As filed with the Securities and Exchange Commission on October 31, 2022

UNITED STATES SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 20-F

☐ **REGISTRATION STATEMENT PURSUANT TO SECTION 12(b) OR (g) OF THE SECURITIES EXCHANGE ACT OF 1934**

OR

☑ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended June 30, 2022
OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

OR

☐ **SHELL COMPANY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

Date of event requiring this shell company report
For the transition period from___ to___
Commission file number: 001-31545

HARMONY GOLD MINING COMPANY LIMITED

(Exact name of registrant as specified in its charter)
Republic of South Africa
(Jurisdiction of incorporation or organization)
RANDFONTEIN OFFICE PARK, CNR WARD AVENUE AND MAIN REEF ROAD,
RANDFONTEIN, South Africa, 1759
(Address of principal executive offices)
Shela Mohatla, Group Company Secretary
Tel: +27 11 411 2359, shela.mohatla@harmony.co.za, fax: +27 11 696 9734,
Randfontein Office Park, CNR Ward Avenue and Main Reef Road, Randfontein, South Africa, 1759
(Name, Telephone, E-mail and/or Facsimile number and Address of Company Contact Person)
Securities registered or to be registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of Each Exchange on Which Registered
Ordinary shares, with no par value per share*	n/a*	New York Stock Exchange*
American Depositary Shares (as evidenced by American Depositary Receipts), each representing one ordinary share	HMY	New York Stock Exchange

* Not for trading, but only in connection with the registration of American Depositary Shares, pursuant to the requirements of the Securities and Exchange Commission.

Securities registered or to be registered pursuant to Section 12(g) of the Act:
None
Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act:
None
The number of outstanding shares of each of the issuer's classes of capital or common stock as of the close of the last full fiscal year covered by this Annual Report was 616,525,702 ordinary shares, with no par value per share

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☑ No ☐

If this report is an annual or transition report, indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934. Yes ☐ No ☑

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☑ No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☑ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or an emerging growth company. See definition of "accelerated filer and large accelerated filer" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large Accelerated Filer ☑ Accelerated filer ☐ Non-accelerated filer ☐ Emerging growth company ☐

If an emerging growth company that prepares its financial statements in accordance with U.S. GAAP, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards† provided pursuant to Section 13(a) of the Exchange Act. ☐

† The term "new or revised financial accounting standard" refers to any update issued by the Financial Accounting Standards Board to its Accounting Standards Codification after April 5, 2012.

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. Yes ☑ No ☐

Indicate by check mark which basis of accounting the registrant has used to prepare the financial statements included in this filing:

US GAAP ☐ International Financial Reporting Standards as issued by the International Accounting Standards Board ☑ Other ☐

If "Other" has been checked in response to the previous question, indicate by check mark which financial statement item the registrant has elected to follow: Item 17 ☐ Item 18 ☐

If this is an annual report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☑

(APPLICABLE ONLY TO ISSUERS INVOLVED IN BANKRUPTCY PROCEEDINGS DURING THE PAST FIVE YEARS)

Indicate by check mark whether the registrant has filed all documents and reports required to be filed by Sections 12, 13 or 15(d) of the Securities Exchange Act of 1934 subsequent to the distribution of securities under a plan confirmed by a court. Yes ☐ No ☐

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This document comprises the annual report on Form 20-F for the year ended June 30, 2022 ("**Harmony 2022 Form 20-F**") of Harmony Gold Mining Company Limited ("**Harmony**" or the "**Company**"). Certain of the information in the Harmony's 2022 suite of reports, including from its Integrated annual report 2022, Environmental, Social and Governance ("**ESG**") report 2022 as well as the Climate-related financial disclosures report 2022, included in Exhibit 15.1 ("**Integrated Annual Report for the 20-F 2022**") is incorporated by reference into the Harmony 2022 Form 20-F, as specified elsewhere in this report, in accordance with Rule 12b-23(a) of the Securities Exchange Act of 1934, as amended (the "**Exchange Act**"). With the exception of the items so specified, the Integrated Annual Report for the 20-F 2022 is not deemed to be filed as part of the Harmony 2022 Form 20-F.

Only (i) the information included in the Harmony 2022 Form 20-F, (ii) the information in the Integrated Annual Report for the 20-F 2022 that is expressly incorporated by reference in the Harmony 2022 Form 20-F and (iii) the exhibits to the Harmony 2022 Form 20-F that are required to be filed pursuant to the Form 20-F (the "**Exhibits**"), shall be deemed to be filed with the Securities and Exchange Commission ("**SEC**") for any purpose. Any information in the Integrated Annual Report for the 20-F 2022 which is not referenced in the Harmony 2022 Form 20-F or filed as an Exhibit, shall not be deemed to be so incorporated by reference.

Financial and other material information regarding Harmony is routinely posted on and accessible at the Harmony website, *www.harmony.co.za*. No material referred to in this annual report as being available on our website is incorporated by reference into, or forms any part of, this annual report. References herein to our website shall not be deemed to cause such incorporation.

USE OF TERMS AND CONVENTIONS IN THIS ANNUAL REPORT

Harmony Gold Mining Company Limited is a corporation organized under the laws of the Republic of South Africa. As used in this Harmony 2022 Form 20-F, unless the context otherwise requires, the terms "**Harmony**" and "**Company**" refer to Harmony Gold Mining Company Limited; the term "**South Africa**" refers to the Republic of South Africa; the terms "**we**", "**us**" and "**our**" refer to Harmony and, as applicable, its direct and indirect subsidiaries as a "**Group**".

In this annual report, references to "**R**", "**Rand**" and "**c**", "**cents**" are to the South African Rand, the lawful currency of South Africa, "**A$**" and "Australian dollars" refers to Australian dollars, "**K**" or "**Kina**" refers to Papua New Guinean Kina and references to "**$**", "**US$**" and "**US dollars**" are to United States dollars.

This annual report contains information concerning our gold reserves. While this annual report has been prepared in accordance with United States Securities and Exchange Commission Regulation S-K 1300, it is based on assumptions which may prove to be incorrect. See Item 3: *"Key Information - Risk Factors - Risks Related to Our Operations and Business - Estimations of our reserves are based on a number of assumptions, including mining and recovery factors, future cash costs of production, exchange rates, and relevant commodity prices; As a result, metals produced in future may differ from current estimates."*

This annual report contains descriptions of gold mining and the gold mining industry, including descriptions of geological formations and mining processes. We have explained some of these terms in the Glossary of Mining Terms included in this annual report. This glossary may assist you in understanding these terms.

All references to websites in this annual report are intended to be inactive textual reference for information only and information contained in or accessible through any such website does not form a part of this annual report.

PRESENTATION OF FINANCIAL INFORMATION

Harmony is a South African company and the majority of the Group operations are located in South Africa. Accordingly, our books of account are maintained in South African Rand and our annual financial statements are prepared in accordance with International Financial Reporting Standards ("**IFRS**") as issued by the International Accounting Standards Board ("**IASB**"). This annual report includes our consolidated financial statements prepared in accordance with IFRS presented in the functional currency of the Company, being South African Rand. All financial information, except as otherwise noted, is stated in accordance with IFRS.

In this annual report, we also present "cash costs", "cash costs per ounce", "cash costs per kilogram" "all-in sustaining costs", "all-in sustaining costs per ounce" and "all-in sustaining costs per kilogram", which are non-GAAP measures. An investor should not consider these items in isolation or as alternatives to production costs, cost of sales or any other measure of financial performance presented in accordance with IFRS. The calculation of cash costs, cash costs per ounce/kilogram, all-in sustaining costs and all-in sustaining costs per ounce/kilogram may vary significantly among gold mining companies and, by themselves, do not necessarily provide a basis for comparison with other gold mining companies. For further information, see Item 5: *"Operating and Financial Review and Prospects - Key factors affecting our results – Costs" and* :- *Reconciliation of Non-GAAP Measures"*.

We have included the US dollar equivalent amounts of certain information and transactions in Rand, Kina and A$. Unless otherwise stated, we have translated assets and liabilities at the spot rate for the day, while the US$ equivalents of cash costs and all-in sustaining costs have been translated at the average rate for the year (R15.21 per US$1.00 for fiscal 2022 and R15.40 per US$1.00 for fiscal 2021). By including these US dollar equivalents in this annual report, we are not representing that the Rand, Kina and A$ amounts actually represent the US dollar amounts, as the case may be, or that these amounts could be converted at the rates indicated.

CAUTIONARY STATEMENT ABOUT FORWARD-LOOKING STATEMENTS

This annual report contains forward-looking statements within the meaning of the safe harbor provided by Section 21E of the Exchange Act and Section 27A of the Securities Act of 1933, as amended (the "**Securities Act**"), with respect to our financial condition, results of operations, business strategies, operating efficiencies, competitive positions, growth opportunities for existing services, plans and objectives of management, markets for stock and other matters.

These forward-looking statements, including, among others, those relating to our future business prospects, revenues, and the potential benefit of acquisitions (including statements regarding growth and cost savings) wherever they may occur in this annual report and the exhibits to this annual report, and including any climate change-related statements, targets and metrics, are necessarily estimates reflecting the best judgment of our senior management and involve a number of risks and uncertainties that could cause actual results to differ materially from those suggested by the forward-looking statements. As a consequence, these forward-looking statements should be considered in light of various important factors, including those set forth in this annual report. All statements other than statements of historical facts included in this report may be forward-looking statements. Forward-looking statements also often use words such as "will", "forecast", "potential", "estimate", "expect" and words of similar meaning. By their nature, forward-looking statements involve risk and uncertainty because they relate to future events and circumstances and should be considered in light of various important factors, including those set forth in this disclaimer. Readers are cautioned not to place undue reliance on such statements. Important factors that could cause actual results to differ materially from estimates or projections contained in the forward-looking statements include, without limitation:

- overall economic and business conditions in South Africa, Papua New Guinea, Australia and elsewhere;
- the impact from, and measures taken to address, the coronavirus disease ("**Covid-19**") pandemic and other contagious diseases, such as HIV and tuberculosis;
- rising inflation, supply chain issues, volatile commodity costs and other inflationary pressures exacerbated by the Russian invasion of Ukraine and subsequent sanctions;

- estimates of future earnings, and the sensitivity of earnings to gold and other metals prices;
- estimates of future gold and other metals production and sales;
- estimates of future cash costs;
- estimates of future cash flows, and the sensitivity of cash flows to gold and other metals prices;
- estimates of provision for silicosis settlement;
- increasing regulation of environmental and sustainability matters such as greenhouse gas ("**GHG**") emission and climate change, and the impact of climate change on our operations;
- estimates of future tax liabilities under the Carbon Tax Act (as defined below);
- statements regarding future debt repayments;
- estimates of future capital expenditures;
- the success of our business strategy, exploration and development activities and other initiatives;
- future financial position, plans, strategies, objectives, capital expenditures, projected costs and anticipated cost savings and financing plans;
- estimates of reserves statements regarding future exploration results and the replacement of reserves;
- the ability to achieve anticipated efficiencies and other cost savings in connection with past and future acquisitions, as well as at existing operations;
- fluctuations in the market price of gold and other metals;
- the occurrence of hazards associated with underground and surface gold mining;
- the occurrence of labor disruptions related to industrial action or health and safety incidents;
- power cost increases as well as power stoppages, fluctuations and usage constraints;
- supply chain shortages and increases in the prices of production imports and the availability, terms and deployment of capital;
- our ability to hire and retain senior management, sufficiently technically-skilled employees, as well as our ability to achieve sufficient representation of historically disadvantaged persons in management positions or sufficient gender diversity in management positions or at Board level;
- our ability to comply with requirements that we operate in a sustainable manner and provide benefits to affected communities;
- potential liabilities related to occupational health diseases;
- changes in government regulation and the political environment, particularly tax and royalties, mining rights, health, safety, environmental regulation and business ownership including any interpretation thereof;
- court decisions affecting the mining industry, including, without limitation, regarding the interpretation of mining rights;
- our ability to protect our information technology and communication systems and the personal data we retain;
- risks related to the failure of internal controls;
- the outcome of pending or future litigation or regulatory proceedings;
- fluctuations in exchange rates and currency devaluations and other macroeconomic monetary policies;
- the adequacy of the Group's insurance coverage;
- any further downgrade of South Africa's credit rating; and
- socio-economic or political instability in South Africa, Papua New Guinea and other countries in which we operate.

The foregoing factors and others described under "Risk Factors" should not be construed as exhaustive.

We undertake no obligation to update publicly or release any revisions to these forward-looking statements to reflect events or circumstances after the date of this annual report or to reflect the occurrence of unanticipated events, except as required by law. All subsequent written or oral forward-looking statements attributable to Harmony or any person acting on its behalf are qualified by the cautionary statements herein.

PART I

ITEM 1. IDENTITY OF DIRECTORS, SENIOR MANAGEMENT AND ADVISERS

Not applicable.

ITEM 2. OFFER STATISTICS AND EXPECTED TIMETABLE

Not applicable.

ITEM 3. KEY INFORMATION

A. [Reserved]

B. CAPITALIZATION AND INDEBTEDNESS

Not applicable.

C. REASONS FOR THE OFFER AND USE OF PROCEEDS

Not applicable.

D. RISK FACTORS

*In addition to the other information included in this annual report and the exhibits, you should also carefully consider the following factors related to our ordinary shares and American Depositary Shares ("**ADSs**"). There may be additional risks that we do not currently know of or that we currently deem immaterial based on information currently available to us. Although we have a formal risk policy framework in place, the maintenance and development of which is undertaken on an ongoing basis so as to help management address systematic categories of risk associated with our business operations, any of these risks could have a material adverse effect on our business, financial condition or results of operations, leading to a decline in the trading price of our ordinary shares or our ADSs. The risks described below may, in retrospect, turn out to be incomplete and therefore may not be the only risks to which we are exposed. Additional risks and uncertainties not presently known to us or that we now believe are immaterial (and have therefore not been included), could also adversely affect our business, results of operations or financial condition. The order of presentation of the risk factors below does not indicate the likelihood of their occurrence or the magnitude or the significance of the individual risks.*

Summary of Risk Factors

Risks Related to Our Industry

1. ***We are exposed to the impact of any significant decreases in the commodity prices on our production***
2. ***The impact from, and measures taken to address, the Covid-19 pandemic may adversely affect our people, and may impact our business continuity, operating results, cash flows and financial condition***
3. ***The nature of our mining operations presents safety risks***
4. ***Mining companies face strong competition and industry consolidation***
5. ***Laws governing health and safety affect our business and could impose significant costs and burdens***
6. ***Since our labor force has substantial trade union participation, we face the risk of disruption from labor disputes and non-procedural industrial action resulting in loss of production and increased labor costs impacting negatively on production and financial results***
7. ***HIV/AIDS, tuberculosis and other contagious diseases, such as Covid-19, pose risks to us in terms of productivity and costs.***
8. ***Laws governing mineral rights affect our business and could impose significant costs and obligations; mineral rights in the countries in which we operate could be altered, suspended or canceled for a variety of reasons, including breaches in our obligations in respect of such mining rights***
9. ***Our financial flexibility could be constrained by the Exchange Control Regulations of the countries in which we operate***

Risks Related to Our Operations and Business

1. ***Risks associated with pumping water inflows from closed mines adjacent to our operations, including related closure liabilities, could adversely affect our operational results***
2. ***Infrastructure constraints and aging infrastructure could adversely affect our operations***
3. ***Disruptions to the supply of electricity and increases in the cost of power may adversely affect our results of operations and financial condition***
4. ***Illegal mining and other criminal activity at our operations, including theft of gold and gold-bearing material, could pose a threat to the safety of employees, result in damage to property and could expose us to losses, business disruption and liability***
5. ***Actual and potential shortages of production inputs and supply chain disruptions may affect our operational results***

6. ***Fluctuations in insurance cost and availability could adversely affect our operating results and our insurance coverage may prove inadequate to satisfy future claims***
7. ***We compete with mining and other companies for key human resources with critical skills and our inability to retain key personnel could have an adverse effect on our business***
8. ***The use of contractors at certain of our operations may expose us to delays or suspensions in mining activities and increases in mining costs***
9. ***We are dependent on a number of highly-integrated communication and IT systems, any disruption to which could have an adverse effect on our results of operations and financial condition***
10. ***Estimations of our reserves are based on a number of assumptions, including mining and recovery factors, future cash costs of production, exchange rates, and the relevant commodity prices; as a result, metals produced in future may differ from current estimates***
11. ***Our operations have limited proved and probable reserves; exploration for additional resources and reserves is speculative in nature, may be unsuccessful and involves many risks***
12. ***We are subject to the risk of litigation, the causes and costs of which are not always known***

Risks Related to ESG

1. ***Increasing scrutiny and changing expectations from our stakeholders, including communities, governments and non-governmental organization ("NGOs") as well as investors, lenders and other market participants, with respect to our ESG performance and policies may impose additional costs or expose us to additional risks***
2. ***We are subject to extensive environmental regulations in the countries in which we operate***
3. ***The socio-economic framework in the regions in which we operate may have an adverse effect on our operations and profits***
4. ***Given the nature of mining and the type of mines we operate, we face a material risk of liability, delays and increased cash costs of production from environmental and industrial accidents and pollution compliance breaches***
5. ***Mining companies are increasingly expected to provide benefits to affected communities; failure to comply with these requirements can result in legal suits, additional operational costs, investor divestment and impact our "social license to operate", which could adversely impact our business, operating results and financial condition***
6. ***We may not be able to meet our ESG targets***
7. ***Compliance with emerging climate change regulations and other sustainability measures could result in significant costs for us***
8. ***Climate change may present physical risks to our operations***
9. ***The cost of occupational health care services and the potential liabilities related to occupational health diseases may increase in future and may be substantial***
10. ***Our operations are subject to water use and other licenses, which could impose significant costs***
11. ***Compliance with tailings management requirements and standards, and potential liabilities in the event of a failure to timely comply or an incident involving a tailings storage facility, could adversely impact our financial condition, results of operations and reputation***
12. ***We may have exposure to rehabilitate potential groundwater pollution, which may include salination, and radiation contamination that may exist where we have operated or continue to operate; implementation of the financial provision regulations may require us to include provision in our financial statements for rehabilitation***
13. ***Compliance with new and changing corporate governance and public disclosure requirements adds uncertainty to our compliance policies and increases our costs of compliance***

Risks Related to Our Corporate and Financing Structure and Strategy

1. ***Our inability to maintain an effective system of internal control over financial reporting may have an adverse effect on investors' confidence in the reliability of our financial statements***
2. ***We may experience problems in identifying, financing and managing new acquisitions or other business combination transactions and integrating them with our existing operations; we may not have full management control over future joint venture partners***
3. ***Certain factors may affect our ability to support the carrying value of our property, plant and equipment, goodwill and other assets on our balance sheet, resulting in impairments***
4. ***Our ability to service our debt will depend on our future financial performance and other factors***

5. ***We are subject to the imposition of various regulatory costs, such as mining taxes and royalties, changes to which may have a material adverse effect on our operations and profits***
6. ***Sales of large quantities of our ordinary shares and ADSs, or the perception that these sales may occur, could adversely affect the prevailing market price of such securities***
7. ***As we have a significant number of shares that may be issued in terms of the employee share schemes, our ordinary shares are subject to dilution***
8. ***The continued status of South Africa's credit rating as non-investment grade, as well as a potential grey-listing of South Africa by the Financial Action Task Force ("FATF"), may have an adverse effect on our ability to secure financing on favorable terms, or at all***
9. ***We may not pay dividends or make similar payments to our shareholders in the future***

Strategic and Market Risks

1. ***The profitability of our operations, and cash flows generated by those operations, are affected by changes in the price of gold and other metals; a fall in the gold price below our cash cost of production and capital expenditure required to maintain production for any sustained period may lead to losses and require us to curtail or suspend certain operations***
2. ***Fluctuations in input production prices linked to commodities may adversely affect our operational results and financial condition***
3. ***Foreign exchange fluctuations could have a material adverse effect on our operational results and financial condition***
4. ***Fluctuations in the exchange rate of currencies may reduce the market value of our securities, as well as the market value of any dividends or distributions paid by us.***
5. ***Rising inflation, including as a result of Russia's invasion of Ukraine, may have a material adverse effect on our business, operating results and financial condition***
6. ***Investors may face liquidity risk in trading our ordinary shares on the JSE Limited***
7. ***Shareholders outside South Africa may not be able to participate in future issues of securities (including ordinary shares)***
8. ***Global, social, political and economic conditions could adversely affect the profitability of our operations***
9. ***The risk of unforeseen difficulties, delays or costs in implementing our business strategy and projects may lead to us not delivering the anticipated benefits of our strategy and projects; in addition, actual cash costs, capital expenditure, production and economic returns may differ significantly from those anticipated by feasibility studies for new development projects***

Other Regulatory and Legal Risks

1. ***Breaches in our information technology ("IT") security processes and violations of data protection laws may adversely impact the conduct of our business activities and may lead to public and private censure, regulatory penalties, fines and/or sanctions and may damage our reputation***
2. ***Failure to comply with laws, regulations, codes and standards, policies and procedures or contractual obligations may lead to fines and penalties, loss of licenses or, permits, may negatively affect our financial results, and adversely affect our reputation***
3. ***Investors in the United States may have difficulty bringing actions, and enforcing judgments, against us, our directors and our executive officers based on the civil liabilities provisions of the federal securities laws or other laws of the United States or any state thereof***
4. ***US securities laws do not require us to disclose as much information to investors as a US company is required to disclose, and investors may receive less information about us than they might otherwise receive from a comparable US company***

Risks Related to Our Industry

We are exposed to the impact of any significant decreases in the commodity prices on our production

As a rule, we sell our gold and silver at the prevailing market price. In order to manage commodity price risk we maintain a commodity hedging program. Contracts entered into under this program manage variability of cash flows for up to 20% of the Group's total production over a two-year period for gold and up to 50% for silver. Our remaining unhedged future production is not protected against decreases. If the gold or silver price should decrease significantly, our revenues may be materially adversely affected, which could materially adversely affect our operating results and financial condition.

The impact from, and measures taken to address, the Covid-19 pandemic may adversely affect our people, and may impact our business continuity, operating results, cash flows and financial condition

The advent of Covid-19 posed an adverse effect to production and sustainability with a greater threat of life to employees. Covid-19 remains a threat due to emergence of new variants which may be more infectious and/or more lethal. Our operations have been and may continue to be impacted by the Covid-19 pandemic. The continued spread of Covid-19 could continue to result in serious illness (including incapacity) or death, or quarantine of our employees and contractors.

These effects have been exacerbated by employees and contractors working in close proximity to each other in underground and surface mines and living in close quarters. In addition, certain underlying health conditions including conditions which compromise the immune system, such as HIV/AIDS and diabetes have worsened the outcomes among the individuals infected with Covid-19.

Although Covid-19 vaccines are being rolled out globally, including in the regions where we operate, uncertainties remain with respect to the emergence of new Covid-19 viral mutations and the efficacy of the Covid -19 vaccines currently available to address these new mutations . See "*Integrated Annual Report for the 20-F* 2022 – *Social – Health"* on page 139 to 146.

In addition, any actions taken by governments or regulators in response to the Covid-19 pandemic have impacted, and could have a further material impact, on our operations and lead to an increase in our costs. The government of South Africa has eased most Covid-19 regulations including the wearing of masks, mass gatherings and travel restrictions in a move not uncommon globally signaling the lower risk identified around the virus.

Our operational costs have increased due to Covid-19 and we believe we will be required to continue to allocate financial resources on preventative measures such as vaccine rollouts, promotion and education. Any new measures may result in additional costs incurred or interference with management's and/or employees' productivity.

The extent to which the Covid-19 pandemic will impact our results will depend on the scale, duration and geographic reach of future developments, which are highly uncertain and cannot be predicted, including notably the possibility of a recurrence or "multiple waves" of the outbreak and new variants. There have been instances in which governmental restrictions have been re-imposed where infection rates have started to increase again and there is a risk that widespread measures such as strict social distancing and curtailing or ceasing normal business activities may be reintroduced in the future.

Our property and business interruption insurance and liability may not cover or be sufficient to fully cover any of our losses resulting from public health emergencies and other events that could disrupt our operations, such as Covid-19. See "*– Risks related to Our Operations and Business - Fluctuations in insurance cost and availability could adversely affect our operating results and our insurance coverage may prove inadequate to satisfy future claims*".

The global economy, metal prices, and financial markets have experienced significant volatility and uncertainty due to Covid-19. Our revenue is directly related to the market price of gold and other metals. Metal price volatility causes our revenue to fluctuate from period to period. This price volatility could also cause operators or developers to defer or forgo projects, which could adversely impact our future revenue. Moreover, in the ordinary course of business, we review opportunities to acquire selected precious metal producing companies or assets. Reduced economic and travel activities or illness among our management team as a result of Covid-19 could limit or delay acquisition opportunities or other business activities. In addition, economic volatility, disruptions in the financial markets, or severe price declines for gold or other metals could adversely affect our ability to obtain future debt or equity financing for acquisitions on acceptable terms.

The full extent to which Covid-19 will impact our operational and financial performance, whether directly or indirectly, will depend on future developments, which are highly uncertain and cannot be predicted. Any disruption to production or increased operational costs as a result of Covid-19 could have a material adverse effect on our business, operating results and financial condition.

The nature of our mining operations presents safety risks

The environmental and industrial risks identified elsewhere in this annual report also present safety risks for our operations and our employees and could lead to the suspension and potential closure of operations for indeterminate periods. Safety risks, even in situations where no injuries occur, can have a material adverse effect on our results of operations and financial condition. See Item 4: *"Information on the Company - Business Overview - Regulation - Health and Safety - South Africa*" and "*Integrated Annual Report for the 20-F* 2022 – *Social – Safety"* and *"– Health"* on pages 133 to 138 and 139 to 146.

Mining companies face strong competition and industry consolidation

The mining industry is competitive in all of its phases. We compete with other mining companies and individuals for specialized equipment, components and supplies necessary for exploration and development, for mining claims and leases on exploration properties and for the acquisition of mining assets. These competitors may have greater financial resources, operational experience and technical capabilities than us. Competition may increase our cost of acquiring suitable claims, properties and assets, which could have a material adverse effect on our financial condition.

Further, industry consolidation may lead to increased competition due to lesser availability of mining and exploration assets. Similar consolidations in the form of acquisitions, business combinations, joint ventures, partnerships or other strategic relationships may continue in the future. The companies or alliances resulting from these transactions or any further consolidation involving our competitors may benefit from greater economies of scale as well as significantly larger and more diversified asset bases than us. In addition, following such transactions certain of our competitors may decide to sell specific mining assets increasing the availability of such assets in the market, which could adversely impact any sale process that we may undertake at the same time, including such sales processes taking longer to complete or not completing at all or not realizing the full value of the assets being disposed of.

Such developments could have a material adverse effect on our business, operating results and financial condition.

Laws governing health and safety affect our business and could impose significant costs and burdens

In South Africa, the Mine Health and Safety Act, 29 of 1996 ("**MHSA**"), requires that employers implement various measures to ensure the safety and health of persons working at a mine as far as reasonably practicable. This obligation is extended to any contractor employees that may be working at a mine. These obligations include the identification and assessment of risk, implementation of codes of practice and standards setting out safe work procedures, proper and appropriate training, supervision, medical surveillance and the provision of safe equipment and personal protective equipment.

Further, pursuant to the MHSA we must ensure compliance with various licenses, permissions or consents that have been issued to it pursuant to the various provisions of applicable legislation.

An employer may be subjected to significant penalties and/or administrative fines for non-compliance under the MHSA and other applicable legislation. Depending on the particular circumstances, litigation (criminal and/or civil) may, depending on the circumstances, be instituted against the employer in respect of an accident or incident which has resulted in the injury, death or occupational disease contracted by an employee (or contractor employee). In some of the jurisdictions in which we operate, the regulatory authority also issues closure notices for the operation or parts thereof, following the occurrence of an injury or death threat. In the past, certain of our operations have also been temporarily suspended for safety reasons. Such closure notices or suspensions, if of sufficient magnitude, could have a material adverse effect on our business, operating results or financial condition. See Item 4: "*Information on the Company - Business Overview - Regulation - Health and Safety - South Africa*".

Any further changes to the health and safety laws which increase the burden of compliance on the employer and impose higher penalties for non-compliance may result in us incurring further significant costs, which could have a material adverse effect on our business, operating results and financial condition. In addition, our reputation could be damaged by any significant governmental investigation or enforcement of health and safety laws, regulations, codes or standards, which could also have a material adverse effect on our business, operating results and financial condition.

In June 2022, the Minister of Mineral Resources and Energy ("**Minister**") released a draft Mine Health and Safety Amendment Bill 2022 (the "**MHSA Amendment Bill**") for public comment. The MHSA Amendment Bill would amend certain provisions of the MHSA. The Bill contains a number of provisions which, if enacted in their present form, could have a material adverse effect on our business, operating results and financial condition. The Bill deals (amongst others) with proposed increases of fines in respect of instances of non-compliance, requiring more direct involvement of executives (particularly CEOs), concept of "strict liability", changes to the duty of care obligations relating to training and formulation of training programs.

In the Independent State of Papua New Guinea ("**PNG**"), the safety of employees, contractors and third parties at our mining operations is regulated by the PNG Mining (Safety) Act 1977 ("**PNG Mining (Safety) Act**") and the Regulations issued thereunder. Pursuant to section 6(1)(e)(i) of the PNG Mining (Safety) Act, an inspector has the power to order the cessation of operations on any part of a mine for such (unlimited) time as he or she considers may be necessary to satisfy the safety provisions of the Act. Such order for cessation can often result in lower or a total stoppage of production resulting in significant financial losses during and following the cessation.

The mining regime in PNG, including the PNG Mining (Safety) Act and Regulations, is currently the subject of comprehensive ongoing review, which may result in changes which will affect our operations and projects in PNG. In June 2021, the Government of the PNG (the "**PNG Government**") released a draft Mine & Works (Safety and Health) Bill 2021 for comment by the PNG Chamber of Mines and Petroleum and other interested parties. If enacted, the Bill will repeal and replace the PNG Mining (Safety) Act and introduce a number of provisions which could have a material adverse effect on our operations and projects in PNG, and our operating results or financial condition. We continue to engage with the PNG Government and relevant regulators on these matters, indirectly through the offices of the PNG Chamber of Mines and Petroleum and directly with the PNG Mineral Resources Authority ("**MRA**"), the PNG Department of Mineral Policy and Geohazards Management ("**DMPGM**") and the PNG Chief Inspector of Mines. See Item 4: "*Information on the Company – Business Overview - Regulation - Health and Safety – Papua New Guinea*".

Since our labor force has substantial trade union participation, we face the risk of disruption from labor disputes and non-procedural industrial action resulting in loss of production and increased labor costs impacting negatively on production and financial results

Despite a history of constructive engagement with labor unions, there are periods when various stakeholders are unable to agree on dispute resolution processes. Disruptive activities on the part of labor, which normally differ in intensity, then become unavoidable. Due to the high level of union membership, which is about 95% among our employees, we are at risk of production stoppages for indefinite periods due to strikes and other disputes, especially wildcat strikes. Inter-union rivalry may increase the risk of labor relations instability. In addition, in South Africa, a variety of legacy issues such as housing, migrant labor, education, poor service delivery and youth unemployment, which may be exacerbated by the Covid-19 pandemic, can lead to communities and unions working together to create instability in and around mining operations. See "*—The impact from, and measures taken to address, the Covid-19 pandemic may adversely affect our people, and may impact our business continuity, operating results, cash flows and financial condition*" above.

In October 2018, we concluded a three-year wage agreement with unions representing the majority of our South African employees. This agreement was extended to all employees irrespective of union affiliation. We have experienced a relatively peaceful labor environment since the conclusion and implementation of this wage agreement. On September 16, 2021, Harmony announced the acceptance of another three-year wage agreement by the unions, effective from July 1, 2021. The negotiations were concluded in a peaceful manner. However we are not able to predict whether we will experience significant labor disputes in future, or what the financial impact of any such disputes may be. See Item 4: "*Information on the Company – Business Overview – Regulation – Labor Relations*", "*Integrated Annual Report for the 20-F 2022 – Social – Caring for our employees*" on pages 147 to 153. South African employment law sets out minimum terms and conditions of employment for employees although these may be improved by agreements between us and the trade unions, prescribed minimum terms and conditions form the benchmark for all employment contracts. See "*Integrated Annual Report for the 20-F 2022 – About Harmony – Our material matters*" on page 35 to 38.

We are required to submit a report under South African employment law detailing the progress made towards achieving employment equity in the workplace. If this report is not submitted, we could incur substantial penalties.

Developments in South African employment law may increase our cash costs of production or alter our relationship with our employees and trade unions, which may have an adverse effect on our business, operating results and financial condition.

In PNG, the workforce in our mining operations is not significantly unionized, and attempts to unionize have had little employee support. However, during the Covid-19 pandemic our PNG operations experienced limited non-procedural industrial action arising from adjustments to work rosters and incentive programs to align with mine health and Covid-19 quarantine measures.

Our PNG operations are also subject to disruption as a result of actions taken by landowners and occupants of the land within the area of impact of such operations, including the blockading of access routes to the operations. These disruptions generally arise as a result of grievances with regard to the non-distribution by the PNG Government to local communities of mine-derived royalties and other benefits, or in relation to the participation of local businesses in the provision of goods and services to the operations.

In the event that we experience industrial relations related interruptions at any of our operations or in other industries that impact our operations, or increased employment-related costs due to union or employee activity, these may have a material adverse effect on our business, production levels, operating costs, production targets, operating results, financial condition, reputation and future prospects. In addition, mining conditions can deteriorate during extended periods without production, such as during and after strikes; lower levels of mining activity can have a longer term impact on production levels and operating costs, which may affect our mines' operating life, which could have a material adverse effect on our business, operating results and financial condition.

HIV/AIDS, tuberculosis and other contagious diseases, such as Covid-19, pose risks to us in terms of productivity and costs

The prevalence of HIV/AIDS and other contagious diseases, including Covid-19, in South Africa and PNG poses risks to us in terms of potentially reduced productivity, and increased medical and other costs.

The continued spread of Covid-19 could result in serious illness (including incapacity) or death, or quarantine of our employees and contractors, which may be exacerbated by employees and contractors working in close proximity to each other in underground and surface mines and living in close quarters. In addition, certain underlying health conditions (diabetes and oncology emerging as new prevalent risks) including conditions which compromise the immune system, may worsen the outcomes among the individuals infected with Covid-19.

Any disruption to production or increased operational costs as a result of the spread of contagious diseases, such as Covid-19, HIV/AIDS or tuberculosis, could have a material adverse effect on our business, operating results and financial condition. See "*Integrated Annual Report for the 20-F* 2022 – *Social – Health*" on pages 139 to 146.

Laws governing mineral rights affect our business and could impose significant costs and obligations; mineral rights in the countries in which we operate could be altered, suspended or canceled for a variety of reasons, including breaches in our obligations in respect of such mining rights

Our operations in South Africa and PNG are subject to legislation regulating mineral rights. Certain of the Company's properties may be subject to the rights or the asserted rights of various community stakeholders, including indigenous peoples. The presence of those stakeholders may therefore have an impact on our ability to develop or operate our mining interests.

South Africa

In South Africa, we are governed by the Mineral and Petroleum Resources Development Act, 28 of 2002 ("**MPRDA**"). See Item 4: "*Information on the Company - Business Overview - Regulation - Mineral Rights - South Africa - MPRDA*" for a description of the principal objectives set out in the MPRDA.

The MPRDA was promulgated as effective legislation on May 1, 2004 and transferred ownership of mineral resources to the South African people, with the South African government acting as custodian in order to, among other things, promote equitable access to the nation's mineral resources by South Africans, expand opportunities to Historically Disadvantaged South Africans ("**HDSAs**") who wish to participate in the South African mining industry and advance socio-economic development. We currently continue to comply with the requirements of the MPRDA. Any failure to comply with the conditions of our mining rights, whether intentional or unintentional, could have a material adverse effect on our operations and financial condition and could result in the cancellation or suspension of our mining rights.

On June 21, 2013, the Minister introduced the Mineral and Petroleum Resources Development Amendment Bill, 2013 (the "**MPRDA Bill**") into Parliament. The South African Department of Mineral Resources (as it then was known, but now is referred to as the Department of Mineral Resources and Energy ("**DMRE**")) briefed the National Assembly's Portfolio Committee on Mineral Resources in July 2013. The MPRDA Bill was passed by both the National Assembly and the National Council of Provinces ("**NCOP**") on March 27, 2014. In January 2015, the former President, Jacob Zuma, referred the MPRDA Bill back to Parliament for reconsideration and on November 1, 2016, the Portfolio Committee on Mineral Resources tabled non-substantial revisions to the MPRDA Bill in the National Assembly and a slightly revised version of the MPRDA Bill was passed by the National Assembly and referred to the NCOP. On March 3, 2017, the National Assembly passed certain minor amendments to the MPRDA Bill. The National Assembly has referred the MPRDA Bill to the NCOP where the Select Committee has received comments on the draft legislation. The chairperson of the Select Committee had targeted January or February of 2018 to pass the legislation. On February 16, 2018, the current President of South Africa, Cyril Ramaphosa, announced that the MPRDA Bill was at an advanced stage in Parliament. However, in August 2018, the Minister announced that, given certain concerns with the MPRDA Bill, his recommendation would be to withdraw it entirely. The South African Cabinet subsequently supported the Minister's proposal to withdraw the MPRDA Bill. While the MPRDA Bill was not formally withdrawn by Parliament, it lapsed on March 28, 2019. Although Parliament has the ability to revive a lapsed Bill, it seems unlikely that it will revive the MPRDA Bill given both the Minister's and Cabinet's support for its withdrawal.

There is a large degree of uncertainty regarding the changes that will be brought about should the MPRDA Bill be revived and made law. Among other things, the MPRDA Bill provides that applicants will no longer be able to rely on the “first come, first served” principle when submitting an application for a right, it seeks to require the consent of the Minister for the transfer of any interest in an unlisted company or any controlling interest in a listed company where such companies hold a prospecting right or mining right and to give the Minister broad discretionary powers to prescribe the levels of minerals required to be offered to domestic beneficiators for beneficiation. We cannot yet determine the full impact that the MPRDA Bill may have on our business and there can be no assurance that such changes will not have a material adverse effect on our operations and financial condition.

Regulations under the MPRDA

On March 27, 2020 the Minister published for implementation amendments to the regulations promulgated pursuant to the MPRDA in 2004 (the “**MPRDA Regulations**” and as amended the “**Amended Regulations**”). The Amended Regulations include the following notable changes:

- Mining right applicants must “meaningfully consult” with landowners, lawful occupiers and interested and affected parties in accordance with the procedures contemplated under the Environmental Impact Assessment Regulations, 2014 (the “**EIA Regulations**”). The office of the Regional Manager is permitted to participate as an observer in these processes.
- Mining right holders must, pursuant to their social and labor plans (“**SLPs**”), contribute to the socio-economic development in the areas in which they operate and labor sending areas (i.e. a local municipality which a majority of mine workers consider to be their primary residence). This requirement may impose obligations on mining right holder to effect measures in communities that are located far away from the mine and / or could give rise to some social issues.
- Although most of the provisions regulating environmental matters have been deleted from the Amended Regulations, those sections dealing with mine closure have been retained but have been amended to state that mine closure must be regulated pursuant to the National Environmental Management Act, 107 of 1998 (“**NEMA**”), the EIA Regulations and the Financial Provision Regulations, 2015 (as they may be amended). As discussed in Item 4: “*Information on the Company – Business Overview – Regulation - Laws and Regulations Pertaining to Environmental Protection – South Africa*” it is anticipated that the Financial Provision Regulations, 2015 will be replaced by revised regulations following further engagement with the mining industry.
- The appeal process in the MPRDA Regulations has been replaced with a more comprehensive procedure that includes specific time periods within which appellants, respondents and the competent authority must submit appeals, responses or consider appeals (as the case may be). Although there is no guarantee that the parties will comply with these time periods, the time periods are intended to hold the parties accountable and to ensure that appeals are resolved in a timely manner.

The Mining Charter

On September 27, 2018, the Minister published the Broad-Based Socio-Economic Empowerment Charter for the Mining and Minerals Industry, 2018 (“**Mining Charter III**”), on which date it also became effective, as amended by the notice published in the Government Gazette on December 19, 2018 and read with the Implementation Guidelines for the Broad Based Socio-Economic Empowerment Charter for the Mining and Minerals Industry, 2018 (“**Implementation Guidelines**”) published on the same date. It replaces, in their entirety, the original Mining Charter negotiated in 2002 and gazetted in 2004 (the "**Original Charter**") and the amended Charter gazetted in September 2010 (the “**Amended Charter**”). Mining Charter III imposes new obligations and increased participation by HDSAs in relation to a mining company’s ownership, procurement of goods and services, enterprise and supplier development, human resource development and employment equity requirements. The first annual reporting for compliance with Mining Charter III was due on or before March 31, 2020, although on April 11, 2020, the Minister gazetted directions under the regulations of the Disaster Management Act as part of the measures to address, prevent and combat the spread of Covid-19, which extended the date for submission of the first annual report to June 1, 2020. Harmony submitted its first report under Mining Charter III within the specified deadline.

While the ownership requirement for HDSAs in relation to existing mining rights has not increased (provided that we met the 26% requirement under the Amended Charter), we may be required to comply with new HDSA ownership requirements in relation to any renewals, consolidations and transfers of our existing rights and any applications for new mining rights. The increased HDSA requirements in relation to employment equity, procurement of goods and services and enterprise and supplier development may result in additional costs being incurred by us, which could have a material adverse effect on our results of operations and financial condition.

While Mining Charter III was effective from September 27, 2018, many of its provisions are vague and untested despite the publication of the Implementation Guidelines. See Item 4: “*Information on the Company - Business Overview - Regulation - Mineral Rights - South Africa - The Mining Charter*”.

On March 26, 2019, the Minerals Council South Africa (previously the Chamber of Mines) (“**MCSA**”) filed an application for the judicial review and setting aside of certain clauses of Mining Charter III. The MCSA had engaged in ongoing attempts to reach a compromise with the Minister on certain provisions that are problematic for the industry, and which would be detrimental to its sustainability.

The application aligns with the MCSA’s previously stated view that most aspects of Mining Charter III represent a reasonable and workable framework. However, the MCSA’s application contends that Mining Charter III does not fully recognize the continuing consequences of previous empowerment transactions, particularly in relation to mining right renewals and transfers of such rights. In August 2020, the current Minister, Gwede Mantashe, withdrew his notice of appeal to the Supreme Court of Appeal in respect of the declaratory order issued in April 2018 by the High Court of South Africa (Gauteng Division). The declaratory order held that black economic empowerment (“**BEE**”) ownership transactions should continue to be recognized for regulatory certainty purposes and for the duration of the mining right – even where the BEE partner has sold or transferred part of or all its equity. The MCSA's judicial review application was heard before a full bench of judges in May 2021. Judgment was handed down on September 21, 2021 (the "**2021 Judgement**") setting aside certain of the problematic provisions, while providing that the remainder of Mining Charter III should continue in force. In November 2021, the DMRE informed the National Assembly's Portfolio Committee on Mineral Resources and Energy that it did not intend to appeal the outcome of the 2021 Judgement, but instead will consider steps to achieve the empowerment objectives through legislative amendments to the MPRDA.

We cannot guarantee that we will meet all the targets set out by Mining Charter III. Should we breach any obligations in complying with the MPRDA or Mining Charter III, our existing mining rights in South Africa could be suspended or canceled by the Minister in accordance with the provisions of the MPRDA. It may also influence our ability to obtain any new mining rights. Any such suspension or cancellation could have a material adverse effect on our results of operations and financial condition.

Papua New Guinea

In PNG, mining is primarily regulated by the PNG Mining Act 1992 (the "**PNG Mining Act**") and the PNG Mining (Safety) Act and their respective Regulations. All minerals are owned by the Independent State of Papua New Guinea, which grants rights to explore for or mine such minerals under a concessionary tenement system. Types of tenement include: exploration license; mining lease; special mining lease; alluvial mining lease; lease for mining purposes; and mining easement. See Item 4: "*Information on the Company – Business Overview – Regulation - Mineral Rights - Papua New Guinea*".

Since 2009, the mining regime in PNG has been the subject of a comprehensive ongoing review involving various PNG Government agencies. In addition to the review of applicable legislation, PNG mineral policy and mining-specific sector policies are also being reviewed and drafted, including a biodiversity offsets policy, a national oceans policy, a sustainable development policy, an involuntary relocation policy and a mine closure policy and mining project rehabilitation and closure guideline.

Over that period, various draft revisions of the PNG Mining Act have been circulated for comment, most recently in 2018 and 2020. The most recent draft revisions include an increase in the royalty rate and changes to the terms of the PNG Government's option to acquire an interest in a mineral discovery, the percentage extent of such option, the consideration payable for it, and the contributions to be made by the PNG Government pursuant to it. Other proposed revisions include the introduction of a development levy and a waste fee, the introduction of an obligation to maintain production at minimum prescribed levels, a prohibition on non-local "fly-in, fly-out" employment practices, and the introduction of downstream processing obligations. If enacted in their proposed form and applied to our operations and projects in PNG, the revisions will potentially affect those operations and projects and could have a material adverse effect on our business, operating results and financial condition.

In May 2019, Hon James Marape M.P. was appointed Prime Minister of PNG following a vote of no confidence in the previous Government. In September 2022, he was re-appointed as Prime Minister for a second term following a national general election. Since his appointment, the PNG Government has advocated a policy of "Take Back PNG", including a review and restructuring of resource laws so as to increase the PNG Government's share of the proceeds from mining, enhance landholder and provincial government equity participation in mining projects, and promote direct involvement in mining and exploration by a State-owned entity ("**SOE**").

On June 26, 2020 the Mining (Amendment) Act 2020 (the "**PNG Mining (Amendment) Act**") was enacted, which requires the real-time provision of production and mineral sales data to the MRA. The PNG Mining (Amendment) Act also amended the PNG Mining Act to provide that the PNG Government has the power to reserve land that is subject to an expired, cancelled, surrendered or relinquished tenement. Wholly or majority PNG-owned entities, including an SOE, then have a statutory priority in applying for a new tenement over the reserved land.

On July 16, 2020 a proposed Organic Law on Ownership and Development of Hydrocarbons and Minerals and the Commercialization of State Businesses (the "**PNG Organic Law**") was tabled for reading in Parliament. The PNG Organic Law (if adopted) will materially alter the legislative and regulatory regime governing mining in PNG, including the transfer of ownership of minerals from the PNG Government to an SOE (which will not be subject to the PNG Mining Act or the regulation of the MRA), and the transformation of the methodology of its participation in mining operations from a concessionary to a production sharing regime. The PNG Organic Law is silent on the form and content of the production sharing regime to be entered into, which arrangements it envisages will be negotiated by the SOE on a case-by-case basis.

It is presently uncertain if the PNG Organic Law will be adopted, or (if adopted) whether or how the PNG Organic Law will be applied to our current operations and projects in PNG. We continue to engage with the PNG Government and relevant regulators on these matters, indirectly through the offices of the PNG Chamber of Mines and Petroleum and directly with the MRA and the DMPGM.

Due to this uncertainty, we are unable to express a view on the likely impact of the potential changes to the PNG mining regime, save to state that, if the presently proposed PNG Organic Law and revision of the Mining Act are adopted and applied to our operations and projects in PNG, they could have a material adverse effect on our business, operating results and financial condition.

PNG mining legislation and mining tenements contain provisions and conditions, the breach of which may result in the imposition of a fine, imprisonment or the cancellation of the tenement.

Our financial flexibility could be constrained by the Exchange Control Regulations in the countries in which we operate

South Africa's Exchange Control Regulations restrict the export of capital from South Africa. Transactions between South African residents (including companies) and non-residents (excluding residents of the Republic of Namibia and the Kingdoms of Lesotho and Eswatini, known collectively as the Common Monetary Area ("**CMA**") are subject to exchange controls enforced by South African Reserve Bank ("**SARB**"). While South African exchange controls have been relaxed in recent years, South African companies remain subject to restrictions on their ability to deploy capital outside of the CMA. As a result, our ability to raise and deploy capital outside the CMA is restricted. These restrictions could hinder our financial and strategic flexibility, particularly our ability to raise funds outside South Africa and could therefore have a material adverse effect on our business, operating results and financial condition.

Our operation in PNG (including the export of gold and the operation of approved offshore foreign currency accounts) are subject to the foreign exchange control and other directives of the Bank of Papua New Guinea. The withdrawal of existing approvals or the imposition of restrictions could potentially hinder our financial and strategic flexibility, and could have a material adverse effect on our business, operating results and financial condition.

Risks Related to Our Operations and Business

Risks associated with pumping water inflows from closed mines adjacent to our operations, including related closure liabilities, could adversely affect our operational results

Certain of our mining operations are adjacent to the mining operations of other companies. A mine closure can affect continued operations at an adjacent mine if appropriate preventative steps are not taken. In particular, this could include the ingress of underground water when pumping operations at the closed mine are suspended. This can result in damage to property, operational disruptions and additional pumping costs, which could adversely affect any one of our adjacent mining operations and, in turn could adversely affect our business, operating results and financial condition.

In connection with our acquisition in 2018 of the Moab Khotsong and Great Noligwa mines from AngloGold Ashanti Limited ("**AngloGold"**), together with other assets and related infrastructure (the "**Moab Acquisition**"), we inherited a two-thirds interest in the Margaret Water Company NPC ("**Margaret Water**") for all pumping and water-related infrastructure at its Margaret shaft. The shaft operates for the purpose of de-watering the Klerksdorp, Orkney, Stilfontein, Hartbeesfontein ("**KOSH**") basin groundwater. This is to allow Moab Khotsong operations and the mine operated by Kopanang Gold Mining Company Proprietary Limited (the mining company holding the remaining one–third interest in Margaret Water Company and the only other mining company continuing operating in the area) to remain dry and to prevent flooding of operational areas. Therefore, it remains imperative for the shaft to continue pumping water.

Flooding in the future resulting from a failure in pumping and water-related infrastructure could pose an unpredicted "force majeure" type event, which could result in financial liability for us, and could have an adverse impact on our results of operations and financial condition. For instance, we have also conducted assessments at our Doornkop and Kusasalethu operations and the assessments conclude that there is a risk of decant post closure. Due to the interconnectivity, any long-term water management solution would have to be a regional solution. Although, we have installed water treatment plants at both sites for current treatment needs, which could serve as water plants for final decant should the situation arise, there can be no assurance that such plants will be sufficient to address such risks. There is also a flooding risk at operations assumed as part of our acquisition with effect on October 1, 2020 of the remainder of AngloGold's South African business (the "**Mponeng Acquisition**"). This relates to the Mponeng mine, requiring the continuous pumping arrangement with Covalent Water Company (Pty) Limited (a wholly-owned subsidiary) to stay in place.

Obligations in respect of the pumping and treatment of extraneous water must also be addressed in connection with our final closure plans for each of our operations. We are responsible for these liabilities until a closure certificate is issued pursuant to the MPRDA and possibly thereafter under the NEMA. This liability is discussed in more details in Item 4: "*Information on the Company – Business Overview – Regulation - Law and Regulations Pertaining to Environmental Protections in South Africa - NEMA*". See also "*– We are subject to extensive environmental regulations in the countries in which we operate*" below.

Infrastructure constraints and aging infrastructure could adversely affect our operations

Mining, processing, development and exploration activities depend on adequate infrastructure. Reliable rail, ports, roads, bridges, power sources, power transmission facilities and water supply are critical to the Company's business operations and affect capital and operating costs. The infrastructure and services are often provided by third parties whose operational activities are outside the control of the Company.

Interference to the maintenance or provision of infrastructure, including by extreme weather conditions, sabotage or social unrest, could impede our ability to deliver products on time and adversely affect our business, results of operations and financial condition.

Once a shaft or a processing plant has reached the end of its intended lifespan, higher than normal maintenance and care is required. Maintaining this infrastructure requires skilled human resources, capital allocation, management and planned maintenance. Although we have implemented a comprehensive maintenance strategy, incidents resulting in production delays, increased costs or industrial accidents may occur. Such incidents may have an adverse effect on our operating results and financial condition.

Disruptions to the supply of electricity and increases in the cost of power may adversely affect our results of operations and financial condition

In South Africa, each of our mining operations depends on electrical power generated largely from fossil fuels by the South African state utility, Eskom Holdings SOC Limited ("**Eskom**"), which holds a monopoly in the South African market. Electricity supply in South Africa has been constrained over the past decade and there have been multiple power disruptions as a result of continued poor generation performance and reliability. Eskom reintroduced national rotational power cuts ("**load shedding**") in December 2018. Load shedding continued at increasing rates from 2019 to date, increasing from 21 days in calendar year 2019 to 116 days up until the end of September 2022. Under load shedding, our South African operations are required to reduce power demand which can result in production losses. Load curtailment is the program for industrial customers who can manage their load, while load shedding is implemented for other customers. In fiscal 2021 and 2022, the electricity supply in South Africa continued to see substantial pressure, with Eskom instituting load curtailment ranging from Stage 2 to Stage 6 on multiple occasions. During Stage 1 to Stage 4 we were required to reduce load by 10% to 20% respectively and thereafter we are forced to essential loads, which allows for only critical processes to continue such as pumping and running the winders to remove people from underground.

Eskom's aging infrastructure, its need to replace or upgrade its power generation fleet and its deferral of routine maintenance due to financial constraints, may adversely affect electricity supply in South Africa. A lack of plant availability was a major contributor to increased load curtailment in fiscal 2021 and fiscal 2022. In addition, Eskom's ability to undertake necessary infrastructure and fleet upgrades, on commercially acceptable terms or otherwise, may be limited by the amount of debt it has outstanding and it is anticipated that more financing and reduction in debt will be required for financial sustainability. Any blackouts or other disruptions to power supply could have a material adverse effect on our business, operating results and financial condition.

Eskom's inability to fully meet the country's demand has led and may continue to lead to rolling blackouts, unscheduled power cuts and surveillance programs to ensure non-essential lighting and electricity appliances are powered off. There can be no assurance that Eskom's efforts to protect the national electrical grid will prevent a complete national blackout.

Although management has been able to comply with the load shedding and curtailment requirements experienced in our 2022 fiscal year and the first quarter of fiscal 2023 without incurring material production losses, there can be no guarantee that we will be able to comply with such curtailment requirements without incurring material production losses in the future.

In addition to supply constraints, severe weather events, labor unrest in South Africa has before, and may in future, disrupt the supply of coal to power stations operated by Eskom, or the operation of the power stations directly, and result in curtailed supply. For example, in February 2021, Cyclone Eloise caused extensive rainfall which, in turn, led to constraints in the quality and supply of coal, national power constraints and load curtailment.

In February 2019, the President of South Africa announced the vertical unbundling of Eskom. While full-state ownership will be maintained, the unbundling is expected to result in the separation of the Eskom's generation, transmission and distribution functions into separate entities. The unbundling is currently underway for the legal separation of the transmission function and the generation and distribution functions are still to be unbundled. The transmission unbundling was planned to be completed by December 2021 and the distribution and generation functions by December 2022 but these dates have subsequently been pushed back. In December 2021, Eskom released a statement to the effect that it had extended an order to transfer its transmission function to a wholly-owned subsidiary, the National Transmission Company South Africa SOC Limited ("**NTCSA**"). Poor reliability of the supply of electricity, instability in prices and a possible tariff increase above inflation are expected to continue through the unbundling process. Should we experience further power tariff increases, our business operating results and financial condition may be adversely impacted.

Eskom tariffs are determined through a consultative multi-year price determination application ("**MYPD**") process, with occasional tariff increase adjustments under the Regulatory Clearing Account ("**RCA**") mechanism. In the most recent MYPD process, the National Energy Regulator of South Africa ("**NERSA**"), granted Eskom tariff increases of 8.1% (later adding an additional 0.7%) for the period 2020 to 2021 and 15.1% for the period 2021 to 2022 (after the initial approval of 5.2%). In February 2022, NERSA granted Eskom a 9.6% tariff increase for the period 2022 to 2023, which includes an RCA amount of R14 billion. The RCA figure may change however. For instance, NERSA appealed in August 2020 an earlier court ruling requiring R23 billion in revenue to be added to the 2021/2022 increase, and leave to appeal was granted in October 2020. In addition, NERSA also announced the approval of R3.9 billion from the RCA in costs incurred by Eskom over and above the previously regulated costs, applicable from April 2021. The recovery period from the consumer is yet to be determined. Moreover, Eskom has indicated that it is still assessing NERSA's tariff increase of 9.6% for the period 2022 to 2023. On the basis of external economic advice, we are planning for 10% increases in both 2022/2023 and 2023/2024, but there can be no assurance that this will be adequate to meet our obligations under the tariffs as finally approved.

Increasing global demand for energy, concerns about nuclear power and the limited growth of new supply are also impacting the price and supply of energy. Various factors have resulted in increased demand or constrained supply and escalating oil and energy prices. These included, amongst others, the transition of emerging markets to higher energy consumption, actual and proposed pricing or taxation of carbon emissions, unrest and potential conflict in the Middle East as well as the recent armed conflict between Russia and Ukraine. In particular, the recent hostilities between Russia and Ukraine triggered the imposition of retaliatory measures, and could result in further measures in the future, by the United States, the EU, the United Kingdom, the North Atlantic Treaty Organization ("**NATO**") and other jurisdictions against Russia. These and any additional measures, including sanctions or export controls, as well as any countermeasures taken by Russia or other jurisdictions, have led to, and may lead to additional, sharp increases in oil and energy prices, given Russia's role as a major global exporter of crude oil and natural gas.

In PNG, power generation and distribution is supplied by the state utility, PNG Power Limited. This utility is severely financially constrained, with aging and poorly maintained infrastructure subject to disruptions in electrical power supply. Currently, our mines and projects receive 100% of their daily demand from PNG Power and, although they have the capacity to self-generate by means of diesel-generated power when required, the cost of this power will fluctuate with changes in the oil price. Disruptions in electrical power supply or substantial increases in the cost of oil could have a material adverse effect on our business, operating results and financial condition.

See Item 5: "*Operating and Financial Review and Prospects – Operating Results – Key factors affecting our results - Electricity in South Africa*." and "*Integrated Annual Report for the 20-F 2022 – Environment – Climate change, energy and emissions management*" on pages 100 to 105.

Illegal mining and other criminal activity, including theft of gold and gold-bearing material, could pose a threat to the safety of employees, result in damage to property and could expose us to losses, business disruption and liability.

The activities of illegal and artisanal miners, which include theft, has increased over the years and had become more violent and threatens both the safety of employees and sustainability of the mining industry, Artisanal and illegal miners are active on, or adjacent to, several of our properties, but are mostly active on surface the last year. Artisanal and illegal miners at times may lead to interference with our operations and results in conflict that presents a security threat to property and human life. The environmental, social, safety and health impacts of artisanal mining are frequently attributed to formal mining activity, and it is often assumed that artisanal-mined gold is channeled through large-scale mining operators, even though artisanal and large-scale miners have distinct supply chains. These misconceptions impact negatively on the reputation of the industry.

The activities of the illegal miners, which include theft, can cause damage to our properties, including by way of pollution, copper cable theft, underground fires, critical infrastructure damage, operational disruption, project delays or personal injury or death, for which we could potentially be held responsible. Illegal and artisanal mining could contribute to the depletion of mineral deposits, potentially making the future mining of such deposits uneconomic. Most illegal miners are found at abandoned shafts or old work places.

Illegal and artisanal mining (which may be by employees or third parties) is associated with a number of negative impacts, including environmental degradation and human rights abuse, such as forced labor, human trafficking, child labor, corruption, money laundering and other violent crimes in the communities and at the mines. Effective local government administration is often lacking in the locations where illegal and artisanal miners operate, due to rapid population growth and the lack of functioning structures, which can create a complex, unstable social environment. The disbandment of specialized South African Police Service ("**SAPS**") units has also left a huge gap in the apprehension of high-ranking criminals in the illicit gold trade.

The presence of illegal miners could lead to project delays and disputes regarding the development or operation of commercial gold deposits. In addition, illegal mining could lead to an increase in the level of organization and funding of criminal activity around some of our operations. Criminal activities such as trespassing, illegal and artisanal mining, and related sabotage, theft and vandalism could lead to damage to, and disruptions at, our operations.

Rising gold and copper prices may result in an increase in gold and copper thefts; moreover, incidences of illegal mining may escalate as a result of social and economic conditions. The occurrence of any of these events could have a material adverse effect on our financial condition on results of our operations.

Actual and potential shortages of production inputs and supply chain disruptions may affect our operational results

Our operational results may be affected by the availability and pricing of consumables such as fuel, chemical reagents, explosives, tires, steel and other essential production inputs. Issues with regards to availability of consumables may result from shortages, long lead times to deliver and supply chain disruptions, which could result in production delays and production shortfalls. We expect cost increases to continue in fiscal 2023 across our operations, including as a result of other factors such as the price of oil, inflationary increases and labor costs. See "*—Rising inflation, including as a result of Russia's invasion of Ukraine, may have a material adverse effect on our business, operating results and financial condition*".

Our mining operations have not been spared the global trend of steel shortages created by the Covid-19 pandemic and mushrooming protests within the steel industry regarding wages Virtually without exception, local major steelmakers and retailers have struggled to meet the rebound in steel demand. The national steel shortages, ascribed to the South African lockdown and protests, are affecting many engineering companies (small and large) in our supply chain network and impacting on the availability of steel-related mining inputs. Our reagent suppliers for sodium cyanide, hydrochloric acid and caustic soda have also been struggling to meet our demands due to similar Covid-19 and protest-related disruptions. There was also a potential shortage of oxygen at our operations during the higher waves of Covid-19 outbreaks which contributed to lower production at our plants.

These shortages and delayed deliveries may also be experienced where industrial action affects our suppliers. These issues could also affect the pricing of the consumables, especially if shortages are experienced. The price of consumables may be substantially affected by changes in global supply and demand, along with natural disasters such as earthquakes, climate change, extreme weather conditions, governmental controls, industrial action and other factors. A sustained interruption to the supply of any of these consumables would require us to find acceptable substitute suppliers and could require us to pay higher prices for such materials. A sustained interruption might also adversely affect our ability to pursue our development projects.

Any significant increase in the prices of these consumables would increase operating costs and adversely affect profitability, which could adversely affect our results of operations and our financial condition.

Fluctuations in insurance cost and availability could adversely affect our operating results and our insurance coverage may prove inadequate to satisfy future claims

We have global insurance policies covering general liability, directors' and officers' liability, cyber-security, accidental loss or material damage to our property, business interruption in the form of fixed operating costs or standing charges and other losses. The costs of maintaining adequate insurance coverage, have increased significantly recently and may continue to do so in the future, thereby adversely affecting our operating results.

We have third-party liability coverage for most potential liabilities, including environmental liabilities. We may be subject to liability for pollution (excluding sudden and accidental pollution) or other hazards against which we have not insured or cannot insure, including those for past mining activities. We also maintain property and liability insurance consistent with industry practice, but this insurance contains exclusions and limitations on coverage. In addition, there can be no assurance that insurance will be available at economically acceptable premiums. As a result, our insurance coverage may not cover the claims against it, including for environmental or industrial accidents, pollution or public health emergencies, data protection and cybersecurity breaches and other events that could disrupt our operations, such as Covid-19, which could have a material adverse effect on our financial condition. See *"—Risks related to our industry - The impact from, and measures taken to address, the Covid-19 pandemic may adversely affect our people, and may impact our business continuity, operating results, cash flows and financial condition*."

We compete with mining and other companies for key human resources with critical skills and our inability to retain key personnel could have an adverse effect on our business

The risk of losing senior management or being unable to hire and retain sufficient technically skilled employees or sufficient representation by HDSAs in management positions, or sufficient gender diversity in management positions or at Board level, may materially impact on our ability to achieve our objectives.

We compete with mining and other companies globally to attract and retain key human resources at all levels with the appropriate technical skills and operating and managerial experience necessary to continue operating our business. The need to recruit, develop and retain skilled employees is particularly critical with HDSAs and women in mining in South Africa, and the global shortage of key mining specialists, including geologists, mining engineers, mechanical and electrical engineers, metallurgists and skilled artisans has been exacerbated by increased mining activity across the globe. There can be no assurance that we will attract and retain skilled and experienced employees. Should we lose any of our key personnel, our business may be harmed and our operational results and financial condition could be adversely affected. See Item 4. "*Information on the Company – Business Overview – Regulation – Labor Relations*" and "*Integrated Annual Report for the 20-F 2022 – Social – Caring for our employees*" on pages 147 to 153.

In PNG, the PNG Government is considering revisions of its local content policy which will severely restrict the utilization of offshore-based "fly-in, fly out" expatriate employees, and prescribe increased levels of participation by locally-owned businesses in the provision of goods and services. If introduced, this will adversely affect our ability in PNG to engage and retain appropriately skilled human resources, and manage the costs of goods and services to our operations. It will also necessitate the application of additional resources to the construction or provision of housing for residential employees, and the recruiting and training of local landowners and landowner businesses.

The use of contractors at certain of our operations may expose us to delays or suspensions in mining activities and increases in mining costs

We use contractors at certain of our operations to mine and deliver ore to processing plants as well as for other purposes. At mines employing mining contractors, contracting costs represent a significant proportion of the total operating costs of these operations and we do not own all of the mining equipment.

Our operations could be disrupted, resulting in additional costs and liabilities, if the mining contractors at affected mines have financial difficulties, if a dispute arises in renegotiating a contract, or if there is a delay in replacing an existing contractor and its operating equipment to meet business needs at expected cost levels. Increases in contract mining rates, in the absence of associated productivity increases, will also have an adverse impact on the our results of operations and financial condition.

Contractors can adversely affect our reputation, results of operations and financial condition by: our reduced control over those aspects of operations which are the responsibility of contractors; their failure to comply with applicable legal, human rights and regulatory requirements; their inability to manage their workforce to provide high quality services and a high level of productivity. This may result in us incurring liability to third parties due to the actions of contractors, which could have a material adverse effect on our business, operating results and financial condition.

We are dependent on a number of highly-integrated communication and IT systems, any disruption to which could have an adverse effect on our results of operations and financial condition.

We utilize and are reliant on various internal and external communication and IT system applications to support our business activities. Damage or interruption of our communication and IT systems, whether due to accidents, human error, natural events or malicious acts, may lead to important data being irretrievably lost, exposed or damaged, thereby adversely affecting our business, operating results and financial condition.

Estimations of our reserves are based on a number of assumptions, including mining and recovery factors, future cash costs of production, exchange rates, and the relevant commodity prices; as a result, metals produced in future may differ from current estimates

The mineral reserve estimates in this annual report are estimates of the mill-delivered quantity and grade of metals in our deposits and stockpiles. They represent the amount of metals that we believe can be mined, processed and sold at prices sufficient to recover our estimated future cash costs of production, remaining investment and anticipated additional capital expenditures. Our mineral reserves are estimated based on a number of factors, which have been stated in accordance with the South African Code for the Reporting of Exploration Results, Mineral Resources and Mineral Reserves, 2016 edition ("**SAMREC, 2016**"). Calculations of our mineral reserves are based on estimates of:

- future cash costs;
- future commodity prices;
- future currency exchange rates; and
- metallurgical and mining recovery rates.

These factors, which significantly impact mineral reserve estimates, are beyond our control. As a result, reserve estimates in this annual report should not be interpreted as assurances of the economic life of our gold and other precious metal deposits or the future profitability of operations.

Since these mineral reserves are estimates based on assumptions related to factors detailed above, should there be changes to any of these assumptions, we may in future need to revise these estimates. In particular, if our cash operating and production costs increase or the gold price decreases, recovering a portion of our mineral reserves may become uneconomical. This will lead, in turn, to a reduction in estimated reserves. Any reduction in our mineral reserves estimate could materially adversely affect our business, operating results and financial condition.

Our operations have limited proved and probable reserves; exploration for additional resources and reserves is speculative in nature, may be unsuccessful and involves many risks

Our operations have limited proved and probable reserves, and exploration and discovery of new resources and reserves are necessary to maintain current gold production levels at these operations. Exploration for gold and other precious metals is speculative in nature, may be unsuccessful and involves risks including those related to:

- locating orebodies;
- geological nature of the orebodies;
- identifying the metallurgical properties of orebodies;
- estimating the economic feasibility of mining orebodies;
- developing appropriate metallurgical processes;
- obtaining necessary governmental permits; and
- constructing mining and processing facilities at any site chosen for mining.

Our exploration efforts might not result in the discovery of mineralization, and any mineralization discovered might not result in an increase in resources or proved and probable reserves. To access additional resources and reserves, we will need to complete development projects successfully, including extensions to existing mines and, possibly, establishing new mines. Development projects would also be required to access any new mineralization discovered by exploration activities around the world. We typically use feasibility studies to determine whether to undertake significant development projects. These studies often require substantial expenditure. Feasibility studies include estimates of expected or anticipated economic returns, which are based on assumptions about:

- future gold and other metal prices;
- anticipated tonnage, grades and metallurgical characteristics of ore to be mined and processed;
- anticipated recovery rates of gold and other metals from the ore; and
- anticipated total costs of the project, including capital expenditure and cash costs.

All projects are subject to project study risk. There is no certainty or guarantee that a feasibility study, if undertaken, will be successfully concluded or that the project that is the subject of the study will satisfy our economic, technical, risk and other criteria in order to progress that project to development.

A failure in our ability to discover new resources and reserves, enhance existing resources and reserves or develop new operations in sufficient quantities to maintain or grow the current level of our resources and reserves could negatively affect our business, operating results and financial condition.

We are subject to the risk of litigation, the causes and costs of which are not always known

We are subject to litigation, arbitration and other legal proceedings arising in the normal course of business, including environmental, health and safety matters, and may be involved in disputes that may result in litigation. The causes of potential future litigation cannot be known and may arise from, among other things, business activities, environmental, health and safety concerns, share price volatility or failure to comply with disclosure obligations. The results of litigation cannot be predicted with certainty but could include costly damage awards or settlements, fines, and the loss of licenses, concessions, or rights, among other things.

In the event of a dispute, we may be subject to the exclusive jurisdiction of foreign courts or may not be successful in subjecting foreign persons to the jurisdiction of courts in South Africa. An adverse or arbitrary decision of a foreign court could have a material adverse impact on our financial performance, cash flow and results of operations.

We are subject to numerous claims, including class actions or similar group claims relating to silicosis and other occupational health diseases, and could be subject to similar claims in the future. A settlement in the silicosis class action claims has been reached and a provision for silicosis has been made. A provision of R820 million has been recognized at June 30, 2022, for our potential cost to settle the silicosis and TB class actions that have been instituted against us in South Africa. Significant judgment was applied in estimating the costs that will be incurred to settle the silicosis class action claims and related expenditure and the final costs may differ from current cost estimates. Management believes the assumptions are appropriate, however changes in the assumptions may materially affect the provision and final costs of settlement. There can be no assurance that the ultimate resolution of this matter will not result in losses in excess of the recorded provision and the ultimate settlement may have a material adverse effect on our financial position. For further information, see Item 8: "*Financial Information – Consolidated Statements and Other Financial Information – Legal Proceedings"* and *"Integrated Annual Report for the 20-F* 2022 – *Social – Health*" on pages 139 to 146 for further information. See note 27 "*Other Provisions – Provision for silicosis settlement*" to our consolidated financial statements set forth beginning on page F-1.

It is possible that additional class actions and/or individual claims relating to silicosis and/or other occupational health diseases will be filed against us in the future. We will defend all and any subsequent claims as filed on their merits. Should we be unsuccessful in defending any such claims, or in otherwise favorably resolving perceived deficiencies in the national occupational disease compensation framework that were identified in the earlier decision by the Constitutional Court, such matters would have an adverse effect on our financial position, which could be material.

In PNG, it is proposed to utilize deep sea tailings placement ("**DSTP**") as the tailings disposal method for the Wafi-Golpu project, which disposal method is authorized under the environment permit issued for the project. The issuance of the permit is currently the subject of a judicial review applied for in March 2021 by the previous Governor of the Morobe Province in PNG, who was opposed to DSTP. The present Governor, who was appointed in September 2022, is not opposed to DSTP and has stated publicly that he intends to withdraw the action. Notwithstanding the change of position of the Governor, it is possible that a class action or individual claim relating to DSTP may be filed against us in the future, which could have a material adverse impact on the Wafi-Golpu project.

Should we be unable to resolve disputes favorably or to enforce our rights, this may have a material adverse impact on our financial performance, cash flow and results of operations.

Risks Related to ESG

Increasing scrutiny and changing expectations from our stakeholders, including communities, governments and NGOs as well as investors, lenders and other market participants, with respect to our ESG performance and policies may impose additional costs or expose us to additional risks

Companies across all industries are facing increasing scrutiny related to ESG issues, including their internal ESG policies and governance practices. Investor advocacy groups, certain institutional investors, investment funds, lenders and other market participants are increasingly focused on ESG-related matters and in recent years have placed increasing importance on the environmental and social costs and impact of their investments. The increased focus and activism related to ESG and similar matters may hinder access to capital, as investors and lenders may decide to reallocate capital or to not commit capital as a result of their assessment of a company's ESG practices. In addition, host communities, as well as certain governmental and non-government actors, are increasingly focused on a company's ability to operate in a sustainable manner and to mitigate related risks, as well as the public commitments and quantitative metrics used to demonstrate performance and track progress.

For us, this includes, in particular, the safe operation of our mines, mitigating our impact to local environments and affected communities and reducing GHG emissions in line with our voluntary commitments. If our performance fails to meet internal or adopted external ESG standards, or we otherwise fail to satisfy stakeholder expectations with respect to our commitments and performance, regardless of whether there is a legal requirement to do so, such failure could result in reputational damage to and litigation against us and our business, financial condition, and/or share price could be materially and adversely affected.

In particular, we face heightened pressures from stakeholders, who are increasingly focused on climate change, to prioritize energy efficiency in our operations, reduce our carbon footprint and improve water and other resource consumption, as well as to be transparent about how climate-related risks and opportunities are managed throughout the supply chain to foster and promote business resiliency, accountability and stakeholder value. We may be required to implement even more stringent ESG practices or standards to meet the expectations of existing and future stakeholders and, if we fail to achieve these objectives or to adhere to internal or adopted external standards, or are perceived to be insufficiently committed to addressing ESG concerns across all of our operations and activities, our reputation and brand image could be damaged. Further, we could lose the trust of our stakeholders (including governments, NGOs, investors, customers and employees) or be subject to litigation brought by those stakeholders and our business, financial condition and results of operations could be adversely impacted.

We are subject to extensive environmental regulations in the countries in which we operate

As a gold mining company, we are subject to extensive environmental regulation. These regulations relate to, among other things, the protection of the environment, pollution, water management, waste disposal, occupational health and safety, including mine safety, toxic substances and the closure of mining operations. We expect the trend of rising production costs due to compliance with environmental laws and regulations in South Africa and PNG to continue.

In addition to compliance with local laws and regulations, our operations are also increasingly subject to stakeholder expectations concerning the application of stringent internationally-recognized environmental, health and safety and social standards and benchmarks. The application of such standards could impose significant costs on us. Certain financial institutions from whom we borrow money may also require compliance with any of these standards, the subsequent deviation from which could prevent or adversely affect our financial condition, existing financing arrangements and ability to secure future financing.

South Africa

In South Africa, the MPRDA and NEMA, along with various other environmental statutes, regulations and standards regulate the impact of our prospecting and mining operations on the environment. These statutes, regulations and standards are regularly updated, amended and supplemented, imposing additional obligations on mining companies to, among other things, minimize emissions, reduce, re-use and recycle waste and improve the quality of effluent and wastewater discharged from the operations. See Item 4: "*Information on the Company – Business Overview – Regulation – Laws and Regulations Pertaining to Environmental Protection - South Africa – NEMA*".

Under the MPRDA, a mining holder remains responsible for any environmental liability, pollution, ecological degradation, the pumping and treatment of extraneous water and the sustainable closure of mining operations until such time as the Minister issues a closure certificate. Notwithstanding this, the NEMA states that a mining right holder will remain responsible for these obligations even after a closure certificate is issued.

In South Africa, until such time as a closure certificate is issued, a mining right holder is required to assess annually the environmental liabilities associated with the mining operation (including the pumping and treatment of extraneous water) and put up financial provision for the rehabilitation, closure and ongoing post decommissioning management of negative environmental impacts. This financial provision may be released when the Minister issues a closure certificate. However, he or she may determine to retain a portion of the financial provision in perpetuity for any residual and latent environmental liabilities.

The manner in which the amount of the financial provision is calculated may in future be regulated under the Financial Provision Regulations, 2015 (as they may be amended). Prior to this, the amount of financial provision has been calculated pursuant to the Guideline Document for the Evaluation of the Quantum of Closure-related Financial Provision Provided by a Mine (the "**DMRE Guidelines**") of the DMRE. The DMRE Guidelines were criticized for undervaluing the costs of environmental rehabilitation thus exposing the DMRE to potential liability in the event that the mining right holder was unable to fulfill its environmental obligations. The proposed Financial Provision Regulations, 2015 place an emphasis on post-closure water pumping and treatment and the need for upfront provision to be set aside for the management of these types of impacts.

On November 20, 2015, the Minister of Environmental Affairs published the Financial Provision Regulations, 2015. The Financial Provision Regulations, 2015 sought to rectify the inadequacies of the DMRE Guidelines by, among other things, including preliminary and general costs in the financial provision calculations, imposing VAT (at 15%) on the total amount, prohibiting the withdrawal of trust funds for concurrent rehabilitation (even in circumstances where the financial provision exceeds the evaluated environmental liability) and ceding a portion of the funds to the Minister as security for possible latent and residual post-closure environmental impacts.

Compliance with these obligations would result in a significant increase in the required financial provision and, consequently has been strongly opposed by the mining industry. In response to this opposition, the Department of Forestry, Fisheries and the Environment ("**DFFE**"), the competent authority for drafting the Financial Provision Regulations, 2015, undertook to engage further with mining industry and other stakeholders to amend or develop new financial provision regulations. Draft amendments to the Financial Provision Regulations, 2015 were published by the Minister of Forestry, Fisheries and the Environment in May 2019, August 2021 and again on July 11, 2022. We have submitted comments on these latest draft amendments in an effort to address some of the remaining issues. In light of this the on-going consultation, the date by which mining companies are required to align their financial provision with the Financial Provision Regulations, 2015 has been extended to September 19, 2023. It is likely that the financial provision calculation will be more stringent than the calculations under the DMRE Guidelines and we may have to adjust our financial provision.

In addition, we may also face increased environmental costs should other mines in the vicinity fail to meet their obligations related to the pumping or treatment of water.

The adoption of these, or additional or more comprehensive and stringent requirements, particularly for the management of hazardous waste, pollution of ground and groundwater systems and duty to rehabilitate closed mines, may result in additional costs and liabilities, which could have a material adverse effect on our business, operating results and financial condition.

We continue to engage with the DFFE and the DMRE regarding matters relating to financial provision including the Financial Provision Regulations, 2015, as well as the adjustment of financial provision in respect of the mining operations. There are concerns about the ambiguity of the provisions and how they can be operationalized within the prescribed transitional time frames, which may result in misinterpretation, mis-application and potential disputes with the DFFE, any of which could have a material adverse effect on our business, operating results and financial condition. See note 26 *"Provision for environmental rehabilitation*" to our consolidated financial statements set forth beginning on page F-1.

Other key environmental legislation includes the South African National Water Act, 36 of 1998 ("**NWA**"), the National Environmental Management: Air Quality Act, 39 of 2004 (the "**Air Quality Act**"), the National Environmental Management: Waste Act, 59 of 2008 (the "**Waste Act**"), the National Nuclear Regulator Act, 47 of 1999, the National Environmental Management: Biodiversity Act, 10 of 2004, the National Heritage Resources Act, 25 of 1999, the Carbon Tax Act, 15 of 2019 (the "**Carbon Tax Act**"), and the MPRDA. The National Environmental Management Laws Amendment Act, 2 of 2022 ("**NEMLAA**") was assented to on June 21, 2022. The NEMLAA will come into effect on a date determined by the Minister of Forestry, Fisheries and the Environment (the "**Environment Minister**"). The NEMLAA contains numerous amendments to NEMA, many of which are intended to resolve several issues linked to the roll-out of the "One Environmental System". The NEMLAA has been described as the most significant piece of environmental legislation since the implementation of the One Environmental System, bringing with it a major shift in South Africa's environmental legislative landscape. See Item 4: *"Information on the Company – Business Overview – Regulation – Laws and Regulations Pertaining to Environmental Protection - South Africa*".

Papua New Guinea

Our PNG operations are subject to the PNG Environment Act 2000 ("**PNG Environment Act**") and various related regulations and guidelines. The PNG Environment Act regulates discharges to air, land and water, and sets out the requirements for proponents to obtain an environment permit for the construction and operation of prescribed activities having the potential to cause environmental harm. An environmental impact statement is required when projects are likely to have a significant adverse impact on the environment and other social or cultural heritage aspects. The PNG Government will use the environmental impact statement as the means to assess a project's impacts, in accordance with statutory processes, and decide whether the Environment Minister should grant approval in principle for the project under the PNG Environment Act. Thereafter, the Managing Director Conservation and Environment Protection Authority ("**CEPA**") may grant a Level 3 environment permit for the project.

Compliance with existing or new environmental legislation, which increases the burden of compliance or the penalties for non-compliance may cause us to incur further significant costs and could have a material adverse effect on our business, operating results and financial condition.

A process of mining regime review is underway within PNG and a number of environmental matters are under consideration. These include a Mine Closure Policy and Mining Project Rehabilitation and Closure Guidelines (which include requirements for the provision of financial assurance for mine closure and rehabilitation costs), a Biodiversity Offsets Policy (which anticipates biodiversity offset payments to support biodiversity initiatives), and a National Oceans Policy. See Item 4: "*Information on the Company – Business Overview – Regulation – Laws and Regulations pertaining to Environmental Protection – Papua New Guinea*".

Our operations and projects in PNG will potentially be affected by changes to PNG environmental laws, which could have a material adverse effect on our business, operating results and financial condition. As such we continue to engage with the PNG Government on these matters, indirectly through the offices of the PNG Chamber of Mines and Petroleum and directly with CEPA and (in the case of mine closure) with the MRA.

See "*Integrated Annual Report* for the 20-F 2022 – *Environment – Environmental management and stewardship*" on pages 89 to 96 for further discussion on the applicable legislation and our policies on environmental matters.

The socio-economic framework in the regions in which we operate may have an adverse effect on our operations and profits

We have operations in South Africa and PNG. As a result, changes to or instability in the social, economic or political environment in either of these countries or in countries proximate to them could affect an investment in us. Without limitation, political risks may include the following: political instability and terrorism; nationalization; change in legislative, regulatory or fiscal frameworks; renegotiation or nullification of existing contracts, leases, permits or other agreements; restrictions on repatriation of earnings or capital; changes in laws and policy; and socio-economic risks including civil unrest and criminality. The impact of future long term health related issues may heighten social tensions and demands, as individuals look to the mining industry for job creation opportunities and other resources and benefits.

In March 2019, the President of South Africa, Cyril Ramaphosa, announced in parliament that South Africa would move forward with the nationalization of the SARB. Since the announcement, there have been various contradictory statements made by government officials regarding the government's plans to nationalize the SARB, which have created uncertainty around this issue, notwithstanding that the SARB's independence is constitutionally guaranteed. Although the most recent statements of the African National Congress ("**ANC**") suggest that nationalizing the SARB is still part of their policy, it appears that the nationalization process has been put on hold.

In PNG, the government of Prime Minister, James Marape, has advocated a policy of "Take Back PNG", intended to increase the PNG Government's share of the proceeds from mining, enhance landholder and provincial government equity participation in mining projects and promote direct involvement in mining and exploration by State-owned enterprises. In addition to a comprehensive ongoing review of PNG's mining regime, this policy has witnessed the passage of the Mining (Amendment) Act 2020 which empowers the PNG Government to reserve land that is subject to an expired, cancelled, surrendered or relinquished tenement, and the tabling of a proposed Organic Law, which envisages the transfer of ownership of minerals from the PNG Government to a SOE not subject to the PNG Mining Act.

It is difficult to predict the future political, social and economic environment in these countries, or any other country in which we operate save to state that any social, economic or political changes or instability may adversely affect the general business environment and our business, results of operations and financial condition, including the movement of funds into or out of South Africa and PNG.

Given the nature of mining and the type of mines we operate, we face a material risk of liability, delays and increased cash costs of production from environmental and industrial accidents and pollution compliance breaches

The business of gold mining involves significant risks and hazards, including environmental hazards and industrial accidents. In particular, hazards associated with underground mining include:

- rock bursts;
- seismic events;
- underground fires;
- cave-ins or fall-of-ground;
- discharges of gases and toxic chemicals;
- release of radioactive hazards;
- flooding or droughts;
- mining of pillars (integrity of shaft support structures may be compromised and cause increased seismicity);
- processing plant fire and explosion;
- critical equipment failures;
- accidents and loss-of-life incidents; and
- other conditions resulting from drilling, blasting and the removal and processing of material from a deep-level mine.

Hazards associated with opencast mining (also known as open-pit mining) include:

- flooding of the open-pit;
- collapse of open-pit walls or slope failures;
- processing plant fire and explosion;
- accidents associated with operating large open-pit and rock transportation equipment;
- accidents associated with preparing and igniting of large-scale open-pit blasting operations; and
- major equipment failures.

Hazards associated with construction and operation of waste rock dumps and tailings storage facilities include:

- accidents associated with operating a waste dump and rock transportation;
- production disruptions caused by natural phenomena, such as floods and droughts and weather conditions, potentially exacerbated by climate change;
- dam, wall or slope failures; and
- contamination of ground or surface water.

We are at risk from any or all of these environmental and industrial hazards. In addition, the nature of our mining operations presents safety risks. Our operations are subject to health and safety regulations, which could impose additional costs and compliance requirements. We may face claims and liability for breaches, or alleged breaches, of such regulations and other applicable laws. Any legislative changes relating to financial provisions could add to the costs. The occurrence of any of these events could disrupt production, increase cash costs and, individually or in the aggregate, have a material adverse effect on our business, results of operations and our financial condition.

Mining companies are increasingly expected to provide benefits to affected communities; failure to comply with these requirements can result in legal suits, additional operational costs, investor divestment and impact our "social license to operate", which could adversely impact our business, operating results and financial condition

As a result of public concern about the perceived ill effects of economic globalization, businesses in general and large international companies such as our company, in particular, face increasing public scrutiny of their activities.

Like other mining companies, we are under pressure to demonstrate that while we seek a satisfactory return on investment for shareholders, other stakeholders including employees, contractors, communities surrounding the operations and the countries in which we operate, also benefit from our commercial activities. Such pressures tend to be particularly focused on companies whose activities are perceived to have a high impact on the social and physical environment. The potential consequences of these pressures include reputational damage, legal suits, social spending obligations and investor withdrawal. There is also increasing action by members of the general financial and investment communities, such as asset managers, sovereign wealth funds, public pension funds, universities and other groups, to promote improvements in ESG performance by us and others.

Existing and proposed mining operations are often located at or near existing towns and villages and other infrastructure, or natural water courses. The impacts of dust generation, waste storage, water quality or shortages may be immediate and directly adverse to those communities; poor environmental management practices, in particular, adverse changes in the supply or quality of water can result in community protest, regulatory sanctions or ultimately in the withdrawal of community and government support. While mining operations are intended to be designed to mitigate the impact on such communities and the environment, there can be no assurance that they will do so, and the occurrence of any of these events could disrupt production, increase cash costs and, individually or in the aggregate, have a material adverse effect on our business, results of operations and our financial condition.

In PNG, we are required under the PNG Mining Act and PNG Environment Act to pay landowners compensation for any loss or damage sustained by them arising from our exploration or mining activities. In certain prescribed instances, the quantum of these payments is regulated, or otherwise is the subject of negotiation (and determination by a mine warden in the event of disagreement).

In addition, it is a practice under the PNG mining regime for mining tenement holders to enter into a negotiated Memorandum of Agreement ("**MOA**") with the PNG Government, the affected provincial and local level governments, the affected landowner(s) and other stakeholder organizations regarding the sharing of benefits (e.g. royalties payable to the PNG Government) derived from the mining operations and other social performance objectives.

Under the Hidden Valley Mine MOA, which was executed in 2005, an agreed share of the royalties paid by us to the PNG Government in respect of our mining operations is allocated among Morobe Provincial and local level governments and landowner groups. Also, the Hidden Valley MOA contains agreed national content, localization and social performance plans, which address various aspects of procurement, business development, employment and training and other community support.

Delays in projects attributable to a lack of community support or community-related disruptions or delays can translate directly into a decrease in the value of a project or into an inability to bring the project to, or maintain, production. The cost of implementing these and other measures to support sustainable development could increase capital expenditure and operating costs and therefore adversely impact our reputation, business, operational results and financial condition. See "*Integrated Annual Report for the 20-F 2022 – About Harmony – Our material matters*" on pages 35 to 38 and "*– Stakeholder engagement*" on pages 39 to 44.

We may not be able to meet our ESG targets

We have announced a range of ESG-related targets for the next five years and beyond, including environmental management, land rehabilitation, climate change, energy and emissions management, water use optimization, tailings and waste management, air quality, biodiversity and conservation, employee health and safety, wellness and healthcare, community empowerment, corporate social investment and corporate governance. We cannot guarantee that we will meet all these targets. For instance, the climate crisis cannot be addressed by Harmony, or any organization, on its own. Our progress is dependent not only on our own actions but on (i) the governments of the countries in which we operate, (ii) clear, early regulatory policy to help drive the change needed to meet our targets and (iii) actions of those in our value chain and wider society. Failure to meet these targets could have a material adverse effect on our business, operating results and financial condition, as well as pose reputational and litigation risks. See "*Integrated Annual Report for the 20-F 2022 – Environment*" set forth on pages 89 to 129.

Compliance with emerging climate change regulations and other sustainability measures could result in significant costs for us

Increased global awareness that GHGs contribute to climate change has resulted in legislative mechanisms obliging companies to report GHG emissions and implement measures to reduce GHG emissions and imposing penalties or taxes on GHG emissions. The manner in which these legislative mechanisms and sustainability measures will affect the Company are set out in more detail below.

Reporting GHG Emissions

In South Africa, the National Greenhouse Gas Emission Reporting Regulations require that we register our operations that involve fuel combustion activities associated with mining and quarrying in excess of 10MW as well as certain other activities associated with the mineral industry. We must report our GHG emissions and activity data in respect of these operations in accordance with the Technical Guidelines for Monitoring, Reporting and Verification of Greenhouse Gas Emissions by Industry ("**Technical Guidelines**") for each of the relevant GHGs and the Intergovernmental Panel on Climate Change ("**IPCC**"), emission sources by March 31st of each year. The Technical Guidelines are a companion to the South African National GHG Regulations and describe the reporting methodology as specified in the Air Quality Act.

Reduction in GHGs

GHGs are emitted directly by our operations, as well as indirectly as a result of consuming electricity generated by external utilities. Emissions from electricity consumption are indirectly attributable to our operations.

A number of international measures seeking to mitigate or limit GHG emissions have been ratified by South Africa and PNG, including the Paris Agreement, a treaty negotiated at the Conference of the Parties of the UN Framework Convention on Climate Change in Paris in December 2015 (the "**Paris Agreement**"), pursuant to which member countries set out the manner and period in which they plan to reduce emissions. This commitment or "nationally-determined contribution" is informed by each member country's circumstances.

Pursuant to South Africa's nationally-determined contribution, GHG emissions will peak between 2020 and 2025, plateau from 2025 to 2035 and thereafter decline from 2036 onwards.

PNG's GHG emissions have historically been negligible. However, according to PNG's nationally-determined contribution, economic development in PNG will see an increased reliance on fuel. The PNG Government therefore plans to reduce fossil fuel emissions in the electricity generation sector and transition to 100% renewable energy by 2030, provided that funding is available.

The Carbon Tax Act was enacted to assist South Africa in meeting its objectives under its nationally-determined contribution.

The Carbon Tax Act came into effect on June 1, 2019 notwithstanding that the regulations required for implementation had not then been promulgated. Pursuant to the Carbon Tax Act, a party is liable to pay a carbon tax if it conducts an activity in South Africa resulting in GHG emissions above the threshold set out in Schedule 2 to the Carbon Tax Act. The tax is charged at a rate of R144 per tonne of GHG emissions generated by burning fossil fuels, unintentionally emitting GHGs during the extraction, processing, delivery and burning of fossil fuels for energy production, including from industrial plant and pipelines, and conducting manufacturing processes that chemically and physically transform materials.

The tonnage of GHGs in respect of these activities is determined by multiplying GHG emission factors contained in the Schedules to the Carbon Tax Act by the mass of fossil fuels or raw materials used or produced, as the case may be. Until December 31, 2025 the tax rate will be increased annually by the consumer price index ("**CPI**") plus 2%. Thereafter, the rate will increase annually by the CPI.

In order to reduce the significant tax that results by multiplying the total tonnage of GHG by R144, the Carbon Tax Act makes provision for various "allowances" which could result in a decrease of the carbon tax payable by up to 95%. These allowances include:

- allowance for fossil fuel combustion;
- allowance for industrial process emissions;
- allowance in respect of fugitive emissions;
- a trade exposure allowance;
- a performance allowance;
- a carbon budget allowance; and
- an offset allowance.

These allowances reduce the effective carbon tax rate to between R6 and R48 per tonne of GHG. Pursuant to section 19 of the Carbon Tax Act, the Minister of Finance must make regulations regarding: the sub-sector GHG emissions intensity benchmark required in order to calculate the performance allowance; the manner in which the trade exposure allowance must be determined; and carbon offsets. To date, only the carbon offset regulations under the Carbon Tax Act have been promulgated, which set out the eligibility criteria for carbon offset projects, a procedure for taxpayers claiming the carbon offset allowance, and administration of the offset system. The National Treasury published amendments to the carbon offset regulations in March 2021, which among other things stated that the carbon offset regulations were amended to clarify that carbon credits from approved "clean development mechanism" projects issued under national registries will be eligible for carbon offsets. The intensity benchmark regulations and trade exposure regulations are still only in draft form. In respect of carbon budgets, the

South African government has undertaken to consult with industry to ensure an "optimal combination" of mitigation actions that strike a balance between South Africa's socio-economic imperatives, especially creating and preserving jobs, as well as the need to manage climate change impacts and contribute to global efforts to stabilize GHG concentrations.

On February 18, 2022, the DFFE introduced the Climate Change Bill, 9 of 2022 (the "**2022 Climate Change Bill**"), for public consultation. The 2022 Climate Change Bill would impose carbon budgets on entities in certain high-emitting industries, such as mining. It also requires companies, including Harmony, to submit pollution prevention plans covering the period from January 1, 2021 to December 31, 2025. The carbon budgets are intended to operate as statutory limits for CO_2e, emissions in excess of which may entail a fine, or other punitive measures. It is expected that the Carbon Tax Act will be aligned with the 2022 Climate Change Bill, such that it will set out the amount that companies will be required to pay for CO_2e emissions exceeding the applicable carbon budget. Further, if the 2022 Climate Change Bill is enacted, it is expected that the South African government will phase out the current carbon budget allowance of 5% provided for under the Carbon Tax Act.

The first carbon tax payment for the period from June 1, 2019 to December 31, 2019 was originally due on July 31, 2020, but was extended to October 31, 2020 due to the Covid-19 pandemic. Carbon tax reporting and payment for 2020 was due on July 29, 2021, with details and requirements related to reporting available on the South African Revenue Service's website.

Our tax liability due to the carbon tax has been provisionally estimated. However, at this time it is not possible to determine the ultimate impact of the Carbon Tax Act on the Company. Nevertheless, we have set our internal carbon price (for the South African operations) to match that of the carbon tax. We may also be liable for potential pass-through costs from our suppliers in the short term from increased fuel prices. Simultaneously with the introduction of the carbon tax under the Carbon Tax Act, a carbon fuel levy was introduced under the Customs and Excise Act 91 of 1964 ("**Customs and Excise Tax**"), as part of the current South African fuel levy regime. The carbon tax on liquid fuels will be imposed at the fuel source. It is estimated that the increased fuel price would be R0.13/liter. This will have an impact on our operational expenses.

The carbon tax poses a relatively low cost to us until December 31, 2025 after which it is anticipated that the "allowances" discussed above will be reduced and the tax will be increased. It is also anticipated that carbon taxes will be imposed on electricity usage generated from fossil fuels. The impact of the carbon tax on us arising from electricity usage after December 31, 2025 is currently unknown but it is anticipated that it may be between R100 million to R500 million per year from fiscal 2023 to fiscal 2030.

The largest portion of GHG emissions is predominantly electricity-related, with electricity expenditure amounting to approximately 15% of our cash costs in South Africa. While cost management is clearly a strategic issue for us, of even greater importance is that energy supply be constant and reliable, given the implications of a loss of energy on both production and health and safety. Additional taxes on energy will affect us significantly, as will regulation that may include, among other things, emission measurement and reduction, audit processes and human resource costs. There is some sentiment expressed by National Treasury that the taxes may be increased but this is not supported by regulation at present.

Assessments of the potential impact of future climate change regulation are still uncertain, given the wide scope of potential regulatory change in South Africa. Such regulatory initiatives and related costs could have a material adverse effect on the business, operating results and financial condition.

Climate Change legislation and policy

As mentioned above, the DFFE published the 2022 Climate Change Bill for public consultation in response to the international commitments made under the Paris Agreement. It aims to address climate change in the long-term by aiming for a climate resilient and low carbon economy in South Africa. Comments on the 2022 Climate Change Bill were due on May 27, 2022. It is unclear when a new draft will be made available.

In PNG, the PNG Climate Change (Management) Act 2015 provides the regulatory framework with respect to climate change in PNG, and establishes PNG's Climate Change and Development Authority as the coordinating entity for climate change related policies and actions across PNG and the designated National Authority under the UN Framework Convention on Climate Change. Implementation actions under this policy to date have been very limited, however in January 2021 the PNG Climate Change Fees and Charges came into effect which include taxes on carbon in fuel products and a Green Fee (a departure tax for non-residents leaving PNG), and in August 2022 a draft Climate Change (Management) (Carbon Markets) Regulation was circulated for discussion. Future implications of the climate change policy on our operations in PNG are still being established and while they are not expected to have significant impact in the near term, they may potentially have a material adverse effect on our business, operating results and financial condition in the future.

See "Integrated Annual Report for the 20-F 2022 – *Environment – Environmental management and stewardship*", and "– *Climate change, energy and emissions management*" on pages 89 to 96 and 100 to 105 for disclosure regarding our GHG emissions.

Climate change may present physical risks to our operations

Our operations could be exposed to a number of physical risks posed by climate change, such as changes in rainfall, rising sea levels, reduced water availability, higher temperatures and more frequent extreme weather events. Events or conditions such as fires, flooding or inadequate water supplies could disrupt our mining and transport operations, mineral processing and rehabilitation efforts, create resource or energy shortages, damage property or equipment and increase health and safety risks. Such events or conditions could have other adverse effects on our workforce and on the communities around our mines, such as an increased risk of food insecurity, water scarcity and prevalence of disease. Each of these potential physical impacts of climate change could disrupt our operations and have a material adverse effect on our business, operating results and financial condition.

The cost of occupational health care services and the potential liabilities related to occupational health diseases may increase in future and may be substantial

Our operations are subject to health and safety regulations which could impose significant cost burdens. In South Africa, the MHSA imposes various duties on mines and grants the authorities broad powers to, among others, close mines which are unsafe or hazardous to the health of persons and order corrective action on health and safety matters. Operations in PNG are subject to similar duties and powers, including under the following laws and regulations: PNG Industrial Safety, Health and Welfare Act 1961, PNG Industrial Safety, Health and Welfare Regulations 1965, PNG Mining Act, PNG Mining (Safety) Act), PNG Mining Safety Regulation 1935 (updated in 2006) and PNG Environment Act. In June 2021, the PNG Ministry of Mining released the draft Mine & Works (Safety & Health) Bill 2021 which, if enacted in its present form, will repeal and replace the PNG Mining (Safety) Act.

There is a risk that the cost of providing health services, complying with applicable regulations, including the Compensation for Occupational Injuries and Diseases Act, 130 of 1993 ("**COIDA**"), and the Occupational Diseases in Mines and Works Act, 78 of 1973 ("**ODMWA**"), and implementing various programs could increase in future, depending on changes to underlying legislation, legal claims and the profile of our employees. This increased cost, should it transpire, could be substantial, but is currently indeterminate.

The Occupational Lung Disease Working Group ("**Working Group**"), was formed in fiscal 2014 to address issues relating to compensation and medical care for occupational lung disease in the South African gold mining industry. The Working Group, made up of African Rainbow Minerals Limited, Anglo American SA, AngloGold, Gold Fields Limited, Harmony and Sibanye Gold Limited, has had extensive engagements with a wide range of stakeholders since its formation, including government, organized labor, other mining companies and the legal representatives of claimants who have filed legal actions against the companies.

We have been subject to numerous claims, including class actions or similar group claims relating to silicosis and other occupational lung diseases, and could be subject to similar claims in the future. For instance, in May 2016, the High Court of South Africa (Gauteng Division) certified a class action by current and former mine workers against gold mining companies in South Africa, including us. The action consists of two classes: the silicosis class and the tuberculosis ("**TB**") class. Each class includes mine workers and dependents whose parents died after contracting silicosis and/or TB while working at the mines. The certification of the class means that the claimants were able to sue the mining companies as a class. While issues, such as negligence and causation, need to be proved by the claimant on a case-by-case basis, such a ruling could expose us to claims related to occupational hazards and diseases (including silicosis and TB, which may be in the form of an individual claim, a class action or a similar group claim). The Supreme Court of Appeal granted the mining companies leave to appeal against all aspects of the class May 2016 judgment. The appeal hearing before the Supreme Court of Appeal was scheduled to be heard in March 2018.

However, the parties agreed to postpone the matter to conclude settlement negotiations. The matter was subsequently settled in May 2018. The terms of the settlement are available on our website. The settlement was subject to certain conditions, including that an unconditional order of court, sanctioning the settlement agreement to make the settlement agreement an order of court, is obtained from the High Court of South Africa (Gauteng Division). Such an order was obtained on July 26, 2019, subject to certain conditions which were subsequently fulfilled, and the settlement became effective on December 10, 2019. Accordingly, the Tshiamiso Trust was created for purposes of administering the settlement funds, with all trustees having been appointed by February 6, 2020. See Item 8: "*Financial Information – Consolidated Statements and Other Financial Information – Legal Proceeding*s" and "*Integrated Annual Report for the 20-F 2022 – Health*" on pages 139 to 146 for further information. See note 27 "*Other Provisions – Provision for silicosis settlement*" to our consolidated financial statements set forth beginning on page F-1.

On January 31, 2020, the Working Group commenced the payment of their quarterly administration and benefit contributions to the Tshiamiso Trust to enable the trustees to settle benefits of eligible claimants.

As a result of the ongoing work of the Working Group and engagements with affected stakeholders since December 31, 2016, we provided for our share of the estimated cost in relation to the Working Group of a settlement of the class action claims and related costs. At June 30, 2022 the provision in our statement of financial position was R820 million. We believe that this remains a reasonable estimate of our share of the estimated cost in relation to the Working Group of the settlement of the class action claims and related costs. The final settlement costs and related expenditure may, however, be higher than the recorded provision depending on various factors, such as, among other things, differences in the number and profile of eligible claimants actually compensated compared to current estimates and fluctuations in foreign exchange rates. See note 27 "Other provisions – Provisions for Silicosis Settlement" to our consolidated financial statements set forth beginning on page F-1.

If we or any of our subsidiaries were to face a significant number of additional such claims and the claims were suitably established against it, the payments of compensation to the claimants could have a material adverse effect on our results of operations and financial condition. In addition, we may incur significant additional costs, including costs relating to the payment of fees, levies or other contributions in respect of compensatory or other funds established (if any), and expenditures arising out of our efforts to resolve any such claims or other potential actions.

Our operations are subject to water use and other licenses, which could impose significant costs

Under the NWA a person may only undertake a "water use" subject to a water use license (and the conditions contained therein) issued under the NWA, a general authorization issued by the Minister of Water and Sanitation or in terms of a prior existing water use, such as a water permit issued under the NWA's predecessor, Water Act, 54 of 1954 ("**Water Act**"). Persons undertaking water use under a general authorization or prior existing water use are required to register this use with the Department of Water and Sanitation ("**DWS**") and are required to comply with the conditions contained in the published general authorization or any conditions contained in any prior existing water use (to the extent there are any).

Our South African operations are predominantly regulated under water permits issued pursuant to the Water Act, with some having been converted to water use licenses under the NWA. Notwithstanding this, the South African operations have elected to convert all prior existing water uses into water use licenses under the NWA to ensure these operations are carried out in accordance with current best practice and water quality standards. Submissions were made as early as 2003 and we have been working closely with the regional directors in the review process.

Some operations have received draft licenses for review and comment before finalization by the regional directors at the DWS. Kusasalethu and Kalgold received their final water use licenses. These licenses, however, contain conditions that are impossible to meet and, as a result, we have applied to amend the relevant conditions.

In future, when new water licenses are issued, we may need to implement alternate water management measures that may require significant cost implication for our business. We intend to work collaboratively with the regional departments and catchment management agencies (which are aimed at decentralizing water management and facilitating inclusive stewardship of water resources) to reach a sustainable outcome for both us and the water resource/environment.

Failing to comply with the conditions of a water use license may result in the competent authority issuing a compliance notice or directive to us instructing it to take measures to correct the non-compliance and, in some instances, to cease operations pending the resolution of the non-compliance. In addition, failing to comply with a water use license is an offense that may result in prosecution. If we are successfully prosecuted, the court may impose fines, damages, director and employee liability and imprisonment.

Any of these could have a material effect on our business, operating results and financial condition.

In addition to the licensing requirements mentioned above, the NWA imposes a duty of care on us to take reasonable measures to prevent pollution or contamination of water resources. The nature and extent of the reasonable measures will depend on the circumstances of each case. If we fail to implement the measures required of it, a directive may be issued by the competent authority instructing us to implement certain measures within a prescribed period. Failing to comply with a directive is an offense and may result in prosecution and the penalties contemplated above. In addition, the competent authority could implement the necessary measures using its own methods and resources, and thereafter and recoup the costs from us.

Any such environmental levy could have a material effect on our business, operating results and financial condition. In addition, the occurrence of Acid Mine Drainage ("**AMD**") at any of our mines could affect our ability to comply with our water use license requirements.

Obligations in respect of the pumping and treatment of extraneous water must also be addressed in connection with our final closure plans for each of our operations and we are responsible for these liabilities until a closure certificate is issued pursuant to the MPRDA and possibly thereafter under the NEMA. This liability is discussed in more details in Item 4: "*Information on the Company – Business Overview – Regulation – Law and Regulations Pertaining to Environmental Protections in South Africa – NEMA*".

In PNG, the issuance of separate "waste discharge" and "water extraction" (water use) permits has now been abolished and, following the conclusion of the assessment process for a project, a single environment permit is issued by the Managing Director of CEPA under the provisions of the PNG Environment Act. The Environment permit includes provisions for both water extraction and waste discharge. An annual administration fee is payable for this permit.

See "*Integrated Annual Report for the 20-F 2022 – Environment – Water use*" on pages 106 to 109.

Compliance with tailings management requirements and standards, and potential liabilities in the event of a failure to timely comply or an incident involving a tailings storage facility, could adversely impact our financial condition, results of operations and reputation.

Mining companies face inherent risks in their operation of tailings storage facilities. Tailings storage facilities are engineered structures built for the containment of the uneconomical milled ore residue and water, known as tailings. The use of tailings storage facilities exposes us to certain risks, including the failure of a tailings dam due to events such as high rainfall, overtopping of the dam, piping or seepage failures. The potential occurrence of a dam failure at one of our tailings storage facilities could lead to the loss of human life and extensive property and environmental damage.

We maintain measures to manage our dams' safety, including compliance with the International Council on Mining and Metals' Tailings Governance Position Statement, our Code of Practice and undertakes routine reviews by independent consulting companies. Although we have a tailings storage facility management system, the effectiveness of its designs, construction quality or regular monitoring cannot be guaranteed throughout its operations and it cannot be guaranteed that these measures will prevent the failure of one or more of its tailings dams or that such potential failure will be detected in advance. In addition, although we generally require our partners to maintain such systems, we cannot guarantee that our partners maintain similar safety precautions or monitoring systems on their tailings storage facilities. There is no assurance that any safety measures implemented will prevent the failure of any tailings storage facility.

The failure of a tailings storage facility will lead to multiple legal proceedings and investigations, which could include securities class actions, criminal proceedings and public civil actions (against us or individuals) for significant amounts of damages. Furthermore, the elimination of the "conventional" practice of storing wet tailings (e.g. alternatively filtering, "dry" stacking and compacting the tailings) could require the research and development of new technologies, which could lead to additional large expenditures. As a result of the dam failure in Brazil in 2015 and 2019, and Canada in 2014 (neither of which are associated with us) or as a result of future dam failures, additional environmental and health and safety laws and regulations may be forthcoming globally, including in jurisdictions where we operate, which may ban the storage of wet tailings completely. In addition, changes in laws and regulations may impose more stringent conditions in connection with the construction of tailings dams, particularly with respect to upstream tailings dams which could also be made illegal. Further, we may see changes in the licensing process of projects and operations, the imposition of significant financial assurance requirements, and increased criminal and civil liability for companies, officers and contractors.

Furthermore, the unexpected failure of a dam at a tailings storage facility could lead to the need for a large expenditure on contingencies and on recovering the regions and people affected, extensive and permanent environmental damage and the payment of penalties, fines or other money damages. The occurrence of any of such risks could have a material adverse effect on our business, operating results and financial condition. See "*Integrated Annual Report for the 20-F 2022 – Environment – Tailings and waste management*" on pages 110 to 114.

We may have exposure to rehabilitate potential groundwater pollution, which may include salination, and radiation contamination that may exist where we have operated or continue to operate; implementation of the financial provision regulations may require us to include provision in our financial statements for rehabilitation

Due to the interconnected nature of mining operations at Doornkop, Kusasalethu, Mponeng, Mine Waste Solutions ("**MWS**") and Moab Khotsong, any proposed solution for potential flooding and decant risk posed by deep groundwater needs to comprise a regional solution supported by all mines located in the goldfields and the government in the event of legacy issues. As a result, the DMRE and affected mining companies are involved in developing a regional mine closure strategy. In view of the status of the Financial Provision Regulations, 2015, no reliable estimate can be made for any possible obligations or liabilities, which could be material and have an adverse impact on our financial condition.

See "*—Risks Related to Our Industry - We are subject to extensive environmental regulations in the countries in which we operate*".

We are implementing the following steps to ensure that funds are available to top up our financial provision, if necessary:

- facilitating concurrent rehabilitation;
- re-purposing infrastructure; and
- accelerating mine closure rehabilitation where operations have reached the end of its geological life.

Currently, no provision for any potential liability has been made in our financial statements under the Financial Provision Regulations, 2015. If provision needs to be made, and is substantial, this could have a material adverse effect on our business, operating results and financial condition.

Compliance with new and changing corporate governance and public disclosure requirements adds uncertainty to our compliance policies and increases our costs of compliance

Laws, regulations and standards relating to accounting, corporate governance and public disclosure, "conflict minerals" and "responsible" gold, SEC regulations and other listing regulations applicable to us are subject to change and can create uncertainty for companies like us. New or changed laws, regulations, codes and standards could lack specificity or be subject to varying interpretations. Their application in practice may evolve over time as new guidance is provided by regulatory and governing bodies. This could result in continuing uncertainty on compliance matters and higher costs of compliance as a result of ongoing revisions to such governance standards.

We are committed to maintaining high standards of corporate governance and public disclosure, and our efforts to comply with evolving laws, regulations, codes and standards in this regard have resulted in, and are likely to continue to result in, increased general and administrative expenses, which could have a material adverse effect on our business, operating results and financial condition.

Risks Related to Our Corporate and Financing Structure and Strategy

Our inability to maintain an effective system of internal control over financial reporting may have an adverse effect on investors' confidence in the reliability of our financial statements

Internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of the company's financial statements for external purposes in accordance with IFRS as issued by the IASB. Disclosure controls and procedures are designed to ensure that information required to be disclosed by a company in reports that it files or submits under the Exchange Act, is recorded, processed, summarized and reported within the time periods specified in the rules and forms of the SEC. We have invested in resources to facilitate the documentation and assessment of our system of disclosure controls and our internal control over financial reporting. However, a control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance with respect to the reliability of financial reporting and financial statement preparation. If we were unable to maintain an effective system of internal control over financial reporting, investors may lose confidence in the reliability of our financial statements, and this may have an adverse impact on investors' abilities to make decisions about their investment in us. See Item 15: "*Controls and Procedures*".

We may experience problems in identifying, financing and managing new acquisitions or other business combination transactions and integrating them with our existing operations; we may not have full management control over future joint venture partners

In order to maintain or expand our operations and reserve base, we have sought, and may continue to seek to enter into joint ventures or other business combination transactions or to make acquisitions of selected precious metal producing companies or assets. For example, in 2018 we acquired AngloGold's Moab Khotsong and Great Noligwa mines together with other assets and related infrastructure in the Moab Acquisition and with effect on October 1, 2020, acquired the remainder of AngloGold's South African business, including the Mponeng mine and MWS, in the Mponeng Acquisition.

Acquiring new mining operations or entering into other business combination transactions involves a number of risks including:

- our ability to identify appropriate assets for acquisition and/or to negotiate an acquisition or combination on favorable terms;
- obtaining the financing necessary to complete future acquisitions;
- difficulties in assimilating the operations of the acquired business;
- the changing regulatory environment as it relates to the Mining Charter (as defined below) and the general policy uncertainty in South Africa;
- difficulties in maintaining our financial and strategic focus while integrating the acquired business;
- problems in implementing uniform quality, standards, controls, procedures and policies;
- management capacity, and skills to supplement that capacity, to integrate new assets and operations;
- increasing pressures on existing management to oversee an expanding company; and
- to the extent we acquire mining operations or enter into another business combination transaction outside South Africa, Australia or PNG, encountering difficulties relating to operating in countries in which we have not previously operated.

Any such acquisition or joint venture may change the scale of our business and operations and may expose us to new geographic, geological, political, social, operating, financial, legal, regulatory and contractual risks. Our ability to make successful acquisitions and any difficulties or time delays in achieving successful integration of any of such acquisitions could have a material adverse effect on our business, operating results and financial condition.

In addition, to the extent that we participate in the development of a project through a joint venture or other multi-party commercial structure, there could be disagreements, legal or otherwise or divergent interests or goals among the parties, which could jeopardize the success of the project, particularly if we do not have full management control over the joint venture. There can be no assurance that any joint venture will achieve the results intended and, as such, any joint venture could have a material adverse effect on our revenues, cash and other operating costs. See Item 5. "*Operating and Financial Review and Prospects - Liquidity and Capital Resources - Cash flows from investing activities*".

Certain factors may affect our ability to support the carrying value of our property, plant and equipment, goodwill and other assets on our balance sheet, resulting in impairments

We review and test the carrying value of our assets when events or changes in circumstances suggest that this amount may not be recoverable and impairments may be recorded as a result of testing performed.

Our market capitalization on any reporting date is calculated on the basis of the price of our shares and ADSs on that date. Our shares and ADSs may trade in a wide range through the fiscal year depending on the changes in the market, including trader sentiment on various factors including gold price. Therefore, there may be times where our market capitalization is greater than the value of our net assets, or "book value", and other times when our market capitalization is less than our book value. Where our market capitalization is less than our net asset or book value, this could indicate a potential impairment and we may be required to record an impairment charge in the relevant period.

At least on an annual basis for goodwill, and when there are indications that impairment of property, plant and equipment and other non-financial assets may have occurred, estimates of expected future cash flows for each group of assets are prepared in order to determine the recoverable amounts of each group of assets. These estimates are prepared at the lowest level at which identifiable cash flows are considered as being independent of the cash flows of other mining assets and liabilities. Expected future cash flows are inherently uncertain, and could materially change over time. Such cash flows are significantly affected by reserve and production estimates, together with economic factors such as spot and forward gold prices, discount rates, currency exchange rates, estimates of costs to produce reserves and future capital expenditures.

As at June 30, 2022, we had substantial amounts of property, plant and equipment, goodwill and other assets on our consolidated balance sheet. Impairment charges of R4,433 million relating to property, plant and equipment, goodwill and other assets were recorded in fiscal 2022. If management is required to recognize further impairment charges, this could have a material adverse effect on our results of operations and financial condition.

Our ability to service our debt will depend on our future financial performance and other factors

Our ability to service our debt and maintain compliance with financial covenants depends on our financial performance, which in turn will be affected by our operating performance as well as by financial and other factors, and in particular the gold price, certain of which are beyond our control. Various financial and other factors may result in an increase in our indebtedness, which could adversely affect us in several respects, including:

- limiting our ability to access the capital markets;
- hindering our flexibility to plan for or react to changing market, industry or economic conditions;
- limiting the amount of cash flow available for future operations, acquisitions, dividends, or other uses, making us more vulnerable to economic or industry downturns, including interest rate increases;
- increasing the risk that we will need to sell assets, possibly on unfavorable terms, to meet payment obligations; or
- increasing the risk that we may not meet the financial covenants contained in our debt agreements or timely make all required debt payments.

The occurrence of any of these events could adversely affect our results of operations and our financial condition. See " – T*he impact from, and measures taken to address, the Covid-19 pandemic may adversely affect our people, and may impact our business continuity, operating results, cash flows and financial condition.*"

Our ability to service our debt also depends on the amount of our indebtedness. In order to fund the Mponeng Acquisition, we completed a placing pursuant to which we issued new ordinary shares for cash which had the effect of reducing net debt at the end of fiscal 2020. On September 30, 2020, when the purchase price for the Mponeng Acquisition was paid, the net debt level increased again. While the Covid-19 pandemic has resulted in higher gold prices and improved cash flow as a result, it also disrupted operations and may continue to do so, which could impact on our ability to repay our debts. In May 2022 we entered into a US$400 million sustainability-linked syndicated term and revolving credit facility, as well as a R2.5 billion sustainability-linked revolving credit facility. The first two facilities have a three-year term and include two extension options of one year each and the last facility has a six and one-half year term. At June 30, 2022, US$200 million was drawn against the US$ facility. See Item 5: "*Operating and Financial Review and Prospects - Liquidity and Capital Resources - Cash flows from financing activities"* and *"- Outstanding Credit Facilities and Other Borrowings*".

In the near term, we expect to manage our liquidity needs from cash generated by our operations, cash on hand, committed and unutilized facilities, as well as additional funding opportunities. However, if our cost of debt were to increase or if we were to encounter difficulties in obtaining financing in the future, our sources of funding may not match our financing needs, which could have a material adverse effect on our business, operating results and financial condition.

We are subject to the imposition of various regulatory costs, such as mining taxes and royalties, changes to which may have a material adverse effect on our operations and profits

With increasing resource nationalism in recent years, governments, communities, non-government organizations and trade unions in several jurisdictions have sought and, in some cases, have imposed greater participatory imposts on the mining industry. Such imposts, whether in the form of taxes, royalties and levies, interference in project management, mandatory social investment requirements, local content requirements or creeping expropriation, are an increasing feature of the global mining industry and could materially adversely affect our business, operating results and financial condition.

South Africa

In December 2017, during its national conference, the ANC resolved that as a matter of policy, the ANC should pursue the expropriation of land without compensation, provided that such expropriation is carried out without destabilizing the agricultural sector, endangering food security or undermining economic growth and job creation. In February 2018, the National Assembly assigned the Constitutional Review Committee ("**CRC**"), to review section 25 of South Africa's Constitution and other relevant clauses to make it possible for the state to expropriate land in the public interest without compensation. On December 4, 2018, South Africa's Parliament adopted the CRC's report dated November 15, 2018 in which it recommended that section 25 of South Africa's Constitution be amended to make explicit that expropriation of land without compensation is a legitimate option for land reform. On March 13, 2019, the CRC announced that the work to amend section 25 of South Africa's Constitution would not be finished before the South African general elections in May 2019 and that consequently the matter would be taken up by Parliament after the elections. In the event that the CRC recommends a Constitutional amendment in favor of expropriation, various procedural milestones would need to occur, including a bill amending section 25 of the Constitution approved by a majority of the National Assembly as well as six of the nine provinces of the NCOP and signed by the President, among others. The legislative process to give effect to the proposed Constitutional amendment, has not yet been finalized. The National Assembly re-established the Ad-Hoc Committee tasked with initiating and introducing the legislation required to amend Section 25 of the Constitution in 2020. The Ad-Hoc Committee engaged in a public participation process which consisted of public hearings that took place from December 2019 to the end of February 2020. These public hearings were held in the nine provinces. The Ad-Hoc committee released the report on its findings on the public participation process on April 16, 2021. In a media statement on April 16, 2021, the Ad-Hoc committee advised that it had adopted the report and in a subsequent media statement on September 8, 2021, it advised that both the report and the Bill would be sent to the National Assembly for consideration.

The Draft Constitution Eighteenth Amendment Bill was published for comment at the end of 2019. The aim of the Draft Constitution Eighteenth Amendment Bill is to amend the Constitution of the Republic of South Africa, 1996 so as to provide that where land and any improvements thereon are expropriated for the purpose of land reform, the amount of compensation payable may be nil. The Draft Constitution Eighteenth Amendment Bill failed to receive the required two-thirds approval of the National Assembly in December 2021 and the proposed Amendment Bill is no longer being pursued.

In 2019, prior to the introduction of the Draft Constitution Eighteenth Amendment Bill, a draft expropriation bill (the "**Draft Expropriation Bill**") was published for public comment by the South African Minister for Public Works (the "**Minister for Public Works**"), which would allow the state to expropriate land without compensation where doing so would be for a public purpose or in the public interest. In determining to expropriate land without compensation, this legislation would also require the consideration of "all relevant circumstances", which include, among other things, whether the land is held purely for speculative purposes, is owned by the state or is abandoned. Following significant comments raised by the public on the Draft Expropriation Bill, in October 2020, a new draft expropriation bill (the "**New Draft Expropriation Bill**") was introduced by the Minister for Public Works of South Africa. The New Draft Expropriation Bill was approved by the National Assembly on September 28, 2022. It will be referred to the NCOP for consideration and thereafter to the President for ratification.

While the South African government has stated that it does not intend to nationalize mining assets or mining companies, certain political parties have stated publicly and in the media that the government should embark on a program of nationalization. For instance, the ANC has adopted two recommended approaches to interacting with the mining industry. While the ANC has rejected the possibility of mine nationalization for now, the first approach contemplates, among other things, greater state intervention in the mining industry, including the revision of existing royalties, the imposition of new taxes and an increase in the South African government's holdings in mining companies. The second approach contemplates the South African government taking a more active role in the mining sector, including through the introduction of a state mining company to be involved in new projects either through partnerships or individually.

The proposed amendment to section 25 of South Africa's Constitution or any legislation resulting in the expropriation of land or greater government intervention could disrupt our operations, which could have a material adverse effect on our business, operating results and financial condition.

The former President, Jacob Zuma, appointed the Davis Tax Committee to look into and review the current South African tax regime, including the mining tax regime. The committee's first interim report on mining, which was released for public comment on August 13, 2015, proposed no changes to the royalty regime but recommended the discontinuation of the upfront capital expenditure write-off regime in favor of an accelerated capital expenditure depreciation regime. In addition, the report recommended retaining the so called "gold formula" for existing gold mines only, as new gold mines would be unlikely to be established in circumstances where profits are marginal or where gold mines would conduct mining of the type intended to be encouraged by the formula. The committee also recommended the phasing out of additional capital allowances available to gold mines in order to bring the gold mining corporate income tax regime in line with the tax system applicable to all taxpayers. In December 2016, following a period of public comment, the committee issued its second and final report to the Minister of Finance, which largely reaffirmed the committee's initial recommendations. The final reports were published in November 2017. The South African National Treasury will continue to consider the committee's final recommendations. It is not clear at this stage which, if any, of the recommendations will be adopted as legislation. Such legislation could, however, have a material adverse effect on our business, results of operations and financial condition.

On July 31, 2020, the South African National Treasury published for public comment the 2020 Draft Taxation Laws Amendments Bill which proposed, amongst others, amendments to disallow contract miners from benefiting from the accelerated capital expenditure allowance and the elimination of the Minister of Finance's discretion to uplift the ring-fencing of capital expenditure per mine. Various stakeholders raised issues with the draft bill during the public consultation period. The Taxation Law Amendment Act, 23 of 2020 came into force on January 20, 2021. The amendments proposed in the Bill relating to contract miners and the Minister's discretion to uplift the ring-fencing of capital expenditure per mine were not included in the final Act.

On December 11, 2020, the Minister published the Housing and Living Conditions Standard, which requires us to revise our current housing and living condition plans in terms of its SLPs, which could result in increased costs. See Item 4. "*Information on the Company - Business Overview - Regulation - Mining rights - South Africa - Housing and Living Standards*".

Papua New Guinea

In PNG, participatory imposts take a variety of forms.

Taxes on Group companies are governed by the Income Tax Act 1959 and the Goods and Services Tax Act 2003, while under the PNG Mining Act and the Mineral Resources Authority Act 2018, holders of mining leases must pay royalties to the PNG Government based on production (currently 2%).

In addition to the PNG Government's entitlement to taxes and royalties, tenement holders also pay area-based rents and a mineral production levy (0.5% of assessable income derived by a producer of minerals) to the MRA, and CEPA imposes "user pays" levies.

PNG exploration licenses each contain a condition that the PNG Government may, at any time prior to the commencement of mining, purchase an equitable interest of up to 30% in any mineral discovery arising from the license at a price pro rata to the accumulated exploration expenditure. The PNG Government has indicated that it intends to exercise the PNG Government's option in full in respect of the Wafi-Golpu project.

Since 2009, the mining regime in PNG has been the subject of a comprehensive ongoing review involving various PNG Government agencies. Over that period, various draft revisions of the PNG Mining Act have been circulated and submitted to the PNG Chamber of Mines and Petroleum for its comments, most recently in 2018 and 2020. Proposed revisions include significant increases in the rate of royalties payable to the PNG Government, and changes to the terms governing the PNG Government's option to purchase an interest in a mineral discovery. If enacted and applied to our operations and projects in PNG, these revisions could have a material adverse effect on our business, operating results and financial condition. We continue to engage with the PNG Government and relevant regulators on these matters, indirectly through the offices of the PNG Chamber of Mines and Petroleum, and directly with the MRA, CEPA and the DMPGM.

In 2014, the PNG Government initiated a review of the tax regime, with a final report issued by the PNG Tax Review Committee in October 2015. Pursuant to the tax regime review, certain adverse changes to the fiscal regime were introduced with effect from January 1, 2017, with the main changes being the introduction of an additional profit tax, the cessation of the double deduction allowance for exploration expenditure, and an increase in the rates of interest withholding and dividend withholding taxes.

A new Income Tax Act (to simplify and modernize the PNG Income Law as currently set out in the PNG Income Tax Act 1959) is in the process of being drafted and is expected to be passed in the 2023 Budget, with an expected commencement date of January 1, 2024. The most recent draft was issued in September 2022 and the final consultation phase is currently in progress. The new Act will include the introduction of a capital gains tax, which will tax capital gains at a rate of 15%.

To date, the key outstanding issue is the transitional rules for treatment of existing Mining Capital and Exploration Expenditure, which rules are still to be written. We understand that these rules will be drafted and included in the final draft of the legislation that is currently in progress.

Sales of large quantities of our ordinary shares and ADSs, or the perception that these sales may occur, could adversely affect the prevailing market price of such securities

The market price of our ordinary shares or ADSs could fall if large quantities of ordinary shares or ADSs are sold in the public market, or there is a perception in the marketplace that such sales could occur. Subject to applicable securities laws, holders of our ordinary shares or ADSs may decide to sell them at any time. The market price of our ordinary shares or ADSs could also fall as a result of any future offerings it makes of ordinary shares, ADSs or securities exchangeable or exercisable for our ordinary shares or ADSs, or the perception in the marketplace that these sales might occur. We may make such offerings of additional ADS rights, letters of allocation or similar securities from time to time in the future.

As we have a significant number of shares that may be issued in terms of the employee share schemes, our ordinary shares are subject to dilution

We have recently approved a Deferred Share Plan as part of our new Total Incentive Plan that came into effect in 2020. Our shareholders have authorized up to 25,000,000 shares of the issued share capital to be used for this plan.

As a result, shareholders' equity interests in us are subject to dilution to the extent of the potential future exercises of the options through the share plan.

The continued status of South Africa's credit rating as non-investment grade, as well as a potential grey-listing of South Africa by the Financial Action Task Force ("FATF"), may have an adverse effect on our ability to secure financing on favorable terms, or at all

Over the past several years, the slowing economy, rising sovereign debt, escalating labor disputes and the structural challenges facing the mining industry and other sectors have resulted in the downgrading of South Africa's sovereign credit ratings.

Currently, South Africa's sovereign credit is rated as non-investment grade: Fitch has assigned South Africa a sovereign credit rating of BB-, Moody's has assigned South Africa a sovereign credit rating of Ba2 and S&P has assigned South Africa a sovereign credit rating of BB-. Most recently, on December 15, 2021, Fitch affirmed South Africa's sovereign credit rating as BB- and upgraded the outlook to stable; on April 1, 2022, Moody's affirmed South Africa's sovereign credit rating as Ba2 and upgraded the outlook to stable and on May 20, 2022, S&P affirmed South Africa's sovereign credit rating as BB- and upgraded the outlook to positive.

In October 2021 the FATF, an inter-governmental body, published their 'Mutual Evaluation Report' that highlighted several shortcomings of the criminal justice system insofar it relates to the prosecution and conviction of commercial crimes as well as acts of money laundering. It recommended several actions South Africa should take to prevent it being classified as a country under increased monitoring (also referred to as "**grey-listing**").

The continued status of South Africa's credit rating as non-investment grade and any downgrading by any of these agencies, as well as the grey-listing by the FATF may adversely affect the South African mining industry and our business, operating results and financial condition by making it more difficult to obtain external financing or could result in any such financing being available only at greater cost or on more restrictive terms than might otherwise be available.

We may not pay dividends or make similar payments to our shareholders in the future

Our dividend policy is to pay cash dividends only if funds are available for that purpose. Whether funds are available depends on a variety of factors, including the amount of cash available, our capital expenditures and other current or future anticipated cash requirements existing at the time. Under South African law, we are only entitled to pay a dividend or similar payment to shareholders if we meet the solvency and liquidity tests set out in the Companies Act, 71 of 2008 (as amended) including its Regulations (the "**Companies Act**"), and our current Memorandum of Incorporation. Cash dividends or other similar payments may not be paid in the future. It should be noted that there is currently a 20% withholding tax on dividends declared by South African resident companies to non-resident shareholders or non-resident ADS holders.

In addition, our foreign shareholders face investment risk from currency exchange rate fluctuations affecting the market value of any dividends or distributions paid by us.

Strategic and Market Risks

The profitability of our operations, and cash flows generated by those operations, are affected by changes in the price of gold and other metals; a fall in the gold price below our cash cost of production and capital expenditure required to maintain production for any sustained period may lead to losses and require us to curtail or suspend certain operations

Substantially all of our revenues come from the sale of gold. Historically, the market price for gold has fluctuated widely and has been affected by numerous factors, over which we have no control, including:

- demand for gold for industrial uses, jewelry and investment;
- international or regional social, political and economic events and trends;
- strength or weakness of the US dollar (the currency in which gold prices generally are quoted) and of other currencies;
- monetary policies announced or implemented by central banks, including the US Federal Reserve;
- financial market expectations on the rate of inflation;
- changes in the supply of gold from production, divestment, scrap and hedging;
- interest rates;

- speculative activities;
- gold hedging or de-hedging by gold producers;
- actual or expected purchases and sales of gold bullion held by central banks or other large gold bullion holders or dealers; and
- production and cost levels for gold in major gold-producing nations, such as South Africa, China, the United States and Australia.

In addition, current demand and supply affects the price of gold, but not necessarily in the same manner as current demand and supply affect the prices of other commodities. Historically, gold has retained its value in relative terms against basic goods in times of inflation and monetary crisis. As a result, central banks, financial institutions and individuals hold large amounts of gold as a store of value and production in any given year constitutes a very small portion of the total potential supply of gold. However, as gold has historically been used as a hedge against unstable or lower economic performance, improved economic performance may have a negative impact on the price for gold. Since the potential supply of gold is large relative to mine production in any given year, normal variations in current production will not necessarily have a significant effect on the supply of gold or its price. Uncertainty in global economic conditions has impacted the price of gold significantly in the past and continued to do so in fiscal 2022. Covid-19 and certain geopolitical events, such as Russia's invasion of Ukraine, have resulted, and may continue to result, in increased volatility.

The volatility of gold prices is illustrated in the table, which shows the annual high, low and average of the afternoon London bullion market fixing price of gold in US dollars for each of the past ten years:

Annual gold price: 2013 - 2022

	Price per ounce (US$)		
Calendar year	High	Low	Average
2013	1,694	1,192	1,411
2014	1,385	1,142	1,266
2015	1,296	1,049	1,160
2016	1,366	1,077	1,251
2017	1,346	1,151	1,253
2018	1,355	1,178	1,268
2019	1,546	1,270	1,393
2020	2,067	1,474	1,770
2021	1,943	1,684	1,799
2022 (up to and including October 25, 2022)	2,039	1,632	1,811

There was a notable increase in the price of gold following the outbreak of Covid-19 and again after Russia's invasion of Ukraine. See "- *The impact from, and measures taken to address, the Covid-19 pandemic may adversely affect our people, and may impact our business continuity, operating results, cash flows and financial condition*". On October 25, 2022, the afternoon fixing price of gold on the London bullion market was US$1,659/oz.

While the price volatility is difficult to predict, if gold prices should fall below our cash cost of production and capital expenditure required to sustain production and remain at these levels for any sustained period, we may record losses and be forced to curtail or suspend some or all of our operations, which could materially adversely affect our business, operating results and financial condition.

In addition, we would also have to assess the economic impact of low gold prices on our ability to recover any losses that may be incurred during that period and on our ability to maintain adequate reserves. The use of lower gold prices in reserve calculations and LOM plans could also result in material impairments of our investment in gold mining properties or a reduction in our reserve estimates and corresponding restatements of our reserves and increased amortization, reclamation and closure charges.

Fluctuations in input production prices linked to commodities may adversely affect our operational results and financial condition

Fuel, energy and consumables, including diesel, heavy fuel oil, chemical reagents, explosives, tires, steel and mining equipment consumed in mining operations, form a relatively large part of the operating costs and capital expenditure of a mining company. The price of oil, in particular, has increased precipitously as a result of geopolitical tensions and the armed conflict between Russia and the Ukraine. While the price of oil fluctuated between $78.98 and $127.98 per barrel of Brent Crude in 2021, the price of a barrel of Brent Crude was $93.05 as of October 25, 2022. We have no control over the costs of these consumables, many of which are linked to some degree to the price of oil and steel.

Fluctuations in oil and steel prices have a significant impact on operating cost and capital expenditure estimates and, in the absence of other economic fluctuations, could result in significant changes in the total expenditure estimates for new mining projects or render certain projects non-viable, either of which could have a material adverse effect on our business, operating results and financial condition.

Foreign exchange fluctuations could have a material adverse effect on our operational results and financial condition

Gold is priced throughout the world in US dollars and, as a result, our revenue is realized in US dollars, but most of our operating costs are incurred in Rand and other non-US currencies, including the Australian dollar and Kina. From time to time, we may implement currency hedges intended to reduce exposure to changes in the foreign currency exchange, which we started doing in fiscal 2016 and will continue as long as it is strategically viable. Such hedging strategies may not however be successful, and any of our unhedged exchange payments will continue to be subject to market fluctuations. Any significant and sustained appreciation of the Rand and other non-US currencies against the dollar will materially reduce our Rand revenues and overall net income, which could materially adversely affect our operating results and financial condition. See Item 11 – "*Quantitative and Qualitative Disclosure about Market Risk*".

Fluctuations in the exchange rate of currencies may reduce the market value of our securities, as well as the market value of any dividends or distributions paid by us

We have historically declared all dividends in South African Rand. As a result, exchange rate movements may have affected the Australian dollar, the Kina and the US dollar value of these dividends, as well as of any other distributions paid by the Depositary to holders of ADSs.

Furthermore, our Memorandum of Incorporation allows for dividends and distributions to be declared in any currency at the discretion of the board of directors or the company's shareholders at a general meeting. If, and to the extent that, we opt to declare dividends and distributions in US dollars, exchange rate movements will not affect the US dollar value of any dividends or distributions. Nevertheless, the value of any dividend or distribution in Australian dollars, Kina, British pounds or South African Rand will continue to be affected. If, and to the extent that, dividends and distributions are declared in South African Rand in the future, exchange rate movements will continue to affect the Australian dollar, Kina, British pound and US dollar value of these dividends and distributions. This may reduce the value of the company's securities to investors. Additionally, the market value of our securities as expressed in Australian dollars, Kina, British pounds, US dollars and South African Rand will continue to fluctuate in part as a result of foreign exchange fluctuations.

Rising inflation, including as a result of Russia's invasion of Ukraine, may have a material adverse effect on our business, operating results and financial condition

While inflation in South Africa has fluctuated in a narrow band in recent years, remaining within or just outside the inflation range of 3% - 6% set by the South African Reserve Bank, it began to increase significantly in the latter half of fiscal 2022. At the end of fiscal 2020, 2021 and 2022, inflation was 2.2%, 4.9% and 7.4%, respectively, in South Africa. Inflation is expected to continue accelerating throughout fiscal 2023. Prolonged periods of inflation may impact our profitability by negatively impacting our fixed costs and expenses, including raw material, transportation and labor costs. If these increased costs are not offset by an increase in gold prices, they could have a material adverse effect on Harmony's business, operating results and financial condition.

Geopolitical risks and conflicts around the world could further disrupt supply chains and create additional inflationary pressures. Specifically, Russia's invasion of Ukraine has led to sanctions, travel bans, and asset or financial freezes being levied by the governments of the United States, the EU, the United Kingdom and other jurisdictions against Russian entities and individuals, with additional sanctions being proposed. These sanctions and other measures have had a significant impact on commodity prices, including increased oil, gas, steel and gold prices. The oil price is a driver of a number of input costs, including diesel and transport costs, while gas prices have an impact on power costs, and other commodity prices drive direct mining and processing costs. These inflationary pressures could also cause interest rates and the cost of borrowing to increase and could have a material adverse effect on the financial markets and economic conditions throughout the world. The extent and duration of the invasion, sanctions and resulting market disruptions are impossible to predict. Any inflationary impacts or disruptions caused by the invasion or resulting sanctions may have a material adverse effect on Harmony's business, operating results and financial condition, and may magnify the impact of other risks described in this annual report.

At the end of fiscal 2020, 2021 and 2022, inflation was 6.3%, 3.3% and 6.9% respectively, in PNG.

Our results of operations, profits and financial condition could be adversely affected to the extent that cost inflation is not offset by devaluation in operating currencies or an increase in the price of gold.

Investors may face liquidity risk in trading our ordinary shares on the JSE Limited

The primary listing of our ordinary shares is on the JSE Limited. Historically, the trading volumes and liquidity of shares listed on the JSE have been low relative to other major markets. The ability of a holder to sell a substantial number of our ordinary shares on the JSE in a timely manner, especially in a large block trade, may be restricted by this limited liquidity. See Item 9: "*The Offer and Listing - Markets - The Securities Exchange in South Africa.*"

Shareholders outside South Africa may not be able to participate in future issues of securities (including ordinary shares)

Securities laws of certain jurisdictions may restrict our ability to allow participation by certain shareholders in future issues of securities (including ordinary shares) carried out by us or an affiliate. In particular, holders of our securities who are located in the United States (including those who hold ordinary shares or ADSs) may not be able to participate in securities offerings by or on behalf of us unless a registration statement under the Securities Act is effective with respect to such securities or an exemption from the registration requirements of the Securities Act is available. Securities laws of certain other jurisdictions may also restrict our ability to allow the participation of all holders in such jurisdictions in future issues of securities. Holders who have a registered address or are resident in, or who are citizens of, countries other than South Africa should consult their professional advisors as to whether they require any governmental or other consents or approvals or need to observe any other formalities to enable them to participate in any offering of our securities.

Global social, political and economic conditions could adversely affect the profitability of our operations

Our operations and performance depend on global economic conditions. Global economic conditions remain fragile with significant uncertainty regarding recovery prospects, level of recovery and long-term economic growth effects, and have been further adversely impacted by the Covid-19 pandemic. A global economic downturn may have follow-on effects on our business. These could include:

- key suppliers or contractors becoming insolvent, resulting in a break-down in the supply chain;
- a reduction in the availability of credit which may make it more difficult for us to obtain financing for our operations and capital expenditures or make that financing more costly;
- exposure to the liquidity and insolvency risks of our lenders and customers; or
- the availability of credit being reduced, which may make it more difficult for us to obtain financing for our operations and capital expenditure or make financing more expensive.

Coupled with the volatility of commodity prices as well as the rising trend of input costs, such factors could result in initiatives relating to strategic alignment, portfolio review, restructuring and cost-cutting, temporary or permanent shutdowns and divestments. Further, sudden changes in a life-of-mine ("**LOM**") plan or the accelerated closure of a mine may result in the recognition of impairments and give rise to the recognition of liabilities that are not anticipated.

As a result of the geopolitical tensions and armed conflict between Russia and Ukraine due to the recent recognition by Russia of the independence of the self-proclaimed People's Republics of Donetsk and Luhansk, in the Donbas region of Ukraine, followed by Russia's military invasion of Ukraine, the governments of the United States, the EU, the United Kingdom and other jurisdictions announced the imposition of various sanctions against Russia. Despite the fact that we have limited commercial interests in Russia, Ukraine and the current areas of conflict, these and any additional sanctions or export controls, as well as any responses by Russia or other jurisdictions, have led to a sharp increase in oil and energy prices, which are important input costs for our business. Furthermore, the invasion of Ukraine and the retaliatory measures that have been taken, and could be taken in the future, by the United States, the EU, the United Kingdom and other jurisdictions have created global security concerns that could result in a regional or global conflict and otherwise have a lasting impact on regional and global economies, any or all of which could adversely affect our business.

In addition to the potentially adverse impact on the profitability of our operations, any uncertainty on global economic conditions may also increase volatility or negatively impact the market value of our securities. Any of these events could materially adversely affect our business, operating results and financial condition.

The risk of unforeseen difficulties, delays or costs in implementing our business strategy and projects may lead to us not delivering the anticipated benefits of our strategy and projects; in addition, actual cash costs, capital expenditure, production and economic returns may differ significantly from those anticipated by feasibility studies for new development projects

The successful implementation of our business strategy and projects depends upon many factors, including those outside our control. For example, the successful management of costs will depend on prevailing market prices for input costs. The ability to grow our business will depend on the successful implementation of our existing and proposed projects and continued exploration success, as well as on the availability of attractive acquisition opportunities, all of which are subject to the relevant mining and company specific risks as outlined in these risk factors.

It can take a number of years from the initial feasibility study until development of a project is completed and, during that time, the economic feasibility of production may change. In addition, there are a number of inherent uncertainties in developing and constructing an extension to an existing mine or a new mine, including:

- availability and timing of necessary environmental and governmental permits;
- timing and cost of constructing mining and processing facilities, which can be considerable;
- availability and cost of skilled labor, power, water, fuel, mining equipment and other materials;
- accessibility of transportation and other infrastructure, particularly in remote locations;
- availability and cost of smelting and refining arrangements;
- availability of funds to finance construction and development activities; and
- spot and expected future commodity prices of metals including gold, silver, copper, uranium and molybdenum.

All of these factors, and others, could result in our actual cash costs, capital expenditures, production and economic returns differing materially from those anticipated by feasibility studies.

We currently maintain a range of focused exploration programs, concentrating mainly on a number of prospective known gold and copper mineralized areas in PNG, the Kraaipan Greenstone belt and the Witwatersrand area in South Africa.

In order to maintain or expand our operations and reserve base, we have sought, and may continue to seek to enter into joint ventures or to make acquisitions of selected precious metal producing companies or assets. For example, in 2018 we acquired AngloGold's Moab Khotsong and Great Noligwa mines together with other assets and related infrastructure in the Moab Acquisition and with effect on October 1, 2020, acquired the remainder of AngloGold's South African business, including the Mponeng mine and MWS, in the Mponeng Acquisition. See *"— Risks Related to Our Corporate and Financing Structure and Strategy - We may experience problems in identifying, financing and managing new acquisitions or other business combination transactions and integrating them with our existing operations. We may not have full management control over future joint venture partners*". However, there is no assurance that any future development projects will extend the life of our existing mining operations or result in any new commercial mining operations. Unforeseen difficulties, delays or costs may adversely affect the successful implementation of our business strategy and projects, and such strategy and projects may not result in the anticipated benefits, which could have a material adverse effect on our results of operations, financial condition and prospects.

Other Regulatory and Legal Risks

Breaches in our IT security processes and violations of data protection laws may adversely impact the conduct of our business activities and may lead to public and private censure, regulatory penalties, fines and/or sanctions and may damage our reputation

We maintain global IT and communication networks and applications to support our business activities. Our extensive IT infrastructure and network may experience service outages that may adversely impact the conduct of our business activities. This includes potential cybercrime and disruptive technologies. Our vulnerability to such cyber-attacks could also be increased due to a proportion of our employees working remotely. The sophistication and magnitude of cybersecurity incidents are increasing and include malicious software, attempts to gain unauthorized access to data and other electronic security and protected information breaches that could lead to production downtimes, operational delays, the compromising of confidential or otherwise protected information, destruction or corruption of data, other manipulation or improper use of Harmony's systems and networks or financial losses from remedial actions. A sharp increase in ransomware-related threats have also been recorded throughout the mining industry with several high-profile organizations experiencing disruptions. The information security management system, or ISMS, protecting our IT infrastructure and network may not prevent future malicious action, including denial-of-service attacks, or fraud by individuals, groups or organizations resulting in the corruption of operating systems, theft of commercially sensitive data, including commercial price outlooks, mergers and acquisitions and divestment transactions, misappropriation of funds and disruptions to our business operations, the occurrence of any of which could have a material adverse effect on our business and results of operations.

The interpretation and application of consumer and data protection laws in South Africa, the United States and elsewhere are ambiguous and evolving. It is possible that these laws may be interpreted and applied in a manner that is inconsistent with our data practices. Complying with these various laws is difficult and could cause the company to incur substantial costs or require it to change our business practices in a manner adverse to our business.

South Africa's comprehensive privacy law known as the Protection of Personal Information Act, 4 of 2013 (the "**POPIA**") became effective on July 1, 2020. All processing of personal information were required to comply with the POPIA's provisions by July 1, 2021. Failure to comply with POPIA may lead to penalties and fines between R1 million - R10 million and or imprisonment. We may also have insufficient insurance coverage for any data protection breaches, including in relation to POPIA. See *"— Risks Related to Our Operations and Business - Fluctuations in insurance cost and availability could adversely affect* our *operating results an our insurance coverage may prove inadequate to satisfy future claims.*".

On May 25, 2018 the General Data Protection Regulation ("**GDPR**") came into force. The GDPR is a EU-wide framework for the protection of personal data being processed in, or outside, the EU, based on certain application criterion. The GDPR enhances existing legal requirements through several new rules, including stronger rights for data subjects cross-border transfer of information and mandatory data breach notification requirements, and increases penalties for non-compliance. Failure to comply with the GDPR may lead to a fine of up to four percent of a company's worldwide turnover or up to €20 million.

Failure to comply with laws, regulations, codes and standards, policies and procedures or contractual obligations may lead to fines and penalties, loss of licenses or permits, may negatively affect our financial results, and adversely affect our reputation

We operate in multiple jurisdictions, including those with less developed political and regulatory environments, and within numerous and complex frameworks. Our governance and compliance processes may not prevent potential breaches of law, accounting principles or other governance practices.

Our Code of Conduct and Behavioral Code, among other policies and procedures, standards and guidance, and training thereon may not prevent instances of unethical or unlawful behavior, including bribery or corruption, nor do they guarantee compliance with legal and regulatory requirements, and breaches may not be detected by management.

To the extent that we suffer from any actual or alleged breach or breaches of relevant laws, including South African anti-bribery and corruption legislation or the US Foreign Corrupt Practices Act of 1977 under any circumstances, they may lead to investigations and examinations, fines, penalties, imprisonment of officers, litigation, and loss of operating licenses or permits, suspensions of operations, negative effects on our reported financial results and may damage our reputation. Such sanctions could have a material adverse impact on our business, operating results and financial condition.

Investors in the United States may have difficulty bringing actions, and enforcing judgments, against us, our directors and our executive officers based on the civil liabilities provisions of the federal securities laws or other laws of the United States or any state thereof

We are incorporated in South Africa. Each of our directors and executive officers (and our independent registered public accounting firm) resides outside the United States. Substantially all of the assets of these persons and substantially all our assets are located outside the United States. As a result, it may not be possible for investors to enforce a judgment against these persons or ourselves obtained in a court of the United States predicated upon the civil liability provisions of the federal securities or other laws of the United States or any state thereof. A foreign judgment is not directly enforceable in South Africa, but constitutes a cause of action which may be enforced by South African courts provided that:

- the court that pronounced the judgment had jurisdiction to entertain the case according to the principles recognized by South African law with reference to the jurisdiction of foreign courts;
- the judgment is final and conclusive;
- the judgment has not lapsed;
- the recognition and enforcement of the judgment by South African courts would not be contrary to public policy, including observance of the rules of natural justice which require that the documents initiating the United States proceeding were

properly served on the defendant and that the defendant was given the right to be heard and represented by counsel in a free and fair trial before an impartial tribunal;

- the judgment does not involve the enforcement of a penal or revenue law; and
- the enforcement of the judgment is not otherwise precluded by the provisions of the Protection of Business Act 99 of 1978, as amended, of the Republic of South Africa.

US securities laws do not require us to disclose as much information to investors as a US company is required to disclose, and investors may receive less information about us than they might otherwise receive from a comparable US company

We are subject to the periodic reporting requirements of the SEC and the NYSE that apply to "foreign private issuers". The periodic disclosure required of foreign private issuers under applicable rules is more limited than the periodic disclosure required of US issuers. Investors may receive less timely financial reports than they otherwise might receive from a comparable US company or from certain of our peers in the industry. This may have an adverse impact on investors' abilities to make decisions about their investment in us.

ITEM 4. INFORMATION ON THE COMPANY

A. HISTORY AND DEVELOPMENT OF THE COMPANY

Harmony Gold Mining Company Limited is a public limited company incorporated in South Africa, with its registered office at Randfontein Office Park, Corner Main Reef Road and Ward Avenue, Randfontein, 1759, telephone number +27 11 411 2000. Harmony was incorporated and registered as a public limited company in South Africa under registration number 1950/038232/06 on August 25, 1950. Harmony Gold Mining Company Limited is the ultimate holding company of the Group.

The information set forth under the headings:

- "*– Who we are*" on page 8 to 9;
- "*– Our business model*" on pages 14 to 17;
- "*– Delivering profitable ounces – Operational performance*" on pages 50 to 85; and
- "*– Delivering profitable ounces – Exploration and projects*" on pages 86 to 88

of the Integrated Annual Report for the 20-F 2022 is incorporated herein by reference. Also see note 21 *"Investments in Associates"* and note 22 *"Investment in Joint Operations"* of our consolidated financial statements, set forth beginning on page F-1.

For information concerning our principal capital expenditures currently in progress, including the distribution of these investments geographically and the method of financing, refer to Item 4: *"Information on the Company - Business Overview—Capital Expenditures*" and Item 5: *"Operating and Financial Review and Prospects - Liquidity and Capital Resources*".

In the 2022 fiscal year, we did not receive any public takeover offers by third parties or make any public takeover offers in respect of other companies' shares.

The SEC maintains an internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC (*www.sec.gov*). As a foreign private issuer, we are exempt from the rules under the Exchange Act that prescribe the furnishing and content of proxy statements to shareholders. Our corporate website is *www.harmony.co.za*.

Recent Developments

Developments since June 30, 2022

- On August 29, 2022, a final dividend of 22 SA cents was declared, paid on October 17, 2022
- During the budgeting process for fiscal 2023, a decision was taken to restructure the Tshepong Operations into two separate operations, being the Tshepong North and the Tshepong South operations. This decision was taken to create immediately profitable operations and had the impact of reducing the LOM of Tshepong North from 19 years to seven years. From July 1, 2022 the operations will be reported on separately to the chief operating decision-maker (the "**CODM**") and as a result be disclosed as two reportable segments.
- On October 6, 2022, Harmony entered into an agreement with Copper Mountain Mining Corporation ("**Copper Mountain**"), to acquire its wholly-owned Eva Copper Project and its 2 295km^2 exploration land package in Queensland, Australia (collectively "**the acquired assets**") for a total consideration of up to US$230 million.

Under the terms of the transaction, the acquisition consideration consists of the following:

– US$170 million in upfront cash payable on closing of the transaction

– Up to US$30 million in cash, based on a contingent payment arrangement where Harmony will pay Copper Mountain 10% of the incremental revenue generated from the acquired assets which is above revenue based on a US$3.80/lb copper price

– Up to US$30 million in cash, based on a contingent payment arrangement where Harmony will pay Copper Mountain US$0.03 per pound of contained copper for any SAMREC copper resource discovered and declared on a new deposit within the acquired assets after the closing of the transaction.

Harmony plans to fund the upfront purchase price using available cash and revolving credit facilities.

The closing of the transaction is subject to certain customary conditions, including approval from the Foreign Investment Review Board in Australia and Copper Mountain bondholder approval. The transaction has received approval from the South African Reserve Bank.

Management will assess the accounting treatment upon the closure of the transaction

B. BUSINESS OVERVIEW

The information set forth under the headings:

- *"– Who we are*" on page 8 to 9;
- "– Our operations" on page 10 to 13;
- "– *Our business model"* on page 14 to 17;
- "– *Our external operating environment"* on pages 25 to 29;
- "– *Our risks and opportunities"* on pages 30 to 34;
- "– *Our material matters"* on page 35 to 38;
- "– *Stakeholder engagement"* on pages 39 to 44;
- *"– Delivering profitable ounces – Operational performance*" on pages 50 to 85;
- "– *Delivering profitable ounces – Exploration and projects*" on pages 86 to 88;
- *"– Environment"* on pages 89 to 129; and
- *"– Social"* on pages 129 to 166

of the Integrated Annual Report for the 20-F 2022 is incorporated herein by reference.

Capital Expenditures

Capital expenditures for all operations and capitalized exploration incurred for fiscal 2022 amounted to R6,192 million, compared with R5,103 million in fiscal 2021. During fiscal 2022, capital expenditures at Tshepong Operations accounted for 24% of the total, with Hidden Valley accounting for 20%, Moab Khotsong for 14% and Mponeng for 10%. During fiscal 2021, capital expenditures at Hidden Valley accounted for 26% of the total, with Tshepong Operations accounting for 22%, Moab Khotsong for 12% and Mponeng for 10%.

The focus of our capital expenditures in recent years has been underground development and plant improvement and upgrades. During fiscal 2022, the capital expenditure was funded from Harmony's cash generated by operations. See Item 5: *"Operating and Financial Review and Prospects - Liquidity and Capital Resources".*

We have budgeted approximately R8,453 million for operational capital expenditures in fiscal 2023. We currently expect that our planned operational capital expenditures will be financed from cash generated by operations and new borrowings as needed. Details regarding the capital expenditure for each operation is included in the table below.

	Capital expenditure budgeted for fiscal 2023 (R'million)
South Africa	
Moab Khotsong[1]	1,337
Mponeng	811
Tshepong North	479
Tshepong South	516
Doornkop	742
Joel	276
Target 1	454
Kusasalethu	208
Masimong	101
Mine Waste Solutions	1,554
Other - surface	203
International	
Hidden Valley[2]	1,772
Total operational capital expenditure	**8,453**
Wafi-Golpu	33
Other international	10
Total capital expenditure	**8,496**

[1] Includes capital expenditure for Zaaiplaats.

[2] Includes R1,071 million related to capitalized stripping costs.

Regulation

Mineral Rights – South Africa

MPRDA

The MPRDA was promulgated as effective legislation on May 1, 2004 and is the primary legislation regulating the mining industry in South Africa. Pursuant to the MPRDA, the South African government is the custodian of South Africa's mineral and petroleum resources and has a duty to administer these resources for the benefit of all South Africans. As a consequence, an owner of the surface rights has no claim to the minerals found in, on or under the surface of his or her land. The MPRDA extinguished private ownership of minerals. The DMRE is the government body which, through its regional offices, implements and administers the MPRDA.

Any person (including the owner of the surface rights) who wishes to exploit mineral resources in South Africa is required to first apply for and obtain the appropriate right under the MPRDA. The Minister is authorized to grant or refuse applications for rights under the MPRDA. Provided that an applicant meets all the requirements relating to the right for which the applicant has applied, the Minister is obliged to grant the right. Once the right is granted in terms of the MPRDA and registered in terms of the Mining Titles Registration Act, 16 of 1967, the holder holds a limited real right in respect of the mineral and the land to which such right relates.

In accordance with the MPRDA, the holder of a mining right must comply with the terms of the right, the provisions of the MPRDA, the environmental authorization (issued under the NEMA), the mining work program and the SLP approved as part of the right. The SLP relates to the obligations placed on the mining right holder to, among other things, train employees of the mine in accordance with prescribed training methodologies, achieve employment equity and human resource development in the mining company, improve housing and living conditions of employees and set up local economic development projects.

Compliance with each of the provisions of the MPRDA, environmental authorization, mining work program and SLP is monitored by submission of monthly, bi-annual and annual returns and reports by the holder of the right to the DMRE in accordance with the provisions of the MPRDA and the right. A prospecting or mining right can be suspended or canceled if the holder conducts mining operations in breach of the MPRDA, a term or condition of the right or an environmental management plan, or if the holder of the right submits false, incorrect or misleading information to the DMRE. The MPRDA sets out a process which must be followed before the Minister is entitled to suspend or cancel the prospecting or mining right.

We have been working on our program of licensing since 2004, which involved the compilation of a mineral assets register and the identification of all of our economic, mineral and mining rights. We actively carry out mining and exploration activities in all of our material mineral rights areas in South Africa. In the period following the MPRDA taking effect, we applied for and were granted conversion of all of our "old order" mining rights into "new order" mining rights in terms of the MPRDA.

Our strategy has been to secure all strategic mining rights on a region-by-region basis, which we have achieved as we have secured all "old order" mining rights and validated existing mining authorizations. All mining operations have valid mining rights in terms of the MPRDA and we now have to continue complying with the required monthly, annual and bi-annual reporting obligation to the DMRE.

On June 21, 2013, the Minister introduced the MPRDA Bill into Parliament. The DMRE briefed the National Assembly's Portfolio Committee on Mineral Resources in July 2013. The MPRDA Bill was passed by both the National Assembly and the NCOP on March 27, 2014. In January 2015, the former President, Jacob Zuma, referred the MPRDA Bill back to Parliament for reconsideration and on November 1, 2016, the Portfolio Committee on Mineral Resources tabled non-substantial revisions to the MPRDA Bill in the National Assembly and a slightly revised version of the MPRDA Bill was passed by the National Assembly and referred to the NCOP. On March 3, 2017, the National Assembly passed certain minor amendments to the MPRDA Bill. The National Assembly referred the MPRDA Bill to the NCOP where the Select Committee received comments on the draft legislation. The chairperson of the Select Committee had targeted January or February of 2018 to pass the legislation. On February 16, 2018, the current President of South Africa, Cyril Ramaphosa, announced that the MPRDA Bill was at an advanced stage in Parliament. However, in August 2018, the Minister announced that, given certain concerns with the MPRDA Bill, his recommendation would be to withdraw it entirely. The South African Cabinet subsequently supported the Minister's proposal to withdraw the MPRDA Bill. While the MPRDA Bill was not formally withdrawn by Parliament, it lapsed on March 28, 2019. Although Parliament has the ability to revive a lapsed Bill, it seems unlikely that it will revive the MPRDA Bill given both the Minister's and Cabinet's support for its withdrawal.

Among other things, the MPRDA Bill would achieve the following:

- *Concentration of rights*

  The MPRDA Bill seeks to introduce a system whereby the Minister invites applications for prospecting rights, exploration rights, mining rights, technical co-operation permit, production rights and mining permits in respect of any area of land. Applicants for rights will no longer be able to rely on the "first come, first served" principle when submitting an application.

- *Ownership of tailings created before May 1, 2004*

  The MPRDA provides that historic tailings are not regulated in terms of the MPRDA; however, the MPRDA Bill purports to amend the MPRDA so as to render historic tailings subject to regulation under the MPRDA, resulting in the South African government gaining custodianship of historic tailings.

- *Transfers in interests in companies*

  The MPRDA Bill seeks to require the consent of the Minister for the transfer of any interest in an unlisted company or any controlling interest in a listed company where such companies hold a prospecting right or mining right.

- *Mineral beneficiation*

  A key change is that the MPRDA Bill seeks to make it mandatory for the Minister to “initiate or promote the beneficiation of minerals and petroleum resources in the Republic of South Africa”. The MPRDA Bill affords the broad discretion over beneficiation, without providing any criteria under which such discretion should be exercised.

- *Issue of a closure certificate*

  The MPRDA Bill envisages that a rights holder will remain liable for any latent or residual environmental and associated damage caused by prospecting and mining operations, even after (and notwithstanding) the issue of a closure certificate by the Minister. This means that a rights holder will no longer be indemnified from liability after the issue of a closure certificate.

There is a large degree of uncertainty regarding the changes that will be brought about in the unlikely event that the MPRDA Bill is revived and made law.

The Mining Charter

The South African government has identified the South African mining industry as a sector in which significant participation by HDSAs is required. One of the objects of the MPRDA is to substantially and meaningfully encourage HDSAs to enter the mineral and petroleum industries and to benefit from the exploitation of the nation’s mineral and petroleum resources. In terms of section 100 of the MPRDA, the Minister was empowered to develop a broad-based socio-economic charter in order to set the framework for targets and time periods for giving effect to these objectives.

Among other things, the Original Charter stated that mining companies agreed to achieve 26% HDSA ownership of South African mining industry assets within 10 years (i.e. by the end of 2014). Ownership could comprise active involvement, through HDSA-controlled companies (where HDSAs own at least 50% plus one share of the company and have management control), strategic joint ventures or partnerships (where HDSAs own at least 25% plus one vote of the joint venture or partnership interest and there is joint management and control), collective investment vehicles, the majority ownership of which is HDSA based, or passive involvement, particularly through broad-based vehicles such as employee stock option plans.

The Original Charter was subsequently amended by the Amended Charter which included targets and timelines for HDSA participation in procurement and enterprise development, beneficiation, employment equity, human resources development, mine community development, housing and living conditions, sustainable development and growth of the mining industry and reporting (monitoring and evaluation). It required mining companies to achieve the following, among other things, by no later than December 31, 2014:

- have a minimum effective HDSA ownership of 26%;
- procure a minimum of 40% of capital goods, 70% of services and 50% of consumer goods from HDSA suppliers (i.e. suppliers in which a minimum of 25% + one vote of their share capital must be owned by HDSAs) by 2014 (exclusive of non-discretionary procurement expenditure);

- ensure that multinational suppliers of capital goods contribute a minimum of 0.5% of their annual income generated from South African mining companies into a social development fund from 2010 towards the socio-economic development of South African communities;
- achieve a minimum of 40% HDSA demographic representation at executive management (board) level, senior management (executive committee) level, core and critical skills, middle management level and junior management level;
- invest up to 5% of annual payroll in essential skills development activities; and
- implement measures to improve the standards of housing and living conditions for mineworkers by converting or upgrading mineworkers' hostels into family units, attaining an occupancy rate of one person per room and facilitating home ownership options for all mineworkers in consultation with organized labor.

In addition, mining companies were required to monitor and evaluate their compliance with the Amended Charter and submit annual compliance reports to the DMRE. The "scorecard" attached to the Amended Charter made provision for a phased-in approach for compliance with the above targets over the five year period ending on December 31, 2014. For measurement purposes, the scorecard allocated various weightings to the different elements of the Amended Charter. Failure to comply with the provisions of the Amended Charter would, according to its provisions, ostensibly amount to a breach of the MPRDA and could have resulted in the cancellation or suspension of a mining company's mining rights.

In March 2015, the DMRE prepared an interim report of consolidated results of the self-assessment by reporting companies of compliance with the Amended Charter, reporting relatively broad compliance with the non-ownership requirements of the Amended Charter. However, the DMRE did not report the results of compliance with the HDSA ownership guidelines of the Amended Charter and noted that there was no consensus on certain principles applicable to the interpretation of the ownership element.

On March 31, 2015, the MCSA and the DMRE jointly agreed to approach the High Court of South Africa (Gauteng Division) to seek a declaratory order that would provide a ruling on the relevant legislation and the status of the Original Charter and the Amended Charter, including clarity on the status of previous empowerment (i.e., HDSA ownership) transactions concluded by mining companies and a determination on whether the ownership element of the Original Charter and the Amended Charter should be a continuous compliance requirement for the duration of the mining right as argued by the DMRE, or a once-off requirement as argued by the MSCA, on the "once empowered always empowered" principle. The MCSA and the DMRE filed papers in court (the "**Main Application**") and the matter was placed on the roll to be heard on March 15, 2016. On February 16, 2017, the High Court of South Africa (Gauteng Division) postponed the hearing of the application indefinitely to allow the MCSA and the South African government to engage in further discussion on this matter.

The Minister published the Broad-Based Black Socio-Economic Empowerment Charter for the South African Mining and Minerals Industry, 2017 ("**2017 Mining Charter**") which came into effect on June 15, 2017. The MCSA launched an urgent application in the High Court of South Africa (Gauteng Division) to interdict the implementation of the 2017 Mining Charter (the "**Interdict Application**") pending a judicial review application on the basis that it was unilaterally developed and imposed on the industry and that the process that was followed by the DMRE in developing the 2017 Mining Charter had been seriously flawed (the "**2017 Review Application**"). However, the Minister and the MCSA reached an agreement on September 13, 2017 under which the Interdict Application did not proceed as the Minister undertook to suspend the 2017 Mining Charter pending the outcome of the 2017 Review Application by the MCSA. The 2017 Review Application was subsequently indefinitely postponed by agreement between the DMRE and the MCSA on the basis that the MCSA had entered into a new round of discussions with the President of South Africa, Cyril Ramaphosa, and the Minister. On February 19, 2018, the High Court of South Africa (Gauteng Division) ordered that the DMRE and the MCSA also involve communities affected by mining activities in these new discussions relating to the 2017 Mining Charter.

When the 2017 Mining Charter was published, the MCSA re-enrolled the Main Application for hearing and the High Court of South Africa (Gauteng Division) hearing was held in December 2017.

On April 4, 2018, the High Court of South Africa (Gauteng Division) delivered its judgement (the "**2018 Judgement**"). The effect of the 2018 Judgement is that mining companies are not required to re-empower themselves after their HDSA shareholders have sold out and that the DMRE cannot rely on the provisions of the MPRDA to enforce compliance with the Amended Charter, unless the provisions which the DMRE seeks to enforce were made a term or condition of the mining right. The High Court of South Africa (Gauteng Division) also held that the Minister's promulgation of the Amended Charter did not occur in terms of or in compliance with the duty imposed under section 100(2) of the MPRDA and, as such, the terms of the Amended Charter can have legal consequences or significance only insofar as they are, by any means, reflected in the terms of conditions subject to which the Minister grants a mining right. It also brings the validity and enforceability of any subsequent mining charter into question unless it is legislatively authorized. On April 19, 2018, the DMRE filed a notice of intention to appeal the judgment of the High Court of South Africa (Gauteng Division), but later withdrew its appeal in August 2020.

On September 27, 2018, the Minister published the Mining Charter III on which date it also became effective, as amended by the notice published in the Government Gazette on December 19, 2018 and read with the Implementation Guidelines. It replaces, in their entirety, the Original Charter and the Amended Charter. Mining Charter III imposes new obligations and increased participation by HDSAs in relation to a mining company's ownership, procurement of goods and services, enterprise and supplier development, human resource development and employment equity requirements. The first annual reporting for compliance with Mining Charter III was on or before March 31, 2020, although on April 11, 2020, the Minister gazetted Directions under the regulations of the Disaster Management Act as part of the measures to address, prevent and combat the spread of Covid-19, which extended the date for submission of the first annual report to June 1, 2020. Harmony submitted its first report under Mining Charter III within the specified deadline.

Some of the material changes introduced by Mining Charter III include:

- in relation to existing mining rights, the continuing consequences of historical BEE transactions will be recognized and existing right holders will not be required to increase their HDSA shareholding for the duration of their mining right in circumstances where they either achieved and maintained 26% HDSA ownership or where they achieved the 26% HDSA ownership but their HDSA shareholder has since exited;
- in relation to the renewal and transfer of existing mining rights, historical BEE credentials will not be recognized and mining companies will be required to comply with the ownership requirements in relation to new mining rights (see below);
- in relation to new mining rights (granted after September 27, 2018) mining companies must have a minimum of 30% BEE shareholding distributed as follows: a minimum of 5% non-transferable *carried* interest to qualifying employees; a minimum of 5% non-transferable *carried* interest to host communities, or a minimum 5% equity equivalent benefit; and a minimum of 20% to a BEE entrepreneur, 5% of which must preferably be for women; "carried interest" is defined as "*shares issued to qualifying employees and host communities at no cost to them and free of any encumbrances. The cost for the carried interest shall be recovered by a right holder from the development of the asset*";
- applications for mining rights lodged and accepted prior to September 27, 2018, will be processed in terms of the Amended Charter (i.e. with a 26% HDSA ownership requirement) but with a further obligation to increase their HDSA shareholding to 30% within five years of the granting of the right;
- BEE shareholding may be concluded at holding company level, mining right level, on units of production, shares or assets and where it is concluded at any level other than mining right level, the flow-through principle will apply;
- the permitted beneficiation off-set of up to 11% against the HDSA ownership requirement contained in the Original Charter and Amended Charter has been reduced to 5% unless it was "claimed" prior to September 27, 2018;
- a minimum of 70% of total mining goods procurement spend (including non-discretionary expenditure) must be on South African manufactured goods, allocated amongst HDSA owned and controlled companies, women and youth owned and controlled companies and BEE compliant companies;
- a minimum of 80% of the total spend on services (including non-discretionary expenditure) must be sourced from *South African* companies, allocated among HDSA owned and controlled companies, women and youth owned and controlled companies and BEE compliant companies;
- mining companies must achieve a minimum representation of HDSAs in the following management positions: 50% on the Board of directors (20% of which must be women), 50% in executive (20% of which must be women), 60% in senior management (25% of which must be women); 60% in middle level (25% of which must be women); 70% in junior level (30% of which must be women) and 60% in core and critical skills. In addition; HDSAs with disabilities must constitute 1.5% of all employees.
- the Minister may, by notice in the Government Gazette, review Mining Charter III;
- the ownership and mine community development elements are ring-fenced and require 100% compliance at all times; and
- a mining rights holder that has not complied with the ownership element and falls between levels 6 and 8 of the Mining Charter scorecard shall be in breach of the MPRDA and its mining right may be suspended or canceled in accordance with the provisions of the MPRDA.

While Mining Charter III is now effective, there are transitional arrangements in relation to compliance with the procurement and the employment equity element targets.

On March 26, 2019, the MCSA instituted judicial review proceedings in High Court of South Africa (Gauteng Division) for an order reviewing and setting aside certain provisions of Mining Charter III. The provisions challenged by the MCSA relate to those which, among other things:

- provide that mining rights holders must at all times comply with the ownership requirements imposed under Mining Charter III;
- stipulate that the continuing consequences of historic empowerment transactions will not be recognized if existing mining rights are renewed or transferred to third parties;
- impose the procurement thresholds for goods and services; and
- indicate that the Minister may invoke the sanctions prescribed under the MPRDA, if a mineral right holder fails to comply with the threshold requirements imposed under the Charter.

The application aligns with the MCSA’s previously stated view that most aspects of the Mining Charter III represent a reasonable and workable framework. However, the MCSA’s application contends that Mining Charter III does not fully recognize the continuing consequences of previous empowerment transactions, particularly in relation to mining right renewals and transfers of such rights. According to the MCSA, this constitutes a breach of the 2018 Judgement. On June 30, 2020, the High Court of South Africa (Gauteng Division) ordered that various mine-affected communities and trade unions be joined as parties to the MCSA's application. The MCSA's application was heard before a full bench of judges in May 2021. The 2021 Judgement was handed down on September 21, 2021, setting aside certain of the problematic provisions, while providing that the remainder of Mining Charter III should continue in force. In November 2021, the DMRE informed National Assembly's Portfolio Committee on Mineral Resources and Energy that it does not intend to appeal the outcome of the 2021 Judgement, but instead will consider steps to achieve the empowerment objectives through legislative amendments to the MPRDA.

The 2021 Judgement was discussed at the parliamentary mineral resources and energy committee meeting on March 18, 2022. The meeting involved various stakeholders such as labor unions and the MCSA to present their views on the 2021 Judgement. To date, there have been no developments with regards to the above-mentioned views of the stakeholders.

For details of our compliance in the regard, see *“Integrated Annual Report for the 20-F 2022 – Governance – Mining Charter III – compliance scorecard”* on pages 206 to 207.

Regulations under the MPRDA

On March 27, 2020 the Minister published for implementation amendments to the MPRDA Regulations (the "**Amended Regulations**"). The Amended Regulations include the following notable changes:

- Mining rights applicants must "meaningfully consult" with landowners, lawful occupiers and interested and affected parties in accordance with the procedures contemplated under the EIA Regulations. The office of the Regional Manager is permitted to participate as an observer in these processes.
- Mining rights holders must pursuant to their SLPs contribute to the socio-economic development in the areas in which they operate and "labor sending" areas (i.e. a local municipality which a majority of mine workers consider to be their primary residence). This requirement may impose obligations on mining rights holder to effect measures in communities that are located far away from the mine and / or could give rise to some social issues.
- Although most of the provisions regulating environmental matters have been deleted from the Amended Regulations, those sections dealing with mine closure have been retained but have been amended to state that mine closure must be regulated in terms of the NEMA, the EIA Regulations and the Financial Provision Regulations, 2015 (as they may be amended). As discussed below, it is anticipated that the Financial Provision Regulations, 2015 will be replaced by revised regulations following further engagement with the mining industry.
- The appeal process in the MPRDA Regulations has been replaced with a more comprehensive procedure that includes specific time periods within which appellants, respondents and the competent authority must submit appeals, responses or consider appeals (as the case may be). Although there is no guarantee that the parties will comply with these time periods, the time periods are intended to hold the parties accountable and to ensure that appeals are resolved in a timely manner.

The Royalty Act

The Mineral and Petroleum Royalty Act, 28 of 2008, and the Mineral and Petroleum Royalty Administration Act, 29 of 2008, were assented to on November 21, 2008 with the commencement date set as May 1, 2009. However, the date on which royalties became payable was deferred to March 1, 2010. Royalties are payable by the holders of mining rights to the government according to formula based on a defined earnings before interest and tax. This rate is then applied to a defined gross sales leviable amount to calculate the royalty amount due, with a minimum of 0.5% and a maximum of 5% for gold. For 2022, the average royalty rate for our South African operations was 0.74% of the gross sales leviable amount.

The BBBEE Act and the BBBEE Amendment Act

The BBBEE Act, 53 of 2003 (the "**BBBEE Act**"), which came into effect on April 21, 2004, established a national policy on broad-based black economic empowerment with the objective to (i) remedy historical racial imbalances in the South Africa economy and (ii) achieve economic transformation, by increasing the number of black people who participate in the mainstream South African economy. The BBBEE Act provides for various measures to promote BEE participation, including empowering the Minister of Trade and Industry to issue Codes of Good Practice (the "**BBBEE Codes**"), with which organs of state and public entities and parties interacting with them or obtaining rights and licenses from them would be required to comply. The BBBEE Codes were first published in 2007, and were revised in 2013 (although the revisions only came into effect in 2015). The BBBEE Codes sought to provide a standard framework, in the form of a "generic scorecard", for the measurement of BBBEE across all sectors and industries operating within the South African economy and sought to regularize such sectors and industries by providing clear and comprehensive criteria for the measurement of BBBEE.

On October 24, 2014, the BBBEE Amendment Act, 46 of 2013 (the "**BBBEE Amendment Act**"), came into effect. The BBBEE Amendment Act inserted a new provision in the BBBEE Act, whereby the BBBEE Act would trump the provisions of any other law in South Africa which conflicts with the provisions of the BBBEE Act, provided such conflicting law was in force immediately prior to the effective date of the BBBEE Amendment Act. The BBBEE Amendment Act also stipulates that this provision would only be effective one year after the BBBEE Amendment Act is brought into effect, on October 24, 2015. On October 27, 2015, the Minister of Trade and Industry published a government gazette notice declaring an exemption in favor of the DMRE from applying the requirements contained in section 10(1) of the BBBEE Act for a period of 12 months.

There has been some debate as to whether or to what extent the mining industry was subject to the BBBEE Act and the policies and codes provided for thereunder. The BBBEE Codes apply in the absence of sector specific codes which have been agreed to by interested and affected parties active within a specific sector. By way of background, various sectors within the South African economy may negotiate and agree Codes of Good Practice which would govern transformation in that specific sector. In addition, certain codes fall outside of the regulatory framework established by the BBBEE Act and BBBEE Codes promulgated by the Minister of Trade and Industry thereunder. One such sector is the mining industry, where the Original Charter, the Amended Charter and Mining Charter III, which we refer to generally in this section as the Mining Charter govern the implementation of BBBEE, among other things, within the mining industry.

For purposes of the BBBEE Act, the Mining Charter is not a "sector code". It is not clear at this stage how the Mining Charter and BBBEE Codes relate to each other. The government may designate the Mining Charter as a sector code, in which case it will be under the auspices of the BBBEE Act. On the other hand, the Mining Charter may remain a stand-alone document under the auspices of the MPRDA and may be subject to the trumping provision, discussed above, to the extent that there is a conflict between the two. This uncertainty may be resolved through either government clarification or judicial attention. The exemption by the Minister of Trade and Industry can be read as confirmation that the Department of Trade and Industry regards the BBBEE Codes as "applicable" to the Mining Industry after the exemption was lifted on October 27, 2016.

On February 17, 2016, the Minister of Trade and Industry published a gazette notice which repealed and confirmed the validity of a number of sector codes. The omission of the Mining Charter from the notice can be interpreted as confirmation that the Mining Charter is not contemplated as a sector code. This supports the interpretation BBBEE Act did not intend to trump the

Mining Charter. While it remains to be seen how this will be interpreted, it appears that the BBBEE Act and the BEE Codes will not overrule the Mining Charter in the future and, in any event, our view is that the DMRE is likely to continue implementing the Mining Charter and it is unlikely that the DMRE will begin applying the BBBEE Act and BBBEE Codes in administering the MPRDA, since in order to do so will potentially require an amendment of the MPRDA.

Housing and Living Standards

On December 11, 2019 the Minister published the Housing and Living Conditions Standard for the Minerals Industry (the "**Housing and Living Conditions Standard**"). The purpose of the Housing and Living Conditions Standard is to ensure that mine employees are provided with adequate housing, healthcare services, balanced nutrition and water. The Housing and Living Conditions Standard repeals the previous iteration of the Housing and Living Conditions Standard from 2009 and applies to existing and new mining right holders. The underlying purpose of the Housing and Living Conditions Standard is to develop decent single and family housing units for mine employees and their families.

Mining right holders are required to develop, in consultation with organized labor, relevant municipalities and the DWS, a housing and living conditions plan taking into account various principles in giving effect to the above objectives including, engaging with all relevant stakeholders, ensuring equity in the implementation and administration of the housing of employees, providing employees with a range of housing options (such as subsidized rental, private ownership, living out allowances and government subsidized ownership) and ensuring that all housing facilities are developed or redeveloped with access to electricity, water and ablutions in accordance with the requisite norms and standards.

Draft Resettlement Guidelines

The Minister published the draft Mine Community Resettlement Guidelines, 2019 for public comment in December 2019. The Minister published the final Mine Community Resettlement Guidelines, 2022 ("**Resettlement Guidelines**") for implementation on March 30, 2022, on which date they also became effective. The Resettlement Guidelines apply to applicants and holders of mining rights, prospecting rights and mining permits pursuant to the MPRDA, which result in the displacement of parties. Resettlement is guided by several fundamental principles including meaningful consultation, gender equality, the avoidance of resettlement, where possible, rules concerning meetings and the protection of existing rights.

Applicants and holders will need to make provision for a Resettlement Plan, Resettlement Action Plan and a Resettlement Agreement. The Resettlement Plan sets out the nature of the project, its expected impacts, the manner in which consultation will be implemented and the various cost implications for the resettlement. The Resettlement Action Plan sets out the specific steps that the holder will need to meet to implement the Resettlement Plan and the Resettlement Agreement records the commitments made by the holder. There are no specific requirements in the Resettlement Guidelines regarding the content of these agreements. However, all stakeholders should be engaged and commit to their respective obligations.

No mining activities may commence until such time as the Resettlement Agreement has been concluded. This includes agreement on the compensation that should be paid to affected parties. Any disputes between the parties regarding the Resettlement Agreement or associated plans, should be resolved between the parties. To the extent that the parties are unable to reach an amicable solution, only then should the Regional Manager-led process in section 54 of the MPRDA be invoked.

Geoscience Regulations

The Minister published the draft regulations to the Geoscience Act, 100 of 1993 (the "**Geoscience Act**") for public comment on March 4, 2021. On March 30, 2022, the Minister published the final version of the Geoscience Act Regulations, 2022 (the "**Geoscience Regulations**"), on which date they also became effective.

The Geoscience Regulations obligate the lodgment of geoscience data and information in respect of reconnaissance and prospecting with the Council for Geoscience ("**CG**"). The Geoscience Regulations require that the owners of onshore and offshore geoscience data and geoscience information must submit this information to the CG.

The Geoscience Regulations state that the lodgment of geoscience data and information should include several categories of information such as geology, geochemistry, borehole profile logs and physical borehole core, and geophysical data. The requirement to submit physical borehole material has been qualified to only be necessary upon a specific request by the CG as well the fact that physical core materials drilled for research purposes may only be discarded after obtaining consent from the CG. All physical materials recovered from boreholes drilled for infrastructure and development purposes can only be discarded after consultation with the CG.

In terms of the Geoscience Regulations, entities which hold historical information relating to onshore and offshore geoscience data and information are obliged to notify the CG that such data and information is in their possession within 18 months of the Geoscience Regulations coming into effect (i.e by September 30, 2022). Following such notification, the CG, at its expense, must arrange to collect the data and/or information. Lastly, the Geoscience Regulations classify all geoscience data and information not related to prospecting and reconnaissance, preceding the coming into operation of these Geoscience Regulations, as historical data, and the same provisions and time described above will apply.

The Geoscience Regulations provide for the disclosure and accessibility of geoscience data, geoscience information, and prescribed services through digital and non-digital media as well as data requests that may be made directly to the CG. The Geoscience Regulations contain confidentiality provisions relating to geoscience data and information, which are consistent with the confidentiality provisions found in the MPRDA. However, the confidentiality provisions are subject to the provision that geoscience data or information relating to a prospecting permit or reconnaissance may not be disclosed until the permit has lapsed or been abandoned in line with section 30(5) of the MPRDA. Additionally, the Geoscience Regulations state that geoscience data and information not relating to reconnaissance or prospecting are considered confidential and will only be disclosed in limited circumstances.

Mineral Rights - Papua New Guinea

Mineral Rights in PNG are regulated by the PNG Mining Act. The PNG Mining Act stipulates that all minerals are the property of the PNG Government and, subject to the PNG Mining Act, all land is available for exploration and mining. The issuance and administration of mining tenements under the PNG Mining Act is effected through the offices of the MRA established under the PNG Mineral Resources Authority Act 2018, and mining operations are administered by the Chief Inspector of Mines under the PNG Mining (Safety) Act. Mineral policy is administered by the Department of Mineral Policy and Geohazards Management, all three branches falling within the PNG Department of Mining. The permitting process can be very time consuming, and (subject to the applicable legislation) there is no assurance that a mining tenement will be granted or extended.

Mining tenements include:

- exploration licenses, issued for a term not exceeding two years, renewable on application for further two year terms subject to compliance with expenditure and other conditions. Each license contains a condition conferring on the PNG Government the right to make a single purchase up to 30% equitable interest in any mineral discovery under the license at a price pro rata to the accumulated exploration expenditure;
- mining leases, issued for a term not exceeding 20 years, renewable on application for up to ten years at the discretion of the PNG Minister for Mining after considering PNG Mining Advisory Board recommendations;
- special mining leases, issued for a term not exceeding 40 years, renewable on application for up to twenty years at the discretion of the PNG Minister for Mining after considering PNG Mining Advisory Board recommendations and subject to the provisions of any mining development contract which may have been entered into between the PNG Government and the tenement holder;
- mining easements; and
- leases for mining purposes.

These tenements generally confer exclusive rights on the holder to exercise their rights thereunder. However, in PNG, citizens have the right to carry out non-mechanized mining of alluvial minerals on land owned by them, provided that an alluvial mining lease is obtained and provided there is not already a mining lease or special mining lease over the subject land.

PNG exploration licenses contain a condition that the PNG Government may, at any time prior to the commencement of mining, acquire a participating interest of up to 30% in any mineral discovery at historical exploration cost. This condition confers on PNG or its nominee the option to take up a direct equity of participating interest in new mining projects. The PNG Government has indicated that it intends to exercise the PNG Government's option in full in respect of the Wafi-Golpu project.

In addition, PNG mining legislation and mining tenements contain provisions and conditions, the breach of which may result in the imposition of a fine, imprisonment or the cancellation of the tenement.

Almost all land in PNG is owned by a person or group of persons under customary ownership, and is not generally overlaid by landowner title. The customary owners of the land have in some instances been formally identified through the work of the Land Titles Commission. However, there is often considerable difficulty in identifying landowners of a particular area of land because land ownership may arise from both contract and inheritance, and because of the absence of a formal written registration system.

Prior to commencing exploration, compensation for loss or damage must be agreed with the landowners. Prior to commencing mining, written agreements must be entered into with landowners dealing with compensation and, in company with the PNG Government as a party, a memorandum of agreement dealing with such other matters as the sharing of royalties and other mining benefits among and between landowner groups and Provincial and local government entities.

Along with standard corporate and other taxes and levies, mining companies must pay royalties to the PNG Government and a levy to the MRA, based on production.

Health and Safety - South Africa

For many years, the safety of persons working in South African mines and quarries was controlled by the Mines and Works Act, 27 of 1956 and then by the Minerals Act, 50 of 1991, which was replaced by the MHSA**.** The objectives of the MHSA are:

- to protect the health and safety of persons at mines;
- to require employers and employees to identify hazards and eliminate, control and minimize the risks relating to health and safety at mines;
- to give effect to the public international law obligations of South Africa that concern health and safety at mines;
- to provide for employee participation in matters of health and safety through health and safety representatives and the health and safety committees at mines;
- to provide effective monitoring of health and safety measures at mines;
- to provide for enforcement of health and safety conditions at mines;
- to provide for investigations and inquiries to improve health and safety at mines;
- to promote a culture of health and safety in the mining industry;
- to promote training in health and safety in the mining industry; and
- to promote co-operation and consultation on health and safety matters between the South African employers, employees and their representatives.

One of the most important objectives of the MHSA is to protect the health and safety of all persons directly affected by the activities at mines and not merely the health and safety of employees. An employer is obliged, in terms of the MHSA and the regulations binding in terms thereof, to protect, as far as reasonably practicable, the health and safety of non-employees (such as visitors to a mine and the public who live in close proximity to the mine) and employees (which includes employees of independent contractors) performing work at a mine.

The word "*employer*" in section 102 of the MHSA is defined as the owner of the mine. In turn, an "*owner*" of a mine is defined to include: (i) the holder of the prospecting permit or mining authorization issued under the MPRDA; (ii) if a prospecting permit or mining authorization does not exist, the person for whom the activities in connection with the winning of a mineral are undertaken, but excluding an independent contractor; or (iii) the last person who worked the mine or that person's successor in title.

The aforesaid subsection was amended by section 30(f) of the Mine Health and Safety Amendment Act, 74 of 2008 by substituting the term "*Mineral and Petroleum Resources Development Act*" for the term "*Minerals Act*." Under the new system, mining authorizations do not exist. However, taking into account section 12 of the Interpretation Act 33 of 1957, the word "*authorisation*" must be substituted by the words "*mining right or mining permit*." Accordingly, the holder of the "*mining right or mining permit*" is regarded as the employer for the purposes of the MHSA and the regulations binding thereunder. The employer therefore remains responsible to ensure that applicable provisions of the MHSA and the regulations binding in terms thereof, are complied with to ensure the health and safety of persons, as far as reasonably practicable and to prevent damage to property.

The MHSA prescribes, among other things, general and specific duties for employers and other persons, determines penalties for non-compliance with the MHSA and regulations thereunder, makes allowance for administrative fines to be issued for non-compliance with the MHSA and regulations thereunder, and provides for employee participation by requiring the appointment of health and safety representatives and the establishment of health and safety committees. The MHSA also entrenches the right of employees to refuse to work in dangerous conditions. The MHSA further places an obligation on employees to protect their health and safety, as well as the health and safety of other persons.

See "Integrated Annual Report for the 20-F 2022 – Social – Safety" on pages 133 to 138 and "*Integrated Annual Report for the 20-F 2022 – Social – Health"* on pages 139 to 146.

The Mine Health and Safety Inspectorate ("**MHSI**") of the DMRE is responsible for the enforcement of the MHSA and the regulations binding in terms thereof. The DMRE also plays an important role in the promotion of health and safety at mines. The MHSI comprises of a Chief Inspector of Mines, Deputy General, Principal Inspectors of Mines for each region and various Senior Inspectors and Inspectors of Mines for each region. Should employers or employees fail to comply with their obligations under the MHSA, the MHSI may take a number of enforcement measures which may include the following:

- the issuing of statutory instructions (for example notices in terms of section 54 or section 55 of the MHSA) if an Inspector of Mines has reason to believe that any occurrence, practice or condition at a mine endangers the health and safety of any person at a mine, or alternatively if an Inspector of Mines has reason to believe that a provision of the MHSA has not been complied with. A notice in terms of section 54 of the MHSA, may halt all mining operations undertaken at a mine or part thereof. If a mine receives notices in terms of section 54 of the MHSA regularly, the production stoppages and the additional costs incurred as a result thereof will not only affect the production results of a mine but also the reputation and business of a mine. If, however, a notice in terms of section 54 of the MHSA has been issued unlawfully, the mine may appeal the said notice to the Chief Inspector of Mines. It must be noted that the aforesaid appeal does not suspend the operation of the notice issued in terms of section 54 of the MHSA. To suspend the operation of the notice in the above instance, a mine must lodge an urgent application to the Labour Court (being the court with jurisdiction) requesting the suspension of the operation of the notice issued in terms of section 54 of the MHSA pending the outcome of the appeal to the Chief Inspector of Mines;
- the Chief Inspector of Mines may suspend or cancel certificates of competency issued in terms of the MHSA if the holder of that certificate is guilty of gross negligence or misconduct or has not complied with the MHSA or the regulations binding thereunder;
- a Principal Inspector of Mines may recommend prosecution to the National Director of Public Prosecutions if satisfied that there is sufficient admissible evidence that an offense has been committed. Any person convicted of an offence in terms of the MHSA may be issued with a fine or sentenced to imprisonment as may be prescribed; and
- a Principal Inspector of Mines may, after considering the recommendation of an Inspector of Mines and the written representations of the employer, impose an administrative fine for the failure to comply with, amongst others, the provisions of the MHSA and the regulations binding thereunder. In terms of Table 2 of Schedule 8 to the MHSA, the maximum administrative fine which may be imposed on an employer is one million Rand per transgression. The MHSA does not make provision for any internal appeal against an administrative fine which has been issued unlawfully. However, if a mine receives an administrative fine which has been issued unlawfully, the mine may lodge an application in the Labour Court (being the court with jurisdiction) to review the decision to impose an administrative fine.

Over and above the aforesaid, investigation and/or inquiry proceedings in terms of the MHSA are instituted by the MHSI following an accident or occurrence at a mine, which results in the death of any person.

In South Africa COIDA and ODMWA established two statutory systems for the payment of compensation for occupationally related injuries and certain occupationally related diseases. COIDA applies to the compensation of all occupational injuries (including payment of compensation in the event of the death of the injured employee), whether or not it occurs in or outside the mining industry. ODMWA applies to diseases which are defined as "*compensatable diseases*", being primarily occupationally related lung diseases like silicosis.

COIDA indemnifies the employer against claims by the employee or his/her dependents for damages incurred as a result of occupational injuries and diseases. However, the Constitutional Court held in *Mankayi v AngloGold Ashanti Limited* 2011 (3) SA 237 (CC) that although COIDA applies to occupational diseases in general, COIDA does not apply in instances where the disease in question is a compensatable disease in terms of ODMWA and which was contracted as a result of the performance of "*risk work*" at a "*controlled mine*". The Court further held that if an employee contracts a compensatable disease as defined in ODMWA, the employee would still be entitled to claim common law damages from the employer.

Health and Safety - Papua New Guinea

PNG has a significant mining industry, and a developing system of occupational health and safety. The PNG Mining (Safety) Act is the principal legislation, which addresses a range of issues such as working hours, minimum safety and reporting requirements. Other legislation and regulations also apply.

The PNG Mining (Safety) Act and the Regulations issued thereunder are currently under review as part of the overall review of mining legislation in PNG. In June 2021, the PNG Ministry of Mining released the draft Mine & Works (Safety & Health) Bill 2021 which, if enacted in its present form, will repeal and replace the PNG Mining (Safety) Act.

See above under "- *Regulation - Mineral Rights - Papua New Guinea*".

Harmony's operations and projects in PNG will potentially be affected by changes to PNG health and safety laws. Harmony continues to engage with the PNG Government through the offices of the Chamber of Mines and Petroleum of PNG, and directly with the PNG Minister for Mining and the Managing Director of the MRA.

See "Integrated Annual Report for the 20-F 2022 – Social – Safety" on pages 133 to 138 and "*Integrated Annual Report for the 20-F 2022 – Social – Health"* on pages 139 to 146*.*

Laws and Regulations Pertaining to Environmental Protection - South Africa

In South Africa, environmental matters are regulated by national, provincial and municipal laws based on the competencies afforded to each of these spheres of government under South Africa's Constitution and relevant legislation. As a result, there are many statutes and by-laws that are applicable to construction, operation, decommissioning and closure of mining operations. The key legislation includes the NEMA, the NWA, the Air Quality Act, the National Environmental Management: Waste Act, 59 of 2008 (the "**Waste Act**"), the National Nuclear Regulator Act, 47 of 1999, the National Environmental Management: Biodiversity Act, 10 of 2004, the National Heritage Resources Act, 25 of 1999, the Carbon Tax Act and the MPRDA.

This legislation commonly requires businesses whose operations may have an impact on the environment to obtain permits, authorizations and other approvals for those operations. The rationale behind this is to ensure that companies with activities that are reasonably expected to have environmental impacts, can initially assess the extent of the environmental impacts from such activities, as well as to put reasonable and practicable mitigation measures in place to manage these impacts. In addition, businesses and authorities must monitor compliance to ensure that the requirements under the relevant permits, authorization and other approvals are achieved. In addition, the legislation may require compliance with standards or levels for which authorization is not required and impose a duty of care on businesses to ensure that reasonable measures are implemented to prevent pollution or environmental degradation from occurring, continuing or recurring.

NEMA

Section 24 of South Africa's Constitution is the cornerstone of South African environmental law. It affords every person the right to an environment that promotes their health and well-being and places an obligation on the state to create legislation and other instruments to give effect to this right taking into consideration the principles of sustainable development.

In accordance with this obligation, the Minister of Environmental Affairs and Tourism (as he was then) introduced the NEMA. The NEMA is "framework legislation"; that is, it provides the core principles and structures in terms of which all environmental legislation and decisions are interpreted, administered and applied. These principles include (but are not limited to) the principles of inter-generational equity, the polluter pays principle, the cradle to grave principle and the principle of sustainable development (the "**Section 2 Principles**").

Listed Activities and competent authorities

The NEMA introduces environmental management tools aimed at ensuring that the Section 2 Principles are incorporated into all decisions that may have an effect on the environment. Chief among these tools is the environmental authorization process. Under section 24(1) of the NEMA, the Minister of Environment, Forestry and Fisheries may identify activities that may not commence without an environmental authorization (the "**Listed Activities**").

The Minister of Environmental Affairs published the EIA Regulations and three lists of Listed Activities (the "**Listing Notices**"). The EIA Regulations contemplate two application processes for an environmental authorization: a "basic assessment" process and a "scoping and environmental impact assessment" process. The basic assessment is an abridged assessment process that considers the impacts of the proposed activity on the environment, while the scoping and environmental impact assessment is a much more detailed assessment that is reserved for those activities that are expected to have a greater impact on the environment. The activities listed in Listing Notices 1 and 3 trigger a basic assessment process, while the activities contained in Listing Notice 2 require the applicant to complete a scoping and environmental impact assessment. The period from the date of application until the granting or refusal of an environmental authorization should take no more than 300 days, excluding any appeal process that suspends the environmental authorization for the duration of the appeal. Due to departmental limitations and other hindering factors, the 300 day time period is not always adhered to.

The EIA Regulations and Listing Notices were published with effect from December 8, 2014, along with various amendments to the NEMA and the MPRDA pursuant to an agreement (referred to as the "**One Environmental System**") concluded between the Minister of Environmental Affairs, the Minister of Mineral Resources and Energy and the Minister of

Water and Sanitation (as such ministries were then called). In terms of the One Environmental System, the DFFE is responsible for the creation of all legislation and regulation relating to the environment. The DMRE, however, will be the competent authority responsible for implementing and enforcing this legislation as far as it directly relates to prospecting and mining activities, including the granting of environmental authorizations for these activities.

Prior to the One Environmental System, the powers and responsibilities of the DFFE and DMRE overlapped. Any person applying for a prospecting right, mining permit or mining right was required under the MPRDA to conduct an environmental impact assessment and obtain approval (referred to as an Environmental Management Programme or "**EMPr**") from the DMRE. To the extent that the proposed prospecting or mining activities also triggered any Listed Activities and prior versions of the EIA Regulations, an environmental authorization was required from the provincial environmental authorities. In practice, applicants for an EMPr and environmental authorization would conduct one environmental impact assessment and submit the final report to both the DMRE and provincial authority for their respective approvals. This dual system resulted in conflicting conditions with which the applicants were required to comply.

With effect from December 8, 2014, the DMRE became the competent authority in relation to all environmental matters directly related to prospecting, extraction and primary processing of mineral resources, including those ancillary Listed Activities associated with prospecting and mining operations previously governed by the provincial environmental authorities. Today, any person that seeks to obtain a prospecting right, mining permit or mining right must apply for an environmental authorization from the DMRE. This environmental authorization must be granted before a prospecting right, mining permit or mining right may be granted.

The NEMLAA was assented to by the President of South Africa on June 21, 2022. The NEMLAA will come into effect on a date determined by the Environment Minister. The NEMLAA will amend the Minister's jurisdiction to only include “mining activities” which refers "an activity which requires a permission, right, permit or consent under the MPRDA". This amendment may create uncertainty as to whether the Minister is the competent authority for ancillary activities for which a permission, right, permit or consent under the MPRDA is (in itself) not required.

The commencement of a Listed Activity without an environmental authorization is an offense but could possibly be corrected by submitting an application in terms of section 24G of the NEMA, which is an application for retrospective authorization. There is no guarantee that the competent authority will grant an environmental authorization in terms of this process. They may instruct the applicant to rehabilitate the environment or take any other measures to rectify the unlawful conduct. Even if the authority agrees to grant an environmental authorization, it may only do so after the applicant has paid an administrative fine. The granting of an environmental authorization under section 24G does not absolve the applicant of potential criminal liability for commencing with an activity without the requisite authorization.

The NEMLAA, once in effect, will introduce important changes to the section 24G process, extending the scope such that “successors in title” and “persons in control” of land on which a listed activity has commenced unlawfully are now permitted to submit rectification applications under section 24G. Prior to this amendment, only the person who commenced with the activity without the requisite approval was eligible to apply for rectification. Furthermore, the competent authority must now direct a person making a rectification application to cease undertaking the unlawful activity pending a decision on such application. The maximum quantum of the fine payable in terms of section 24G has also been increased from R5 million to R10 million. The NEMLAA will also insert a similar section into the National Environmental Management: Air Quality Act 39 of 2004.

Financial provision

The NEMA requires applicants for environmental authorizations in respect of prospecting and mining to assess the environmental liabilities arising from their mining operations and to put up financial provision (in the form of cash, guarantees or certain insurance policies) to the satisfaction of the Minister. The amount of financial provision is assessed annually and, to the extent necessary, the financial provision is adjusted to the satisfaction of the Minister. If, at any point, the holder of environmental authorization fails to fulfill its obligations under the authorization or in terms of environmental laws, the Minister may call upon the financial provision to implement any necessary measures.

Prior to September 2, 2014, financial provision was regulated under section 41 of the MPRDA read with regulation 53 and 54 of the MPRDA Regulations. These sections and regulations required that a mining right applicant make financial provision for the rehabilitation of negative environmental impacts arising from their mining activities. The initial amount and subsequent increases thereof were determined in accordance with the DMRE Guidelines. Pursuant to the DMRE Guidelines and the MPRDA Regulations, the selected financial provision must cater for the actual costs associated with the premature closing, decommissioning and final closure and post closure management of residual and latent environmental impacts.

With effect from September 2, 2014, section 41 of the MPRDA was deleted and replaced with section 24P of the NEMA. Like section 41 of the MPRDA, section 24P of the NEMA states that the prospecting / mining right holder must annually assess their environmental liability in the prescribed manner and adjust the financial provision to the satisfaction of the Minister. The only material difference between section 41 of the MPRDA and section 24P of NEMA is that, in terms of the latter, the prospecting or mining right holder is required to maintain financial provision notwithstanding the issuing of a closure certificate by the Minister, while the former stated that the holder would be absolved of environmental liability once a closure certificate is used.

From September 2, 2014 until November 20, 2015, the amount of financial provision was calculated in accordance with the DMRE Guidelines as the Minister of Environmental Affairs (as she was then known) had not published regulations in support of section 24P. The DMRE Guidelines were criticized for undervaluing the costs of environmental rehabilitation thus exposing the DMRE to potential liability in the event that the mining right holder was unable to fulfill its environmental obligations.

On November 20, 2015, the Minister of Environmental Affairs published the Financial Provision Regulations, 2015. The Financial Provision Regulations, 2015 sought to rectify the inadequacies of the DMRE Guidelines by, among other things, including preliminary and general costs in the financial provision calculations, imposing VAT (at 15%) on the total amount, prohibiting the withdrawal of trust funds for concurrent rehabilitation (even in circumstances where the financial provision exceeds the evaluated environmental liability) and ceding a portion of the funds to the Minister as security for possible latent and residual post-closure environmental impacts.

Compliance with these obligations would have resulted in a significant increase in the required financial provision, and were consequently strongly opposed by the mining industry. In response to this opposition, the DFFE undertook to engage further with mining industry and other stakeholders to amend or develop new financial provision regulations. Draft amendments to the Financial Provision Regulations, 2015 were published by the Minister of Forestry, Fisheries and the Environment in May 2019 and again on August 27, 2021. An amended draft incorporating certain comments submitted by Harmony was published on July 11, 2022. Harmony has submitted additional comments on these latest draft amendments in an effort to address some of the remaining issues. In light of the on-going consultation, the date by which mining companies are required to align their financial provision with the Financial Provision Regulations, 2015 has been extended to September 19, 2023.

Upon the suspension, cancellation, termination or lapsing of a prospecting or mining right, Harmony will have to comply with various regulatory requirements including applying for a closure certificate and will remain liable for compliance with the provisions of various relevant regulations, including any latent significant environmental impacts that manifest post-closure, notwithstanding the issuance of a closure certificate by the DMRE.

Until a closure certificate is granted, Harmony is required to obtain and maintain financial provision for rehabilitation. The financial provision quantum is currently determined in accordance with a legal framework that may change materially. Upon the issuing of a closure certificate, the Minister may retain a portion of the financial provision for future latent and residual environmental liabilities. See Item 5: "*Operating and Financial Review and Prospects - Operating Results – Key factors affecting our results - Electricity in South Africa – Climate Change, Environmental Factors and Carbon tax"* for a discussion regarding carbon tax.

When effective, the NEMLAA will replace the existing section 24P to the NEMA and inserts a new section 24P(A) to the NEMA. The new section 24P(A) permits the Environment Minister to prescribe instances for which financial provision must be set aside. This, therefore, will allow the Environment Minister to require financial provision for activities which historically did not require financial provision, such as the processing of historic tailings dams. This financial provision must be reviewed and adjusted annually. These funds may only be used for purposes of progressive rehabilitation, decommissioning, closure, post closure, as prescribed to ensure mitigation, remediation and rehabilitation of adverse environmental impacts for which it was provided.

Section 24P(A) deals specifically with financial provision for mining. The financial provision must be reviewed and adjusted in the prescribed manner. The financial provision must also be subjected to independent audits. The financial provision amounts and adjustments thereto will need to be published for comment. Furthermore, Section 24P(A)(2) indicates that the holder may only draw down on the financial provision with the consent of the Minister (in consultation with the Environment Minister and the Minister for Water and Sanitation) and only to support decommissioning and final closure in the ten year period before final decommissioning and closure. In addition, financial provision retained by the Minister for latent and residual environmental liabilities must be transferred to an account administered by the Minister or, where the financial provision is an insurance policy, the Minister must access the funds. Harmony will have no right to regulate the manner in which these funds are spent to rectify any latent and residual environmental impacts. Notwithstanding this, Harmony will remain liable for any such liabilities. If the latent and residual environmental liabilities do not materialize, there is no mechanism in terms of which the funds will be returned to the holder.

Duty of care

NEMA imposes a statutory obligation on every person who has caused, is causing or is likely to cause significant contamination to take reasonable measures in relation thereto, failing which the director-general of the DFFE, the head of a province of the relevant environmental department or the director-general of the DMRE (collectively the "**competent authority**") may issue a directive instructing a person to implement measures specified in the directive.

If the person fails to comply with the directive, the competent authority may apply to court for an order compelling various persons (including persons in control of the activities at the time the pollution / environmental degradation occurred, owners of property and persons who failed to prevent pollution / environmental degradation from occurring) to contribute towards the costs of effecting the reasonable measures. The NEMLAA will extend the competent authority to include municipal managers. Amendments to the rights of the competent authority to delegate responsible activities under the NEMLAA have also been extended.

Enforcement

The NEMLAA extends the powers and responsibilities of environmental mineral and petroleum inspectors such that they have the same powers currently only afforded to environmental inspectors to conduct investigations, search and seizure operations.

The costs of preventing, controlling or remedying pollution, environmental degradation and consequent adverse health effects must be paid for by those responsible for harming the environment. This duty applies retrospectively and therefore includes contamination caused prior to 1998, when the NEMA came into effect.

Liabilities

A failure to comply with this duty to obtain or comply with an environmental authorization and other offenses may, upon successful prosecution, result in significant fines of up to R10 million and/or 10 years imprisonment being imposed. In addition, it may result in damages claims, obligations to rehabilitate the environment, paying the costs of the prosecution and even director and employee liability. Any person may use the relevant provisions in the NEMA to initiate the prosecution of an entity, its directors and/or employees in their personal capacity.

Waste management

Pursuant to section 19 of the Waste Act, the Minister is authorized to publish a list of waste management activities that are likely to have a detrimental effect on the environment. No one may commence or undertake a waste management activity except in accordance with the norms and standards created in terms of section 19(3) of the Waste Act or in terms of the provisions of a waste management license. The list of waste management activities that have, or are likely to have, a detrimental effect on the environment set out the various activities for which a waste management license is required. A basic assessment is required in respect of those activities listed in Category A, while a scoping and environmental impact assessment is required in respect of Category B listed activities. In respect of those activities listed in Category C, an waste management license is not required but the person seeking to undertake those activities must comply with published norms and standards.

Regulatory uncertainty exists regarding the management and re-processing of residue stockpiles and residue deposits created prior to May 1, 2004, being the date on which so-called “new order” and “old order” mining rights were created by the MPRDA. These residue deposits and residue stockpiles fall outside the scope of the MPRDA (and therefore outside the jurisdiction of the DMRE) and, as such, it is not possible to obtain a mining right or a mining permit over such residue stockpiles or deposits. Amendments were included in 2014 that sought to incorporate the reclamation of residue stockpiles and residue deposits within the scope of the Waste Act and within the jurisdiction of the DMRE. The amendments, however, are unclear and render it uncertain whether the DMRE or the DFFE is the competent authority in respect of these residue stockpiles and deposits. This may lead to possible legal challenges in circumstances where waste management licenses are obtained from the incorrect authority. The NEMLAA introduced certain changes related to residue stockpiles and residue deposits. The definitions of each are inserted into NEMA, and both have the meaning assigned to them in section 1 of the MPRDA. The effect of the amendments is that residue stockpiles and residue deposits are now managed in terms of NEMA and are excluded from the scope of the Waste Act. This does not apply to residue stockpiles and residue deposits created prior to May 1, 2004 which fall outside of the definitions under the MPRDA. As a result, these residue stockpiles and deposits may fall within the scope of the broader definition of hazardous substances contemplated in the NEMLAA.

Other waste management facilities constructed and/or operated by our operations may also be subject to licensing requirements, including hazardous waste disposal sites and central salvage yards.

In addition to licensing, mines must also comply with the management measures prescribed for residue stockpiles and deposits in the Regulations for Residue Stockpiles and Residue Deposits from a Prospecting, Mining, Exploration or Production Operation in GNR 632 of July 24, 2015. These regulations do not retrospectively apply to the management of existing stockpiles and deposits, provided they are in an approved EMPr. These regulations have notable cost implications for new residue stockpiles and deposits established after this date as they impose certain liner/barrier requirements for them.

The Waste Act also regulates contaminated land, whether or not the contamination occurred before the commencement of the Waste Act or at a different time from the actual activity that caused the contamination. Consequently, historic, as well as present or future arising, contaminated land which is identified as an investigation area by the environmental authorities, or which is notified as being contaminated by the landowner must be assessed and reported on. The direction of taking monitoring and management measures, or of undertaking site remediation, may follow depending on the level of risk associated with the contamination.

Failure to comply with the provisions of the Waste Act may result in penalties similar to those discussed under the NEMA above.

Water use and pollution

The NWA regulates the management and water quality of water resources, including watercourses, surface water, estuaries and aquifers to ensure the sustainability of all water resources in the interests of all water users.

The NWA defines a water use as:

- taking water from a water resource;
- storing water;
- impeding or diverting the flow of water in a watercourse;
- engaging in stream flow activities contemplated in the NWA;
- engaging in a controlled activity identified in terms of s37(1) of the NWA or declared in terms of s38(1);
- discharging waste or water containing waste into a water resource through a pipe, canal, sewer, sea outfall or other conduit;
- disposing of waste in a manner which may detrimentally impact on a water resource;
- disposing in any manner of water which contains waste from, or which has been heated in, any industrial or power generation process;
- altering the bed, banks, course or characteristics of a watercourse;
- removing, discharging or disposing of water found underground if it is necessary for the efficient continuation of an activity or for the safety of people; and
- using water for recreational purposes.

From a permitting perspective, water resources are regulated through the issuing of water use licenses, publishing of general authorizations and / or permitting persons to continue undertaking water uses that they were undertaking when the NWA came into effect in October 1998.

Most mining operations require a water use license in order to conduct their operations, particularly for activities relating to water abstraction, storage, effluent discharge, diversions, and facilities which have the potential to pollute groundwater resources. Water use licenses are difficult to obtain and usually involve a lengthy and delayed application process. Mines are also required to comply with the regulations which were specifically published for the use of water for mining and related activities in GN 704 of June 4, 1999. These regulations provide for limitations on the location of mining infrastructure and requirements for the separation of dirty and clean water systems and the design of certain water management infrastructure.

In addition to the permitting requirements, the NWA includes a duty of care similar to that discussed in the section above in respect of NEMA. Failure to comply with the NWA will result in penalties similar to those set out above in respect of NEMA.

Emissions

In South Africa, the National Greenhouse Gas Emission Reporting Regulations require that we register our operations that involve fuel combustion activities associated with mining and quarrying in excess of 10MW as well as certain other activities associated with the mineral industry. We must report our GHG emissions and activity data in respect of these operations in accordance with the Technical Guidelines for each of the relevant GHGs and the IPCC emission sources by March 31st of each year. The Technical Guidelines are a companion to the South African National GHG Regulations and describe the reporting methodology as specified in the Air Quality Act.

See Item 3: *"Key Information - Risk Factors - Risks Related to ESG - Compliance with emerging climate change regulations and other sustainability measures could result in significant costs for us"* for a discussion regarding the laws governing GHG emissions.

Carbon Tax Act

The South African government introduced a carbon tax under the Carbon Tax Act with effect from June 1, 2019. The Carbon Tax Act (together with the Customs and Excise Act, which contains provisions related to the administrative arrangements for the collection of carbon tax revenues by the South African Revenue Service) aims to reduce greenhouse gas emissions. For more information regarding the Carbon Tax Act, see Item 3: *"Key Information - Risk Factors - Risks Related to ESG - Compliance with emerging climate change regulations and other sustainability measures could result in significant costs for us"* and Item 5: "*Operating and Financial Review and Prospects - Operating Results – Key factors affecting our results – Electricity in South Africa"* and *" – Climate Change, Environmental Factors and Carbon tax"* for a discussion regarding carbon tax.

Laws and Regulations Pertaining to Environmental Protection - Papua New Guinea

The PNG Environment Act and various related regulations and guidelines regulate the impact of industry and other activities on the environment and sets out the environmental permitting requirements for developments, including mining projects. An environmental impact statement is required for activities that are likely to have a significant adverse impact on the environment and other social or cultural heritage aspects. This statement must be lodged with the PNG Conservation and Environment Protection Authority for assessment, which includes a public review and referral phase. For large projects, the review process may also involve an independent peer review.

The PNG Government will use the environmental impact statement as the means to assess a project's impacts, in accordance with statutory processes, and decide whether the Environment Minister should grant approval in principle for the project under the PNG Environment Act. Thereafter, the Managing Director Conservation and Environment Protection Authority may grant an environment permit for the activity.

Potential Changes to PNG Environment Laws

A process of mining regime review is underway within PNG and a number of environmental matters are under consideration. These include a Mine Closure Policy and Mining Project Rehabilitation and Closure Guidelines (which include requirements for the provision of financial assurance for mine closure and rehabilitation costs), a Biodiversity Offset Policy (which anticipates biodiversity offset payments to support biodiversity incentives) and a National Oceans Policy.

Harmony's operations and projects in PNG will potentially be affected by changes to PNG environmental laws, and Harmony continues to engage with the PNG Government on these matters through the offices of the PNG Chamber of Mines and Petroleum, and directly with the PNG Conservation and Environment Protection Authority ("**CEPA**") and (in the case of mine closure) the MRA.

Labor Relations

South Africa

Employee relations in South Africa are guided by the Labour Relations Act, 66 of 1995, as well as by the Employee Relations Framework Policy and mine-based recognition agreements. In South Africa, Harmony recognizes four labor unions (save for the Moab Khotsong and Target where the National Union of Metalworkers of South Africa ("**NUMSA**") is also recognized). As at fiscal year-end, these unions and their corresponding representation were as follows, namely the National Union of Mineworkers (at 53%); the Association of Mineworkers and Construction Union (at 28%); the United Association of South Africa (at 5%) NUMSA (6%) and Solidarity (at 2%). About 95% of our South African workforce is unionized, with the balance not belonging to a union. See *"Integrated Annual Report for the 20-F 2022 – Social – Caring for our employees"* on pages 147 to 153.

Australia

Employee relations in Australia are regulated by a combination of federal and state statutes that stipulate minimum standards and provide for collective bargaining and action. All employment contracts are based on the Australian Fair Work Act, 28 of 2009 and the National Employment Standards. Our Australian workforce is not unionized.

Papua New Guinea

Employee relations in PNG are regulated by the PNG Employment Act of 1978 and the PNG Employment of Non-Citizens Act 1978. Individual contracts are entered into, and the workforce is not unionized.

In PNG, wages are guided by independent market research that compares mining, oil and gas companies in the region. Industrial relations at Hidden Valley have been established through regular dialogue between management and employees via the Employee Relations Committee.

In addition, Hidden Valley mine employment is guided by the Employment and Training Plan appended to the Memorandum of Agreement ("**MOA**") dated August 2005 between Morobe Consolidated Goldfields Limited, the PNG Government, provincial and local governments and the Landowner Association. The MOA requires that, as far as is reasonably possible, preference in training and employment is given to local and landowner candidates before individuals from other provinces or countries. Compliance with this agreement is a critical issue in maintaining Hidden Valley mine's license to operate.

Intellectual Property

Harmony is not dependent on intellectual property (including patents or licenses), industrial, commercial or financial contracts (including contracts with customers or suppliers) or new manufacturing processes for the conduct of its business as a whole.

Seasonality

Subject to other factors and unforeseen circumstances, in the third quarter production is generally lower than production during the rest of the year as a result of the ramp-up of operations after annual holiday production declines.

Raw Materials

Harmony uses chemicals, including Cyanide, Hydrochloric Acid and Caustic Soda, as key reagents in the production of gold. These chemicals are available from a large number of suppliers and do not represent a material portion of the company's costs. Given the challenges associated with aging production plants and reliability thereof, Harmony is currently experiencing continued interrupted supply of the foregoing stated reagents as well as other critical consumables utilized in the production of gold across our global operations. The latter has negatively impacted Harmony's purchasing power and security of supply. As a result of sourcing from third-party raw materials suppliers importing consumables internationally, the security of supply is at a higher premium. Additionally, our stocking strategies account for potential lead time variation and supply constraints, thus minimizing the risk of changes in the marketplace. While commodity pricing is subject to volatility over time, our contractual terms are dynamic enough to mitigate the market movement volatility.

However the war in Ukraine has caused significant disruption to financial and commodity markets. During fiscal 2022, prices for several hard and soft commodities had reached their highest levels in a decade or more, or in some cases had set records. Brent crude oil touched levels not seen since 2012 and copper advanced to its highest level ever. The higher cost for basic commodities used in our host countries and communities, and as key production inputs, could impact the costs of our raw materials. The impact on global supply chains from the conflict will become clearer over time. Item 3: "*Key Information - Risk Factors – Strategic and Market Risks - Rising inflation, including as a result of Russia's invasion of Ukraine, may have a material adverse effect on our business, operating results and financial condition".*

C. ORGANIZATIONAL STRUCTURE

Harmony is a holding company with its significant ownership interests organized as set forth in Exhibit 8.1 *"Significant Subsidiaries of Harmony Gold Mining Company Limited*".

The information set forth under the heading:

- *"– Who we are "* on page 8 to 9

of the Integrated Annual Report for the 20-F 2022 is incorporated herein by reference. Also see note 2.1 "*Consolidation*" of our consolidated financial statements, set forth beginning on page F-1.

D. PROPERTY, PLANT AND EQUIPMENT

The information set forth under the headings:

- "*– Our Operations*" on pages 10 to 13;
- "*– Delivering profitable ounces – Operational performance*" on pages 50 to 85; and
- "*– Environment – Environmental management and stewardship*" on pages 89 to 96.

of the Integrated Annual Report for the 20-F 2022 is incorporated herein by reference. Also see note 15 "*Property, Plant and* Equipment" and note 34 "*Cash Generated by Operations*" of our consolidated financial statements, set forth beginning on page F-1.

Also see Item 4: *"Information on the Company - Business Overview - Regulation - Laws and Regulations Pertaining to Environmental Protection - South Africa", "- Laws and Regulations Pertaining to Environmental Protection - Papua New Guinea"* and *"- Capital Expenditures"* and Item 5: *"Operating and Financial Review and Prospects - Liquidity and Capital Resources*".

MINERAL RESOURCE AND MINERAL RESERVE SUMMARY DISCLOSURE

On October 31, 2018, the SEC adopted Subpart 1300 (17 CFR 229.1300) of Regulation S-K (“**Regulation S-K 1300**”) along with the amendments to related rules and guidance in order to modernize the property disclosure requirements for mining registrants under the Securities Act and the Securities Exchange Act. Registrants engaged in mining operations must comply with Regulation S-K 1300 for the first fiscal year beginning on or after January 1, 2021. Accordingly, Harmony is providing disclosure in compliance with Regulation S-K 1300 for its fiscal year ending June 30, 2022, and will continue to do so going forward. As part of its rule-making to modernize its disclosure requirements, the SEC rescinded Industry Guide 7, which accordingly is not applicable to Harmony’s current and future disclosures.

Mineral Resources and Mineral Reserves are estimates that contain inherent risk and depend upon geologic interpretation and statistical inferences drawn from drilling and sampling analysis, which may prove to be unreliable. For additional information on the risks and uncertainties associated with Harmony’s mining properties, see Item 3: "*Key Information – Risk Factors*".

Harmony’s South African operations include eight deep-level mines, an open pit mining operation and several surface retreatment facilities. Combined, these account for gold Mineral Resources (exclusive of Mineral Reserves) of 70.0 million ounces and gold Mineral Reserves of 21.6 million ounces at June 30, 2022.

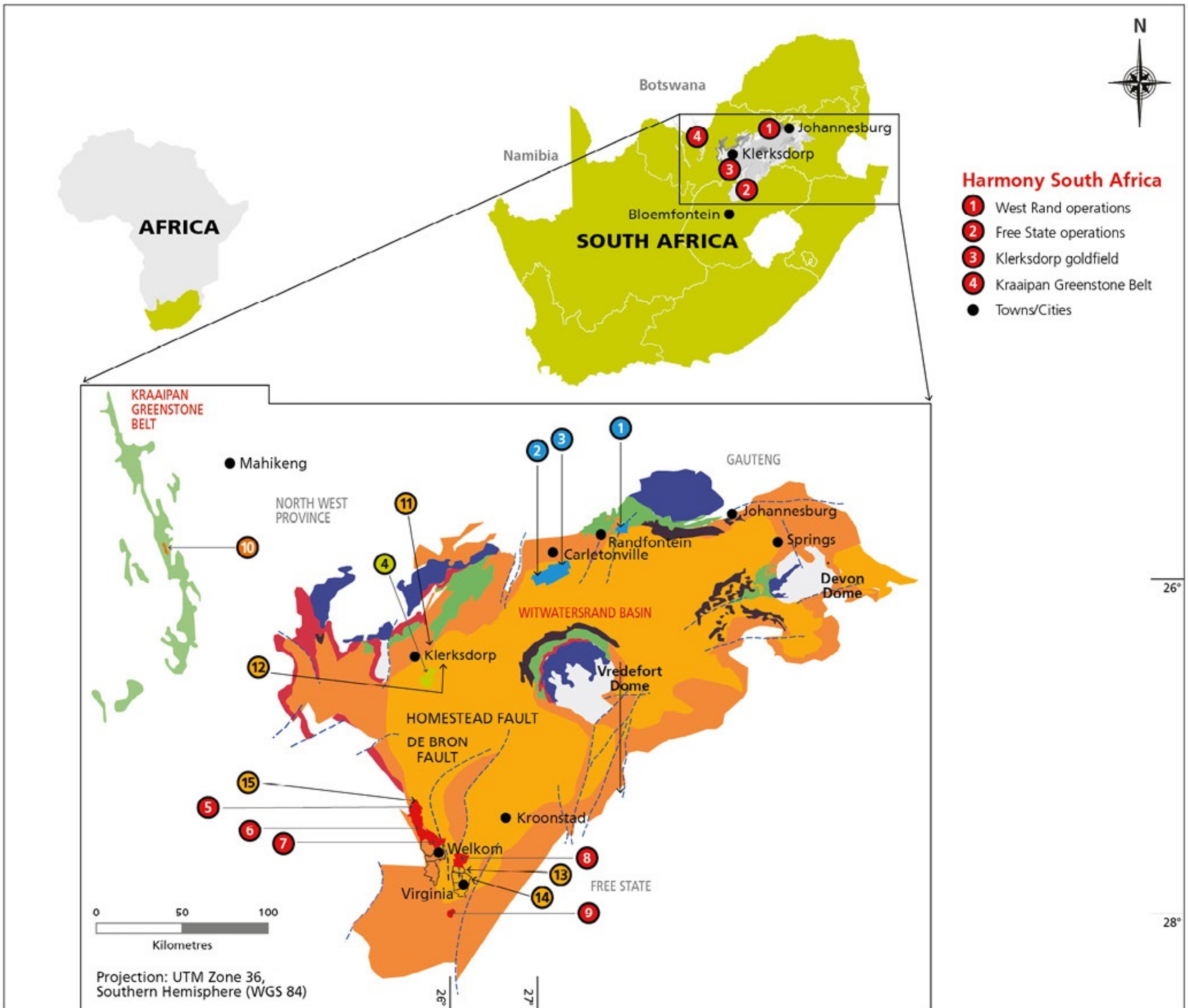
Harmony has three underground mining operations in the West Rand: Doornkop, Kusasalethu and Mponeng. As at June 30, 2022, their combined Mineral Resources (exclusive of Mineral Reserves) were 30.5 million ounces and the combined Mineral Reserves were 4.1 million ounces. Harmony has one underground mining operation in the Klerksdorp goldfield: Moab Khotsong. As at June 30, 2022, the estimated Mineral Resources (exclusive of Mineral Reserves) were 4.8 million ounces and the estimated Mineral Reserves were 4.0 million ounces. Harmony has four underground mining operations in the Free State: Joel, Masimong, Tshepong Operations, and Target 1. Target 3 is also situated in the Free State, but is currently held under care and maintenance. As at June 30, 2022, their combined estimated Mineral Resources (exclusive of Mineral Reserves) were 30.6 million ounces and the combined estimated Mineral Reserves were 3.0 million ounces.

Harmony has one open pit mine and several surface retreatment facilities in South Africa. These include: Kalgold, various surface sources in the Free State (including several tailings retreatment operations and waste rock dumps ("**WRDs**"), located largely in the vicinity of Welkom), marginal ore rock dumps and tailings (Mispah and Kop Paydam) associated with Moab Khotsong that are available for retreatment, Mine Waste Solutions, Savuka gold plant and West Wits. As at June 30, 2022, their combined estimated Mineral Resources (exclusive of Mineral Reserves) were 4.1 million ounces and the combined estimated Mineral Reserves were 10.4 million ounces.

In PNG, Harmony has one wholly-owned open-pit, gold and silver mine: Hidden Valley, and a 50% interest in the Wafi-Golpu project. As at June 30, 2022, our combined estimated gold and gold equivalent Mineral Resources (exclusive of Mineral Reserves) in PNG were 19.7 million ounces and the combined estimated Mineral Reserves were 18.2 million ounces.

Locations of Properties

The following graphic sets out the geographical distribution of Harmony’s mining properties.



LEGEND

- Exposed Central Rand Group
- Covered Central Rand Group
- Exposed West Rand Group
- Covered West Rand Group
- Dominion Group
- Exposed Granitoid Basement
- Major faults

West Rand operations

	Latitude	Longitude
1 Doornkop	26°13'03.36"S	27°47'26.55"E
2 Kusasalethu	26°27'16.23"S	27°21'32.91"E
3 Mponeng	26°26'15.60"S	27°25'41.24"E

Klerksdorp goldfield

	Latitude	Longitude
4 Moab Khotsong	26°59'12.7"S	26°48'03.3"E
15 Exploration Target North		
MAL21A	27°40'58.29"S	26°36'11.95"E
MAL22	27°40'43.75"S	26°36'12.49"E
MAL23	27°40'42.26"S	26°36'06.32"E

Free State operations

	Latitude	Longitude
5 Target 1	27°45'42.59"S	26°38'24.92"E
6 Target 3*	27°49'42.93"S	26°38'29.27"E
7 Tshepong operations**	27°51'56.45"S	26°42'45.15"E
8 Masimong	27°58'23.93"S	26°52'39.41"E
9 Joel	28°16'17.19"S	26°48'57.97"E

Surface sources

Kraaipan Greenstone Belt

	Latitude	Longitude
10 Kalgold	26°10'12.85"S	25°14'02.70"E

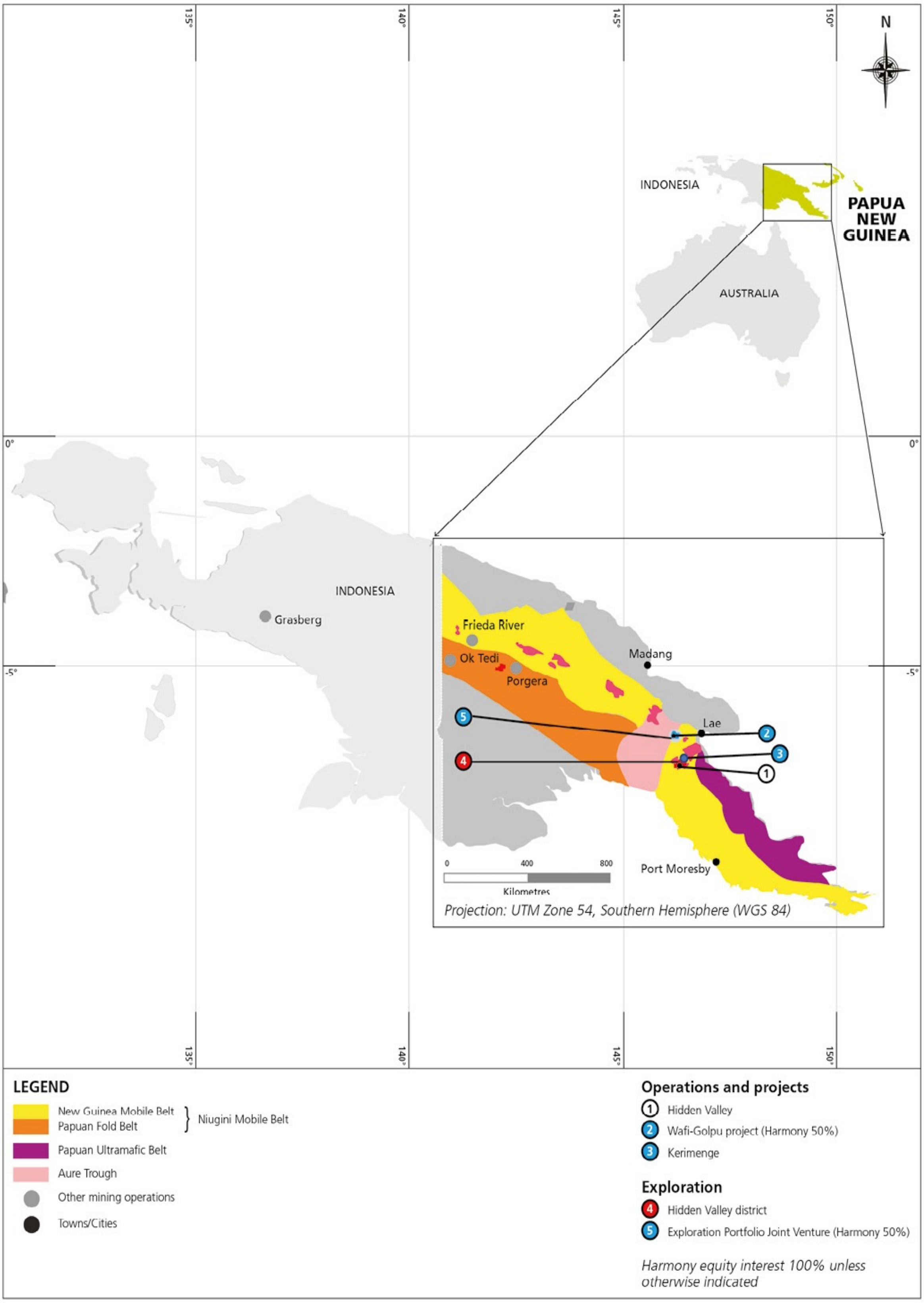
MWS Klerksdorp

	Latitude	Longitude
11 MWS Plant	26°50'10.50"S	26°47'50.41"E
12 Kareerand	26°53'21.49"S	26°53'21.24"E

Free State

	Latitude	Longitude
13 Saaiplaas Plant	28°2'6.64"S	26°52'4.02"E
14 Central Plant	28°3'36.57"S	26°53'14.18"E

* *Care and maintenance*
** *Tshepong Operations includes Tshepong and Phakisa sections combined*



Locality maps showing the location of individual properties as well as infrastructure and licenses are shown in under *"—Individual Property Disclosure"* below. All operations are 100 percent owned unless otherwise indicated.

The following table sets out the aggregate production of Harmony's mining operations for the years ended June 30, 2022, 2021 and 2020.

	Fiscal year ended June 30,		
	2022	**2021**	**2020**
Gold produced (kg)	46,236	47,755	37,863
Gold produced (000oz)	1,487	1,535	1,217

Overview of Mining Properties and Operations

The following information is detailed for each material property in "—Individual Property Disclosure" below:

- the location of the properties;
- the type and amount of ownership interests;
- the identity of the operator or operators;
- titles, mineral rights, leases or options and acreage involved;
- the stages of the properties (exploration, development or production);
- key permit conditions;
- mine types and mineralization styles; and
- processing plants and other available facilities.

Methodology

Mineral Resources

A Mineral Resource is a concentration or occurrence of solid material of economic interest in or on the Earth's crust in such form, grade or quality and quantity that there are reasonable prospects for eventual economic extraction. The location, quantity, grade, continuity and other geological characteristics of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge, including sampling.

An Inferred Mineral Resource is that part of a Mineral Resource for which quantity and grade or quality are estimated based on limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade or quality continuity. An Inferred Resource has a lower level of confidence than that applying to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of an Inferred Mineral Resource could be upgraded to an Indicated Mineral Resource with continued exploration.

An Indicated Mineral Resource is that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics are estimated with sufficient confidence to allow the application of modifying factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit. Geological evidence is derived from adequately detailed and reliable exploration, sampling and testing and is sufficient to assume geological and grade or quality continuity between points of observation.

A Measured Mineral Resource is that part of a Mineral Resource for which quantity, grade or quality, densities, shape, and physical characteristics are estimated with confidence sufficient to allow the application of modifying factors to support detailed mine planning and final evaluation of the economic viability of the deposit. Geological evidence is derived from detailed and reliable exploration, sampling and testing and is sufficient to confirm geological and grade or quality continuity between points of observation. A Measured Mineral Resource has a higher level of confidence than that applying to either an Indicated or an Inferred Mineral Resource. It may be converted to either a Proved Mineral Reserve or a Probable Mineral Reserve.

Mineral Resource estimation

To meet SAMREC, 2016's requirements that this solid material reported as a Mineral Resource should have "reasonable and realistic prospects for eventual economic extraction", Harmony has determined an appropriate cut-off grade which has been applied to the quantified mineralized body according to a process incorporating a long-term view on future economic modifying factors. In applying this process, Harmony uses a gold price of R850,191/kg to derive a cut-off grade to determine the Mineral Resources at each of its South African underground operations.

The estimation of Mineral Resources is based on geoscientific knowledge and borehole and sampling data (obtained by means of chip sampling on the reef horizon in a shaft-specific grid), with input from the company's Ore Reserve managers, geologists and geostatistical staff. All sampling done is subject to quality assurance and quality control, as prescribed by SAMREC, 2016, to ensure data quality and accuracy. Each mine's Mineral Resource is categorized – based on similarities in geology, facies, grade and structure, the orebody is divided into geozones. It is then blocked-out and ascribed an estimated value. A computerized geostatistical estimation process is used at all our mines.

To define that portion of a Measured and Indicated Mineral Resource that can be converted to a Proved and Probable Mineral Reserve, Harmony applies the concept of a cut-off grade. At our underground South African mines, this is done by defining the optimal cut-off as the lowest grade at which an orebody can be mined such that the total profits, under a specified set of mining parameters, are maximized. The cut-off grade is determined using the company's Optimiser software, which requires the following as input:

- the database of Measured and Indicated Resource blocks (per shaft section);
- an assumed gold price which, for this Mineral Reserve statement, was taken as R763,000/kg;
- planned production rates;
- the mine recovery factor which is equivalent to the mine call factor multiplied by the plant recovery factor; and
- planned cash operating costs (Rand per tonne).

Rand per tonne cash operating costs are historically based but take cognizance of distinct changes in the cost environment such as restructuring, right-sizing, and other cost-reduction initiatives and, for below-infrastructure ounces, an estimate of capital expenditure.

In PNG, the block cave reserve at Golpu uses proprietary block cave optimization software to define the optimal mine plan and sequencing. The open-pit reserve at Hidden Valley is determined using the Whittle optimization program to guide the most efficient mine design given the commodity prices and cost inputs assumed.

Mineral Reserves represent that portion of the Measured and Indicated Mineral Resources above the cut-off grade in the LoM plan and are estimated after consideration of the factors affecting extraction, including mining, metallurgical, economic, marketing, legal, environmental, social and governmental factors. At our underground mines, the reported Mineral Reserves are accessible from existing infrastructure and/or infrastructure that is in the process of being developed.

A range of disciplines, including geology, survey, planning, mining engineering, rock engineering, metallurgy, financial management, human resources management and environmental management, are involved at each mine in the LOM planning process and the conversion of Mineral Resources into Mineral Reserves.

The modifying factors related to the ore flow that are used to convert Mineral Resources to Mineral Reserves through the LOM planning process are stated for each shaft. For these factors, historical information is used, except if there is a valid reason to do otherwise. As a result of the depth at which mining occurs and the resulting rock engineering requirements at our South African underground mines, some shafts include stope support pillars into the design of their mining layouts which accounts for discounts of 7% to 10%. A further 15% discount is applied as a LOM factor to provide for unpay and off-reef mining. In general, LOM plan extraction factors do not exceed 85% and are reflected in Mineral Reserves.

While there are some differences between the definition of SAMREC, 2016 and that of Regulation S-K 1300, only the Mineral Reserves at each of Harmony's operations and advanced projects as at June 30, 2022 that qualify as Mineral Reserves for purposes of Regulation S-K 1300 are presented in the tables below.

Mineral Reserves

Modifying factors are considerations used to convert Mineral Resources to Mineral Reserves. These include, but are not restricted to, mining, processing, metallurgical, infrastructure, economic, marketing, legal, environmental, social and governmental factors. A Mineral Reserve is the economically mineable part of a Measured and/or Indicated Mineral Resource. It includes diluting materials and allowances for losses, which may occur when the material is mined or extracted and is defined by studies at prefeasibility or feasibility level as appropriate that include application of modifying factors. Such studies demonstrate that, at the time of reporting, extraction could reasonably be justified. The reference point at which Mineral Reserves are defined, usually the point where the ore is delivered to the processing plant, must be stated. It is important that in all situations where the reference point is different, such as for a saleable product, a clarifying statement is included to ensure that the reader is fully informed as to what is being reported.

A Probable Mineral Reserve is the economically mineable part of an Indicated, and in some circumstances, a Measured Mineral Resource. The confidence in the modifying factors applying to a Probable Mineral Reserve is lower than that applying to a Proved Mineral Reserve.

A Proved Mineral Reserve is the economically mineable part of a Measured Mineral Resource. A Proved Mineral Reserve implies a high degree of confidence in the modifying factors. A Scoping Study is an order of magnitude technical and economic study of the potential viability of Mineral Resources that includes appropriate assessments of realistically assumed modifying factors together with any other relevant operational factors that are necessary to demonstrate at the time of reporting that progress to a prefeasibility study can be reasonably justified.

A prefeasibility study is a comprehensive study of a range of options for the technical and economic viability of a mineral project that has advanced to a stage where a preferred mining method, in the case of underground mining, or the pit configuration, in the case of an open-pit, is established and an effective method of mineral processing is determined. It includes a financial analysis based on reasonable assumptions on the modifying factors and the evaluation of any other relevant factors which are sufficient for a competent person, acting reasonably, to determine if all or part of the Mineral Resource may be converted to a Mineral Reserve at the time of reporting. A prefeasibility study is at a lower confidence level than a feasibility study.

A feasibility study is a comprehensive technical and economic study of the selected development option for a mineral project that includes appropriately detailed assessments of applicable modifying factors together with any other relevant operational factors and detailed financial analysis that are necessary to demonstrate at the time of reporting that extraction is reasonably justified (economically mineable). The results of the study may reasonably serve as the basis for a final decision by a proponent or financial institution to proceed with, or finance, the development of the project. The confidence level of the study will be higher than that of a prefeasibility study.

For the reporting of Mineral Reserves the following parameters were applied:

- a gold price of US$1,546 per ounce;
- an exchange rate of R15.35 per US dollar;
- the above parameters resulting in a gold price of R763,000/kg for the South African assets;
- the Hidden Valley operation and Wafi-Golpu project used prices of US$1,546/oz gold ("**Au"**), US$22.35/oz silver ("**Ag**"), US$ and US$3.30/lb copper ("**Cu**") at an exchange rate of A$1.37 per US$;

- gold equivalent ounces are calculated assuming a US$1,546/oz Au, US$ 3.30/lb Cu and US$22.35/oz Ag with 100% recovery for all metals; and
- "gold equivalent" is computed as the value of Harmony's gold, silver and copper from all Mineral Resources/ Mineral Reserves classifications divided by the price of gold. All calculations are done using metal prices as stipulated.

Gold equivalent ounces

In instances where individual deposits may contain multiple valuable commodities with a reasonable expectation of being recovered (for example gold and copper in a single deposit) Harmony computes a gold equivalent to more easily assess the value of the deposit against gold-only mines. Harmony does this by calculating the value of each of the commodity, then dividing the product by the price of gold. For example, the gold equivalent of a gold and copper deposit would be calculated as follows: ((gold ounces x gold price per ounce) + (copper pounds x copper price per pound)) / gold price per ounce. All calculations are done using metal prices as stipulated above. Harmony assumes a 100% metallurgical recovery in its calculations unless otherwise stated.

Mineral Resources (exclusive of Mineral Reserves)

As at June 30, 2022, Harmony had aggregate attributable Measured and Indicated Resources (exclusive of Mineral Reserves) of approximately 44.8 million ounces of gold, 6.5 million ounces of gold equivalents, 29.2 thousand ounces of silver, 2.9 million pounds of copper, 71.6 million pounds of molybdenum and 60.4 million pounds of uranium.

Operations	Measured Resources			Indicated Resources			Measured and Indicated Resources			Inferred Resources		
Gold	**Tonnes (Mt)**	**Grade (g/t)**	**Gold (000kg)**	**Tonnes (Mt)**	**Grade (g/t)**	**Gold (000kg)**	**Tonnes (Mt)**	**Grade (g/t)**	**Gold (000kg)**	**Tonnes (Mt)**	**Grade (g/t)**	**Gold (000kg)**
South Africa underground												
Free State region												
Tshepong Operations	17.2	12.44	214	11.2	10.89	122	28.5	11.83	337	36.9	10.62	392
Joel	1.7	9.17	15	2.8	6.92	19	4.4	7.76	34	7.0	5.11	36
Masimong	2.0	9.21	18	—	—	—	2.0	9.30	18	—	—	—
Target 1	4.4	8.89	39	3.2	7.76	25	7.6	8.41	64	4.0	5.96	24
Target 3	0.6	9.19	6	3.0	10.17	30	3.6	10.01	36	1.2	8.66	11
Total Free State underground	**25.8**	**11.31**	**292**	**20.2**	**9.75**	**197**	**46.0**	**10.62**	**488**	**49.2**	**9.40**	**463.0**
West Rand region												
Doornkop	18.2	3.54	64	10.5	2.97	31	28.7	3.33	96	13.4	4.38	59
Kusasalethu	1.0	13.03	13	8.5	9.28	79	9.5	9.67	92	2.0	8.85	18
Mponeng	2.5	16.09	40	18.3	13.96	256	20.8	14.22	296	29.1	13.35	389
Total West Rand region	**21.7**	**5.43**	**118**	**37.4**	**9.80**	**367**	**59.1**	**8.19**	**484**	**44.6**	**10.44**	**465**
Klerksdorp operation												
Moab Khotsong	2.3	17.64	41	3.5	16.96	59	5.8	17.23	100	2.6	19.09	49
Total North West region	**2.3**	**17.64**	**41**	**3.5**	**16.96**	**59**	**5.8**	**17.23**	**100**	**2.6**	**19.09**	**49**
Total South Africa underground	**49.9**	**9.04**	**451**	**61.0**	**10.19**	**622**	**110.9**	**9.67**	**1,073**	**96.4**	**10.14**	**977**
South Africa Surface												
Kraaipan Greenstone Belt												
Kalgold	0.6	1.65	1	33.1	1.09	36	33.7	1.10	37	25.4	0.34	9
Total Kalgold	**0.6**	**1.65**	**1**	**33.1**	**1.09**	**36**	**33.7**	**1.10**	**37**	**25.4**	**0.34**	**9**
Free State region – Surface												
Tailings												
Other Free State tailings	82.8	0.27	22	—	—	—	82.8	0.27	22	15.5	0.19	3
Phoenix	21.9	0.27	6	—	—	—	21.9	0.27	6	—	—	—
Central	—	—	—	—	—	—	—	—	—	—	—	—
Waste rock dumps												
Free State WRD	—	—	—	1.1	0.39	0.4	1.1	0.39	0.4	17.0	0.43	7
Total Free State	**104.6**	**0.27**	**28**	**1.1**	**0.01**	**—**	**105.7**	**0.27**	**29**	**32.4**	**0.32**	**10**
North West region – Surface												
Tailings												
Mine Waste Solutions	54.1	0.20	11	113.0	0.19	21	167.2	0.19	32	—	—	—
Waste rock dumps												
Mine Waste Solutions	—	—	—	2.5	0.30	1	2.5	0.30	1	2.5	0.28	1
Total North West	**54.1**	**0.20**	**11**	**115.5**	**0.19**	**22**	**169.6**	**0.20**	**33**	**2.5**	**0.28**	**1**
West Rand region – Surface												
Tailings												
West Wits tailings	—	—	—	22.9	0.36	8	22.9	0.36	8	—	—	—
Waste rock dumps												
West Wits WRD	—	—	—	1.1	0.47	1	1.1	0.47	1	—	—	—
Total West Rand	**—**	**—**	**—**	**24.0**	**0.37**	**9**	**24.0**	**0.37**	**9**	**—**	**—**	**—**
Total South Africa Surface (including Kalgold)	159.3	0.25	40	173.7	0.39	67	333.0	0.32	108	60.4	0.32	19
Total South Africa	**209.2**		**491**	**234.7**		**689**	**443.9**		**1,180**	**156.7**		**996**
Papua New Guinea[1]												
Hidden Valley	—	—	—	33.0	1.34	44	33.0	1.34	44	1.2	1.21	1
Hamata	—	—	—	1.6	1.97	3	1.6	1.97	3	0.2	1.50	—
Wafi	—	—	—	54.0	1.66	89	54.0	1.66	89	20.0	1.37	26
Golpu	—	—	—	145.0	0.54	78	145.0	0.54	78	70.0	0.62	44
Nambonga	—	—	—	—	—	—	—	—	—	24.0	0.69	16
Kerimenge	—	—	—	—	—	—	—	—	—	16.4	1.07	18
Total Papua New Guinea	**—**	**—**	**—**	**233.6**	**0.92**	**214**	**233.6**	**0.92**	**214**	**131.8**	**0.80**	**105**
Grand total	**209.2**		**491**	**468.3**		**904**	**677.5**		**1,395**	**288.5**		**1,102**

Operations	Measured Resources		Indicated Resources		Measured and Indicated Resources		Inferred Resources	
Gold equivalents[1]	**Tons (Mt)**	**Au eq (000kg)**	**Tons (Mt)**	**Au eq (000kg)**	**Tons (Mt)**	**Au eq (000oz)**	**Tons (Mt)**	**Au eq (000oz)**
Silver								
Hidden Valley	—	—	33.0	10	33.0	10	1.2	0.4
Total	**—**	**—**	**33.0**	**10**	**33.0**	**10**	**1.2**	**0.4**
Copper								
Golpu	—	—	145.0	191	145.0	191	70.0	88
Nambonga	—	—	—	—	—	—	24.0	7
Total	**—**	**—**	**145.0**	**191**	**145.0**	**191**	**94.0**	**95**
Total Silver and Copper as gold equivalents	**—**	**—**	**178.0**	**202**	**178.0**	**202**	**95.2**	**95**
Total PNG including gold equivalents	**—**	**—**	**233.6**	**416**	**233.6**	**416**	**131.8**	**201**
Total Harmony including equivalents	**209.2**	**491**	**468.3**	**1,105**	**677.5**	**1,596**	**288.5**	**1,197**

Other metals

Papua New Guinea[1]	Measured Resources			Indicated Resources			Measured and Indicated Resources			Inferred Resources		
Silver	**Tonnes (Mt)**	**Grade (g/t)**	**silver (000kg)**	**Tonnes (Mt)**	**Grade (g/t)**	**silver (000kg)**	**Tonnes (Mt)**	**Grade (g/t)**	**silver (000kg)**	**Tonnes (Mt)**	**Grade (g/t)**	**silver (000kg)**
Hidden Valley	—	—	—	33.0	21.97	725	33.0	21.97	725	1.2	23.12	29
Golpu	—	—	—	145.0	1.26	183	145.0	1.26	183	70.0	1.10	74
Total	**—**	**—**	**—**	**178.0**	**5.10**	**908**	**178.0**	**5.10**	**908**	**71.2**	**1.45**	**103**
Copper	**Tonnes (Mt)**	**%**	**Cu (000t)**	**Tonnes (Mt)**	**%**	**Cu (000t)**	**Tonnes (Mt)**	**%**	**Cu (000t)**	**Tonnes (Mt)**	**%**	**Cu (000t)**
Golpu	—	—	—	145.0	0.90	1,350	145.0	0.90	1,350	70.0	0.86	600
Nambonga	—	—	—	—	—	—	—	—	—	24.0	0.20	47
Total	**—**	**—**	**—**	**145.0**	**0.90**	**1,350**	**145.0**	**0.90**	**1,350**	**94.0**	**0.69**	**647**
Molybdenum	**Tons (Mt)**	**ppm**	**Mo (000t)**	**Tons (Mt)**	**ppm**	**Mo (000t)**	**Tons (Mt)**	**ppm**	**Mo (000t)**	**Tons (Mt)**	**ppm**	**Mo (000t)**
Golpu	—	—	—	145.0	94.00	33	145.0	94.00	33	70.0	71.00	5
Total	**—**	**—**	**—**	**145.0**	**94.00**	**33**	**145.0**	**94.00**	**33**	**70.0**	**71.00**	**5**

South Africa

Uranium	Tonnes (Mt)	Grade (kg/t)	U_3O_8 (Mkg)	Tonnes (Mt)	Grade (kg/t)	U3O8 (Mkg)	Tonnes (Mt)	Grade (kg/t)	U_3O_8 (Mkg)	Tonnes (Mt)	Grade (kg/t)	U_3O_8 (Mkg)
Free State surface	—	—	—	82.8	0.10	8	82.8	0.10	8	—	—	—
Mine Waste Solutions	54.1	0.07	4	113.0	0.08	8	167.2	0.07	12	—	—	—
Moab underground	—	—	—	5.8	1.19	7	5.8	1.19	7	2.6	0.71	2
Grand total	**54.1**	**0.07**	**4**	**201.6**	**0.12**	**24**	**255.8**	0.11	**27**	**2.6**	**0.71**	**2**

¹ Total attributable Gold equivalent ounces are calculated assuming a US$1,546/oz Au, US$3.30/lb Cu and US$22.35/oz Ag with 100% recovery for all metals.

Note: rounding of numbers may result in slight computational discrepancies.

Mineral Reserves

As at June 30, 2022, Harmony had aggregate attributable Proven and Probably Mineral Reserves of approximately 28.1 million ounces of gold, 11.7 million ounces of gold equivalents, 13.3 thousand ounces of silver, 5.4 million pounds of copper and 10 million pounds of uranium.

Operations	Proved Reserves			Probable Reserves			Total Mineral Reserves		
Gold	**Tonnes (Mt)**	**Grade (g/t)**	**Gold² (000kg)**	**Tonnes (Mt)**	**Grade (g/t)**	**Gold² (000kg)**	**Tonnes (Mt)**	**Grade (g/t)**	**Gold² (000kg)**
South Africa underground									
Free State region									
Tshepong Operations	7.9	6.02	48	0.5	7.24	4	8.4	6.09	51
Bambanani	—	—	—	—	—	—	—	—	—
Joel	2.8	5.01	14	1.0	4.85	5	3.7	4.97	19
Masimong	0.7	4.95	4	0.3	3.47	1	1.0	4.55	5
Target 1	2.7	4.32	12	1.7	4.11	7	4.4	4.24	19
Total Free State underground	**14.2**	**5.44**	**77**	**3.5**	**4.73**	**16**	**17.6**	**5.30**	**93**
West Rand region									
Doornkop South Reef	5.9	4.46	26	7.9	4.29	34	13.8	4.36	60
Kusasalethu	1.3	6.97	9	0.03	6.84	0.2	1.3	6.97	9
Mponeng	2.3	8.09	19	4.3	9.12	39	6.6	8.76	58
Total West Rand region	**9.5**	**5.68**	**54**	**12.2**	**5.99**	**73**	**21.7**	**5.86**	**127**
North West region									
Moab Khotsong	2.7	7.48	20	12.0	8.78	105	14.7	8.54	125
Total North West region	**2.7**	**7.48**	**20**	**12.0**	**8.78**	**105**	**14.7**	**8.54**	**125**
Total South Africa underground	**26.3**	**5.74**	**151**	**27.7**	**7.04**	**195**	**54.0**	**6.40**	**346**
South Africa Surface									
Kraaipan Greenstone Belt									
Kalgold	5.6	0.94	5	15.8	1.16	18	21.4	1.10	24
Free State region – Surface									
Tailings									
Other Free State tailings	86.5	0.27	23	578.7	0.22	129	665.3	0.23	153
Phoenix	36.5	0.29	10	—	—	—	36.5	0.29	10
Central	—	—	—	47.9	0.27	13	47.9	0.27	13
Total Free State	**123.0**	**0.27**	**34**	**626.6**	**0.23**	**142**	**749.7**	**0.23**	**176**
North West region – Surface									
Tailings									
Mispah	—	—	—	75.2	0.30	23	75.2	0.30	23
Vaal River tailings	—	—	—	177.3	0.28	50	177.3	0.28	50
Mine Waste Solutions	21.1	0.26	6	166.8	0.24	41	187.8	0.25	46
Total North West	**21.1**	**0.26**	**6**	**419.2**	**0.27**	**113**	**440.3**	**0.27**	**119**
West Rand – Surface									
West Wits tailings	—	—	—	19.3	0.33	6	19.3	0.33	6
Total West Rand	**—**	**—**	**—**	**19.3**	**0.33**	**6**	**19.3**	**0.33**	**6**
Total South Africa Surface (including Kalgold)	**149.7**	**0.30**	**45**	**1,080.9**	**0.26**	**280**	**1,230.7**	**0.26**	**325**
Total South Africa	**176.1**		**196**	**1,108.6**		**475**	**1,284.7**		**670**
Papua New Guinea									
Hidden Valley	2.5	0.86	2	16.3	1.78	29	18.8	1.65	31
Hamata	—	—	—	0.3	1.48	0.4	0.3	1.48	0.4
Golpu [1]	—	—	—	200.0	0.86	171	200.0	0.86	171
Total Papua New Guinea	**2.5**	**0.86**	**2**	**216.6**	**0.93**	**200**	**219.1**	**0.92**	**203**
HV Hamata	2.5	0.86	2	16.6	1.77	29	19.1	1.65	32
Grand total	**178.6**		**198**	**1,325.2**		**675**	**1,503.8**		**873**

Operations	Proved Reserves		Probable Reserves		Total Mineral Reserves	
Gold equivalents	Tonnes (Mt)	Au[2] (000kg)	Tonnes (Mt)	Au[2] (000kg)	Tonnes (Mt)	Au[2] (000kg)
Silver						
Hidden Valley	2.5	1	16.3	5	18.8	6
Copper						
Golpu[1]	—	—	200.0	359	200.0	359
Total silver and copper as gold equivalents	**2.5**	**1**	**216.3**	**364**	**218.8**	**365**
Total PNG including gold equivalents	**2.5**	**3**	**216.6**	**565**	**219.1**	**567**
Total Harmony including equivalents	**178.6**	**199**	**1,325.2**	**1,039**	**1,503.8**	**1,238**

Other metals

Papua New Guinea[1]	Proved Reserves			Probable Reserves			Total Mineral Reserves		
Silver	Tonnes (Mt)	Grade (g/t)	Ag[2] (000kg)	Tonnes (Mt)	Grade (g/t)	Ag[2] (000kg)	Tonnes (Mt)	Grade (g/t)	Ag[2] (000kg)
Hidden Valley	2.5	18.32	47	16.3	22.45	366	18.8	21.89	412

Copper	Tonnes (Mt)	Grade (%)	Cu[2] (000t)	Tonnes (Mt)	Grade (%)	Cu[2] (000t)	Tonnes (Mt)	Grade (%)	Cu[2] (000t)
Golpu	—	—	—	200.0	1.20	2,450	200.0	1.20	2,450

South Africa

Uranium	Tonnes (Mt)	Grade (kg/t)	U_3O_8[2] (Mkg)	Tonnes (Mt)	Grade (kg/t)	U_3O_8[2] (Mkg)	Tonnes (Mt)	Grade (kg/t)	U_3O_8[2] (Mkg)
Moab Khotsong underground	—	—	—	14.7	0.30	4	14.7	0.30	4

[1] Total attributable Gold equivalent ounces are calculated assuming a US$1,546/oz Au, US$3.30/lb Cu and US$22.35/oz Ag with 100% recovery for all metals.

[2] Metal figures are fully inclusive of all mining dilutions and gold losses, and are reported as mill-delivered tonnes and head grades. Metallurgical recovery factors have not been applied to the reserve figures.

Note: rounding of numbers may result in slight computational discrepancies.

As at June 30, 2022, Harmony's attributable gold and gold equivalent Mineral Reserves were 39.8 million ounces of gold, a decrease from 42.5 million ounces at June 30, 2021. The year on year Mineral Reserve reconciliation is shown below.

Description	(000kg)	Moz
June 30, 2021 Gold and gold equivalents	1,320	42.5
Changes during fiscal 2022		
Mined	-51	-1.7
Tshepong Restructuring, Bambanani closure	-87	-2.8
Other losses (geology, planning)	-15	-0.5
Reserve additions from Operations and Mispah	51	1.6
Gold equivalents	20	0.7
June 20, 2022 Gold and gold equivalents	1,238	39.8

MINERAL RESOURCE AND MINERAL RESERVE INDIVIDUAL PROPERTY DISCLOSURE

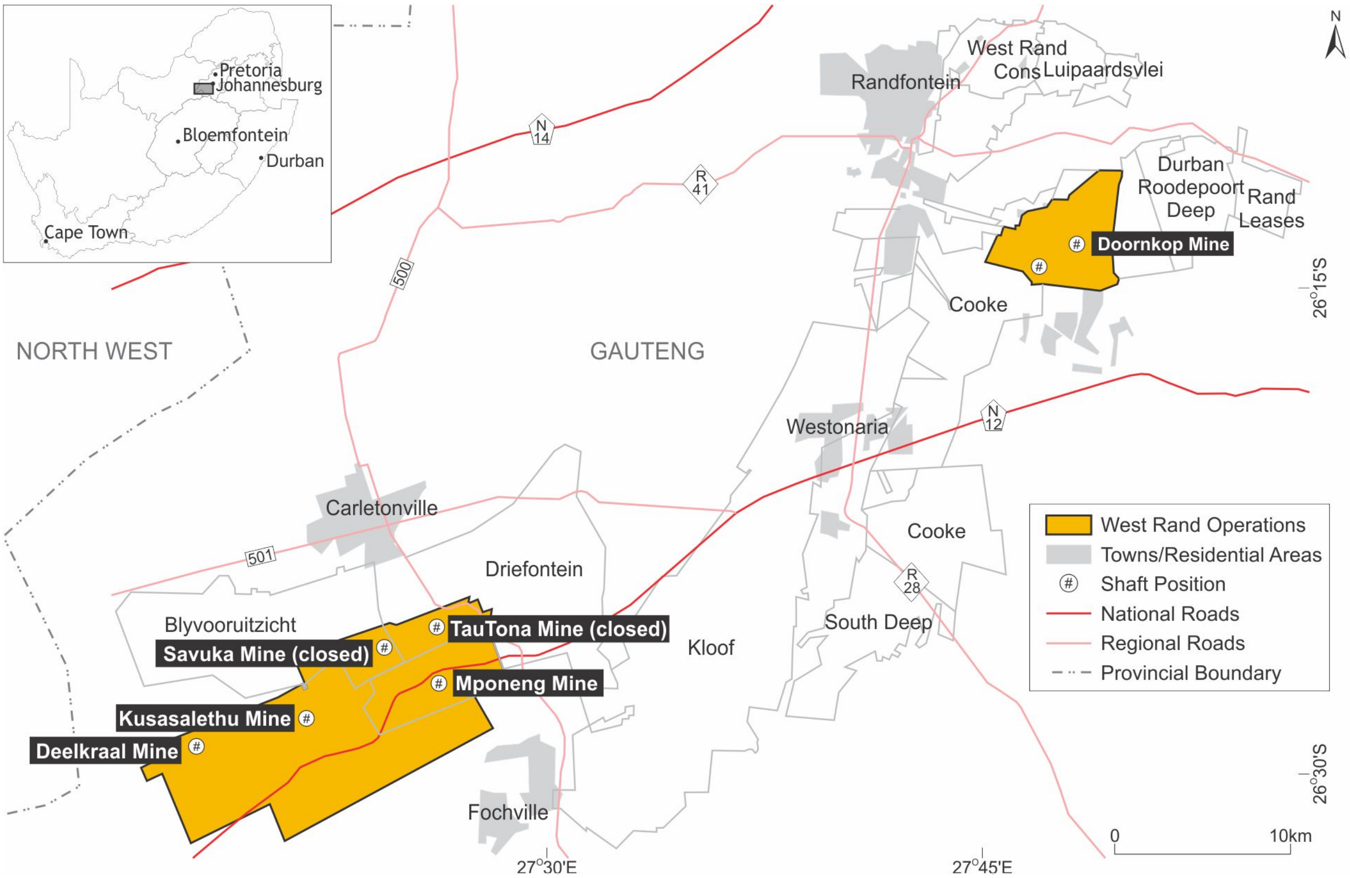
For more information about Harmony's mines, including a summary of the Company's mining rights and licenses refer to Item 4*: "Information on the Company - Business Overview – Regulation"*. For detailed information about Harmony's mines, including the mining rights and licenses refer to the Technical Report Summary ("**TRS**") on each individual property, filed as an Exhibit to this annual report on Form 20-F.

Doornkop

Property Description

Doornkop is an underground gold mine located in the West Wits mining district southwest of Johannesburg, in the Gauteng Province. At longitude 27°47'26.55"E and latitude 26°13'03.2"S, the mine is approximately 30km from Johannesburg and forms part of Harmony's West Rand (“**West Wits**”) operations. Doornkop is wholly-owned and operated by Harmony.

The following graphic illustrates the location of the Doornkop mine, along with certain infrastructure.



The Doornkop shaft complex is located south of Krugersdorp, 30km west of Johannesburg, in Gauteng Province, South Africa. The property lies between Sibanye Stillwater Limited’s Cooke 1 shaft and Durban Roodepoort Deep Limited. Doornkop form part of Harmony’s West Rand operations and extends to a maximum depth of approximately 2,000m below surface. Current mining operations extract the South Reef, with the Mineral Reserves being comprised entirely of this reef. Mineral Resources are comprised of the South Reef and the Kimberley Reef, and a limited (<0.5%) amount of the Main Reef.

There is no material litigation (including violations or fines) against Harmony that threatens its mineral rights, tenure, or operations.

Operational Infrastructure

Infrastructure in the region is well established, supporting the numerous operational gold mines in the area. The regional infrastructure includes national and provincial paved road networks, power transmission and distribution networks, water supply networks and communication infrastructure. Doornkop’s surface and underground infrastructure, including its power and water supplies, is sufficient for the current and planned production level requirements.

Doornkop’s main and vent shaft systems are currently exploiting the South Reef to approximately 2,000m below surface. The narrow South Reef is exploited by means of conventional stoping. The ore mined at Doornkop is processed at the mine’s carbon-in-pulp (“**CIP**”) plant, which is located adjacent to the shaft. Operations are powered by electricity from Eskom.

Doornkop is an established operation, and the currently available infrastructure is sufficient to support the mine plan. Doornkop is accessible via the national and provincial roads. The general layout of Doornkop infrastructure is displayed in the graphic below.

Geology

Doornkop is situated on the northwestern margin of the Witwatersrand Basin of South Africa, one of the most prominent gold provinces in the world. While there are several gold-bearing conglomerate reefs present within the mining right area, only the Kimberley Reef and South Reef are considered to have prospects for economic extraction at this stage.

In the West Rand Goldfield, the Kimberley Reefs include a number of different gold-bearing conglomerate horizons. At Doornkop, it is the Kimberley K9 Reef horizon which comprises the Mineral Resources along with the South Reef. The K9 Reef rests on an unconformity and is a multi-pulse conglomerate which is divided into four cycles, each consisting of an upper conglomerate and a lower quartzite.

The South Reef comprises a basal conglomerate unit and a cycle of trough cross-bedded sediments. The South Reef is dominated by silicate phases such as quartz, carbon (seam and specks), as well as sulphide phases such as pyrite, pyrrhotite and chalcopyrite. While the upper cycles may carry some gold values, up to 95% of the gold present is located in the lower cycle.

Both the Kimberley Reef and the South Reef have been subjected to faulting and are intruded by a series of dykes and sills of various ages that cut across the reefs. The gold mineralisation is interpreted to have succeeded a period of deep burial, fracturing, and alteration. The gold and other elements are believed to have precipitated through the reaction of hydrothermal fluids at high temperatures along the reef horizons.

History

Although exploration in the Doornkop area dates back to the early 1930s, and multiple phases of exploration and mining activities have taken place in the intervening years, the sinking of the Main and Ventilation Shafts at Doornkop only commenced in 1983. At the time, Doornkop was owned by Johannesburg Consolidated Industries Limited (“**JCI**”).

It was initially planned to mine both the Kimberley and the South Reefs. However, a decision was then taken by JCI to target the shallower Kimberley Reef only, mining it by mechanised methods. In additional, the deepening of the Main Shaft required to access to the South Reef was deferred. During 1989, the planned production rates from the Kimberley Reefs were achieved, but the anticipated grades were not recovered. Adverse geological structures were encountered, and the decrease in grades were attributed to difficulties associated with the mechanised mining methods resulting in dilution.

A review of the operation was undertaken in 1991, and the mining approach was changed to a more selective mining cut, targeting higher grade areas of Kimberley Reef only. In 1999, the deepening project was stopped, as a result of the low prevailing gold prices. The sub-vertical shaft sinking had been completed with the shaft bottom at 1,953m below surface. The deepening of the Main Shaft stopped at 1,340m below surface.

Harmony acquired Doornkop when it took over control of Randfontein Estates Limited ("**REL**"), in early 2000. Harmony continued mining the Kimberley Reef using mechanised mining methods, but revisited the work done toward extracting the South Reef. The mining method for the Kimberley Reef was subsequently changed to the conventional stoping approach, in order to extract a reduced tonnage at an improved grade.

Mineral Tenure

Refer to Item 4: *"Information on the Company – Business Overview – Regulation – Mineral Rights – South Africa"* above for a summary of the regulatory environment in South Africa.

The current mining right is held by REL, a wholly owned subsidiary of Harmony. The right encompasses an area of 2,941.02ha and was successfully converted, executed and registered as a new order mining right at the Mineral and Petroleum Resources Titles Office ("**MPRTO**"). As such, it is secured under Mining Authorisation number ML 13/97. The DMRE reference GP30/5/1/2/2/09MR was issued for a period of 30 years expiring on October 6, 2038, and Harmony has the exclusive right to renew the right.

A summary of the status of environmental permits and licenses issued as at June 30, 2022, related to Doornkop operation is presented in the table below.

Permit / Licence	Reference No.	Issued By	Date Granted	Validity
Environmental Management Programme Report ("EMPr")	GP30/5/1/2/2/(09) EM	DMRE	June 7, 2020	LOM
Certificate of Registration (Nuclear)	01/0025/06	National Nuclear Regulator	May 31, 2003	LOM
Water Use Permit	33/2/323/24	DWS	December 1, 1977	LOM
Integrated WUL (Draft)	16/2/7/C221/C024	DWS	January 1, 2010	LOM
ISO 14001 Certification	631282	BSI	November 1, 2021	November 1, 2024
Cyanide Management Certification	n/a	ICMC	April 1, 2021	April 1, 2024
Precious Metal Refining Licence	1889/000251/66	SA Diamond & Precious Metals Regulator	June 1, 2011	June 1, 2024
Environmental Authorisation for Water Treatment Plant	GP30/5/1/2/2/(09) EM	DMRE	August 1, 2016	LOM

Notes: BSI - British Standard Institute, ICMC - International Cyanide Management Code.

Mining Method

Doornkop is a deep level underground gold mine currently operating at depths ranging between 1,870m and 1,950m below surface.

The mining method used at Doornkop is conventional breast mining, in a sequential grid, also known as sequential grid mining ("**SGM**").

Doornkop does not use backfill for the support of stopes. The SGM method makes use of dip pillars and reduced mining spans with pre-developed tunnels, aimed at controlling geotechnical stress.

The mining sequence at Doornkop is typically a V-shaped configuration, colloquially referred to as the "inverted Christmas tree". An underhand face configuration is adopted when mining towards the west and an overhand face configuration when mining towards the east.

Primary development is done off-reef (in waste rock), while secondary development is done on-reef (in the mineralised zone).

Mineral Processing

Doornkop's gold processing facility has been in operation since the mid-1980s. The technology used to process the gold-bearing ore is well established and is suitable for the style of mineralisation.

The milled ore from Doornkop follows a standard cyanide leach, CIP and electrowinning process in order to extract the gold bullion.

The plant is currently operating below its designed throughput capacity and in the past has operated at the throughput required to deliver the forecasted ounces of gold in the LOM.

Qualified Persons

The Qualified Persons ("**QPs**") preparing the TRS were employed on a full-time basis by Harmony. The QPs' qualifications, areas of responsibility and personal inspection of the property are summarized in the graphic below.

Qualified Person	Professional Organisation	Qualification	TRS Section Responsibility	Personal Insp.
Mr H Chirambadare	SACNASP	BSc. (Geol, Math), BSc. (Hons) Geol, MENG, MBA	All	Full time

Exploration

Exploration at Doornkop has been focused on improving confidence in the geological model, as well as adding and upgrading additional Mineral Resources to the mine as existing Mineral Resources are depleted through mining. Over the years, geological data has been obtained through surface drilling, underground drilling, underground channel (chip) sampling and geological mapping.

Surface exploration drilling has taken place over several different campaigns since exploration was initially undertaken in the 1930s. Surface drilling provides widely spaced initial grade and channel width information, upon which mine development decision are based.

Underground exploration drilling is a continuous process which would have been in place since the operation commenced. The underground drilling provides geological information, which is used for the Mineral Resource estimates, as well as for mine planning purposes

Diamond core drilling was used for all underground drill holes. Diamond core drilling has been undertaken using hydraulic and pneumatic drill rigs.

Drilling and logging practices are based on the Harmony company standards, which have been in place since Harmony took over Doornkop

The QP is of the opinion that the quality and quantity of the exploration methods and information gathered is sufficient to support the estimation of Mineral Resources and Mineral Reserves.

Mineral Resource Estimate

The Mineral Resource estimate for Doornkop is considered to have reasonable prospects for economic extraction. The cut-off value for the Mineral Resources has been determined as 638cmg/t, based on the economic assumptions presented in the table below at the effective date of June 30, 2022.

Description	Unit	Value
Gold price	USD/oz	1,723
FX rate	R:USD	15.35
Gold price	R/kg	850,191
Plant recovery factor	%	96.7
Unit cost	R/t	2,798

This cut-off value represents typical costs for the mining method and preliminary mining and metallurgical recovery assumptions.

The Mineral Resources were originally prepared, classified and reported according to the SAMREC, 2016. For the purposes of this report on Form 20-F, the Mineral Resources have been classified in accordance with Item 1302(d)(1)(iii)(A) of Regulation S-K. These Mineral Resources account for mining depletion recorded from July 2021 to June 2022. The Mineral Resource estimate, as at June 30, 2022, exclusive of the reported Mineral Reserves, is summarized in the table below.

	Fiscal Year Ended June 30,						
	2022			2021			
Mineral Resource Category	**Tonnes (Mt)**	**Gold Grade (g/t)**	**Gold Content (kg)**	**Tonnes (Mt)**	**Gold Grade (g/t)**	**Gold Content (kg)**	**% Change**
Measured	18.2	3.54	64,492	—	—	—	n/a
Indicated	10.5	2.97	31,245	—	—	—	n/a
Total / Ave. Measured + Indicated	**28.7**	**3.33**	**95,738**	**—**	**—**	**—**	**n/a**
Inferred	13.4	4.38	58,707	—	—	—	n/a

Notes:

1. Mineral Resources are reported with an effective date of June 30, 2022, were originally prepared, classified and reported according to SAMREC, 2016. For the purposes of this TRS, the Mineral Resources have been classified in accordance with Item 1302(d)(1)(iii)(A) of Regulation S-K. The QP responsible for the estimate is Mr H Chirambadare, who is Ore Reserve Manager at Doornkop, and a Harmony employee.
2. The Mineral Resource tonnes are reported as in situ with reasonable prospects for economic extraction.
3. No modifying factors or dilution sources have been included to in situ Reserve which was subtracted from the SAMREC Resource in order to obtain the S-K 1300 Resource.
4 The Mineral Resources are reported using a cut-off value of 638cmg/t determined at a 90% profit guidance, and a gold price of USD1,723/ oz.
5. Tonnes are reported rounded to three decimal places. Gold values are rounded to zero decimal places.
6. Mineral Resources are exclusive of Mineral Reserves. Mineral Resources are not Mineral Reserves and do not necessarily demonstrate economic viability.
7. Rounding as required by reporting guidelines may result in apparent summation differences.
8. The Mineral Resource estimate is for Harmony’s 100% interest.
9. This is the first time that Harmony has reported Mineral Resource in the Form 20-F and as such it cannot be compared to a previous reporting period.

Mineral Reserve Estimate

The Mineral Reserves were originally prepared, classified and reported according to SAMREC, 2016. For the purposes of this report on Form 20-F, the Mineral Reserves have been classified in accordance with Item 1302(d)(1)(iii)(A) of Regulation S-K. Mineral Reserves are derived from the Mineral Resources, a detailed business plan and the operational mine planning processes. Mine planning utilizes and takes into consideration historical technical parameters achieved. In addition, Mineral Resource conversion to Mineral Reserves considers certain modifying factors, dilution, ore losses, minimum mining widths, planned mine call and plant recovery factors.

The Mineral Reserve estimate, as at June 30, 2021 and 2022, is summarized in the table below.

	Fiscal Year Ended June 30,						
	2022			2021			
Mineral Reserve Category	**Tonnes (Mt)**	**Gold Grade (g/t)**	**Gold Content (kg)**	**Tonnes (Mt)**	**Gold Grade (g/t)**	**Gold Content (kg)**	**% Change**
Proved	5.9	4.46	26,179	6.0	4.73	28,549	(8.3)
Probable	7.9	4.29	33,988	4.4	4.17	18,523	83.5
Total / Ave. Proved + Probable	**13.8**	**4.36**	**60,167**	**10.4**	**4.49**	**47,072**	**27.8**

Notes:

1. The Mineral Reserves were originally prepared, classified and reported according to SAMREC, 2016. For the purposes of this TRS, the Mineral Reserves have been classified in accordance with Item 1302(d)(1)(iii)(A) of Regulation S-K. The QP responsible for the estimate is Mr H Chirambadare, who is the Doornkop Ore Reserve Manager, and a Harmony employee.
2. Tonnes, grade, and gold content (oz) are declared as net delivered to the mills.
3. Figures are fully inclusive of all mining dilutions, gold losses and are reported as mill delivered tonnes and head grades. Metallurgical recovery factors have not been applied to the reserve figures.
4. Gold content is recovered gold content after taking into consideration the modifying factors.
5. Mineral Reserves are reported using a cut-off grade of 739cmg/t determined using a gold price of USD1,546/oz.

The increase in Mineral Reserves is due to long inclined borehole (**"LIB")** exploration drilling and on reef development which increased ore body confidence classification. LIB exploration drilling confirmed a flatter dipping reef which resulted in additional resources above infrastructure that were converted to reserves.

The table below presents a summary of the modifying factors used to convert the Mineral Resource to the Mineral Reserve for Doornkop. The modifying Factors are consistent with the modelling, planning and computing estimates used in determining the Mineral Reserves, which are also consistent with historical performance.

Modifying Factor	**Unit**	**Value**
Relative Density	t/m^3	2.77
Stoping width	cm	123
Gully (dilution)	%	4.4
Off Reef	%	3.0
Waste to Reef	%	0.3
Flushing tons	%	0.0
Discrepancy	%	16.4
Mine Call Factor	%	81.0
Plant Recovery Factor	%	96.7
Mine Recovery Factor	%	78.3
Plant Call Factor	%	100.0
Mineral Reserve cut-off	cmg/t	739

For additional information, see the TRS on each individual property, filed as an Exhibit of this annual report on Form 20-F.

Free State Surface Operations

Property Description

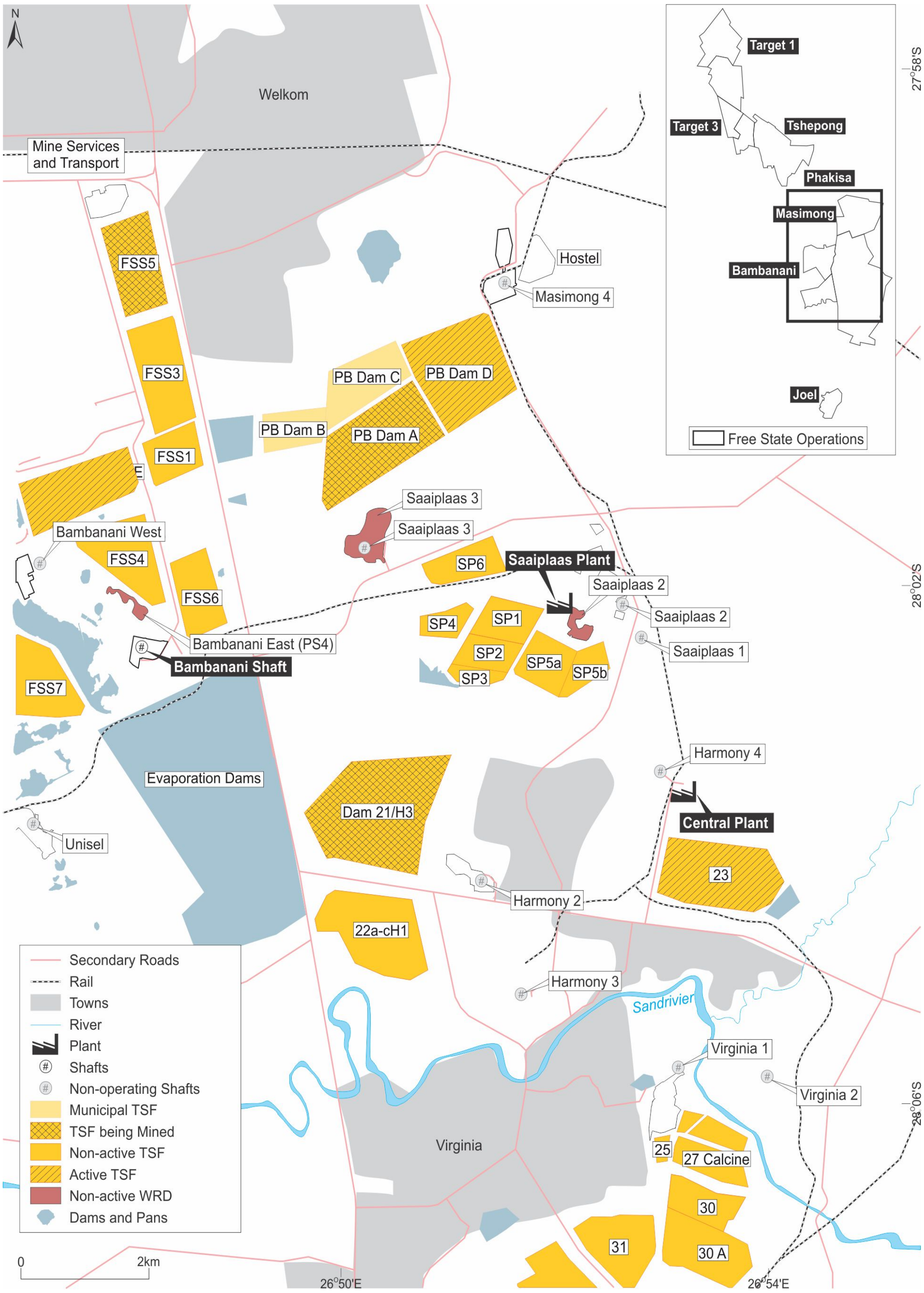
The Free State Surface Operations are located near the towns of Welkom and Virginia, Free State Province, South Africa. The operations reclaim and re-treat local surface tailings storage facilities ("**TSFs**") and WRDs.

The Free State Surface Operations comprise Mineral Resources located in 24 TSFs and 12 WRDs; three of the TSFs are actively being mined and processed through two processing plants. The Free State Surface Operations comprise the following:

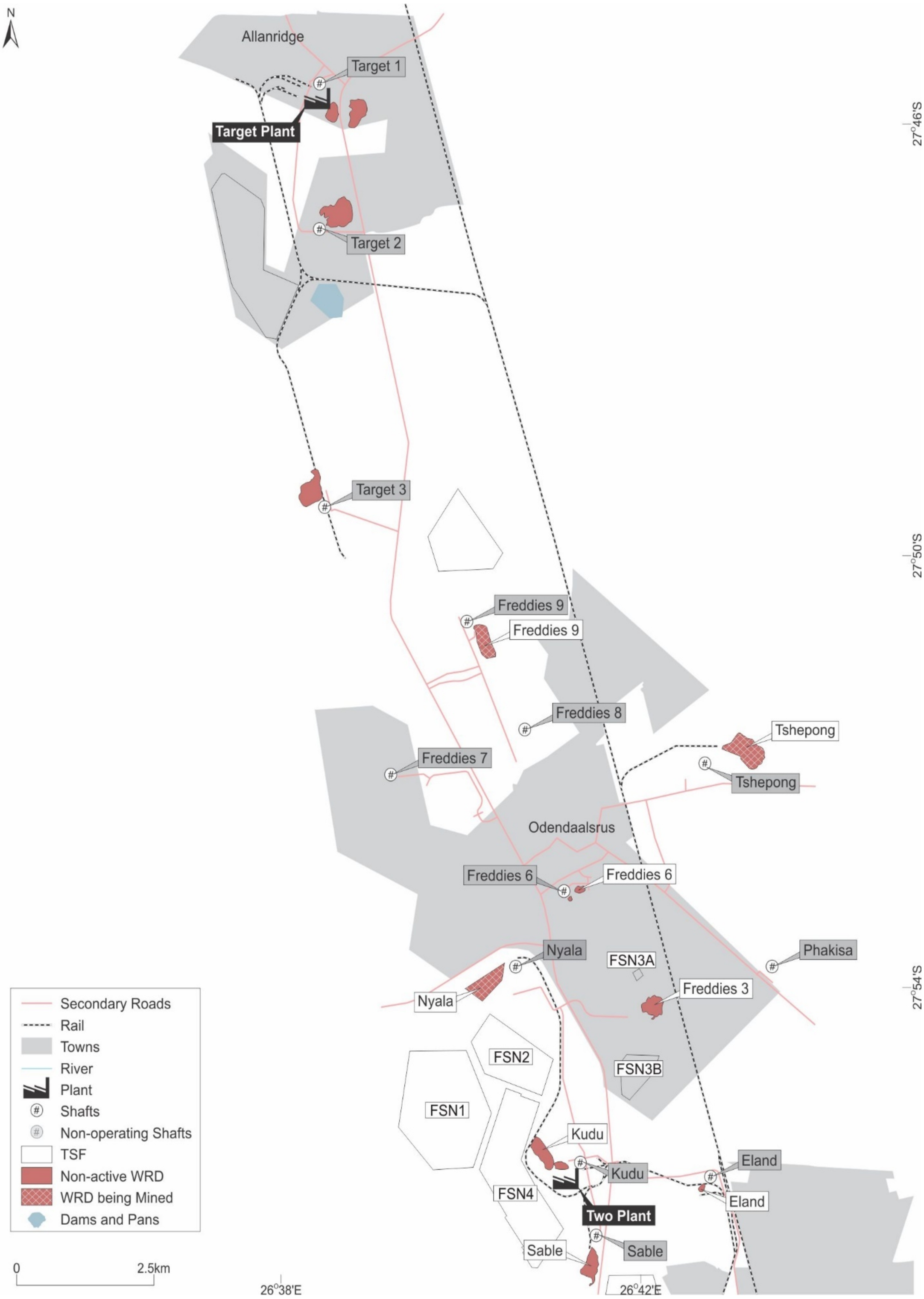
- Phoenix Project: this project is currently reclaiming two TSFs which are processed through the Saaiplaas Plant;
- Central Plant Reclamation. this operation is currently reclaiming one TSF which is processed through the Central Plant;
- Free Sate Tailings: this project is at pre-feasibility study ("**PFS**") level and will include the treatment of 21 TSFs. These TSFs will be processed through any of the plants; and
- WRDs located across Harmony's Free State mining operations.

The Free-State Surface Operations and their associated mineral rights are wholly owned by Harmony, except for the Phoenix Project. The Phoenix Project is 100% owned by Harmony's BBBEE subsidiary, Tswelopele Beneficiation Operation (Pty) Limited, of which Harmony is a 76% shareholder (5% is held by the Harmony Community Trust).

The location of the TSFs situated between Welkom and Virginia is presented in figure below.



The location of the WRDs is presented in the figure below.



Phoenix Project is a tailings retreatment operation located approximately 6km north of the town of Virginia; it currently re-treats material from the Dam A (PB Dam A) and Dam 21 TSFs using the Saaiplaas Plant. The Saaiplaas Plant is located at latitude 28°03’37.68”S and longitude 26°53’14.59”E.

The Phoenix Project is nearing the end of its current ore sources and the next source that will be introduced is the FSS6 TSF.

The Central Plant Reclamation currently re-treats material from the FSS5 TSF using the Central Plant. The FSS5 TSF is located close to the southern edge of the town of Welkom, while the Central Plant is located approximately 7km southeast of the Saaiplaas Plant at a latitude of 28°02’8.36”S and a longitude of 26°52’8.99”E.

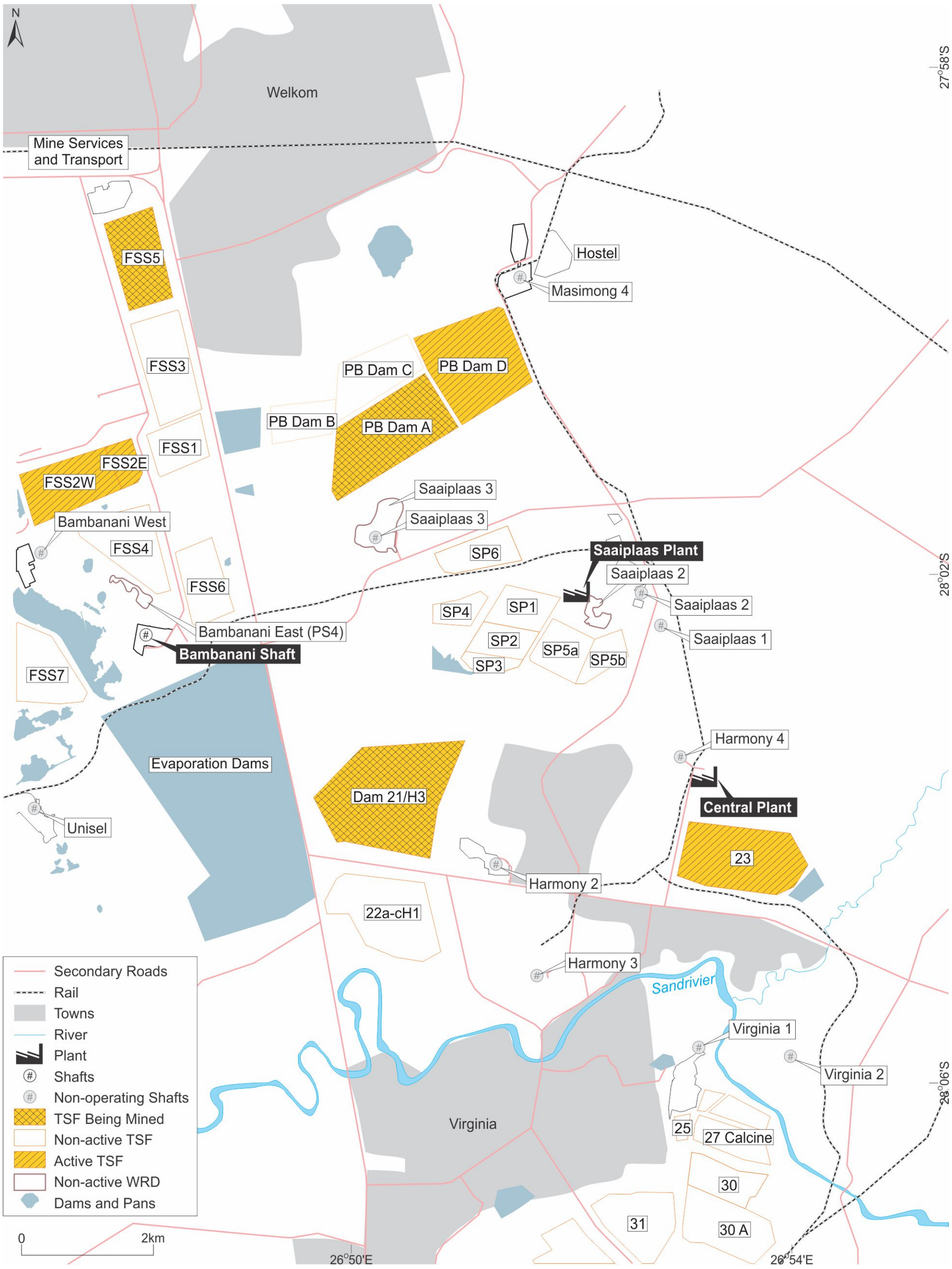
The Free State Tailings is currently at PFS stage. Although the results of the study completed in 2009 indicate a positive net present value, the project has not yet been commissioned. The project currently comprises the 19 TSFs.

There is no material litigation (including violations or fines) against Harmony that threatens its mineral rights, tenure, or operations.

Operational Infrastructure

The surrounding areas of Welkom and Virginia are well developed in terms of access and mining-related infrastructure supporting the numerous operational gold mines in the area. The regional infrastructure includes national and provincial paved road networks, power transmission and distribution networks, water supply networks and communication infrastructure.

The Free State Surface Operations have adequate access to the infrastructure required to meet the planned LOM production schedules. In addition, all provisions and plans required for the St Helena Project have been made. The surface infrastructure located in the vicinity of Welkom and Virginia is displayed in the graphic below.



Geology

Material contained in the TSFs and WRDs originates from deep level gold mines, operated by Harmony and other mining companies. The mining operations predominantly extract narrow, tabular gold-bearing conglomerate reefs, namely the Basal, B, Elsburg (EA), Dreyerskruil and Beatrix Reefs.

These reefs occur within the Archean Witwatersrand Basin which hosts the Witwatersrand Supergroup succession. The Basal Reef is located at the base of the Harmony Formation, within the Johannesburg Subgroup of the Central Rand Group ("**CRG**"). The B Reef is part of the Spec Bona Member at the base of the Aandenk Formation, within the Turffontein Subgroup of the CRG. The Beatrix Reef is part of the Earls Court Member of the Aandenk Formation, within the Turffontein Subgroup of the CRG. The Elsburg (EA) and Dreyerskruil Reefs occur within the Eldorado Formation of the Turffontein Subgroup, capping the CRG in the Free State Goldfield.

The TSF material is the waste product of crushing, milling and gold extraction by carbon-in-leach ("**CIL**") or CIP methods. As man-made deposits the TSFs are not the result of natural sedimentary processes. The grade of the TSFs is a function by the grade of the original reef sources, and the efficiency of the processing method at the time of treatment.

The WRDs comprise unconsolidated, untreated, low-grade gold-bearing rock extracted from underground workings during the mining process. These WRDs are also man-made and are not formed as a result of natural sedimentary processes. They exhibit no structure or continuity. The grade of the WRDs is a function of the grade of the original reef sources.

The most significant mineral in the TSFs and WRDs is quartz, which makes up more than 60% of the bulk mineral composition. The gold predominantly occurs in association with pyrite. Other minerals identified include silver, copper, iron oxide, nickel, bismuth, uranium, lead and zinc from the Basal, B, Elsburg (EA), Dreyerskruil and Beatrix conglomerates.

History

The Saaiplaas plant originally processed ore from Saaiplaas 1, 2 and 3 shafts. Saaiplaas 1 closed around 1980, Saaiplaas 2 around 1996, and Saaiplaas 3 around 2000. The Saaiplaas plant once also processed ore from the Erfdeel (now Masimong) shafts. With the decline of mining in the area, the plant was relegated to processing unmilled surface source material (waste) at a rate of 110,000tpm until July 2007. As all material currently processed by the plant is recovered by hydro-mining from old, desiccated slimes dams in the area, crushing or milling is not required. The ore-receiving silos were demolished in July 2007 when milling ceased.

Plant commissioning began for the Central Plant Reclamation in June 2017 with ramp-up to a capacity of 300,000t a month. Central Plant, which had previously processed WRDs, was converted into a tailings retreatment operation during 2016 and started treating TSF material only in fiscal 2017.

Mineral Tenure

Refer to Item 4: *"Information on the Company – Business Overview – Regulation – Mineral Rights – South Africa"* above for a summary of the regulatory environment in South Africa.

The mineral tenure of the Free State Surface Operations, under which the activity of reclaiming TSFs and WRDs are permitted, falls within the mining rights held by Harmony. The different mining right areas and associated TSFs and WRDs that form part of the Free State Surface Operations is detailed in the table below.

TSF Name	Licence Type	Reference No.	Effective Date	Expiry Date	Mineral
Brand A (PB Dam A)	MR	82	December 11, 2007	December 10, 2029	Au
No. 21 (H3)	MR	82	December 11, 2007	December 10, 2029	Au
FSS3	MR	227	December 11, 2007	December 10, 2029	Au
FSS5	MR	227	December 11, 2007	December 10, 2029	Au
FSS6	MR	227	December 11, 2007	December 10, 2029	Au
FSN6	MR	227	December 11, 2007	December 10, 2029	Au
No. 32	MR	82	December 11, 2007	December 10, 2029	Au
FSS1	MR	227	February 4, 2010	December 10, 2029	Au, Ag, Cu, Fe, Ni, Bi, U, Pb, Zn
FSS2 East and West	MR	83/227	December 11, 2007	December 10, 2029	Au
FSS4	MR	83	December 11, 2007	December 10, 2029	Au
FSS7	MR	83	December 11, 2007	December 10, 2029	Au
FSS8 East FSS8 West	MR	82	December 11, 2007	December 10, 2029	Au
Brand D (PB Dam D)	MR	Welkom no MR	December 11, 2007	December 10, 2029	Au
Saaiplaas 1	MR	82	December 11, 2007	December 10, 2029	Au
Saaiplaas 3 and 2	MR	82	December 11, 2007	December 10, 2029	Au
Saaiplaas 5b	MR	82	December 11, 2007	December 10, 2029	Au
Saaiplaas 6	MR	82	December 11, 2007	December 10, 2029	Au
No. 23 (Central Plant)	MR	82	December 11, 2007	December 10, 2029	Au
No. 30a	MR	82	December 11, 2007	December 10, 2029	Au
No. 33b	MR	82	December 11, 2007	December 10, 2029	Au
No. 34a	MR	82	December 11, 2007	December 10, 2029	Au
Target Slimes Dam	MR	225	December 12, 2013	December 11, 2026	Au, Ag, Cu, Fe, Ni, Bi, U, Pb, Zn
Pres Steyn 9 (Freddies 9)	MR	226	February 4, 2010	February 3, 2040	Au, Ag, Cu, Fe, Ni, Bi, U, Pb, Zn

A summary of the status of environmental permits and licenses issued as at June 30, 2022 related to Free State Surface operations is presented in the table below.

Operation	Permit / Licence	Reference No.	Issued By	Date Granted	Validity
Phoenix Project	Atmospheric Air Emission Licence- Exemption	LDM/AEL/YMK/017	Lejweleputswa District Municipality	November 5, 2018	n/a
	Water Permit	1214N	DWS	n/a	LOM
Central Plant Reclamation	Atmospheric Air Emission Licence	LDM/AEL/YMK/012	Lejweleputswa District Municipality	November 5, 2018	November 6, 2023
	Water Permit	1214N	DWS	n/a	LOM
General	Environmental Management Programme	FS30/5/1/2/3/2/1(82) EM	DMRE	March 12, 2010	Valid

Mining Method

The mining methods used at Free State Surface Operations is hydro-mining for the TSFs, and reclamation of WRDs using tracked dozers and front-end loaders ("**FELs**").

The tailings material is reclaimed by blasting the TSF face with high pressure water, resulting in the slurry gravitating towards the pumping stations. Several hydraulic monitoring guns deliver high pressure water to the face of the TSF. The hydro-mining method allows for flexibility as the monitoring guns can be positioned to selectively reclaim the required areas in the TSF. The bench heights are constrained by the force delivered by the monitoring gun nozzle, taking safety measures into account.

For safety reasons, the top down method of hydro-mining is implemented. The gun is positioned at the top of the face, where it will cut downwards at a safe angle (a maximum angle of 45°). The horizontal distance between the cutting face and the bottom of the bench varies between 10m and 15m, depending on the bench angle. The track for the monitoring gun is located 2m from the cutting face, allowing for a safe angle of repose, taking geotechnical parameters into account.

The pump stations are located at the lowest point of the TSF, which ensures that the slurry material gravitates towards the pump stations, where it is then pumped to the processing plant.

With respect to WRD, dozers are positioned on top of the WRD. The dozers are used to create safe loading faces and blend the rock. The material is then loaded from the face onto trucks using FELs and transported to the relevant gold plants for processing. When loading is done at the bottom of the WRD, precaution must be taken to ensure that the face is not undercut. This precaution measure is put in place to prevent rock falls from the dump. A slope with a maximum inclination angle of 15° is created towards the loading point, where the WRD material is pushed down. The slope angle is monitored and maintained on a continuous basis.

As a safety measure, two red indicating poles are located at the top of the dump in the area where the dozer is working. The dozer must not go beyond the indicating poles, and dozing does not take place vertically above a loading point where an FEL loading. A 30m advance is required between the dozer and the point vertically above an active loading point. As an additional safety consideration, operations at the WRDs take place during hours of daylight.

The WRD material is loaded onto rail hoppers using the FELs and transported to the relevant processing plant.

Mineral Processing

Two plants, namely the Central Plant and the Saaiplaas Plant, are currently dedicated to the processing of tailings material. Reclaimed tailings are pumped as slurry via pipelines and WRD material is transported on trucks, to the respective plants for processing.

The Saaiplaas Plant forms part of the Phoenix Project and is currently treating reclaimed tailings at a rate of 500ktpm from Brand A (PB Dam A) and Dam 21 TSFs.

Reclaimed tailings from FSS5 TSF are processed through the Central Plant at a rate of 320ktpm. The rate of treatment will remain unchanged for the duration of the LOM even when new TSFs form part of the feed to the plant.

The PFS proposes the processing of additional TSFs at both the following plants:

- Harmony One Plant: production will be ramped up in 300ktpm increments as the plant modules become available and the plant is repurposed in 2024, 2032 and 2041; and
- Target Plant: this plant will be repurposed to 300ktpm tailings retreatment in 2028.

Qualified Persons

The QPs preparing the TRS were employed on a full-time basis by Harmony. The QPs' qualifications, areas of responsibility and personal inspection of the property are summarized in the graphic below.

Qualified Person	Professional Organisation	Qualification	TRS Section Responsibility	Personal Insp.
Mr BJ Selebogo	SAGC	MSCC, HND (MRM), Mine Survey CoC	All Sections	Full time
Mr D Fourie	SAIMM	MSc. Eng, GDE	6, 7, 9, 11, 12	Full time
Mr T Leonard	n/a	BSc. (Elec Eng), GCC	5, 6, 7, 8, 11, 12, 19	Full time
Mr T Hlobo	SAIMM	B-Tech Metallurgy, Post Graduate Dip Bus Admin	5, 10, 12, 13, 14, 15	Full time
Mr E Kleinhans	MMMA	B-Tech Metallurgy	5, 10, 12, 13, 14, 15	Full time
Ms M Mbongo	n/a	B-Tech Cost & Man Acc	18, 19	Full time
Mr O Moiloa	n/a	B-Tech Analytical Chemistry	8	Full time
Mr H Mashaba	n/a	BSc. (Hon) Env Man	17	Full time

Exploration

Various auger drilling and sampling campaigns have been undertaken and are on record from 2007 to 2020. Recent drilling of nine TSFs (including Saaiplaas Complex, FSS1, FSS4, FSN6, FSS6, FSS7) began in January 2017 and was completed February 2020.

WRDs cannot be explored using drilling as they are comprised of unconsolidated rock. Instead, they are sampled around the periphery using pitting.

A total of 248 drill holes were drilled into nine TSFs (including Saaiplaas Complex, FSS1, FSS4, FSN6, FSS6, FSS7) between January 2017 and February 2020. The purpose of the drilling was the determination of grade estimate.

The drilling and sampling methodology in use for Harmony's Free State TSFs has been developed specifically for the challenges posed by these deposits and is aligned with industry best practice. An internal protocol is in place, and the drilling components are applied by contractors who are experienced in this specific methodology.

The drill hole samples are deemed to be representative as they provide both vertical and horizontal coverage of each TSF. Drill holes are positioned at regular intervals across the TSFs.

The data spacing, density and distribution is sufficient to support the estimation of Mineral Resources for the various TSFs.

WRDs are not explored using exploration methods due to their unconsolidated nature.

The QPs are of the opinion that the quality and quantity of the exploration methods and information gathered is sufficient to support the estimation of Mineral Resources and Mineral Reserves.

Mineral Resource Estimate

The Mineral Resources were originally prepared, classified and reported according to SAMREC, 2016. For the purposes of this report on Form 20-F, the Mineral Resources have been classified in accordance with Item 1302(d)(1)(iii)(A) of Regulation S-K. These Mineral Resources account for mining depletion recorded from July 2021 to June 2022.

The Mineral Resource estimate for TSF, as at June 30, 2022 exclusive of the reported Mineral Reserves, is summarized in the table below:

		Fiscal Year Ended June 30,						
		2022			2021			
Mineral Resource Category	**Operation / Project**	**Tonnes (Mt)**	**Gold Grade (g/t)**	**Gold Content (kg)**	**Tonnes (Mt)**	**Gold Grade (g/t)**	**Gold Content (kg)**	**% Change**
Measured	Phoenix Project	21.9	0.27	5,855	—	—	—	n/a
	Free State Tailings	82.8	0.27	22,487	—	—	—	n/a
Total / Ave. Measured		**104.7**	**0.27**	**28,342**	**—**	**—**	**—**	**n/a**
	Free State Tailings	15.5	0.19	2,937	—	—	—	n/a

Notes:

1. The Mineral Resources were originally prepared, classified and reported according to SAMREC, 2016. For the purposes of this TRS, the Mineral Reserves have been classified in accordance with Item 1302(d)(1)(iii)(A) of Regulation S-K. The QP responsible for the estimate is Mr BJ Selebogo, who is Ore Reserve Manager, and a Harmony employee.
2. The Mineral Resource tonnes are reported as in situ with reasonable prospects for economic extraction.
3. No cut-off grade has been applied for the estimation of Mineral Resources. Mineral Resource tonnes are reported based on a gold price of USD1,723/oz.
4. Tonnes are reported as million tonnes rounded to three decimal places. Gold values are rounded to zero decimal places.
5. Uranium content is not reported for any of the projects.
6. Metal content does not include allowances for processing losses.
7. Mineral Resources are exclusive of Mineral Reserves. Mineral Resources are not Mineral Reserves and do not necessarily demonstrate economic viability.
8. Rounding as required by reporting guidelines may result in apparent summation differences.
9. The Mineral Resource estimate is for Harmony's 100% interest.

10. This is the first time that Harmony has reported Mineral Resource in the Form 20-F and as such it cannot be compared to a previous reporting period.

The Mineral Resource estimate for WRD, Mineral Resources as at June 30, 2022(exclusive of the reported Mineral Reserves, is summarized in the table below:

		Fiscal Year Ended June 30,						
		2022			2021			
Mineral Resource Category	**Operation / Project**	**Tonnes (Mt)**	**Gold Grade (g/t)**	**Gold Content (kg)**	**Tonnes (Mt)**	**Gold Grade (g/t)**	**Gold Content (kg)**	**% Change**
Indicated	n/a	1.1	0.39	413	—	—	—	n/a
Inferred	n/a	17.0	0.43	7,292	—	—	—	n/a

Notes:

1. The Mineral Resources were originally prepared, classified and reported according to SAMREC, 2016. For the purposes of this TRS, the Mineral Reserves have been classified in accordance with Item 1302(d)(1)(iii)(A) of Regulation S-K. The QP responsible for the estimate is Mr BJ Selebogo, who is Ore Reserve Manager, and a Harmony employee.
2. The Mineral Resource tonnes are reported as in situ with reasonable prospects for economic extraction.
3. No cut-off grade has been applied for the estimation of Mineral Resources. Mineral Resource tonnes are reported based on a gold price of USD1,723/oz.
4. Tonnes are reported as million tonnes rounded to three decimal places. Gold values are rounded to zero decimal places.
5. Uranium content is not reported for any of the projects.
6. Metal content does not include allowances for processing losses.
7. Mineral Resources are exclusive of Mineral Reserves. Mineral Resources are not Mineral Reserves and do not necessarily demonstrate economic viability.
8. Rounding as required by reporting guidelines may result in apparent summation differences.
9. The Mineral Resource estimate is for Harmony's 100% interest.
10. This is the first time that Harmony has reported Mineral Resource in the Form 20-F and as such it cannot be compared to a previous reporting period.

Mineral Reserve Estimate

The Mineral Reserves were originally prepared, classified and reported according to SAMREC, 2016. For the purposes of this report on Form 20-F, the Mineral Reserves have been classified in accordance with Item 1302(d)(1)(iii)(A) of Regulation S-K.Mineral Reserves are derived from the Mineral Resources, a detailed business plan and the operational planning processes. The planning team utilises and takes into consideration historical technical parameters achieved. In addition, Mineral Resource conversion to Mineral Reserves considers certain modifying factors , plant call factor, and plant recovery factors.

The Mineral Reserve estimate for Free State Surface Operations, as at June 30, 2021 and 2022, is summarized in the table below.

There are no Mineral Reserves estimated for the WRDs.

		Fiscal Year Ended June 30,						
		2022			2021			
Mineral Reserve Category	**Operation / Project**	**Tonnes (Mt)**	**Gold Grade (g/t)**	**Gold Content (kg)**	**Tonnes (Mt)**	**Gold Grade (g/t)**	**Gold Content (kg)**	**% Change**
	Phoenix Project	36.5	0.29	10,423	42.6	0.28	11,964	(12.9)
Proven	St Helena Project	—	—	—	108.6	0.27	29,029	(100.0)
	Free State Tailings	86.5	0.27	23,410	—	—	—	100.0
Sub Total / Ave Proven		**123.0**	**0.27**	**33,834**	**151.1**	**0.27**	**40,994**	**(17.5)**
	Central Plant Reclamation	47.9	0.27	12,844	52.0	0.27	13,987	(8.2)
	Free State Tailings	578.7	0.22	129,266	571.7	0.22	127,701	1.2
Sub Total / Ave Probable		**626.6**	**0.23**	**142,110**	**623.7**	**0.23**	**141,688**	**0.3**
Total / Ave Proved + Probable		**749.7**	**0.23**	**175,943**	**774.8**	**0.24**	**182,681**	**(3.7)**

Notes:

1. The Mineral Reserves were originally prepared, classified and reported according to SAMREC, 2016. For the purposes of this TRS, the Mineral Reserves have been classified in accordance with Item 1302(d)(1)(iii)(A) of Regulation S-K. The QP responsible for the estimate is Mr BJ Selebogo, who is the Ore Reserve Manager, and a Harmony employee.
2. Tonnes, grade, and gold content (oz) are declared as net delivered to the mills.
3. Gold content is recovered gold after taking into consideration the modifying factors.
4. Mineral Reserves are reported using a cut-off grade of 0.14g/t and a gold price of USD1,546/oz.
5. Recovered gold (kg) is based on a conversion factor of 32.151oz/kg.

The decrease in Mineral Reserves is mainly due to depletions.

The table below presents a summary of the modifying factors used to convert the Mineral Resource to the Mineral Reserve for the Free State Surface Operations. The modifying factors are consistent with the modelling, planning and computing estimates used in determining the Mineral Reserves, which are also consistent with historical performance.

Operation / Project	Source	Cut-off Grade (g/t Au)	Plant Recovery (%)
Phoenix Project	No. 21 (H3)	0.155	45.0
	Brand A (PB Dam A)	0.155	45.0
	FSS6	0.155	45.0
Central Plant Reclamation	FSS5	0.158	48.0
	FSS3	0.152	50.0
Free State Tailings	FSN6	0.159	43.3
	No. 32	0.138	49.9
	FSS1	0.133	51.7
	FSS2 East & West	0.133	51.7
	FSS4	0.133	51.7
	FSS7	0.141	48.7
	FSS8 East	0.133	51.7
	FSS8 West	0.133	51.7
	Brand D	0.131	52.6
	Saaiplaas 1	0.131	52.6
	Saaiplaas 2 & 3	0.131	52.6
	Saaiplaas 5b	0.131	52.6
	No. 23	0.131	52.6
	No. 30a	0.131	52.6
	No. 33b	0.141	49.0
	No. 34a	0.131	52.6
	No. 33a	0.131	52.6
	Target Slimes Dam	0.132	52.0
	Pres Steyn 9 (Freddies 9)	0.132	52.0

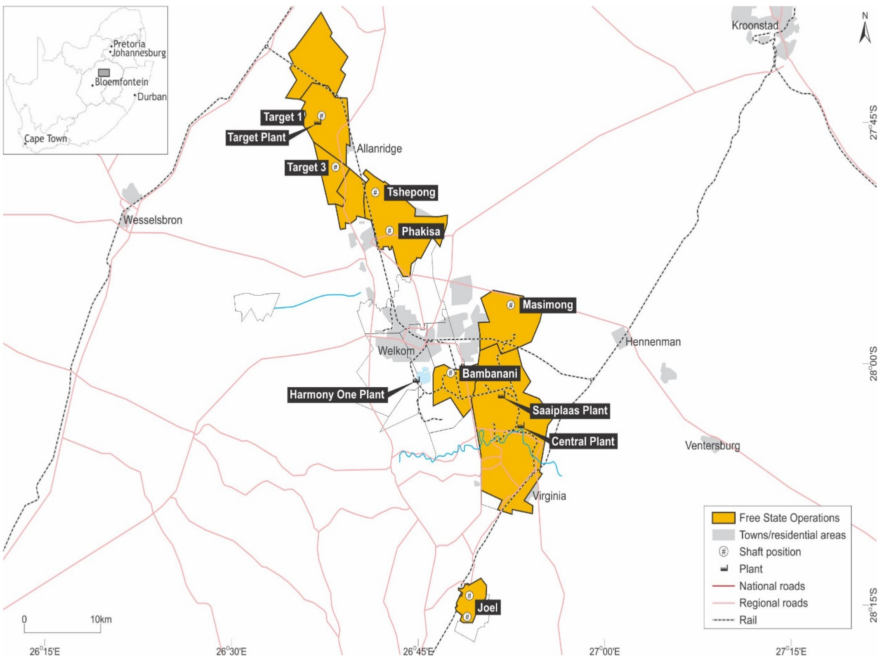
For additional information, see the TRS on each individual property, filed as an Exhibit of this annual report on Form 20-F.

Joel

Property Description

Joel is located on the southern edge of the Witwatersrand Basin in the Free State Gold Field and lies 270km south southwest of Johannesburg at a longitude of 26°48'40"E and latitude 28°16'17"S. Joel is the most southern of the gold mines mined within the Harmony stable and is situated approximately 40km south of Welkom, 30km southeast of Virginia and 20km north of Theunissen. The mine has a common boundary with Beatrix Mine to the west of the mine property, but there are no underground connections between the two mines.

The following graphic illustrates the location of Joel, along with certain infrastructure.



Joel is an intermediate-depth underground gold mine that consists of two shaft complexes interconnected via a triple decline system, spanning four levels and mining at depths of 1,379m below mine datum ("**BMD**"). Joel currently has a LOM expectancy of nine years, which includes mining up to 137 level in a block of ground swapped with the neighbouring Beatrix Mine.

There is no material litigation (including violations or fines) against Harmony that threatens its mineral rights, tenure, or operations.

Operational Infrastructure

The surrounding areas of Welkom and Virginia are well developed in terms of access and mining-related infrastructure supporting the numerous operational gold mines in the area. The regional infrastructure includes national and provincial paved road networks, power transmission and distribution networks, water supply networks and communication infrastructure.

Joel has two operational shaft complexes namely North Shaft and South Shaft, which service and support the mining operation as defined in the LOM plan. The Joel gold plant located near North Shaft was decommissioned in 2009. Joel ore is currently transported by truck to the Harmony One Plant, a distance of 40km away by road, where it is processed.

Operations are powered by electricity from Eskom.

Joel's surface and underground infrastructure, including its power and water supplies, are sufficient for the LOM plan production requirements.

Geology

Joel is situated in the Free State Goldfield, on the southwestern margin of the Witwatersrand Basin of South Africa, one of the most prominent gold provinces in the world. The major gold bearing conglomerate reefs are mostly confined to the CRG of the Witwatersrand Supergroup.

The Free State Goldfield is structurally divided into two sections, cut by the north-south striking De Bron Fault, which has a downward vertical displacement to the west of about 1,500m in the region of Bambanani, as well as a dextral shift of 4km. This known lateral shift allows a reconstruction of the reefs to the west and east of the De Bron Fault. Several other major faults lie parallel to the De Bron Fault. Joel lies to the west of the De Bron Fault. Dips of the reef are mostly towards the east, averaging 30° but become steeper approaching the De Bron Fault. Between the east and west blocks lies the uplifted horst block of WRG sediments with no reef preserved.

The reef currently exploited at Joel is the Beatrix Reef, which covers approximately 90% of the mine. The other economic reefs are the Hybrid BV Reef and the footwall reef ("**Aandenk**") which cover the remaining 10% of Joel.

Mineralisation is associated with the presence of medium to coarse, clast-supported oligomictic pebble horizons. The significant minerals in the deposit are pyrite (60%), quartz (35%) and garnets (5%) within medium to coarse, clast-supported oligomictic pebble horizons. Detrital carbon is also common.

History

Active prospecting in the area began on the farms Leeuwbult 580 and Leeuwfontein 256 in 1981. Construction of the twin-shaft system began in September 1985 and was completed by December 1987. Joel South was designed to be a fully trackless mining operation.

Previously known as HJ Joel Mine, its name was changed to Joel in 1998 when the then AngloGold was established. The mine's name changed again to Taung in 1999 and finally reverted to Joel in January 2002 when the Freegold Joint Venture between Harmony and African Rainbow Minerals Limited ("**ARM**") Gold Division ("**ARMGold**") assumed responsibility for the operation.

Mineral Tenure

Refer to Item 4: *"Information on the Company – Business Overview – Regulation – Mineral Rights – South Africa"* above for a summary of the regulatory environment in South Africa.

The current mining rights (30/5/1/2/2/13 MR) that encompasses an area of 2,166.92ha was successfully converted, executed and registered as a new order mining right at the MPRTO on August 6, 2010. The right was granted on December 3, 2007 for a period of 11 years, ending on December 2, 2018. The right further renewed in terms of section 24 (1) of the Mineral and Petroleum Resources Development Act on February 15, 2019 for a further 11 years, ending on February 14, 2030.

The following mining rights make up the full mining lease area of approximately 2,166.92ha:

- 30/5/1/2/2/13 MR valid from February 15, 2019, to February 14, 2030.

A summary of the status of all environmental permits and licenses issued at the effective date related to Joel is presented in the table below.

Mining Method

Permit / Licence	Reference No.	Issued By	Date Granted	Validity
EMPr	FS 30/5/1/2/3/2/1(14) EM	DMRE	April 16, 2010	LOM
Water Permit	1459B (B33/2/340/116)	DWS	May 25, 1991	LOM
Water Permit	1460B (B33/2/340/116)	DWS	March 15, 1991	LOM
Waste Disposal Permit	1339N (B33/2/340/116/P35)	DWS	September 16, 1991	LOM
Water Permit	3M	DWS	May 27, 1991	LOM
Sewage Treatment Permit	QC404.00.XRO1	DWS	August 20, 1986	LOM
Water Permit	1339N (B33/2/340/116)	DWS	March 15, 1991	LOM

Joel is an intermediate-depth underground gold mine that consists of two shaft complexes interconnected via a triple decline system, spanning four levels and mining at depths of up to 1,350m BMD. Joel currently has a LOM expectancy of nine years, which includes mining up to 137 level in a block of ground swapped with the neighbouring Beatrix Mine.

Joel was originally designed to adopt trackless mechanised mining when production commenced at South Shaft, but in 1994 a decision was made to change to conventional mining mainly due to the high operating costs of trackless mining. Joel consists of two interconnected shaft complexes, the South Shaft complex which is the main operational shaft and the North Shaft which is available for hoisting ore.

Joel's upper mining levels are in a mature phase of operation. The decline project development, from 129 to 137 levels, which started in 2011, is complete. This included mining up to 137 level and the Beatrix Mine block swap. The decline project to access the orebody from 137 level included two declines that were developed at 12° from 129 level – a chairlift decline and a conveyor belt decline. The belt, main tips and chairlifts have been completed. Primary footwall development is currently underway on 137 level and production from the 137 level E5 raise, 137 E4 raise and 137 E6 Raise is ongoing.

Joel has adopted conventional breast mining on a scattered grid (or scattered mining) which is tailored to the variable grades intersected as well as the associated rock-related hazards anticipated at this depth. Stoping panel stability in an intermediate stress environment may require additional stabilizing pillars be left to support the immediate hanging wall. These take the form of inter-panel crush pillars between neighbouring mining panels.

The primary economic reef mined is the narrow tabular Beatrix Reef, accessed via conventional grid development. Mining consists of horizontal footwall development to access the reef horizon with inclined development on the reef plane to establish mining faces. Ore is cleared from the stopes through ore passes into the underlying cross-cuts.

Mineral Processing

The Joel gold plant designed and commissioned during the construction of the mine was decommissioned in fiscal 2009 and all ore mined at Joel is now processed at the Harmony One Plant.

Harmony One Plant is Harmony's largest gold processing plant and processes underground ore from multiple shafts, as well as surface ore from nearby mine waste facilities. The plant was commissioned in 1986 and comprises three independent modules, each consisting of four feed silos, two run-of-mine ("**ROM**") mills, two conventional thickeners, cyanide leach, CIP absorption, elution, zinc precipitation and smelting. The plant CIP process reflects the technology which was current at the time of construction.

The Harmony One Plant has a steady state design capacity of 390ktpm with its conventional CIP flowsheet. The Harmony One plant is in good working condition and the equipment is also in good order with audits done on regular bases to check the operating performance of the plant.

Qualified Persons

The QPs preparing the TRS were employed on a full-time basis by Harmony. The QPs' qualifications, areas of responsibility and personal inspection of the property are summarized in the graphic below.

Qualified Person	Professional Organisation	Qualification	TRS Section Responsibility	Personal Insp.
Ms FO Muthelo	SACNASP	BSc Hons (Geol)	All Sections	Full time
Ms T Stocks	n/a	B.Tech. (Cost & Man Acc)	16, 18, 19	Full time
Mr M Kilian	AMMSA	B. Tech (Min Eng)	16	Full time
Mr K Tose	AMMSA	BSc (Min Eng)	13	Full time
Mr F Mufara	MVSSA	BSc (Comp Sci)	3 17	Full time
Mr S Taku	AMRE	G.C.C Electrical	15	Full time

Exploration

Geological data has been obtained through initial surface drilling, followed by underground drilling, mapping and channel (chip) sampling.

Since the inception of Joel in 1986, 48 exploration drill holes have been drilled from surface. Forty of the holes were drilled by the previous owners of the mine and eight holes, totaling 10,800m, have been drilled during Harmony's tenure.

Surface exploration drilling by Harmony began in 2010, with the eight planned holes and their associated deflections. The purpose was to determine the facies and value in 137 level for the extension of the shaft to 137 level because at that time little information was known about 137 level.

In 2019, five holes were drilled with the purpose to also explore for the VS5 boundary in the eastern side of the shaft in 129 level and to determine the facies and value towards 145 level for the extension of the shaft to 145 level.

Underground exploration drilling has been ongoing throughout the operational life of Joel as the mine deepens. Underground exploration drilling is undertaken to supplement the surface drilling on a closer grid spacing. Underground drilling is undertaken ahead of the face to determine the location of the reef, the grade and the presence of structure.

The underground infill drilling system is in place to improve data density in specific areas and are drilled from the underground development access drives. The drill hole spacing is typically every 25m along strike and 40m down dip, with higher density in the western limb of the asymmetric syncline to the north-west of the mine. The underground drill holes are short drill holes rarely exceeding 200m in length.

The QP is of the opinion that the quality and quantity of the exploration methods and information gathered is sufficient to support the estimation of Mineral Resources and Mineral Reserves.

Mineral Resource Estimate

The Mineral Resource estimate at Joel is considered to have reasonable prospect for economic extraction by underground mining methods. This is demonstrated by the results of the cash flow for the mine. The cut-off grade for the Mineral Resource is determined at 558cmg/t gold based on the economic assumptions presented in the table below at the effective date of June 30, 2022.

Description	Unit	Value
Gold Price	USD/oz	1,723
Exchange Rate	ZAR:USD	15.35
Gold Price	ZAR/kg	850,191
Plant Recovery Factor	%	94.2
Unit Cost	ZAR/t	3,194

Note: Unit cost includes cash-operating cost, royalty and on-going development capital.

This cut-off value represents typical costs for the mining method and preliminary mining and metallurgical recovery assumptions.

The Mineral Resources were originally prepared, classified and reported according to SAMREC, 2016. For the purposes of this report on Form 20-F, the Mineral Resources have been classified in accordance with Item 1302(d)(1)(iii)(A) of Regulation S-K. These Mineral Resources account for mining depletion recorded from July 2021 to June 2022. The Mineral Resource estimate, as at June 30, 2022, exclusive of the reported Mineral Reserves is summarized in the table below.

	Fiscal Year Ended June 30,						
	2022			2021			
Mineral Resource Category	**Tonnes (Mt)**	**Gold Grade (g/t)**	**Gold Content (kg)**	**Tonnes (Mt)**	**Gold Grade (g/t)**	**Gold Content (kg)**	**% Change**
Measured	1.7	9.17	15,138	—	—	—	n/a
Indicated	2.8	6.92	19,336	—	—	—	n/a
Total / Ave. Measured + Indicated	**4.5**	**7.76**	**34,474**	**—**	**—**	**—**	**n/a**
Inferred	7.0	5.11	35,954	—	—	—	n/a

Notes:

1. Mineral Resources are reported with an effective date of June 30, 2022, were originally prepared, classified and reported according to SAMREC, 2016. For the purposes of this TRS, the Mineral Resources have been classified in accordance with Item 1302(d)(1)(iii)(A) of Regulation S-K. The QP responsible for the estimate is Ms FO Muthelo, who is Ore Reserve Manager at Joel, and a Harmony employee.
2. The Mineral Resource tonnes are reported as in situ with reasonable prospects for economic extraction.
3. No modifying factors or dilution sources have been included to in situ Reserve which was subtracted from the SAMREC Resource in order to obtain the S-K 1300 Resource.
4. The Mineral Resources are reported using a cut-off value of 558cmg/t determined at a 90% profit guidance, and a gold price of USD1,723/oz.
5. Tonnes are reported as rounded to three decimal places. Gold values are rounded to zero decimal places.
6. Mineral Resources are exclusive of Mineral Reserves. Mineral Resources are not Mineral Reserves and do not necessarily demonstrate economic viability.
7. Rounding as required by reporting guidelines may result in apparent summation differences.
8. The Mineral Resource estimate is for Harmony's 100% interest.
9. This is the first time that Harmony has reported Mineral Resource in the Form 20-F and as such it cannot be compared to a previous reporting period.

Mineral Reserve Estimate

The Mineral Reserves were originally prepared, classified and reported according to SAMREC, 2016. For the purposes of this report on Form 20-F, the Mineral Reserves have been classified in accordance with Item 1302(d)(1)(iii)(A) of Regulation S-K. Mineral Reserves are derived from the Mineral Resources, a detailed business plan and the operational mine planning processes. Mine planning utilizes and takes into consideration historical technical parameters achieved. In addition, Mineral Resource conversion to Mineral Reserves considers certain modifying factors, dilution, ore losses, minimum mining widths, planned mine call and plant recovery factors.

The Mineral Reserve estimate, as at June 30, 2021, and 2022, is summarized in the table below.

	Fiscal Year Ended June 30,						
	2022			2021			
Mineral Reserve Category	**Tonnes (Mt)**	**Gold Grade (g/t)**	**Gold Content (kg)**	**Tonnes (Mt)**	**Gold Grade (g/t)**	**Gold Content (kg)**	**% Change**
Proved	2.8	5.01	13,941	2.6	5.00	13,168	5.9
Probable	1.0	4.85	4,631	1.5	4.50	6,699	(30.9)
Total / Ave. Proved + Probable	**3.8**	**4.97**	**18,572**	**4.1**	**4.82**	**19,867**	**(6.5)**

Notes:

1. The Mineral Reserves were originally prepared, classified and reported according to SAMREC, 2016. For the purposes of this TRS, the Mineral Reserves have been classified in accordance with Item 1302(d)(1)(iii)(A) of Regulation S-K. The QP responsible for the estimate is Ms FO Muthelo, who is the Joel Ore Reserve Manager, and a Harmony employee.
2. Tonnes, grade, and gold content (oz) are declared as net delivered to the mills.
3. Figures are fully inclusive of all mining dilutions, gold losses and are reported as mill delivered tonnes and head grades. Metallurgical recovery factors have not been applied to the reserve figures.
4. Gold content is recovered gold content after taking into consideration the modifying factors.
5. Mineral Reserves are reported using a cut-off grade of 915cmg/t determined using a gold price of USD1,546/oz gold.

The decrease in Mineral Reserves is mainly due to depletion and a decrease in grade of geozone 3.

The table below presents a summary of the modifying factors used to convert the Mineral Resource to the Mineral Reserve for Joel. The modifying factors are consistent with the modelling, planning and computing estimates used in determining the Mineral Reserves, which are also consistent with historical performance.

Modifying Factor	Unit	Value
Relative Density	t/m3	2,75
Average Stoping Width	cm	156
Gully	%	4.5
Off reef	%	0.9
Waste to Reef	%	3.8
Flushing Tons	%	2.4
Discrepancy	%	0.3
Mine Call Factor (MCF)	%	84.0
Plant Recovery Factor (PRF)	%	94.2
Mine Recovery Factor	%	79.1
Plant Call Factor	%	100.0
Mineral Reserve Cut Off	cmg/t	915

For additional information, see the TRS on each individual property, filed as an Exhibit of this annual report on Form 20-F.

Kalgold

Property Description

Kalgold is located at latitude 26°10.0’S and longitude 25°14.5’E, 55km southwest of Mahikeng, between Mahikeng and Stella, along the Mahikeng-Vryburg road (N18) in North West Province, South Africa. The Kalgold Mine is serviced by well-maintained sealed roads with good access to all nearby towns and cities. The mine is surrounded by farmland and the closest community is at Kraaipan, approximately 15km to the south of the mine. The Kalgold Mine has been in operation since 1997 and is the only significant mining operation in the region. Kalgold is wholly-owned and operated by Harmony.

The following graphic illustrates the location of the Kalgold mine, along with certain infrastructure.

Kalgold is a modular open gold pit mine, extracting ore from a series of satellite orebodies. The mine is in the North West Province of South Africa, 55km southwest of the town of Mahikeng. The Kalgold Mine is serviced by well-maintained sealed roads with good access to all nearby towns and cities. The mine is surrounded by farmland and the closest community is at Kraaipan, approximately 15km to the south of the mine. The Kalgold Mine has been in operation since 1995 and is the only significant mining operation in the region.

There is no material litigation (including violations or fines) against the Company which threatens its mineral rights, tenure, or operations.

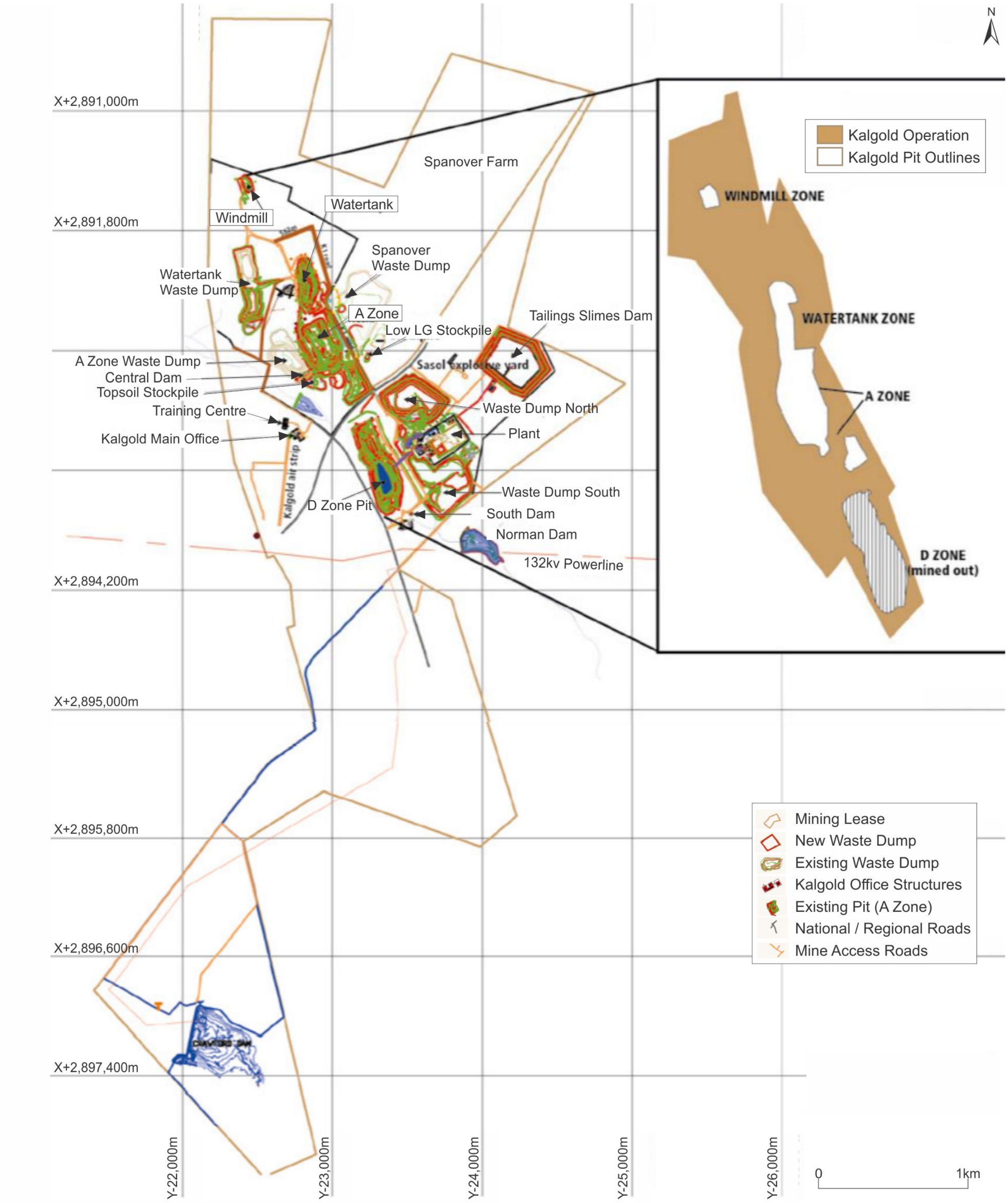
Operational Infrastructure

Infrastructure in the region is well established. The regional infrastructure includes national and provincial paved road networks, power transmission and distribution networks, water supply networks and communication infrastructure. Schools, clinics and hospitals are readily available in the surrounding areas. Operations are powered by electricity from Eskom.

Ore and waste material are transported separately, with ore being trucked from the pit to the plant ROM pad, and waste rock going to the mine's waste dumps. Marginal and low-grade ore is transported by truck and stockpiled for future processing. Kalgold has its own processing plant situated adjacent to the mine.

Kalgold is accessible via the provincial roads. The detailed surface infrastructural layout includes established haul roads for the transport of ore and waste, the waste dumps, and stockpiles for the associated pits.

The general layout of Kalgold infrastructure is displayed in the graphic below.



Geology

The Kalgold lode deposit is located within the geological terrane known as the Archaean Kraaipan Greenstone Belt ("**KGB**"). The KGB forms part of the Kaapvaal Craton of South Africa and comprises a linear belt of weakly metamorphosed mafic volcanic rocks with interbedded metasedimentary rocks and Banded Iron Formation ("**BIF**"). The belt extends in a roughly north/south direction over 250km from South Africa into southern Botswana.

The belt is intruded by several granitoid suites which range from tonalitic and trondhjemitic gneisses through to granodiorite-monzonite suites. There is a general paucity of outcrop owing to the variably developed weathering profile and to the Tertiary-to-Recent cover, including transported Kalahari sands. Due to the younger cover rocks and lack of surface exposure, the mineralisation potential of the belt was poorly understood for many years.

The Kalgold lode deposit is accessed through five discrete mining areas, namely the D Zone, A Zone and A Zone south extension (Henry), Bridge Zone, Watertank, and Windmill pits. The geology of the D Zone Pit is used as a benchmark for the other pits. The geology consists of mafic schist, which forms the immediate footwall, a BIF horizon as the main mineralised zone and a succession of clastic sediments consisting of shale, greywacke, and volcanic conglomerates as the hanging wall. Mining is currently taking place at the A Zone, Watertank, Henry and Windmill pits.

Mineralisation at Kalgold is essentially strata bound to the BIF packages, resulting from intense silica, carbonate, sulphide, potassium alteration and metasomatic replacement of the BIF lenses. The mineralisation is manifested primarily as quartz veined and sulphidised BIF, with sulphides dominated by pyrrhotite and pyrite. Gold predominantly occurs as small grains of native gold, in association with pyrrhotite and trace chalcopyrite and sphalerite.

History

Kalgold was previously known as Shamrock, formed in 1982 as a wholly owned exploration and development subsidiary of Shell.

Exploration of the Kraaipan Greenstone belt by Shell began in the 1980s. In 1994, West Rand Consolidated Mines (“**WRCM**”) acquired Shamrock. The company changed its name to Kalahari Goldridge Mining Company Limited ("**Kalahari**") in May 1996 and was listed on the Johannesburg Stock Exchange on October 14, 1996, via an issue of 18.4% of the shares of the company, as a dividend in specie, to shareholders of WRCM.

Harmony acquired Kalahari in July 1999 and as a result, the Kalgold Mine.

Mineral Tenure

Refer to Item 4: *“Information on the Company – Business Overview – Regulation – Mineral Rights – South Africa”* above for a summary of the regulatory environment in South Africa.

The Kalgold mining right, which encompassed 615ha, was successfully converted, executed, and registered as a new order mining right on February 24, 2015, as MR12/2015 under Mining Right Protocol 574/2008. A Section 102, in terms of the MPRDA, to include portions of the farms Goldridge 632 IO and Ferndale 544 IO was executed on November 9, 2010, under Mining Right Protocol 774/2010.

The mining right now encompasses 988.23ha. The mining right was issued for a period of 30 years, expiring on August 27, 2038, and Kalgold has the exclusive right to renew the right for a further 30 years. The Kalgold mineral rights are held by Harmony. Under the MPRDA, Harmony is entitled to apply to renew the mining right on its expiry. At the effective date, Harmony was still preparing to re-submit the section 102 application refused by DMRE in 2021. These Prospecting Rights will be an extension to the current mining right.

Harmony is now the holder of the following mining rights:

- NW30/5/1/2/2/77MR valid from August 28, 2008 to August 27, 2038; and
- NW30/5/1/1/2/863 and 1469PR. The section 102 application in terms of the MPRDA for the Prospecting Right to be incorporated as Kalgold mining right was not approved. A new Prospecting Right application will be lodged. The area is currently reserved, and the DMRE may not accept any other applications for the area.

A summary of the status of environmental permits and licenses issued as at June 30, 2022, related to Kalgold operation is presented in the table below.

Permit / Licence	Reference No.	Issued By	Date Granted	Validity
Environmental Management Programme (Amendment)	(NW) 30/5/1/2/3/2/1/77 EM	DMR	2022	LOM
Environmental Authorisation	NW30/5/1/2/2/77MR	DMR	2017	LOM
Hazardous Waste Generator Certificate	GPT-00-057	GDARD	July 23, 2021	July 23, 2023
Water Use Licence	07/D41B/ABCGIJ/4754	DWS	February 22, 2021	LOM
Certificate of Registration Inflammable Liquids and Substances	(NW) 30/5/1/2/3/2/1/77 EM	DMR	January 20, 2022	January 20, 2023

Notes: GDARD - Gauteng Department of Agriculture and Rural Development.

Mining Method

Kalgold is an open-pit mining operation located in the geological terrane of the Archaean KGB. Gold mineralisation is hosted by steeply dipping BIF interbedded with schist, shale, and greywacke. The nature of the orebody requires the selective mining of the ore blocks, defined by the east and west mineralised limbs, to separate the ROM destined ore, above the Mineral Reserve cut-off of 0,6g/t. Based on the gold grade, properties of the host rock, and shallow depth of mineralisation, open pit mining is appropriate for Kalgold. The gold deposit is mined most cost effectively, using a modular approach with multiple small to medium open pits defined by mineralised zones.

Mineral Processing

Kalgold's gold processing facility has been in operation since 1996. The technology used to process the gold-bearing ore is well established and has proven to be suitable for the style of mineralisation. Kalgold processes the ore using a well-established cyanide and CIL process for their recovery of gold. The average planned milling tonnages per month is 128.540ktpm at the planned feed grade of 1,06g/t. The plant is operating at its designed throughput capacity and has shown its ability to produce the forecasted ounces of gold at said capacity.

Qualified Persons

The QPs preparing the TRS were employed by Harmony. The QPs' qualifications, areas of responsibility and personal inspection of the property are summarized in the graphic below.

Qualified Person	Prof. Assoc.	Qualifications	TRS Section Responsibility	Personal Insp.
Mrs B Gruszka	n/a	MSc (Geology)	1, 6, 7, 8, 9, 22	Full time
Mrs B van der Linden	n/a	B Com. (Hons) (Bank/Fin Mng.)	1, 18, 19, 22	Full time
Mr D Fourie	SAIMM (706555)	MSc.Eng, GDE	1, 11, 22	Full time
Mr E Malaola	SAGC(PMS0196), IMSSA	NHD Mine Surveying, Mine Surveyors CoC	1, 9, 11.3 - 11.6, 12, 22	Full time
Mr D Vyas	SAIMM (704699), ECSA (00065392), MIMMM (685352)	B Eng. Mining	1, 13.1, 13.2, 22	Part time
Mr FP Coetzee	ECSA Pr. Eng. (20100158), MMC	B Eng. Mining, MBA	1, 13.3, 13.4, 22	Full time
Mr J Boshoff	SACNASP, SAIMM, GSSA	BSc. (Hons), MSc, MBA	1, 9, 11.3 - 11.6, 12, 22	Full time
Mr J Spencer	FSANIRE	B.Sc. (Hons), AREC (COM)	1, 13.2, 22	Part time
Ms K Sehularo	n/a	BA Geography and Environmental Management	1, 4, 17, 22	Full time
Mr N Wessels	AMRE	B.Eng (Mech), GCC	1, 15, 22	Full time
Ms KN Monaisa	AMMSA	B-Tech (Mining Engineering), MDP, MMC	1, 13.3, 13.4, 23	Full time
Mr R Montshonyane	n/a	BTech: Engineering Metallurgy, BT10014	1, 10, 14, 22	Full time
Mr R Reid	Australian Institute of Geoscientists (FAIG: 3507)	BSc. Hons (Earth Science), Grad. DipSc. (GIS)	1, 6, 11, 22	Full time
Mr RF Gaelejwe	SACNASP (400207/14)	BSc. Hons (Geol), PgDip, EMBA	All	Full time
Mr T van Dyk	SACNASP, GSSA	BSc. Hons (Geology)	1, 9, 11.3 - 11.6, 12, 22	Full time
Mr W De Wit	n/a	N.D.T. Mine Surveying, Mine Surveyors Certificate of Competency No 1605	1, 3, 5, 16.3	Full time

Exploration

In the period 2017 to 2019, definition and exploration drilling were undertaken over the Kalgold line of lode deposit. This exploration was aimed at validating and expanding the Mineral Resource estimate at that time. The drilling yielded significant extensions to the Mineral Resource area, expanding on the understanding of the deposit. The drilling results were analysed and incorporated into the geological model to upgrade the Mineral Resource estimates, and in-fill the areas between the A Zone and Watertank mining pits, known as the Bridge Zone.

Further exploration drilling took place during 2021. The results from this exploration drilling extended the mineralised area beyond the current resource limits. The exploration drilling and the subsequent definition of the Mineral Resources are ongoing, and the intention is that the Mineral Resource estimate will be continuously updated as the data becomes available and incorporated into the model.

The most recent exploratory work is planned to the south of the D zone and is supported by an approved budget.

The QP is of the opinion that the drilling and survey processes, the geological and geotechnical logging and the sampling and assaying data is appropriate for the Kalgold modelled deposit and mineralisation style.

Mineral Resource Estimate

The Mineral Resources at Kalgold are considered to have reasonable prospects of economic extraction by open pit mining methods. Kalgold is an on-going operation with a well-defined set of operating parameters and costs. These parameters are used to generate a series of Whittle™ open pit Mineral Resource shells based on various gold prices, to constrain the Mineral Resource block model for reporting purposes. At this stage the Windmill Zone model has no constraining Mineral Resource shell and is reported to an RL (reduced level). Based on the parameters presented in the table below, the cut-off grade reporting to the Kalgold Mineral Resources at the effective date of June 30, 2022, is 0.54g/t gold.

Description	Unit	Value
Gold price	R/kg	850,191
Planned recovery factor	%	86.0
Mining costs	R/t	Modelled based on Andru mining rates
Processing costs	R/t	242.26
Plant throughput	ktpm	140 ramping up to 175 in Yr 3
Planned dilution (Weighted planned per pit)	%	9.1

This cut-off value represents typical costs for the mining method and preliminary mining and metallurgical recovery assumptions.

The Mineral Resources were originally prepared, classified and reported according to SAMREC, 2016. For the purposes of this report on Form 20-F, the Mineral Resources have been classified in accordance with Item 1302(d)(1)(iii)(A) of Regulation S-K. These Mineral Resources account for mining depletion recorded from July 2021 to June 2022.

The Mineral Resource estimate, as at June 30, 2022, exclusive of the reported Mineral Reserves, is summarized in the table below.

	Fiscal Year Ended June 30,						
	2022			2021			
Mineral Resource Category	**Tonnes (Mt)**	**Gold Grade (g/t)**	**Gold Content (kg)**	**Tonnes (Mt)**	**Gold Grade (g/t)**	**Gold Content (kg)**	**% Change**
Measured	0.6	1.65	953	—	—	—	n/a
Indicated	33.1	1.09	35,970	—	—	—	n/a
Total / Ave. Measured + Indicated	**33.7**	**1.10**	**36,923**	**—**	**—**	**—**	**n/a**
Inferred	25.4	0.34	8,557	—	—	—	n/a

Notes:

1. Mineral Resources are reported with an effective date of June 30, 2022, were originally prepared, classified and reported according to SAMREC, 2016. For the purposes of this TRS, the Mineral Resources have been classified in accordance with Item 1302(d)(1)(iii)(A) of Regulation S-K. The QP responsible for the estimate is Mr RF Gaelejwe, who is Ore Reserve Manager at Kalgold, and a Harmony employee.
2. The Mineral Resource tonnes are reported as in situ with reasonable prospects for economic extraction.
3. No modifying factors or dilution sources have been included to in situ Reserve which was subtracted from the SAMREC Resource in order to obtain the S-K 1300 Resource.
4. The Mineral Resources are reported using a cut-off value of 0.54g/t determined at a 90% profit guidance, and a gold price of USD1,723/oz; for an assumed plant throughput of 140ktpa ramping-up to 175kt. These parameters have been used to constrain the Mineral Resource shell.
5. Tonnes are reported as rounded to three decimal places. Gold values are rounded to zero decimal places.
6. Mineral Resources are exclusive of Mineral Reserves. Mineral Resources are not Mineral Reserves and do not necessarily demonstrate economic viability.
7. Rounding as required by reporting guidelines may result in apparent summation differences.
8. The inferred portion of the Mineral Resource includes the historical Surface tailings of 6 263kg (0,201Moz)
9. The Mineral Resource estimate is for Harmony’s 100% interest.
10. This is the first time that Harmony has reported Mineral Resource in the Form 20-F and as such it cannot be compared to a previous reporting period.

Mineral Reserve Estimate

The Mineral Reserves were originally prepared, classified and reported according to SAMREC, 2016. For the purposes of this report on Form 20-F, the Mineral Reserves have been classified in accordance with Item 1302(d)(1)(iii)(A) of Regulation S-K. Mineral Reserves are derived from the Mineral Resources, a detailed business plan and the operational mine planning processes. Mine planning utilizes and takes into consideration historical technical parameters achieved. In addition, Mineral Resource conversion to Mineral Reserves considers certain modifying factors, dilution, ore losses, minimum mining widths, planned mine call and plant recovery factors.

The Mineral Reserve estimate, as at June 30, 2021, and 2022, is summarized in the table below.

Mineral Reserve Category	Fiscal Year Ended June 30, 2022 Tonnes (Mt)	2022 Gold Grade (g/t)	2022 Gold Content (kg)	2021 Tonnes (Mt)	2021 Gold Grade (g/t)	2021 Gold Content (kg)	% Change
Proved (Open pits and stockpiles)	5.6	0.94	5,303	6.1	0.93	5,653	(6.2)
Probable (Open pits and stockpiles	15.8	1.16	18,262	12.5	1.12	13,976	30.7
Total / Ave. Proved + Probable	**21.4**	**1.10**	**23,565**	**18.6**	**1.06**	**19,629**	**20.1**

Notes:

1. The Mineral Reserves were originally prepared, classified and reported according to SAMREC, 2016. For the purposes of this TRS, the Mineral Reserves have been classified in accordance with Item 1302(d)(1)(iii)(A) of Regulation S-K. The QP responsible for the estimate is Mr RF Gaelejwe, who is the Kalgold Ore Reserve Manager, and a Harmony employee.
2. Tonnes, grade, and gold content are declared as net delivered to the mills.
3. Figures are fully inclusive of all mining dilutions, gold losses and are reported as mill delivered tonnes and head grades. Metallurgical recovery factors have not been applied to the reserve figures.
4. Gold content is recovered gold content after taking into consideration the modifying factors.
5. Mineral Reserves are reported using a cut-off grade of 0.60g/t determined using a gold price of USD1,546/oz gold.

The increase in Mineral Reserves is due to the revised geotechnical inputs allowing deeper mining in Watertank and A Zone pits that offset the impact of the Windmill model refinement from latest exploration data.

The table below presents a summary of the modifying factors used to convert the Mineral Resource to the Mineral Reserve for Kalgold. The modifying factors are consistent with the modelling, planning and computing estimates used in determining the Mineral Reserves, which are also consistent with historical performance.

Modifying Factor	Unit	Value
Mineral Reserve cut-off - Pit Mineral Reserves	g/t	0.60
MCF - Pit Mineral Reserves	%	100.0
Dilution - Pit Mineral Reserves	%	9.1 (Weighted planned per pit)
Plant Recovery Factor - Pit Mineral Reserves	%	86.0
Plant Recovery Factor - Stockpile Mineral Reserves	%	70.0

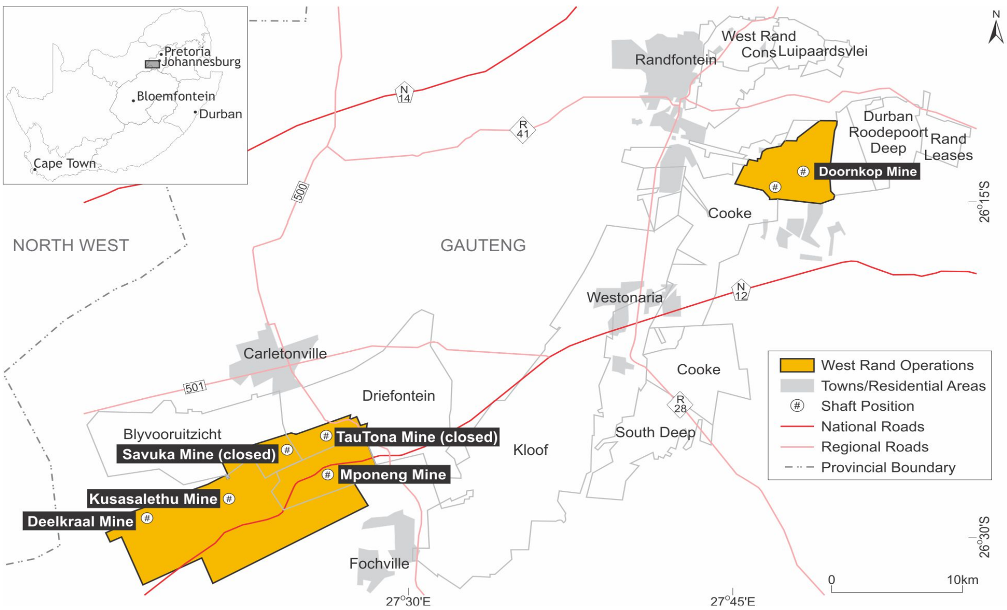
For additional information, see the TRS on each individual property, filed as an Exhibit of this annual report on Form 20-F.

Kusasalethu

Property Description

Kusasalethu is a deep level gold mine, operating at depths ranging between 2,800m and 3,300m BMD, extracting the Ventersdorp Contact Reef ("**VCR**") and located in the West Wits mining district, Gauteng Province. At longitude 27°21'32.91"E and latitude 26°27'16.23"S, the mine is approximately 70km southwest of Johannesburg and 15km south southwest of Carletonville and forms part of Harmony's West Wits operations. Kusasalethu is wholly-owned and operated by Harmony.

The following graphic illustrates the location of the Kusasalethu mine, along with certain infrastructure.



All relevant underground mining and surface right permits, and any other permit related to the work conducted on the property have been obtained and are valid. There are no known legal proceedings (including violations or fines) against Harmony, which threaten its mineral rights, tenure, or operations.

Operational Infrastructure

Infrastructure in the region is well established supporting the numerous operational gold mines in the area. The regional infrastructure includes national and provincial paved road networks, power transmission and distribution networks, water supply networks and communication infrastructure.

Kusasalethu comprises a twin-shaft system with two surface vertical shafts and two vertical sub-shafts. Ore is hoisted to surface and is delivered to the plant by road. Although Kusasalethu has its own processing plant situated adjacent to the mine, this plant does not treat the mine's ore. Operations are powered by electricity from Eskom.

Kusasalethu is accessible via the national and provincial roads. The general layout of Kusasalethu infrastructure in relation to the neighbouring Harmony mines is displayed in the graphic below.

Geology

Kusasalethu is located on the north-western margin of the Archean Witwatersrand Basin, one of the prominent gold provinces in the world. There are seven gold-bearing conglomerates within the mining right area, of which only the VCR is economically viable.

The VCR is a tabular, inclined, gold-bearing quartz pebble conglomerate of intermediate to high grade. It forms the base of the Ventersdorp Supergroup, which caps the CRG of the Witwatersrand Supergroup via an angular unconformity. This reef is characterised by its palaeomorphology, where a thick reef is preserved in the form of terraces separated stratigraphically by a thin inter-terrace slope reef.

The Kusasalethu mining right area is also intruded by dolerite sills and syenite dykes of different ages (Manzi et al., 2015). Many of these dykes strike north to north–northeast with thicknesses that vary from 1m to 90m.

History

Kusasalethu was previously known as Elandsrand Gold Mine when it was owned by AngloGold. The shaft system (i.e., the vertical twin shaft) together with the gold plant were commissioned in 1978.

In 2001, Harmony took control and ownership of Elandsrand Gold Mine and Deelkraal Gold Mine from AngloGold. The name Elandsrand was changed to Kusasalethu in 2010.

Kusasalethu is part of the West Wits mining district that includes the former Western Deep Levels shafts which include the Mponeng, TauTona and Savuka mines, all now also 100% owned by Harmony.

Mineral Tenure

Refer to Item 4: *"Information on the Company – Business Overview – Regulation – Mineral Rights – South Africa"* above for a summary of the regulatory environment in South Africa.

A single mining right covers Kusasalethu which was successfully converted, executed and registered as a new order mining right at the MPRTO. The principal mining right (GP30/5/1/2/2/(07) MR) covers an area of 7,000ha for the mining of gold. This mining right was granted on December 18, 2007, and, unless cancelled or suspended, will continue in force for 30 years ending December 17, 2037.

A section 102 application was submitted in 2018 to combine the contiguous farms Buffelsdoorn 143IQ and Deelkraal 142IQ, which increased the extent of the original mining right from 5,100ha to the current 7,000ha.

The following mining rights make up the full mining lease area of approximately 7,000ha:

- GP30/5/1/2/2(07) MR valid from December 18, 2007 to December 17, 2037.

A summary of the status of environmental permits and licenses issued as at June 30, 2022, related to Kusasalethu operation is presented in the table below.

Permit / Licence	Reference No.	Issued By	Date Granted	Validity
EMPr	GP30/5/1/2/3/2/1(07) EM	DMRE	2018	LOM
Mining Right	GP30/5/1/2/2 (07)MR	DMRE	2018	LOM
Water Use License	08/C23J/AJFG/1019	DWS	2018	2040

Mining Method

Kusasalethu is a deep level underground gold mine, currently operating at depths ranging between 2,900m and 3,300m BMD. Access to the orebody is gained through a twin shaft system from surface to 73 level. The twin sub shaft system extends from 73 level to 115 level.

The VCR horizon is extracted at Kusasalethu, and mining is conducted over five levels (98 level to 113 level) using SGM techniques.

Due to the current mining depths at Kusasalethu, the SGM method with backfill and pre-conditioning is used. The SGM method is preferred due to the variability of the VCR orebody with respect to value, and the seismic risk associated with deep level mining. The mining sequence used for breast mining is a V-shaped configuration, colloquially referred to as the "inverted Christmas tree". An underhand face configuration is adopted when mining towards the west, and an overhand face configuration when mining towards the east. The SGM method makes use of dip pillars and reduced mining spans with pre-developed tunnels, aimed at further control of stresses experienced during rock movement.

Primary development is done off-reef (in waste rock), while secondary development is done on-reef (in the mineralised zone).

Mineral Processing

The ore from Kusasalethu is processed at Mponeng's gold processing facility which has been in operation since 1986. The technology used to process the gold-bearing ore is well established and suitable for the style of mineralisation (VCR ore).

The ore milled at the Mponeng plant follows a standard cyanide leach, CIP, and electrowinning process in order to extract the gold bullion. The plant is designed to process 95tph of ore. The plant capacity is well-matched to accommodate the total ore feed from Kusasalethu and Mponeng, and the gold produced is in line with the forecast ounces.

Qualified Persons

The QPs preparing the TRS were employed on a full-time basis by Harmony. The QPs' qualifications, areas of responsibility and personal inspection of the property are summarized in the graphic below.

Qualified Person	Professional Organisation	Qualification	TRS Section Responsibility	Personal Insp.
Mr. JD Ackermann	SAIMM	BSc (Geol)	1, 2, 3, 4, 5, 7, 11, 12, 13, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25	Full time
Mr. M Hopwood	CIMA	BCom (Hons) Management Accounting; ACMA/CGMA	16, 18, 19	Full time
Ms S v Huyssteen	n/a	BA Environmental Management	17	Full time
Mr. JJ Le Roux	n/a	BSc (Hons) (Geol)	6, 7, 8	Full time
Mr. GJ Nagel	n/a	MBA, GDE Mining Engineering	13	Full time

Exploration

Exploration at Kusasalethu has mainly focused on improving confidence in the geological model, as well as adding and upgrading additional Mineral Resources to the mine to replace depletion. Geological data has been obtained through underground channel (chip) sampling, underground mapping and underground drilling. The close spaced underground data gathering was preceded by a surface geophysical seismic survey, as well as surface diamond core drilling. Exploration from underground platforms continues to improve geological confidence for the VCR.

Exploration work on the Kusasalethu mining right area commenced in the early 1940s as part of the Western Deep Levels evaluation programme. The work was initially limited to surface platforms, where an extensive surface exploration programme was conducted across the Western Deep Levels leases by Anglo American Corporation Limited ("**AAC**").

As the underground areas were accessed, platforms were generated for underground drilling.

Underground exploration drilling has been on-going throughout the operational life of Kusasalethu. Most of the underground drill holes used in the estimation of the current Mineral Resources were drilled by AAC and AngloGold before Harmony acquired the mine.

The drilling of exploration holes is limited by the availability of sufficient drilling platforms or development ends. This however has a marginal effect on estimation, due to the limited amount of development being done on the mine.

Kusasalethu has been allocated a capital amount of R3.96m for exploration drilling of which R1.40m will be carried over to the fiscal 2023. For the purpose of this report, the exploration holes drilled in fiscal 2022 have not been included in the geological modelling and Mineral Resource estimation, as the interpretations will only be finalised after completion of the project.

The underground infill drilling system is in place to improve data density in specific areas and are drilled from the underground development access drives. Drilling and logging practices are based on the Harmony company standards, which have been in place since Harmony took over Kusasalethu in 2001.

The QP is of the opinion that the quality and quantity of the exploration methods and information gathered is sufficient to support the estimation of Mineral Resources and Mineral Reserves.

Mineral Resource Estimate

The Mineral Resource estimate for Kusasalethu is considered to have reasonable prospects for economic extraction. This is demonstrated by the results of the cash flow for the mine. The cut-off value for the Mineral Resources is determined at 1,042cmg/t gold based on the economic assumptions presented in the table below at the effective date June 30, 2022.

Description	Unit	Value
Gold Price	USD/oz	1,723
Exchange Rate	ZAR:USD	15.35
Gold Price	ZAR/kg	850,191
Plant Recovery Factor	%	95.5
Unit Cost	ZAR/t	4,655

This cut-off value represents typical costs for the mining method and preliminary mining and metallurgical recovery assumptions.

The Mineral Resources were originally prepared, classified and reported according to the SAMREC, 2016. For the purposes of this report on Form 20-F, the Mineral Resources have been classified in accordance with Item 1302(d)(1)(iii)(A) of Regulation S-K. These Mineral Resources account for mining depletion recorded from July 2021 to June 2022. The Mineral Resource estimate, as at June 30, 2022, exclusive of the reported Mineral Reserves is summarized in the table below.

	Fiscal Year Ended June 30,						
	2022			2021			
Mineral Resource Category	**Tonnes (Mt)**	**Gold Grade (g/t)**	**Gold Content (kg)**	**Tonnes (Mt)**	**Gold Grade (g/t)**	**Gold Content (kg)**	**% Change**
Measured	1.0	13.03	12,906	—	—	—	n/a
Indicated	8.5	9.28	79,333	—	—	—	n/a
Total / Ave. Measured + Indicated	**9.5**	**9.67**	**92,239**	**—**	**—**	**—**	**n/a**
Inferred	2.0	8.85	17,927	—	—	—	n/a

Notes:

1. Mineral Resources are reported with an effective date of June 30, 2022, were originally prepared, classified and reported according to SAMREC, 2016. For the purposes of this TRS, the Mineral Resources have been classified in accordance with Item 1302(d)(1)(iii)(A) of Regulation S-K. The QP responsible for the estimate is Mr J Ackerman, who is Ore Reserve Manager at Kusasalethu, and a Harmony employee.
2. The Mineral Resource tonnes are reported as in situ with reasonable prospects for economic extraction.
3. No modifying factors or dilution sources have been included to in situ Mineral Reserve which was subtracted from the SAMREC Resource in order to obtain the S-K 1300 Resource.
4. The Mineral Resources are reported using a cut-off value of 1,042cmg/t determined at a 90% profit guidance, and a gold price of USD1,723/oz.
5. Tonnes are reported rounded to three decimal places. Gold values are rounded to zero decimal places.
6. Mineral Resources are exclusive of Mineral Reserves. Mineral Resources are not Mineral Reserves and do not necessarily demonstrate economic viability.
7. Rounding as required by reporting guidelines may result in apparent summation differences.
8. The Mineral Resource estimate is for Harmony's 100% interest.

9. This is the first time that Harmony has reported Mineral Resource in the Form 20-F and as such it cannot be compared to a previous reporting period.

Mineral Reserve Estimate

The Mineral Reserves were originally prepared, classified and reported according to SAMREC, 2016. For the purposes of this report on Form 20-F, the Mineral Reserves have been classified in accordance with Item 1302(d)(1)(iii)(A) of Regulation S-K.

Mineral Reserves are derived from the Mineral Resources, a detailed business plan and the operational mine planning processes. Mine planning utilizes and takes into consideration historical technical parameters achieved. In addition, Mineral Resource conversion to Mineral Reserves considers certain modifying factors, dilution, ore losses, minimum mining widths, planned mine call and plant recovery factors.

The Mineral Reserve estimate, as at June 30, 2021, and 2022, is summarized in the table below.

	Fiscal Year Ended June 30,						
	2022			2021			
Mineral Reserve Category	**Tonnes (Mt)**	**Gold Grade (g/t)**	**Gold Content (kg)**	**Tonnes (Mt)**	**Gold Grade (g/t)**	**Gold Content (kg)**	**% Change**
Proved	1.3	6.97	9,153	1.9	7.51	14,143	(35.3)
Probable	0.1	6.84	210	0.3	4.76	1,334	(84.3)
Total / Ave. Proved + Probable	**1.4**	**6.97**	**9,363**	**2.2**	**7.15**	**15,477**	**(39.5)**

Notes:

1. The Mineral Reserves were originally prepared, classified and reported according to SAMREC, 2016. For the purposes of this TRS, the Mineral Reserves have been classified in accordance with Item 1302(d)(1)(iii)(A) of Regulation S-K. The QP responsible for the estimate is Mr J Ackerman, who is the Kusasalethu Ore Reserve Manager, and who is a Harmony employee.
2. Tonnes, grade, and gold content (oz) are declared as net delivered to the mills.
3. Figures are fully inclusive of all mining dilutions, gold losses and are reported as mill delivered tonnes and head grades. Metallurgical recovery factors have not been applied to the Mineral Reserve figures.
4. Gold content is recovered gold content after taking into consideration the modifying factors.
5. Mineral Reserves are reported using a cut-off grade of 1,100cmg/t determined using a gold price of USD1,546/oz gold.

The decrease in Mineral Reserves is due to reduction of LOM as result of new planning parameters.

The table below presents a summary of the modifying factors used to convert the Mineral Resource to the Mineral Reserve for Kusasalethu. The modifying factors are consistent with the modelling, planning and computing estimates used in determining the Mineral Reserves, which are also consistent with historical performance.

Modifying Factor	Unit	Value
RD	t/m³	2.78
Stoping Width	cm	132.5
Gully	%	5.7
Off Reef	%	2.1
Waste to Reef	%	0.1
Flushing	%	0.2
Discrepancy	%	16.5
Mine Call Factor	%	85.9
Plant Recovery Factor	%	95.5
Mine Recovery Factor	%	82.0
Plant Call Factor	%	100.0
Mineral Reserves Cut Off	cmg/t	1,100

For additional information, see the TRS on each individual property, filed as an Exhibit of this annual report on Form 20-F.

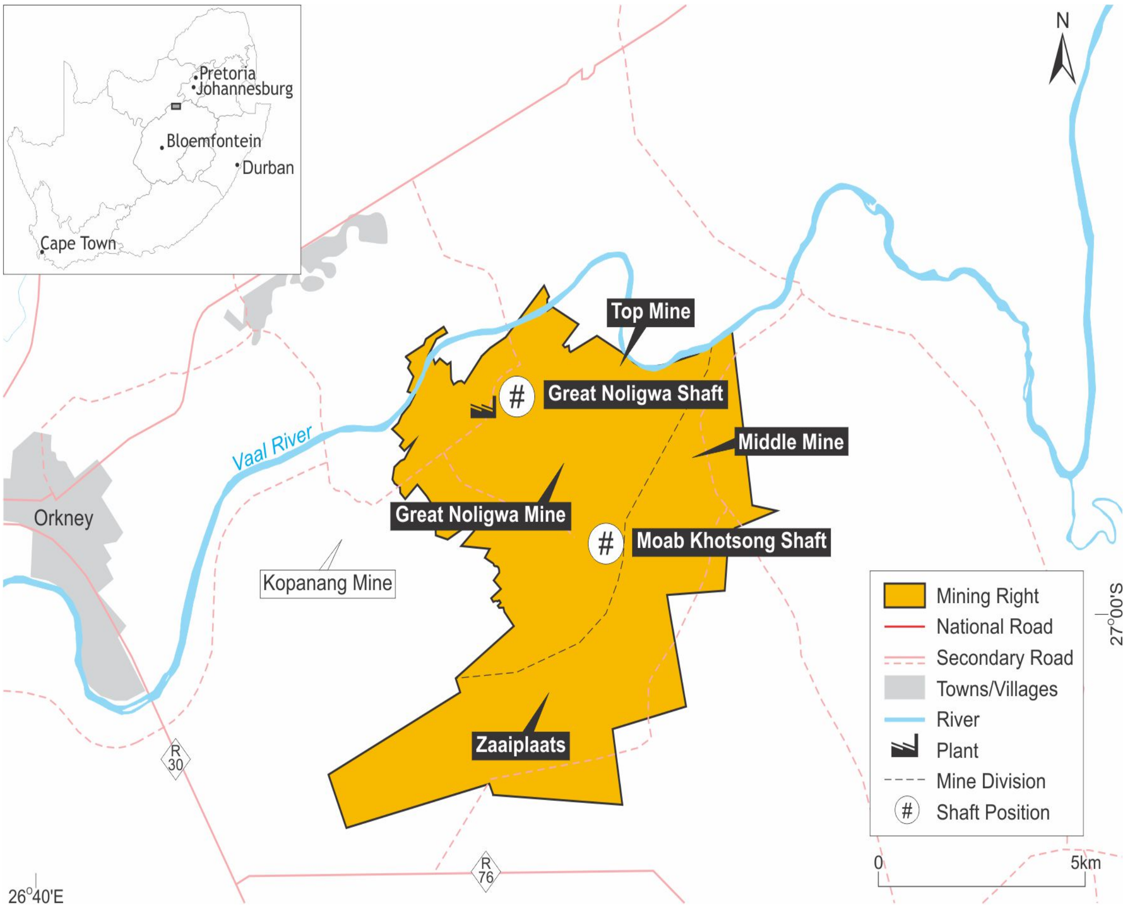
Moab Khotsong

Property Description

Moab Khotsong comprises two operating underground deep level gold mines, namely the Moab Khotsong Mine and the Great Noligwa Mine. Moab Khotsong is sub-divided by major faults into three distinct geographical mining areas. These mining areas are referred to as Top Mine, accessed through Great Noligwa and Moab Khotsong shafts, Middle Mine, accessed through Moab Khotsong shaft, and Zaaiplaats, a Board approved project to be accessed through a decline system from Moab Khotsong.

At longitude 26°48'03.3"E and latitude 26°59'12.7"S, Moab Khotsong is approximately 180km from Johannesburg. The mine is located approximately 10km east of Orkney and directly south of the Vaal River, which forms the border between the North West and Free State provinces. Moab Khotsong is wholly-owned and operated by Harmony.

The following graphic illustrates the location of Moab Khotsong and the associated mines, along with certain infrastructure.



Moab Khotsong comprises the underground and surface assets associated with two mines, namely Moab Khotsong Mine and Great Noligwa Mine, which Harmony acquired from AngloGold in 2018. Both are deep level gold mines, operating at depths of between 2km and 3km. They are situated directly south of the Vaal River approximately 10km east of the town of Orkney, in the Free State Province of South Africa. The primary reef mined is the Vaal Reef ("**VR**"), with additional production being sourced from the C Reef.

Moab Khotsong is sub-divided by major faults into three distinct geographical mining areas. These are referred to as Top Mine, accessed through Great Noligwa shaft, Middle Mine, accessed through Moab Khotsong shaft, and Zaaiplaats, accessed through a decline system off the base of the Moab Khotsong shaft.

Operational Infrastructure

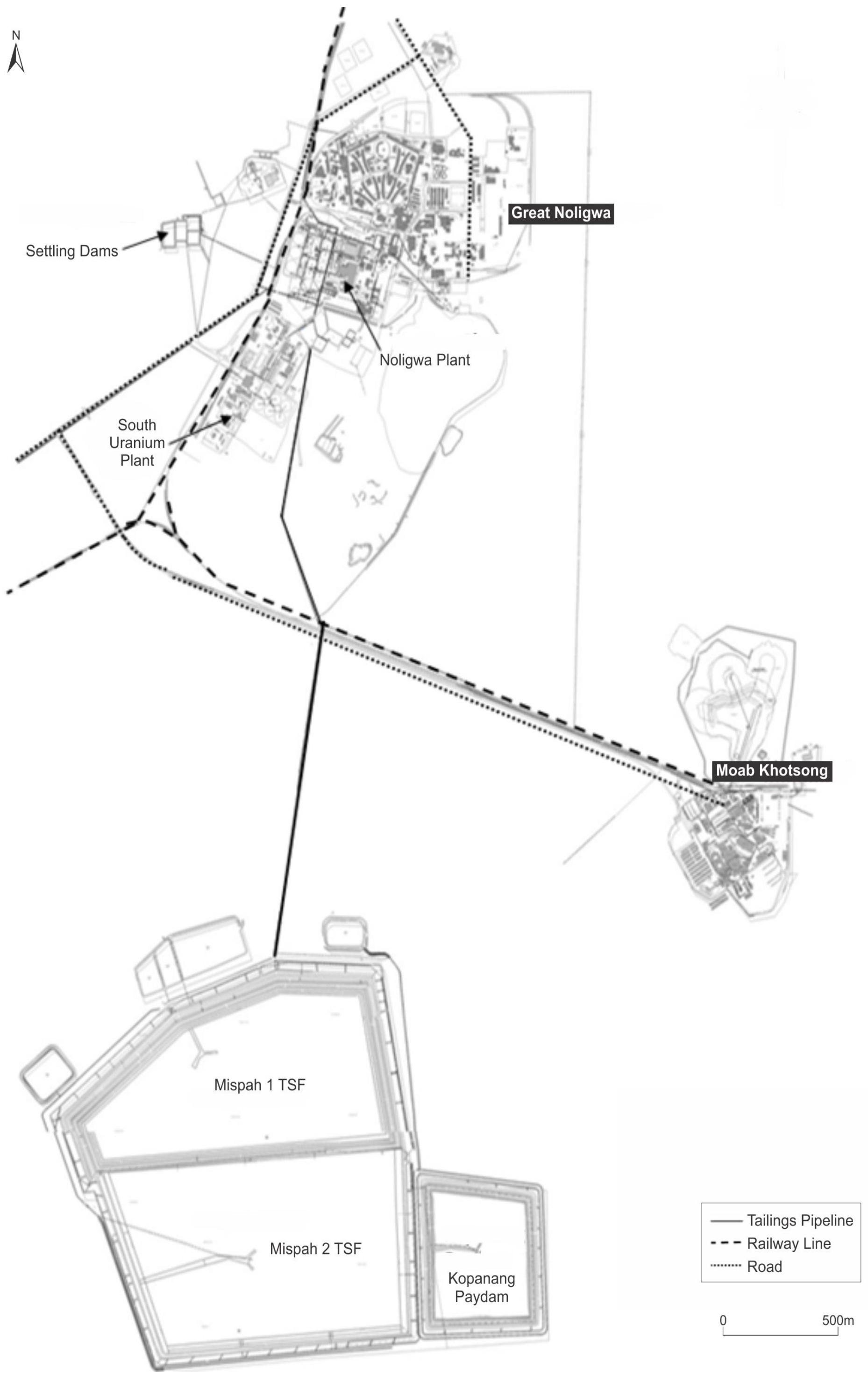
Infrastructure in the region is well established supporting the numerous operational gold mines in the area. The regional infrastructure includes national and provincial paved road networks, power transmission and distribution networks, water supply networks and communication infrastructure.

The operations are powered by electricity from Eskom, and they have the necessary water and power infrastructure to support their remaining lives, including Zaaiplaats.

Moab Khotsong Mine has a single vertical shaft. Great Noligwa Mine has a twin vertical shaft and a dedicated ore processing plant.

The infrastructural layout includes hoisting facilities; logistical support for core handling, sampling, and transporting; the processing plant; waste rock facilities; tailings and leaching infrastructure; roads; water and power supply; ventilation and refrigeration systems; stores and workshop support; electrical supply; offices; housing and security.

The location of the surface infrastructure is displayed in the graphic below.



Geology

Moab Khotsong is situated within the Klerksdorp Goldfield on the western margin of the Witwatersrand Basin of South Africa, one of the most prominent gold provinces in the world. The major gold bearing conglomerate reefs are mostly confined to the CRG of the Witwatersrand Supergroup.

The CRG is up to 2,100m thick in the Vaal River area and the general orientation of the Witwatersrand Supergroup succession in this goldfield is interpreted as southwest-trending and southeast dipping. A series of northeast-trending faults including the Buffelsdoorn, the Kromdraai, the Buffels East and the Jersey Faults, is a key feature of the Klerksdorp Goldfield and the key structural features at Moab Khotsong are related to this series of faults.

Moab Khotsong exploits gold mineralisation occurring in the VR. This reef is stratigraphically located near the top of the Johannesburg Sub-group, within the CRG. The VR ranges in depth at Moab Khotsong from 1,500m BMD to 3,400m BMD. Gold mineralisation also occurs in the stratigraphically higher C-Reef, which lies approximately 225m above the VR. However, the C-Reef typically contributes less than 5% to the mining production.

History

Great Noligwa Mine was developed by AAC and was originally known as Vaal River No. 8 Shaft. Work on Great Noligwa was initiated in 1968, and the mine produced its first gold in 1972. Great Noligwa reached its production peak of around 1,000koz per annum in the late 1990s and at present, mining activity at Great Noligwa Mine is concentrated on the extraction of pillars.

The Moab Khotsong Mine was developed by AngloGold and is the youngest of South Africa's deep-level gold mines. It came into production in 2003 and has been continuously economically exploited since then. The Great Noligwa Mine was merged with Moab Khotsong Mine in 2014, and since the merger of the two mines, annual production has been in the order of 250koz of gold.

Harmony assumed ownership of Moab Khotsong in March 2018, and has since added the Zaaiplaats area to the Mineral Resources and Mineral Reserves. The inclusion of Zaaiplaats in the LOM plan has extended the life of Moab Khotsong for 22 years up to 2044 and the overall production is expected to be in the order of 200koz of gold per annum.

Mineral Tenure

Refer to Note 4: *"Information on the Company – Business Overview – Regulation – Mineral Rights – South Africa"* above for a summary of the regulatory environment in South Africa.

Harmony holds two mining rights, which have been successfully converted, executed and registered as new order mining rights at the MPRTO. These rights cover a total combined area of 10,991.13ha for the mining of gold, silver, nickel and uranium. Both mining rights are valid and remain effective unless cancelled or suspended. Under the MPRDA, Harmony is entitled to apply to review the mining right on its expiry.

Harmony's Moab Khotsong mineral tenure comprises two mining rights covering approximately 10,991ha, namely:

- NW30/5/1/2/2/15 MR valid from September 12, 2007 to September 11, 2037; and
- NW30/5/1/1/2/16 MR valid from August 20, 2008 to August 19, 2038.

A summary of the status of environmental permits and licenses issued as at June 30, 2022 related to Moab Khotsong operation is presented in the table below.

Permit Holder	Permit / Licence	Reference No.	Issued By	Date Granted	Validity
Harmony	EMPr	NW30/5/1/2/2/15&16MR	DMRE	August 8, 2019	LOM
Harmony	Atmospheric Emission Licence	AEL/FS/MKO-HGM/14/10/2019	DFFE	March 13, 2019	January 30, 2026
Harmony	Waste Management Licence	NWP/DK2/WM/ 2018/04/01/02	DARD	January 21, 2021	LOM
Harmony	Water Use Licence	08/C24B/AGJ/9799	DWS	November 12, 2020	November 12, 2040

Mining Method

The tabular nature of the orebody, along with its depth and structural complexity, dictates the mining method employed at Moab Khotsong. The primary mining method used at Moab Khotsong is conventional breast mining, on a scattered grid. This method, as opposed to the SGM, is necessitated by the complex geology at Moab Khotsong, which prevents the implementation of a strict mining sequence. Moab Khotsong makes extensive use of backfill for the support of stopes. The economic reef horizons of Top and Middle Mine are exploited between depths of 1,698m and 3,054m below surface.

Zaaiplaats is located between the elevations of 3,054m and 3,526m below surface. Zaaiplaats will be accessed by declines from the northeastern end of the Zaaiplaats property to take advantage of the existing access development in place.

The Scattered Mining makes use of pillars with a pre-developed grid of tunnels, aimed at providing geological information ahead of the mining face, in order to control geotechnical stress. The Geotechnical Engineering department provides detailed numerical modelling and guidance regarding the best mining practices to be applied to minimize the risk associated with seismicity.

Primary development is done off-reef (in waste rock), while secondary development is done on-reef (in the mineralised zone).

Mineral Processing

The gold processing facility at Great Noligwa has been in operation since the 1960s and is hence a well-established operation. The technology used to process the gold-bearing ore is well established, being used across the majority of South African gold operations and suitable for the style of mineralisation. The milled ore follows a standard cyanide leach, CIP and electrowinning process in order to extract the gold bullion. The current plant capacity is 260ktpm, or daily treatment rate of approximately 9,420tpd at 92% availability. The plant is operating below its designed throughput capacity and has the potential to process the additional ore planned from Zaaiplaats.

Qualified Persons

The QPs preparing the TRS were employed on a full-time basis by Harmony. The QPs' qualifications, areas of responsibility and personal inspection of the property are summarized in the graphic below.

Qualified Person	Professional Organisation	Qualification	TRS Section Responsibility	Personal Insp.
Ms LB Freese	SACNASP, GSSA	BSc. (Hons) (Geol), GDE (MRM)	All sections, except 11	Full time
Mr VH Esterhuizen	SACNASP	BSc (Hons) (Geol)	11	Full Time

Exploration

Exploration at Moab Khotsong has focused on improving confidence in the geological model, as well as adding and upgrading additional Mineral Resources to the mine. Geological data has been obtained from an initial geophysical seismic survey and later through surface drilling, underground channel (chip) sampling, underground mapping and underground drilling.

The surface drill holes used in the estimation of the current Mineral Resources were drilled by AAC and AngloGold before Harmony acquired Moab Khotsong.

Underground exploration drilling has been on-going throughout the operational life of Moab Khotsong as the mine deepens. Underground drilling intersections are sampled where possible and, if acceptable and representative, are used in the estimation process. For estimation purposes 129 Surface and LIB intersections were used.

The underground drilling seeks to identify the geological structure and grade characteristics of the reefs at a 100m to 200m drilling spacing, in order to inform the placement of primary haulage and cross-cut development. In structurally complex areas, particularly in Middle Mine, infill drilling down to a 50m drilling spacing is required.

The exploration has been undertaken using standard Harmony methods since the acquisition of Moab Khotsong, and prior to that using AngloGold standard methods, which would have been in place for many years.

The QP is of the opinion that the quality and quantity of the exploration methods and information gathered is sufficient to support the estimation of Mineral Resources and Mineral Reserves.

Mineral Resource Estimate

The Mineral Resource estimate for Moab Khotsong is considered to have reasonable prospects for economic extraction. The cut-off value for the Mineral Resources has been determined as 1,500cmg/t, based on the economic assumptions presented in the table below at the effective date of June 30, 2022.

Description	Unit	Value
Gold Price	USD/oz	1,723
Exchange Rate	R:USD	15.35
Gold Price	R/kg	850,191
Plant Recovery Factor	%	96.92
Unit Cost	R/t	4,708

This cut-off value represents typical costs for the mining method and preliminary mining and metallurgical recovery assumptions.

The Mineral Resources were originally prepared, classified and reported according to the SAMREC, 2016. For the purposes of this report on Form 20-F, the Mineral Resources have been classified in accordance with Item 1302(d)(1)(iii)(A) of Regulation S-K. These Mineral Resources account for mining depletion recorded from July 2021 to June 2022. The Mineral Resource estimate, as at June 30, 2022, exclusive of the reported Mineral Reserves is summarized in the table below.

	Fiscal Year Ended June 30,						
	2022			2021			
Mineral Resource Category	Tonnes (Mt)	Gold Grade (g/t)	Gold Content (kg)	Tonnes (Mt)	Gold Grade (g/t)	Gold Content (kg)	% Change
Measured	2.3	17.64	41,110	—	—	—	n/a
Indicated	3.5	16.96	58,962	—	—	—	n/a
Total / Ave. Measured + Indicated	**5.8**	**17.23**	**100,072**	**—**	**—**	**—**	**n/a**
Inferred	2.6	19.09	48,762	—	—	—	n/a

Notes:

1. The Mineral Resources were originally prepared, classified and reported according to SAMREC, 2016. For the purposes of this TRS, the Mineral Resources have been classified in accordance with Item 1302(d)(1)(iii)(A) of Regulation S-K. The QP responsible for the estimate is LB. Freese, who is the Ore Reserve Manager, and who is a Harmony employee.
2. The Mineral Resource tonnes are reported as in situ with reasonable prospects for economic extraction.
3. Tonne measurements are reported in metric units. Gold grades are reported in grams per metric tonne ("g/t").
4. The Mineral Resources are reported using a cut-off value of 1,500cmg/t determined at a 90% profit guidance, and a gold price of USD1,723/oz.
5. Tonnes are reported as million metric tonnes ("Mt") rounded to two decimal places. Gold values are rounded to zero decimal places.
6. Mineral Resources are exclusive of Mineral Reserves. Mineral Resources are not Mineral Reserves and do not necessarily demonstrate economic viability.

7. Rounding as required by reporting guidelines may result in apparent summation differences between metric tonnes ("t"), gold value and metal content.
8. The Mineral Resource estimate is for Harmony's 100% interest.
10. This is the first time that Harmony has reported Mineral Resource in the Form 20-F and as such it cannot be compared to a previous reporting period.

Mineral Reserve Estimate

The Mineral Reserves were originally prepared, classified and reported according to SAMREC, 2016. For the purposes of this report on Form 20-F, the Mineral Reserves have been classified in accordance with Item 1302(d)(1)(iii)(A) of Regulation S-K.

Mineral Reserves are derived from the Mineral Resources, a detailed business plan and the operational mine planning processes. Mine planning utilizes and takes into consideration historical technical parameters achieved. In addition, Mineral Resource conversion to Mineral Reserves considers certain modifying factors, dilution, ore losses, minimum mining widths, planned mine call and plant recovery factors.

The Mineral Reserve estimate, as at June 30, 2021, and 2022, is summarized in the table below.

	Fiscal Year Ended June 30,						
			2022			2021	
Mineral Reserve Category	**Tonnes (Mt)**	**Gold Grade (g/t)**	**Gold Content (kg)**	**Tonnes (Mt)**	**Gold Grade (g/t)**	**Gold Content (kg)**	**% Change**
Proved	2.7	7.48	20,117	2.9	7.77	22,626	(11.1)
Probable	12.0	8.78	105,250	12.3	8.89	109,411	(3.8)
Total / Ave. Proved + Probable	**14.7**	**8.54**	**125,367**	**15.2**	**8.68**	**132,037**	**(5.1)**

Notes:

1. The Mineral Reserves were originally prepared, classified and reported according to SAMREC, 2016. For the purposes of this TRS, the Mineral Reserves have been classified in accordance with Item 1302(d)(1)(iii)(A) of Regulation S-K. The QP responsible for the estimate is LB. Freese, who is the Ore Reserve Manager, and who is a Harmony employee.
2. Tonnes, grade, and gold content (oz) are declared as net delivered to the mills.
3. Gold content (kg) is recovered gold content after taking into consideration the modifying factors.
4. Recovered gold (kg) is based on a conversion factor of 32.151oz/kg.
5. Mineral Reserves are reported using a cut-off grade of 1,800cmg/t determined using a gold price of USD1,546/oz gold.

The decrease in Mineral Reserves is mainly due to depletion.

The table below presents a summary of the modifying factors used to convert the Mineral Resource to the Mineral Reserve for Moab Khotsong. The modifying factors are consistent with the modelling, planning and computing estimates used in determining the Mineral Reserves, which are also consistent with historical performance.

Modifying Factor	Unit	Moab Khotsong	Zaaiplaats	Great Noligwa Shaft Pillars
Relative Density	t/m³	2.78t/m³	2.78t/m³	2.78t/m³
Stoping width	cm	170.0cm	154.0cm	169.0cm
Gully	%	10.1%	10.1%	12.4%
Off Reef	%	16.8%	12.0%	22.3%
Waste to Reef	%	14.4%	0.0%	60.5%
Flushing tons	%	1.5%	3.2%	0.0%
Discrepancy	%	20.2%	18.7%	20.2%
Mine Call Factor	%	69.0%	78.0%	69.0%
Plant Recovery Factor	%	96.9%	96.5%	96.9%
Mine Recovery Factor	%	66.9%	75.3%	66.9%
Plant Call Factor	%	103.0%	100.0%	103.0%
Mineral Reserve cut-off	cmg/t	1,800	1,800	1,200

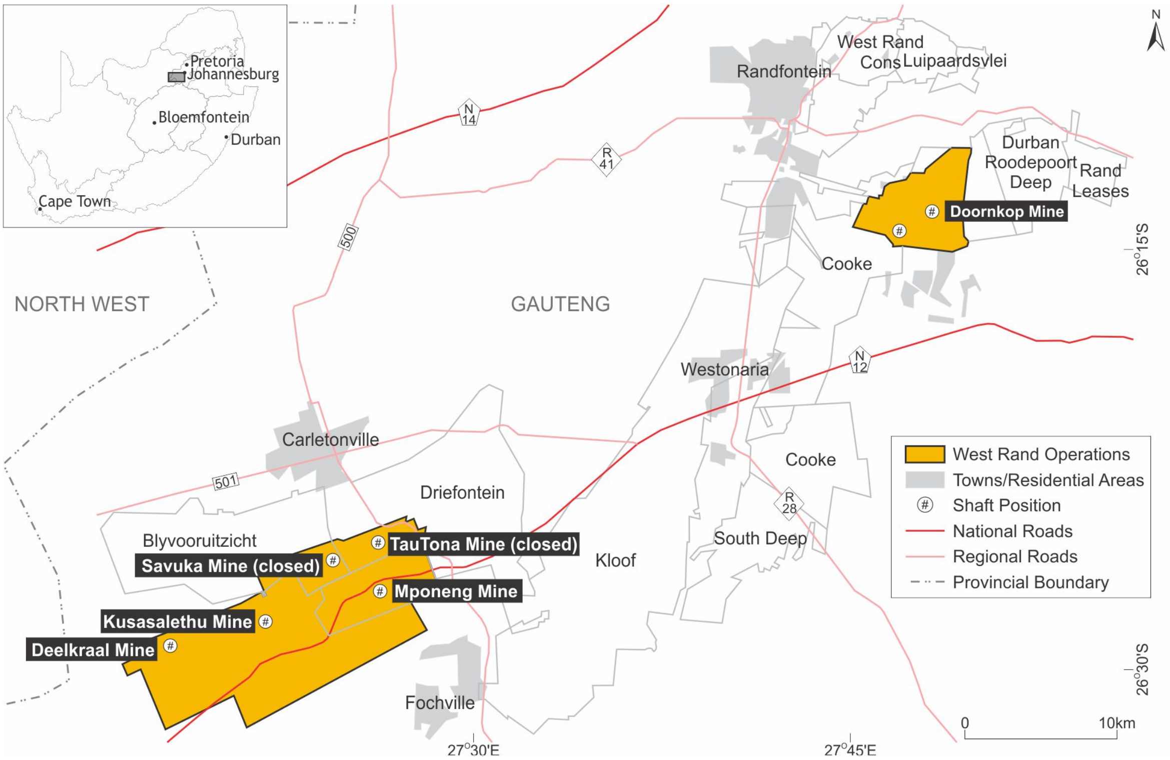
For additional information, see the TRS on each individual property, filed as an Exhibit of this annual report on Form 20-F.

Mponeng

Property Description

Mponeng is an underground gold producing mine located in the West Wits mining district south-west of Johannesburg, on the border between Gauteng and the North West Province. At longitude 27°25'53.62"E and latitude 26°26'12.27"S, the mine is approximately 65km from Johannesburg and 15km from Carletonville and forms part of Harmony's West Wits operations. Mponeng is wholly-owned and operated by Harmony.

The following graphic illustrates the location of the Mponeng mine, along with certain infrastructure.



Mponeng is the deepest mine in the world with development currently at 3,841m BMD. The primary reef mined is the VCR, with future expansion planned on both the VCR and the Carbon Leader Reef ("**CLR**") horizon. The original vertical twin shaft sinking from the surface commenced in 1981 and was commissioned along with the gold plant complex in 1986.

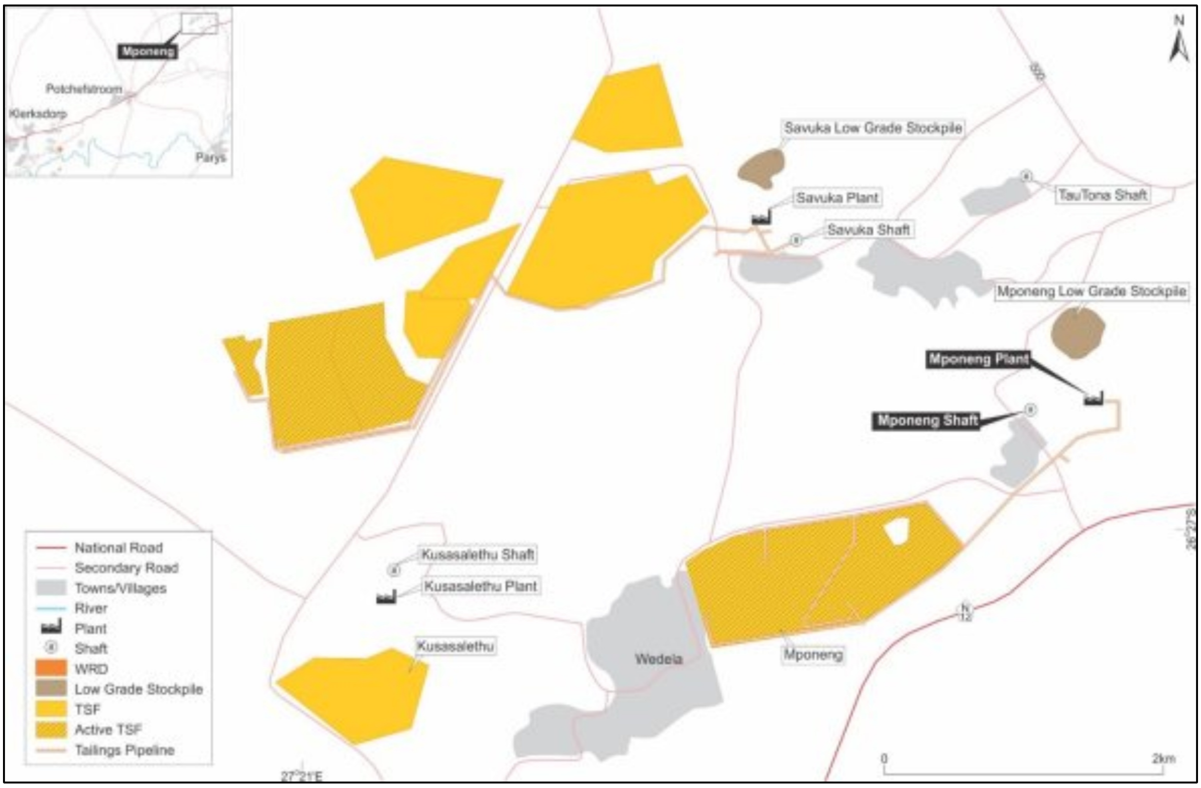
There is no material litigation (including violations or fines) against Harmony that threatens its mineral rights, tenure, or operations.

Operational Infrastructure

Infrastructure in the region is well established supporting the numerous operational gold mines in the area. The regional infrastructure includes national and provincial paved road networks, power transmission and distribution networks, water supply networks and communication infrastructure.

Mponeng comprises a twin-shaft system with two surface vertical shafts and two sub-vertical shafts. Ore and waste material are hoisted separately with ore being delivered to the plant by means of a conveyor belt and the waste rock going to the low-grade stockpile. Mponeng has its own processing plant situated adjacent to the mine. Operations are powered by electricity from Eskom.

Mponeng is accessible via the national and provincial roads. The general layout of Mponeng infrastructure in relation to the neighbouring Harmony mines, TauTona and Savuka is displayed in the graphic below.



Geology

Mponeng is situated on the northwestern margin of the Witwatersrand Basin of South Africa, one of the prominent gold provinces in the world. There are seven gold-bearing conglomerates within the lease area, of which only the VCR and CLR are economically viable.

The VCR is a gold bearing quartz pebble conglomerate of intermediate to high grade. It forms the base of the Ventersdorp Supergroup, which caps the Witwatersrand Supergroup through an angular unconformity. A characteristic of this horizon is the pronounced palaeomorphology, where a thick reef is preserved in the form of terraces separated stratigraphically by a thin inter-terrace slope reef.

The CLR, historically mined at the adjacent Harmony wholly-owned TauTona and Savuka Mines, is reported as part of the Mponeng Mineral Resource. It is a c.20cm thick tabular, auriferous quartz pebble conglomerate. It lies 800-900m stratigraphically deeper than the VCR, near the base of the Johannesburg Subgroup of the CRG of the Witwatersrand Supergroup.

Both the VCR and the CLR have been subjected to faulting and are intruded by a series of igneous dykes and sills of various ages that cut across the reefs. The gold mineralization at Mponeng succeeded a period of deep burial, fracturing, and alteration. The gold and other elements are believed to have precipitated through the reaction of hydrothermal fluids at high temperatures along the reef horizons.

History

Mponeng was formerly known as Western Deep Levels South Shaft, or No.1 Shaft when AAC first owned the operation. The No. 1 South Shaft system (i.e., the vertical twin shaft) together with the gold plant were commissioned in 1986. The shaft system allowed access to the deeper VCR in the southern part of the lease area.

The name changed in 1999 to Mponeng and was 100% owned and operated until recently by AngloGold. As at October 1, 2020, Harmony took full control and ownership of Mponeng as part of the acquisition of AngloGold's South African business pursuant to the Mponeng Acquisition.

Mponeng is part of the West Wits mining district that includes the Savuka Mine (previously known as Western Deep Levels No.2 Shaft) and the TauTona Mine (previously known as Western Deep Levels No. 3 Shaft) (both now also 100% owned by Harmony). These two mines predominantly exploited the CLR within the lease area, which is now mostly mined out resulting in them being placed on care and maintenance in 2017. The Mineral Resources and Mineral Reserves for TauTona were transferred to Mponeng during the same year.

Mineral Tenure

Refer to Item 4: *"Information on the Company – Business Overview – Regulation – Mineral Rights – South Africa"* above for a summary of the regulatory environment in South Africa.

The following mining rights make up the full mining lease area of approximately 6,673ha:

- GP30/5/1/2/2(01) MR valid from February 14, 2006, to February 13, 2036; and
- GP30/5/1/2/2(248) MR valid from October 16, 2012, to October 15, 2022.

As part of the acquisition of AngloGold's South African business, all mining rights related to Mponeng were transferred and are now held by Harmony. There are three mining rights that form Mponeng area which were successfully converted, executed and registered at the MPRTO. The principal mining right (GP30/5/1/2/2(01) MR) covers an area of 6,477ha for the mining of gold, silver, nickel and uranium. This mining right, granted on February 14, 2006, unless cancelled or suspended will continue in force for 36 years ending February 13, 2036. The other mining right, GP30/5/1/2/2(248) MR, is planned to be incorporated into the principal mining right (GP30/5/1/2/2(01) MR.

The mining rights 01MR and 248MR were ceded from AngloGold to Golden Core Trade and Investment (Pty) Ltd ("**Golden Core**"), a wholly owned subsidiary of Harmony, on October 1, 2020 and were successfully registered in the Mining Titles Office on the June 14, 2021 as part of AngloGold's sale of their last remaining South African assets to Harmony, including its West Wits Operations as part of the Mponeng Acquisition.

A section 102 Application in terms of the MPRDA was submitted previously by AngloGold in March 2017 to consolidate its West Wits mining rights into a single mining right (GP30/5/1/2/2(01) MR) ("**AngloGold Application**"). The AngloGold Application was approved by the DMRE in August 2020, but was, however, not implemented due to a change in circumstances as a result of the Mponeng Acquisition and will consequently be withdrawn by AngloGold. On February 15, 2022, Golden Core submitted an application in terms of section 102 of the MPRDA, substantively similar to the AngloGold Application, to consolidate the mining rights and mining right areas into a single mining right (GP30/5/1/2/2(01) MR) ("**Golden Core Application**"). The Golden Core Application is currently pending at the DMRE.

A summary of the status of environmental permits and licenses issued as at June 30, 2022 related to Mponeng's operation is presented in the table below.

Permit / Licence	Reference No.	Issued By	Date Granted	Validity
Environmental Management Programme (Amendment)	(GP) 30/5/1/2/3/2/1 (01)	DMRE	April 12, 2012	LOM
Waste Management Licence	GAUT 002/09-10/W0011	GDARD	June 22, 2015	Expired July 2019. New application submitted.
Hazardous Waste Generator Certificate	GPG-01-513	GDARD	July 14, 2015	In perpetuity
Water Use Licence	08/C23E/AEFGJ/1250	DWS	September 8, 2011	20 years
Water Use Licence	10/C23E/AFJ/4787	DWS	December 1, 2016	15 years
Certificate of Registration Inflammable Liquids and Substances	RP438/ptn5	West Rand District Municipality	November 30, 2021	Annually

Mining Method

Mponeng is a deep level underground gold mine currently operating at depths ranging between 3,160m and 3,740m BMD, and currently the deepest mine in the world with development at 3,841m BMD. Potential future mining operations at Mponeng are expected to deepen the shaft bottom to 4,227m BMD. The reef portion currently being mined at Mponeng is accessible between 3,000 – 3,600m BMD.

There are two mining methods in practice at Mponeng. Historically, longwall mining was practiced at Mponeng until the breast mining method was used, aimed at reducing the occurrence of large seismic events. However, this has evolved to the SGM method with backfill support. The SGM method makes use of dip pillars and reduced mining spans with pre-developed tunnels, aimed at further control of stresses experienced in rock movement. While Mponeng's business plan is based primarily on the SGM method, there are sections of the mine that are still operating using the breast mining method. The mining sequence is a V-shaped configuration, colloquially referred to as the “inverted Christmas tree”. An underhand face configuration is adopted when mining towards the west and an overhand face configuration when mining towards the east.

Mineral Processing

Mponeng's gold processing facility has been in operation since 1986. The technology used to process the gold-bearing ore is well established and is suitable for the style of mineralization (VCR and CLR ore). The current capacity of the plant is designed to process 95tph ore. The plant is operating below its designed throughput capacity and has shown its ability to produce the forecasted ounces of gold at said capacity.

Qualified Persons

The QPs preparing the TRS were employed on a full-time basis by Harmony. The QPs' qualifications, areas of responsibility and personal inspection of the property are summarized in the graphic below.

Qualified Person	Professional Organisation	Qualification	TRS Section Responsibility	Personal Insp.
Mr W Oliver	SAGC (No. MS 0136)	GDE (Mining Engineering) Government Certificate of Competency in Mine Survey	Relevant information in the Executive Summary (Section 1), Section 2-5, 7.6-7.7, 11.2-13, 15-25.	Full time
Mr G Flitton	SACNASP (No. 4000/19/15)	BSc (Hons) (Geology) GDE (Mineral Economics)	Relevant information in the Executive Summary (Section 1).	Full time
Mr W Beukes	SAGC (No. MS 0118)	NHD Mineral Resource Management	Relevant information in the Executive Summary (Section 1),	Full time

Exploration

Exploration at Mponeng has mainly focused on improving confidence in the geological model, as well as adding and upgrading additional Mineral Resources to the mine. Geological data has been obtained through structured underground channel (chip) sampling, mapping and drilling. This underground detailed, closer spaced data gathering exercise has been preceded by surface exploration of the lease area using a historical geophysical seismic survey, as well as surface diamond core drilling.

Exploration from underground platforms is currently continuing for the VCR in the east and west of the current mining levels, between 3,500m and 3,700m below surface, to improve geological confidence.

Exploration of the VCR target areas west and east of the 126-level mining front is planned for 2022/2023. These will form part of the approved exploration campaign. These targets will generate the needed information in two areas, on the Booysens/ Kimberley transition towards the east of the Phase 1 LOM extension areas and the area west of the Kimberley estimation domains.

Both areas are currently showing high levels of variability that will benefit from the additional information that will be generated for the completion of these exploration drill holes. VCR variability limits the forward confidence in the Mineral Resource estimation. More data collected can assist the QP define the zones of high variability.

Mponeng Mine has budgeted R11.03 million for infill exploration drilling of the VCR 2021 to 2022 which is on schedule to be spent by financial year end 2022. All drilling will be conducted from underground platforms on VCR now.

The QPs are of the opinion that the quality and quantity of the exploration methods and information gathered is sufficient to support the estimation of Mineral Resources and Mineral Reserves.

Mineral Resource Estimate

The Mineral Resource estimate is reported in situ within the Mponeng lease area (which includes TauTona and Savuka), as determined through the analysis of the reasonable prospect for economic extraction by underground mining method. The cut-off value for the Mineral Resources is determined at 761cmg/t gold based on the economic assumptions presented in the table below at the effective date of June 30, 2022.

Description	Unit	Value
Gold price	USD/oz	1,723
FX rate	R:USD	15.35
Gold price	R/kg	850,191
Plant recovery factor	%	97.8
Unit cost	R/t	4,810

Note: Unit cost includes cash operating cost, royalty and ongoing development capital.

This cut-off value represents typical costs for the mining method and preliminary mining and metallurgical recovery assumptions.

The Mineral Resources were originally prepared, classified and reported according to the SAMREC, 2016. For the purposes of this report on Form 20-F, the Mineral Resources have been classified in accordance with Item 1302(d)(1)(iii)(A) of Regulation S-K. These Mineral Resources account for mining depletion recorded from July 2021 to June 2022.

The Mineral Resource estimate, as at June 30, 2022, exclusive of the reported Mineral Reserves is summarized in the table below.

	Fiscal Year Ended June 30,						
	2022			2021			
Mineral Resource Category	Tonnes (Mt)	Gold Grade (g/t)	Gold Content (kg)	Tonnes (Mt)	Gold Grade (g/t)	Gold Content (kg)	% Change
Measured	2.5	16.09	40,380	—	—	—	n/a
Indicated	18.3	13.96	255,945	—	—	—	n/a
Total / Ave. Measured + Indicated	**20.8**	**14.22**	**296,325**	**—**	**—**	**—**	**n/a**
Inferred	29.1	13.35	388,682	—	—	—	n/a

Notes:

1. Mineral Resources are reported with an effective date of June 30, 2022 were originally prepared, classified and reported according to SAMREC, 2016. For the purposes of this TRS, the Mineral Resources have been classified in accordance with Item 1302(d)(1)(iii)(A) of Regulation S-K. The QP responsible for the estimate is Mr WH Olivier, who is Ore Reserve Manager at Mponeng, and a Harmony employee.
2. The Mineral Resource tonnes are reported as in situ with reasonable prospects for economic extraction.
3. No modifying factors or dilution sources have been included to in situ Reserve which was subtracted from the SAMREC Resource in order to obtain the S-K 1300 Resource.
4. The Mineral Resources are reported using a cut-off value of 761cmg/t determined at a 90% profit guidance, and a gold price of USD1,723/oz.
5. Tonnes are reported as rounded to three decimal places. Gold values are rounded to zero decimal places.
6. Mineral Resources are exclusive of Mineral Reserves. Mineral Resources are not Mineral Reserves and do not necessarily demonstrate economic viability.
7. Rounding as required by reporting guidelines may result in apparent summation differences.
8. The Mineral Resource estimate is for Harmony's 100% interest.
9. This is the first time that Harmony has reported Mineral Resource in the Form 20-F and as such it cannot be compared to a previous reporting period.

Mineral Reserve Estimate

The Mineral Reserves were originally prepared, classified and reported according to SAMREC, 2016. For the purposes of this report on Form 20-F, the Mineral Reserves have been classified in accordance with Item 1302(d)(1)(iii)(A) of Regulation S-K. Mineral Reserves are derived from the Mineral Resources, a detailed business plan and the operational mine planning processes. Mine planning utilizes and takes into consideration historical technical parameters achieved. In addition, Mineral Resource conversion to Mineral Reserves considers certain modifying factors, dilution, ore losses, minimum mining widths, planned mine call and plant recovery factors.

The Mineral Reserve estimate, as at June 30, 2021, and 2022, is summarized in the table below.

	Fiscal Year Ended June 30,						
	2022			2021			
Mineral Reserve Category	**Tonnes (Mt)**	**Gold Grade (g/t)**	**Gold Content (kg)**	**Tonnes (Mt)**	**Gold Grade (g/t)**	**Gold Content (kg)**	**% Change**
Proved	2.3	8.09	18,580	1.9	8.72	16,631	11.7
Probable	4.3	9.12	39,122	5.8	8.47	48,809	(19.8)
Total / Ave. Proved + Probable	**6.6**	**8.76**	**57,702**	**7.7**	**8.53**	**65,440**	**(11.8)**

Notes:

1. The Mineral Reserves were originally prepared, classified and reported according to SAMREC, 2016. For the purposes of this TRS, the Mineral Reserves have been classified in accordance with Item 1302(d)(1)(iii)(A) of Regulation S-K. The QP responsible for the estimate is Mr WH Olivier, who is the Mponeng Ore Reserve Manager, and a Harmony employee.
2. Tonnes, grade, and gold content are declared as net delivered to the mills.
3. Figures are fully inclusive of all mining dilutions, gold losses and are reported as mill delivered tonnes and head grades. Metallurgical recovery factors have not been applied to the reserve figures.
4. Gold content is recovered gold content after taking into consideration the modifying factors.
5. Mineral Reserves are reported using a cut-off grade of 971cmg/t determined using a gold price of USD1,546/oz gold.

The decrease in the Mineral Reserves is mostly due to depletion, structure updates and rock engineering pillar designs changes as well as delays in accessing blocks of ground at the end of the LOM.

The table below presents a summary of the modifying factors used to convert the Mineral Resource to the Mineral Reserve for Mponeng. The modifying factors are consistent with the modelling, planning and computing estimates used in determining the Mineral Reserves, which are also consistent with historical performance.

Modifying Factor	**Unit**	**Value**
Relative Density	t/m³	2.71
Stoping width	cm	149.7
Gully	%	7.2
Off Reef	%	5.6
Waste to Reef	%	3.0
Flushing tons	%	6.2
Discrepancy	%	24.4
Mine Call Factor	%	80.6
Plant Recovery Factor	%	97.9
Mine Recovery Factor	%	78.9
Plant Call Factor	%	100.0
Mineral Reserve cut-off	cmg/t	971

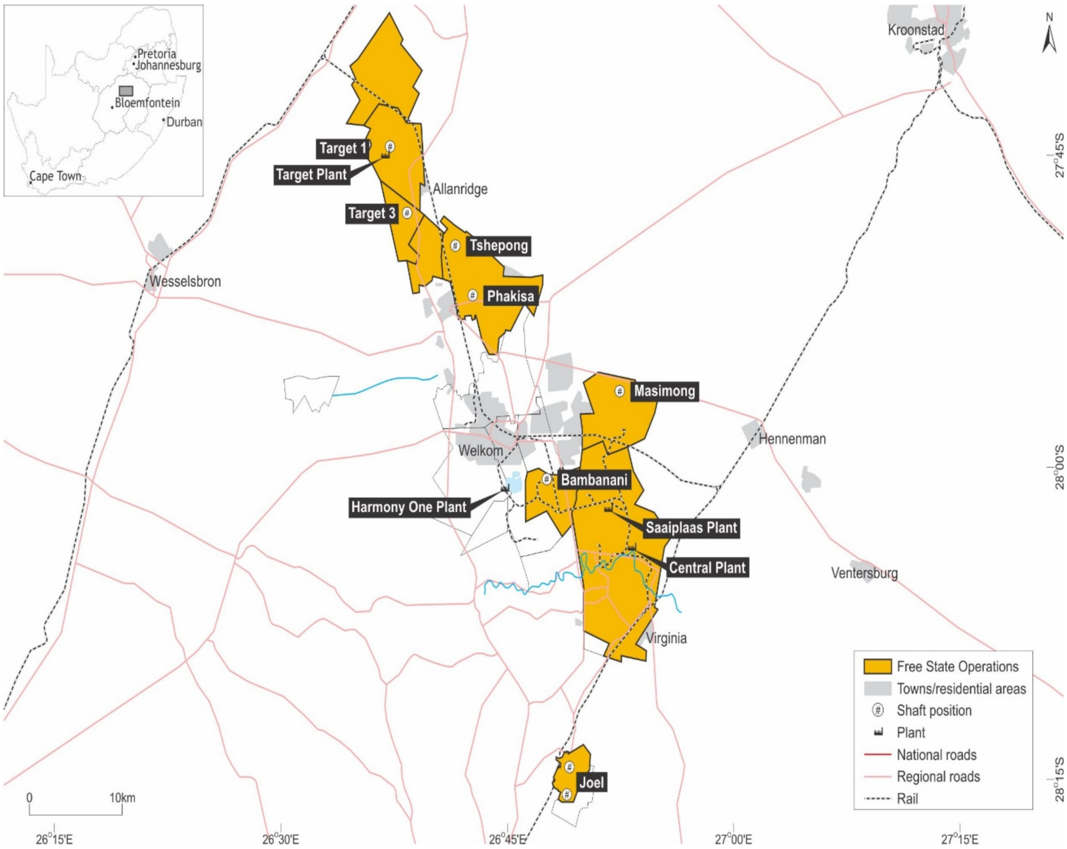
For additional information, see the TRS on each individual property, filed as an Exhibit of this annual report on Form 20-F.

Target

Property Description

Target is an advanced, single-shaft, deep-level gold mine which has been operational for approximately 30 years. While most of the gold mineralisation extracted comes from mechanised mining (massive mining techniques), conventional stoping is still employed primarily to de-stress areas ahead of mechanised mining. It is located in the Free State Province of South Africa, approximately 270km southwest of Johannesburg and 30km north of the town of Welkom. Target is wholly-owned and operated by Harmony.

The following graphic illustrates the location of the Target mine, along with certain infrastructure.



Target is a deep-level underground gold producing mine situated in the Free State Goldfield, 30km north of the town of Welkom, Free State Province, South Africa. Most of the gold mineralisation is currently extracted by mechanised mining (massive mining techniques).

All relevant underground mining and surface right permits, and any other permit related to the work conducted on the property have been obtained and are valid. There are no known legal proceedings (including violations or fines) against Harmony, which threaten its mineral rights, tenure, or operations.

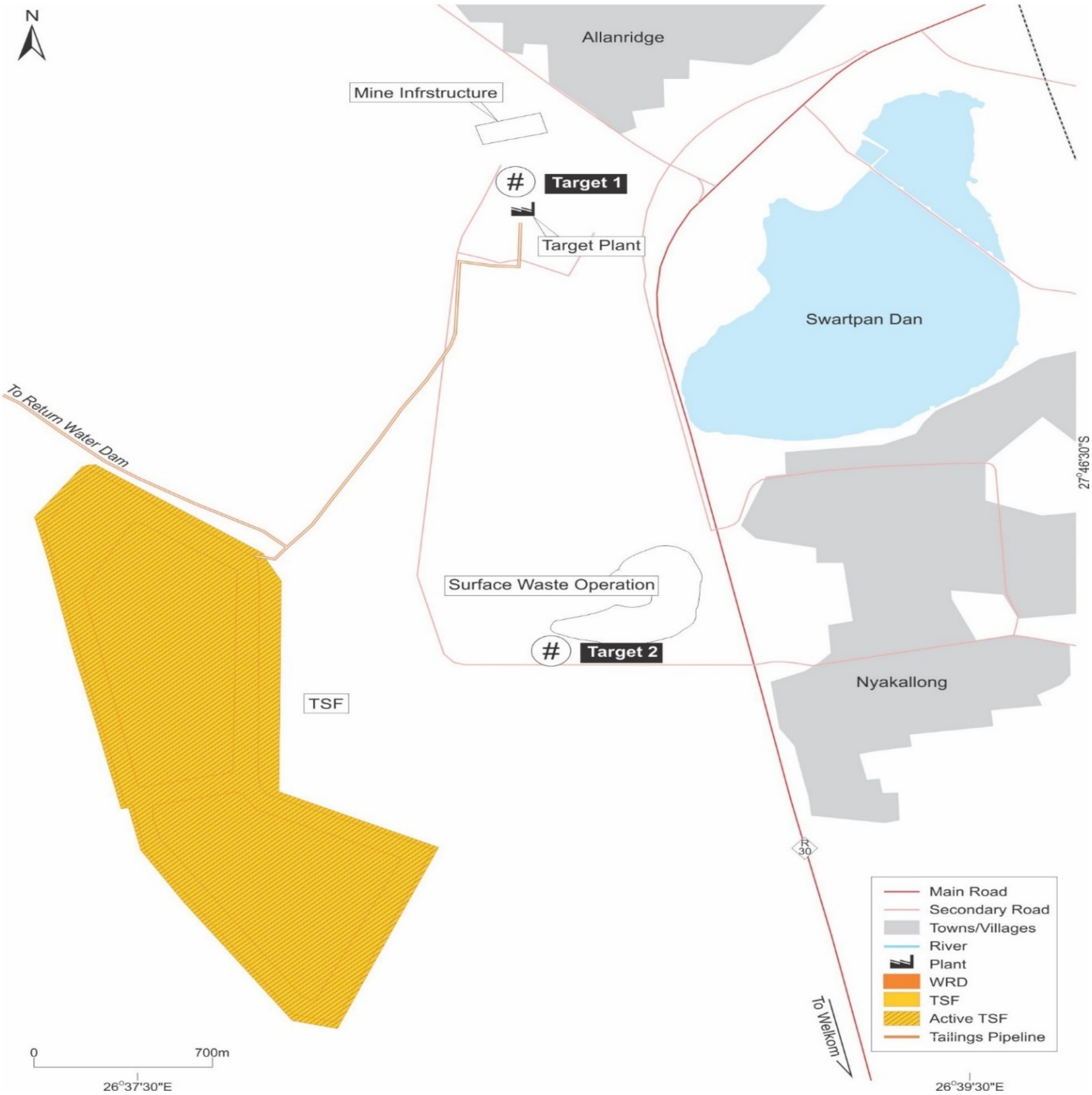
Operational Infrastructure

The surrounding areas of Welkom and Virginia are well developed in terms of access and mining-related infrastructure supporting the numerous operational gold mines in the area. The regional infrastructure includes national and provincial paved road networks, power transmission and distribution networks, water supply networks and communication infrastructure. Target's surface and underground infrastructure, including its power and water supplies, are sufficient for the LOM plan production requirements.

Target includes a single underground mine constructed as an extension to the Loraine Gold Mine ("**Loraine**") and uses a single shaft as access. The ore and development rock are hoisted together, with ore milled and processed at the Target Plant adjacent to the mine. Operations are powered by electricity from Eskom.

The Target mining area is well developed in terms of access and mining-related infrastructure. Access to the Target shafts (1, 2, 3 and 5) is via a well-maintained paved road. Adequately maintained roads is used to access other areas of the mine such as the explosives magazines, sewage works, slimes dam and the evaporation ponds. The area also has access to rail links and an airfield within proximity.

The surface infrastructure associated with Target is presented in the graphic below.



Geology

Target is situated on the north-western margin of the Witwatersrand Basin of South Africa, one of the prominent gold provinces in the world. The major gold bearing conglomerate reefs are mostly confined to the CRG of the Witwatersrand Supergroup.

Folding forms the major structural feature within the lease is and is manifested as an asymmetric syncline whose axis trends N15°W, with a general plunge of 10° to 12° north, although this is variable due to local structural features. The dip of the western limb of the syncline is often more than 55° eastwards. Numerous minor faults are also present.

These faults, with a displacement generally of less than 15m and traceable over a strike distance of less than 150m are too numerous to classify, however, it can be said that the eastern limb of the trough is less faulted than the western limb.

Gold mineralisation currently exploited is hosted within a succession of Elsburg (EA) and Dreyerskuil (DK) quartz pebble conglomerate reefs hosted by the van den Heeversrust and Dreyerskuil (Uitkyk) Members of the Eldorado (Elsburg) Formation, respectively.

Additional mineralisation occurs in the Big Pebble Reef of the underlying the Kimberley (formerly Aandenk) Formation. All these units are within the Turffontein Subgroup of the CRG. Mineralisation is associated with the presence of medium to coarse, clast-supported oligomictic pebble horizons. The presence of allogenic (buckshot) pyrite and detrital carbon is also common.

History

Anglovaal Limited ("**Anglovaal**") previously held the mineral rights for the Target property. Target Exploration Company Limited ("**Target Exploration Company**"), a company formed by Anglovaal specifically for the purpose of exploration, later acquired this area. Options to the mineral rights north of Target were acquired by Sun Mining and Prospecting Company (Pty) Limited (“**Sun**”). The formation of Avgold in 1996 was intended to further the gold mining and exploration interests of Anglovaal. Harmony acquired Target in 2002 by acquiring 100% of Avgold Limited's shares.

Mineral Tenure

Refer to Item 4: *"Information on the Company – Business Overview – Regulation – Mineral Rights – South Africa"* above for a summary of the regulatory environment in South Africa.

The current mining rights encompasses an area of 7,952.78ha. Harmony holds several mining rights for Target, which were successfully converted and executed as new order mining rights. Certain of these rights are still to be registered at the MPRTO.

The summary of mineral tenure and the approved mining rights include the following:

- FS30/5/1/2/2/14MR, which is valid from November 30, 2007, to December 29, 2025, and covers 4,237.00ha; and
- FS30/5/1/2/2/225MR, which is valid from December 12, 2013, to December 11, 2026, and 3,715.78ha**.**

A summary of the status of environmental permits and licenses issued as at June 30, 2022, related to Target is presented in the table below.

Permit / Licence	Reference No.	Issued By	Date Granted	Validity
EMPr	FS 30/5/1/2/3/2/1(14) EM	DMRE	April 16, 2010	LOM
Atmospheric Emission Licence	LDM/AEL/YMK/013	Lejweleputswa District Municipality	November 5, 2018	November 5, 2023
Water Permit	789N	DWS	November 4, 2008	Valid pending issue of new license
Water Permit	1046B	DWS	November 4, 2008	Valid pending issue of new license

Mining Method

The Target Mine deposit is made up of mineralised multiple reef bands overlying one another. The EA reef is composited into thick packages, whilst the Dreyerskuil reefs are separated into thinner discrete horizons. These differences have led to the application of multiple mining methods.

Target Mine is essentially a trackless mining operation with a combination of highly mechanised mining, scattered mining and labour-intensive narrow reef stoping, the latter being more typical of South African gold mines' conventional stoping.

The primary ore extraction method adopted at Target is massive mining of the thick mining horizons (EA1, EA3, EA7 and EA8) through a combination of scattered open stoping supplemented with the use of a 6%-cement backfill, and sub-level open stoping which does not make use of backfilling.

The balance of the ore is mined using a narrow reef mining ("**NRM**") method on the thinner Dreyerskuil Reefs, which does not make use of backfilling either.

Massive open stoping accounts for ±70% of the ore production with ±20% coming from conventional narrow reef stoping. The ±10% balance of production comes from trackless on-reef development sections.

Mineral Processing

The Target Plant was designed and commissioned in November 2001. The plant was designed to treat a total tonnage of 105ktpm with a potential to expand to 160ktpm for future demand. Currently the plant treats ore from Target, Joel plant clean-up and Target 2 waste dump.

Qualified Persons

The QPs preparing the TRS were employed on a full-time basis by Harmony. The QPs' qualifications, areas of responsibility and personal inspection of the property are summarized in the graphic below.

Qualified Person	Professional Organisation	Qualification	TRS Section Responsibility	Personal Insp.
Mr S Motlatla	SACNASP (No. 400451/14)	BSc. (Hons) Geol, GDE (Mining), Project Management Cert NQF Level 5	All the sections	Full Time
Mr D Fourie	SAIMM (No. 706555)	MSc. Min Eng, GDE (Mining)	11	Regular
Mr M Ncube	SACNASP (No. 123075)	BSc. (Hons) Geol	8, 9, 11	Full Time
Dr PJ Le Roux	ECSA (No. 200970121)	PhD. Min Eng	13.1 - 13.2, 13.10	Full Time
Mr M Gxekwa	AMIHRP	Dip HR Man, PgDip. (Labour law)	13.9	Full Time
Mr T Holl	AMRE	GCC Electrical	13.7-13.8	Full Time
Mr C Radebe	MMMA	B.Tech Metallurgy	14	Full Time
Mr A Relebona	n/a	BA (Hons) Env Sci	17	Regular
Mr D Graham	n/a	B.Com (Bus & Man Accounting)	18, 19	Full Time
Mr E Naude	n/a	MRM Certificate	13	Full Time
Mr J van Deventer	SACNASP	BSc. (Hons) Geol	6, 7	Full Time

Exploration

Geological data has been obtained through initial surface drilling, followed by underground drilling, mapping and channel (chip) sampling.

Initial surface drilling carried out during the 1980s, under the auspices of Sun, was designed to delineate the northward continuation of the synclinal axis, around which most of Loraine's gold deposits are located. Following the incorporation of Target Exploration Company in 1990, a total of 17 drillholes and three long deflections from existing drillholes were drilled in three arrays parallel to the western margin, namely the Western, Central and Eastern arrays.

The Central Array targeted the EA Reefs, while the Western and Eastern arrays focused on definition of the proximal (steep west limb) and distal Kimberley and Basal Reefs, respectively.

The positive surface drilling results led to the construction of an underground drilling platform. Underground exploration drilling has been on-going throughout the operational life of Target as the mine deepens. Most of the underground drillholes are used in the geological modelling and estimation of the current Mineral Resources.

Underground diamond core drilling is conducted using hydraulic driven drill rigs, which typically drill BX core. Drill holes are typically short, rarely exceeding 300m in length.

Fans of drill holes are drilled from diamond drilling bays, which are developed at 50m intervals along the decline return airway ("**RAW**") decline. The drilling fans consist of up to ten individual drill holes at inclinations ranging from -15° East to +30° West of vertical, or as dictated by local geological structures. Maximum drillhole lengths of 350m are required for complete Dreyerskuil intersections in the synclinal axis. Drill holes are stopped once the Ventersdorp lava has been intersected, or, in the case of flatter drill holes, once the trough axis has been identified and the drill hole is drilling parallel to the bedding.

The QP is of the opinion that the quality and quantity of the exploration methods and information gathered is sufficient to support the estimation of Mineral Resources and Mineral Reserves.

Mineral Resource Estimate

The Mineral Resource estimate is reported in situ within the Target lease area, as determined through the analysis of the reasonable prospect for economic extraction by underground mining methods. The cut-off grade for the Mineral Resource is determined at 3.05g/t gold based on the economic assumptions presented in the table below at the effective date June 30, 2022.

Description	Unit	Value
Gold Price	USD/oz	1,723
Exchange Rate	R:USD	15.35
Gold Price	R/kg	850,191
Plant Recovery Factor	%	94.4
Unit Cost	R/t	2,461

Note: Unit cos (R/t) includes cash-operating cost, royalty and on-going development capital.

This cut-off value represents typical costs for the mining method and preliminary mining and metallurgical recovery assumptions.

The Mineral Resources were originally prepared, classified and reported according to the SAMREC, 2016. For the purposes of this report on Form 20-F, the Mineral Resources have been classified in accordance with Item 1302(d)(1)(iii)(A) of Regulation S-K. These Mineral Resources account for mining depletion recorded from July 2021 to June 2022.

The Mineral Resource estimate, as at June 30, 2022, exclusive of the reported Mineral Reserves is summarized in the table below.

Mineral Resource Category	Fiscal Year Ended June 30, 2022 Tonnes (Mt)	2022 Gold Grade (g/t)	2022 Gold Content (kg)	2021 Tonnes (Mt)	2021 Gold Grade (g/t)	2021 Gold Content (kg)	% Change
Measured	4.4	8.89	38,860	—	—	—	n/a
Indicated	3.2	7.76	24,780	—	—	—	n/a
Total / Ave. Measured + Indicated	**7.6**	**8.41**	**63,640**	**—**	**—**	**—**	**n/a**
Inferred	4.0	5.96	24,007	—	—	—	n/a

Notes:

1. Mineral Resources are reported with an effective date of June 30, 2022, were originally prepared, classified and reported according to SAMREC, 2016. For the purposes of this TRS, the Mineral Resources have been classified in accordance with Item 1302(d)(1)(iii)(A) of Regulation S-K. The QP responsible for the estimate is Mr D Fourie, who is Head of Department Geostatistician, and a Harmony employee.
2. The Mineral Resource tonnes are reported as in situ with reasonable prospects for economic extraction.
3. No modifying factors or dilution sources have been included to in situ Reserve which was subtracted from the SAMREC Resource in order to obtain the S-K 1300 Resource.
4. The Mineral Resources are reported using a cut-off grade of 3.05g/t determined at a 90% profit guidance, and a gold price of USD1,723/oz.
5. Tonnes are reported as rounded to three decimal places. Gold values are rounded to zero decimal places.
6. Mineral Resources are exclusive of Mineral Reserves. Mineral Resources are not Mineral Reserves and do not necessarily demonstrate economic viability.
7. Rounding as required by reporting guidelines may result in apparent summation differences.
8. The Mineral Resource estimate is for Harmony's 100% interest.
9. This is the first time that Harmony has reported Mineral Resource in the Form 20-F and as such it cannot be compared to a previous reporting period.

Mineral Reserve Estimate

The Mineral Reserves were originally prepared, classified and reported according to SAMREC, 2016. For the purposes of this report on Form 20-F, the Mineral Reserves have been classified in accordance with Item 1302(d)(1)(iii)(A) of Regulation S-K. Mineral Reserves are derived from the Mineral Resources, a detailed business plan and the operational mine planning processes. Mine planning utilizes and takes into consideration historical technical parameters achieved. In addition, Mineral Resource conversion to Mineral Reserves considers certain modifying factors, dilution, ore losses, minimum mining widths, planned mine call and plant recovery factors.

The Mineral Reserve estimate, as at June 30, 2021 and 2022, is summarized in the table below.

Mineral Reserve Category	Fiscal Year Ended June 30, 2022 Tonnes (Mt)	2022 Gold Grade (g/t)	2022 Gold Content (kg)	2021 Tonnes (Mt)	2021 Gold Grade (g/t)	2021 Gold Content (kg)	% Change
Proved	2.7	4.32	11,744	2.9	4.46	12,933	(9.2)
Probable	1.7	4.11	7,096	1.8	3.89	7,183	(1.2)
Total / Ave. Proved + Probable	**4.4**	**4.24**	**18,840**	**4.7**	**4.24**	**20,116**	**(6.3)**

Notes:

1. The Mineral Reserves were originally prepared, classified and reported according to SAMREC, 2016. For the purposes of this TRS, the Mineral Reserves have been classified in accordance with Item 1302(d)(1)(iii)(A) of Regulation S-K. The QP responsible for the estimate is Mr S Motlatla, who is the Target Ore Reserve Manager, and a Harmony employee.
2. Tonnes, grade, and gold content are declared as net delivered to the mills.
3. Figures are fully inclusive of all mining dilutions, gold losses and are reported as mill delivered tonnes and head grades. Metallurgical recovery factors have not been applied to the reserve figures.
4. Gold content is recovered gold content after taking into consideration the modifying factors.
5. The NRM Mineral Reserves are reported using a cut-off value of 821cmg/t determined using a gold price of USD1,546/oz. The massive open stoping Mineral Reserves are reported using a cut-off grade of 3.40g/t determined using a gold price of USD1,546/oz.

The decrease in Mineral Reserves is mainly due to depletion.

The table below presents a summary of the modifying factors used to convert the Mineral Resource to the Mineral Reserve for Target. The modifying factors are consistent with the modelling, planning and computing estimates used in determining the Mineral Reserves, which are also consistent with historical performance.

Modifying Factor	Unit	Value
Relative Density	t/m3	2.71
Average Stoping Width	cm	196.00
Mine Call Factor	%	95.0
Plant Recovery Factor	%	94.4
Mineral Reserve Paylimit - NRM	cmg/t	821.00
Mineral Reserve Cut-off - Massive Open Stoping	g/t	3.40
Mineral Reserve Cut-off - Development	g/t	3.40
Dilution - Massive Open Stoping	%	6.0

For additional information, see the TRS on each individual property, filed as an Exhibit of this annual report on Form 20-F.

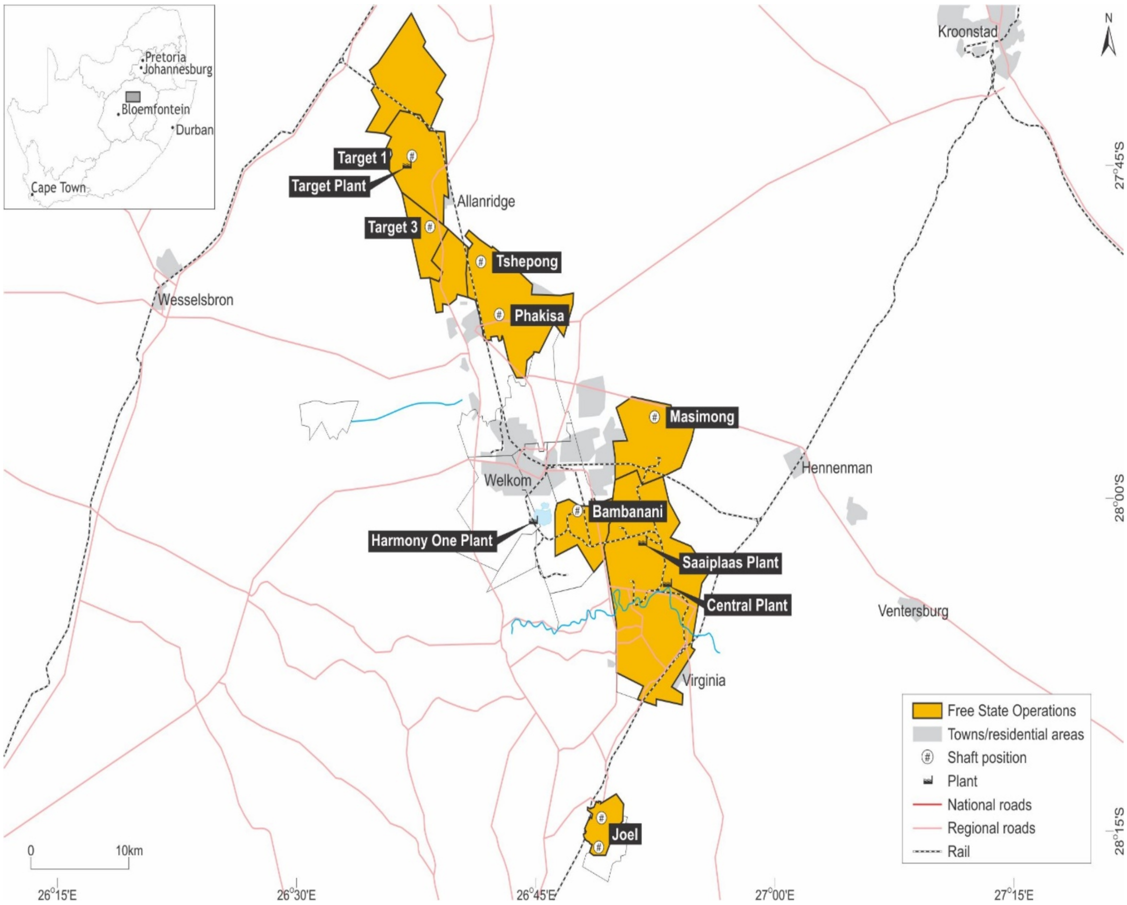
Tshepong Operations

Property Description

The Tshepong Operations comprise two operating underground gold mines namely, Tshepong and Phakisa. Tshepong is a mature, moderate to deep-level underground operation that uses conventional undercut mining, to depths of 2,400m BMD. Phakisa, younger than Tshepong, is a moderate to deep-level underground operation using conventional underground mining methods to depths of 2,427m BMD. The mines utilise the Tshepong, Phakisa and Nyala shafts.

The mines are located in the Free State Province of South Africa, approximately 250km southwest of Johannesburg and 15km to the north of the town of Welkom. Tshepong is situated at a latitude of 27°51'56.45"S and longitude of 26°42'45.15"E. Phakisa is situated adjacent to the south of Tshepong, and is located at a latitude of 27°54'1.27"S and longitude of 26°43'30.05"E. Tshepong Operations is wholly-owned and operated by Harmony.

The following graphic illustrates the location of the Tshepong Operations, along with certain infrastructure.



The primary reef mined is the Basal Reef, with additional gold mineralisation being found in the B Reef and A Reef.

All relevant underground mining and surface right permits, and any other permit related to the work conducted on the property have been obtained and are valid. There are no known legal proceedings (including violations or fines) against Harmony, which threaten its mineral rights, tenure, or operations.

Operational Infrastructure

The surrounding areas of Welkom and Odendaalsrus are well developed in terms of access and mining-related infrastructure, which supports the numerous operational gold mines in the area. The regional infrastructure includes national and provincial paved road networks, power transmission and distribution networks, water supply networks and communication infrastructure.

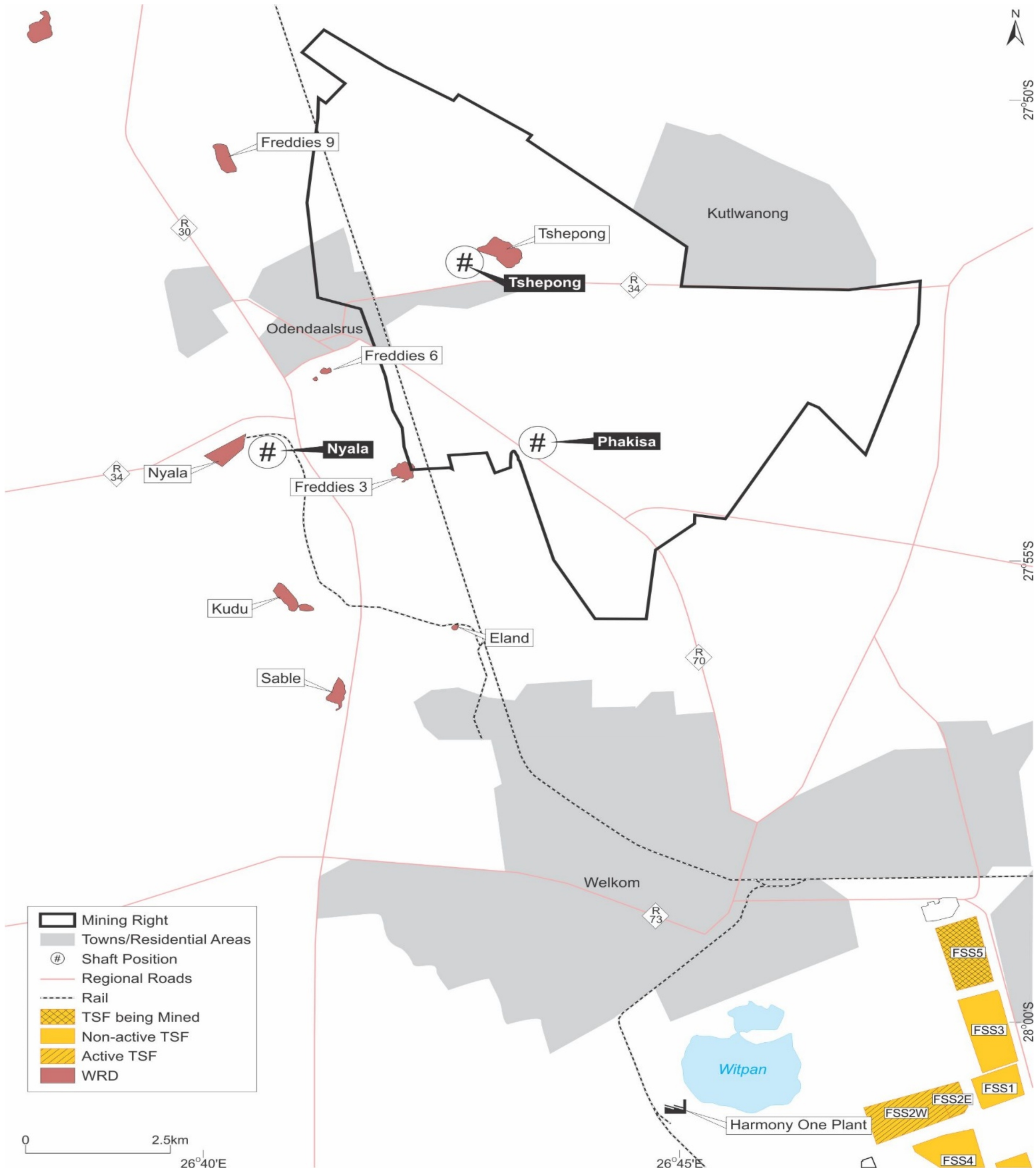
Tshepong has a twin shaft system with ore and waste being hoisted to surface through the main vertical shaft.

Phakisa operates a single vertical shaft for man and materials. Rock is transported from the underground working via a RailVeyorTM system to the Nyala Shaft for hoisting.

The Tshepong and Phakisa ore is transported, by rail, from their respective shafts to the Harmony One Plant in Welkom for processing.

Operations are powered by electricity from Eskom.

The surface infrastructure associated with the Tshepong Operations is displayed in the graphic below.



Geology

The Tshepong Operations are situated in the Free State Goldfield, on the southwestern margin of the Witwatersrand Basin of South Africa, one of the most prominent gold provinces in the world. The major gold bearing conglomerate reefs are mostly confined to the CRG of the Witwatersrand Supergroup.

The general orientation of the Witwatersrand Supergroup succession in this goldfield is interpreted as north-trending, within a syncline that is plunging to the north. The syncline has been divided by faults into the Odendaalsrus, Central Horst and Virginia sections. The Tshepong Operation mining right area is also affected by the Ophir and Dagbreek faults.

Tshepong Operations exploited primarily the Basal Reef, which occurs within the Harmony Formation of the Johannesburg Subgroup of the CRG.

Mineralisation also occurs within the stratigraphically higher A and B Reefs of the Kimberley (formerly Aandenk) Formation, within the Turffontein subgroup of the CRG. However, only the B Reef can be economically extracted.

Mineralisation is associated with the presence of medium to coarse, clast-supported oligomictic pebble horizons. The presence of allogenic pyrite and detrital carbon is also common.

History

Phakisa was formerly known as FSG 4, Freddies 4 and Tshepong South. Phakisa development commenced in October 1993 and shaft sinking was started in February 1994. In 1995, shaft sinking was halted on 59 Level due to the prevailing low gold price. Operations at Phakisa recommenced in September 1996 and sinking was completed to 75 Level, before being halted again in 1999.

The Feasibility Study for the initial development of Tshepong was concluded in 1984. Work to establish the site started in September 1984 and, by 1986, shaft sinking was underway. Sinking and equipping of the shaft were completed in 1991, with the mine being commissioned in November 1991.

Harmony acquired Phakisa as part of the acquisition from AngloGold's Free State operations (previously known as Freegold), which completed in September 2003. Sinking and equipping was completed to a depth of 2,427m in 2006.

The Phakisa and Tshepong operations were merged into the Tshepong Operations by Harmony in 2017**.**

Mineral Tenure

Refer to Item 4: *"Information on the Company – Business Overview – Regulation – Mineral Rights – South Africa"* above for a summary of the regulatory environment in South Africa.

The current mining right for the Tshepong Operations encompasses an area of 10,798.74ha. Harmony holds several mining rights in the Free State goldfields which have been successfully converted and executed as new order mining rights, some of which are still to be registered at the MPRTO.

The Tshepong Operations are wholly owned by Harmony, including the associated mineral rights. Harmony commenced acquiring the assets through the acquisition of AngloGold's Free State operations in 2001, together with ARMGold. ARMGold was subsequently incorporated into Harmony in 2003, giving Harmony 100% ownership and control of the Tshepong Operations.

Mining at Tshepong Operations is carried out under the following mining right, covering both Tshepong and Phakisa:

- FS30/5/1/284MR, which is valid from December 11, 2007, to December 10, 2029, and covers an area of 10,798.74ha.

The mining right is held in a joint venture between ARMGold and Harmony.

A summary of the status of environmental permits and licenses issued as at June 30, 2022, related to Tshepong operation is presented in the table below.

Permit / Licence	Reference No.	Issued By	Date Granted	Validity
Environmental Management Programme	FS 30/5/1/2/3/2/1(84)EM	DMRE	April 16, 2010	LOM
Environmental Management Updated	FS 30/5/1/2/2/84MR	DWAFEC	Pending Approval Submitted in 2019	LOM
Water Permit 936B. Harmony. Free State Geduld Mines. Discharge of untreated effluents	B33/2/340/31	DWAFEC	April 2, 1981	LOM
Water Permit 870B. Harmony. Discharge of untreated effluents.	B33/2/340/25	DWAFEC	27-May-1991	LOM
Water Permit 1214N. Free State Consolidated Gold Mine. Tshepong, Freddie's and Phakisa shafts.	B33/2/340/12	DWAFEC	Not indicated	LOM

Notes: DWAFEC - Department of Water Affairs, Forestry and Environmental Conservation.

Mining Method

The Tshepong Operations may be classified as moderate to deep level underground gold mines currently operating at depths of up to 2,427m below surface (Phakisa) and 2,161m below surface (Tshepong).

SGM is the preferred mining method used at the Tshepong Operations. This method makes use of dip pillars and reduced mining spans with pre-developed tunnels, aimed at further control of stresses experienced in rock movement. The SGM sequence is a V-shaped configuration, colloquially referred to as the "inverted Christmas tree".

The SGM mining methods are suitable for underground, narrow reef mining. A common feature of the SGM method is the layout of the primary and secondary development. Primary development is done off-reef (in waste rock), while secondary development is done on-reef (in the mineralised zone).

The SGM is employed for a deeper mining approach and offers various advantages, the critical one being increased safety. A noticeable characteristic of the SGM method is that mining from the raises is advanced in only one direction at a time, which is directed towards the stabilizing or regional pillars. This SGM mining sequence eliminates the creation of remnant pillars reducing the risk of seismicity.

While Tshepong Operations business plan is based primarily on the SGM methodology and sequencing, there are sections of the mine that are operating using the breast, undercut and open stoping mining methods.

Minor amounts of the B Reef that do not exceed 30% of the on-reef mined per annum, are extracted as an open stoping mining operation. Reason for mining at open stoping is as a result of the erratic nature of the channel width and the support design specific to B reef mining.

The Phakisa Mine was originally based on breast mining methods but transitioned to the SGM method with increasing depths.

A key feature of breast mining is that the mine design includes pillars in the stoping areas that are designed to cave in a planned and controlled manner. These pillars are referred to as crush pillars and the dimensions of the pillars are determined by the geotechnical properties of the host rock.

The breast mining method has consequently evolved into the SGM.

Mineral Processing

All ore mined at Tshepong Operations is processed at Harmony One Plant located west of Welkom. Harmony One Plant is Harmony's largest gold processing plant and processes underground ore from multiple shafts, as well as surface ore from nearby mine waste facilities. The plant was commissioned in 1986 and comprises three independent modules, each consisting of four feed silos, two ROM mills, two conventional thickeners, cyanide leach, CIP adsorption, elution, zinc precipitation and smelting. The plant CIP process reflects the technology which was current at the time of construction.

The Harmony One Plant has a steady state design capacity of 390ktpm with its conventional CIP flowsheet. The Harmony One plant is in good working condition and the equipment is also in good order with audits done on regular bases to check the operating performance of the plant.

Qualified Persons

The QPs preparing the TRS were employed on a full-time basis by Harmony. The QPs' qualifications, areas of responsibility and personal inspection of the property are summarized in the graphic below.

Qualified Person	Professional Organisation	Qualification	TRS Section Responsibility	Personal Insp.
Mr A Louw	SACNASP	BSc. (Hons.) (Geohydro)	All Sections (Tshepong)	Full Time
Ms B Phetlhu	SACNASP	BTech. (Geol), M (Eng)	All Sections (Phakisa)	Full Time

Exploration

Geological data has been obtained through initial surface drilling, followed by underground drilling, mapping and channel (chip) sampling.

Exploration from underground platforms is currently continuing for the Tshepong sub-75 development, to improve geological confidence.

Both, the Phakisa and Tshepong Mines are undergoing B Reef exploration drilling to identify any potential continuation of the current pay shoots connecting these mines. Footwall development began at the Tshepong Mine during fiscal 2020 and will be used as a drilling platform to confirm and delineate the anticipated B Reef channel.

Underground exploration drilling has been ongoing throughout the operational life of Tshepong Operations as the mine deepens. Underground diamond core drilling is conducted using hydraulic driven and pneumatic drill rigs.

Fans of drill holes are drilled from diamond drilling bays, which are developed at 50m intervals along footwall developments ends (X/Cs) and 100m intervals along haulages and RAWs. The drilling fans consist of up to ten individual drill holes at inclinations ranging from -15° to +30° of vertical, or as dictated by local geological structures.

The underground infill drilling system is in place to improve data density in specific areas and are drilled from the underground development access drives.

Logging procedures are conducted as per the Harmony company standards, which are used on all surface and underground mines and are best practice and have been in place consistently since 2001.

The QP is of the opinion that the quality and quantity of the exploration methods and information gathered is sufficient to support the estimation of Mineral Resources and Mineral Reserves.

Mineral Resource Estimate

The Mineral Resource estimate for the Tshepong Operations is considered to have reasonable prospects for economic extraction. This is demonstrated by the results of the cash flow for the mines. The cut-off value for the Mineral Resources is determined at 648cmg/t, Tshepong and 780cmg/t, Phakisa for the gold based on the economic assumptions presented in the table below at the effective date June 30, 2022.

Tshepong

Description	Unit	Value
Gold price	USD/oz	1,723
FX rate	R:USD	15.35
Gold price	R/kg	850,191
Plant recovery factor	%	95.2
Unit cost	R/t	3,367

Phakisa

Description	Unit	Value
Gold price	USD/oz	1,723
FX rate	R:USD	15.35
Gold price	R/kg	850,191
Plant recovery factor	%	94.9
Unit cost	R/t	3,975

Note: Unit cost includes cash operating cost, royalty and ongoing development capital.

This cut-off values represents typical costs for the mining method and preliminary mining and metallurgical recovery assumptions.

The Mineral Resources were originally prepared, classified and reported according to the SAMREC, 2016. For the purposes of this report on Form 20-F, the Mineral Resources have been classified in accordance with Item 1302(d)(1)(iii)(A) of Regulation S-K. These Mineral Resources account for mining depletion recorded from July 2021 to June 2022.

The Mineral Resource estimate for Phakisa, as at June 30, 2022, exclusive of the reported Mineral Reserves is summarized in the table below.

	Fiscal Year Ended June 30,						
	2022			2021			
Mineral Resource Category	**Tonnes (Mt)**	**Gold Grade (g/t)**	**Gold Content (kg)**	**Tonnes (Mt)**	**Gold Grade (g/t)**	**Gold Content (kg)**	**% Change**
Measured	4.7	13.25	62,797	—	—	—	n/a
Indicated	7.2	11.27	81,831	—	—	—	n/a
Total / Ave. Measured + Indicated	**12.0**	**12.05**	**144,627**	**—**	**—**	**—**	**n/a**
Inferred	27.5	10.77	295,943	—	—	—	n/a

Notes:

1. Mineral Resources are reported with an effective date of June 30, 2022, were originally prepared, classified and reported according to SAMREC, 2016. For the purposes of this TRS, the Mineral Resources have been classified in accordance with Item 1302(d)(1)(iii)(A) of Regulation S-K. The QP responsible for the estimate is Ms B Phetlhu, who is Ore Reserve Manager at Phakisa, and a Harmony employee.
2. The Mineral Resource tonnes are reported as in situ with reasonable prospects for economic extraction.
3. No modifying factors or dilution sources have been included to in situ Reserve which was subtracted from the SAMREC Resource in order to obtain the S-K 1300 Resource.
4. The Mineral Resources are reported using a cut-off value of 780cmg/t determined at a 90% profit guidance, and a gold price of USD1,723/oz.
5. Tonnes are reported as rounded to three decimal places. Gold values are rounded to zero decimal places.
6. Mineral Resources are exclusive of Mineral Reserves. Mineral Resources are not Mineral Reserves and do not necessarily demonstrate economic viability.
7. Rounding as required by reporting guidelines may result in apparent summation differences.
8. The Mineral Resource estimate is for Harmony's 100% interest.
9. This is the first time that Harmony has reported Mineral Resource in the Form 20-F and as such it cannot be compared to a previous reporting period.

The Mineral Resource estimate for Tshepong, as at June 30, 2022, exclusive of the reported Mineral Reserves, is summarized in the table below.

	Fiscal Year Ended June 30,						
	2022			**2021**			
Mineral Resource Category	**Tonnes (Mt)**	**Gold Grade (g/t)**	**Gold Content (kg)**	**Tonnes (Mt)**	**Gold Grade (g/t)**	**Gold Content (kg)**	**% Change**
Measured	12.5	12.13	151,437	—	—	—	n/a
Indicated	4.0	10.20	40,575	—	—	—	n/a
Total / Ave. Measured + Indicated	**16.5**	**11.66**	**192,012**	**—**	**—**	**—**	**n/a**
Inferred	9.4	10.18	96,037	—	—	—	n/a

Notes:

1. Mineral Resources are reported with an effective date of June 30, 2022, were originally prepared, classified and reported according to SAMREC, 2016. For the purposes of this TRS, the Mineral Resources have been classified in accordance with Item 1302(d)(1)(iii)(A) of Regulation S-K. The QP responsible for the estimate is Mr A Louw, who is Ore Reserve Manager at Tshepong, and a Harmony employee.
2. The Mineral Resource tonnes are reported as in situ with reasonable prospects for economic extraction.
3. No modifying factors or dilution sources have been included to in situ Reserve which was subtracted from the SAMREC Resource in order to obtain the S-K 1300 Resource.
4. The Mineral Resources are reported using a cut-off value of 648cmg/t determined at a 90% profit guidance, and a gold price of USD1,723/oz.

5. Tonnes are reported as rounded to three decimal places. Gold values are rounded to zero decimal places.
6. Mineral Resources are exclusive of Mineral Reserves. Mineral Resources are not Mineral Reserves and do not necessarily demonstrate economic viability.
7. Rounding as required by reporting guidelines may result in apparent summation differences.
8. The Mineral Resource estimate is for Harmony's 100% interest.
9. This is the first time that Harmony has reported Mineral Resource in the Form 20-F and as such it cannot be compared to a previous reporting period.

Mineral Reserve Estimate

The Mineral Reserves were originally prepared, classified and reported according to SAMREC, 2016. For the purposes of this report on Form 20-F, the Mineral Reserves have been classified in accordance with Item 1302(d)(1)(iii)(A) of Regulation S-K.

Mineral Reserves are derived from the Mineral Resources, a detailed business plan and the operational mine planning processes. Mine planning utilizes and takes into consideration historical technical parameters achieved. In addition, Mineral Resource conversion to Mineral Reserves considers certain modifying factors, dilution, ore losses, minimum mining widths, planned mine call and plant recovery factors.

The Mineral Reserve estimate for Phakisa, as at June 30, 2021, and 2022, is summarized in the table below.

	Fiscal Year Ended June 30,						
	2022			2021			
Mineral Reserve Category	**Tonnes (Mt)**	**Gold Grade (g/t)**	**Gold Content (kg)**	**Tonnes (Mt)**	**Gold Grade (g/t)**	**Gold Content (kg)**	**% Change**
Proved	3.8	6.98	26,243	3.9	6.36	24,793	5.8
Probable	0.2	6.49	1,143	0.4	6.58	2,445	(53.2)
Total / Ave. Proved + Probable	**4.0**	**6.96**	**27,386**	**4.3**	**6.38**	**27,238**	**0.5**

Notes:

1. The Mineral Reserves were originally prepared, classified and reported according to SAMREC, 2016. For the purposes of this TRS, the Mineral Reserves have been classified in accordance with Item 1302(d)(1)(iii)(A) of Regulation S-K. The QP responsible for the estimate is Ms B Phetlhu, who is Ore Reserve Manager at Phakisa, and a Harmony employee.
2. Tonnes, grade, and gold content are declared as net delivered to the mills.
3. Figures are fully inclusive of all mining dilutions, gold losses and are reported as mill delivered tonnes and head grades. Metallurgical recovery factors have not been applied to the reserve figures.
4. Gold content has not taken metallurgical recovery factors into account.
5. Mineral Reserves are reported using a cut-off grade of 791cmg/t determined using a gold price of USD1,546/oz.

The increase in Mineral Reserves is due to an increase in Basal Reef grade as from the 34 line to the South of the mine as well as the increase in the B Reef footprint to the north of the shaft that more than compensated for the depletion.

The Mineral Reserve estimate for Tshepong, as at June 30, 2021, and 2022, is summarized in the table below.

	Fiscal Year Ended June 30,						
	2022			2021			
Mineral Reserve Category	**Tonnes (Mt)**	**Gold Grade (g/t)**	**Gold Content (kg)**	**Tonnes (Mt)**	**Gold Grade (g/t)**	**Gold Content (kg)**	**% Change**
Proved	4.2	5.15	21,419	16.2	5.63	90,979	(76.5)
Probable	0.3	7.63	2,565	4.3	4.28	18,458	(86.1)
Total / Ave. Proved + Probable	**4.5**	**5.34**	**23,985**	**20.5**	**5.35**	**109,437**	**(78.1)**

Notes:

1. The Mineral Reserves were originally prepared, classified and reported according to SAMREC, 2016. For the purposes of this TRS, the Mineral Reserves have been classified in accordance with Item 1302(d)(1)(iii)(A) of Regulation S-K. The QP responsible for the estimate is Mr A Louw, who is Ore Reserve Manager at Tshepong, and a Harmony employee.
2. Tonnes, grade, and gold content are declared as net delivered to the mills.
3. Figures are fully inclusive of all mining dilutions, gold losses and are reported as mill delivered tonnes and head grades. Metallurgical recovery factors have not been applied to the reserve figures.
4. Gold content has not taken metallurgical recovery factors into account.
5. Mineral Reserves are reported using a cut-off grade of 650cmg/t determined using a gold price of USD1,546/oz.

The decrease in Mineral Reserves is due to a significant change in LOM strategy at the operation as well as depletion.

The table below presents a summary of the modifying factors used to convert the Mineral Resource to the Mineral Reserve for Phakisa. The modifying factors are consistent with the modelling, planning and computing estimates used in determining the Mineral Reserves, which are also consistent with historical performance.

Modifying Factor	Unit	Value
Relative Density	t/m3	2.72
Stoping Width	cm	125
Gully	%	6.7
Off Reef	%	4.1
Waste to Reef	%	0.6
Flushing tons	%	0.0
Discrepancy	%	13.8
Mine Call Factor	%	83.0
Plant Recovery Factor	%	94.9
Mine Recovery Factor	%	78.7
Plant Call Factor	%	100.0
Mineral Reserve cut-off	cmg/t	791

Note: Development waste to reef, including the decline development.

The table below presents a summary of the modifying factors used to convert the Mineral Resource to the Mineral Reserve for Tshepong. The modifying factors are consistent with the modelling, planning and computing estimates used in determining the Mineral Reserves, which are also consistent with historical performance.

Modifying Factor	Unit	Value
Relative Density	t/m3	2.72
Stoping Width	cm	110.6
Gully	%	8.8
Off Reef	%	5.3
Waste to Reef	%	0.0
Flushing tons	%	2.9
Discrepancy	%	5.1
Mine Call Factor	%	72.0
Plant Recovery Factor	%	95.2
Mine Recovery Factor	%	67.4
Plant Call Factor	%	100.0
Mineral Reserve cut-off	cmg/t	650

Note: Development waste to reef, including the decline development.

For additional information, see the TRS on each individual property, filed as an Exhibit of this annual report on Form 20-F.

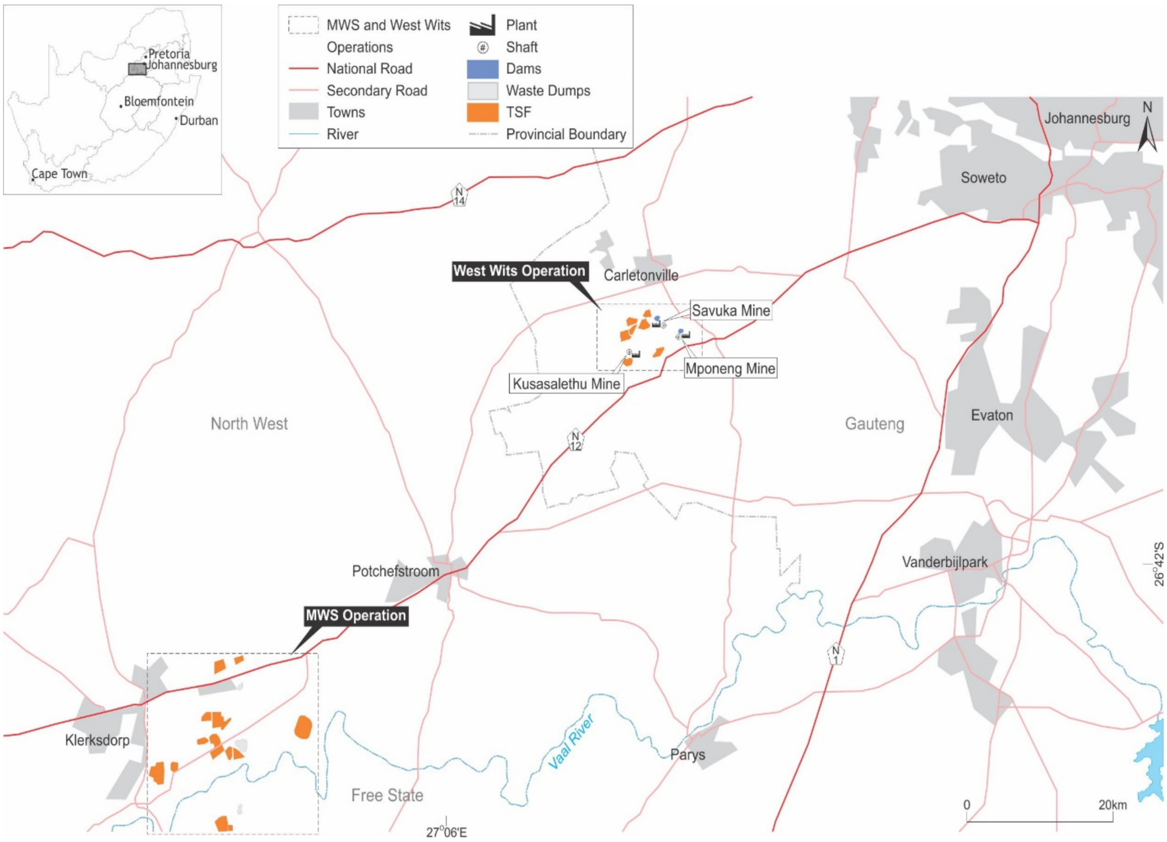
Mine Waste Solutions

Property Description

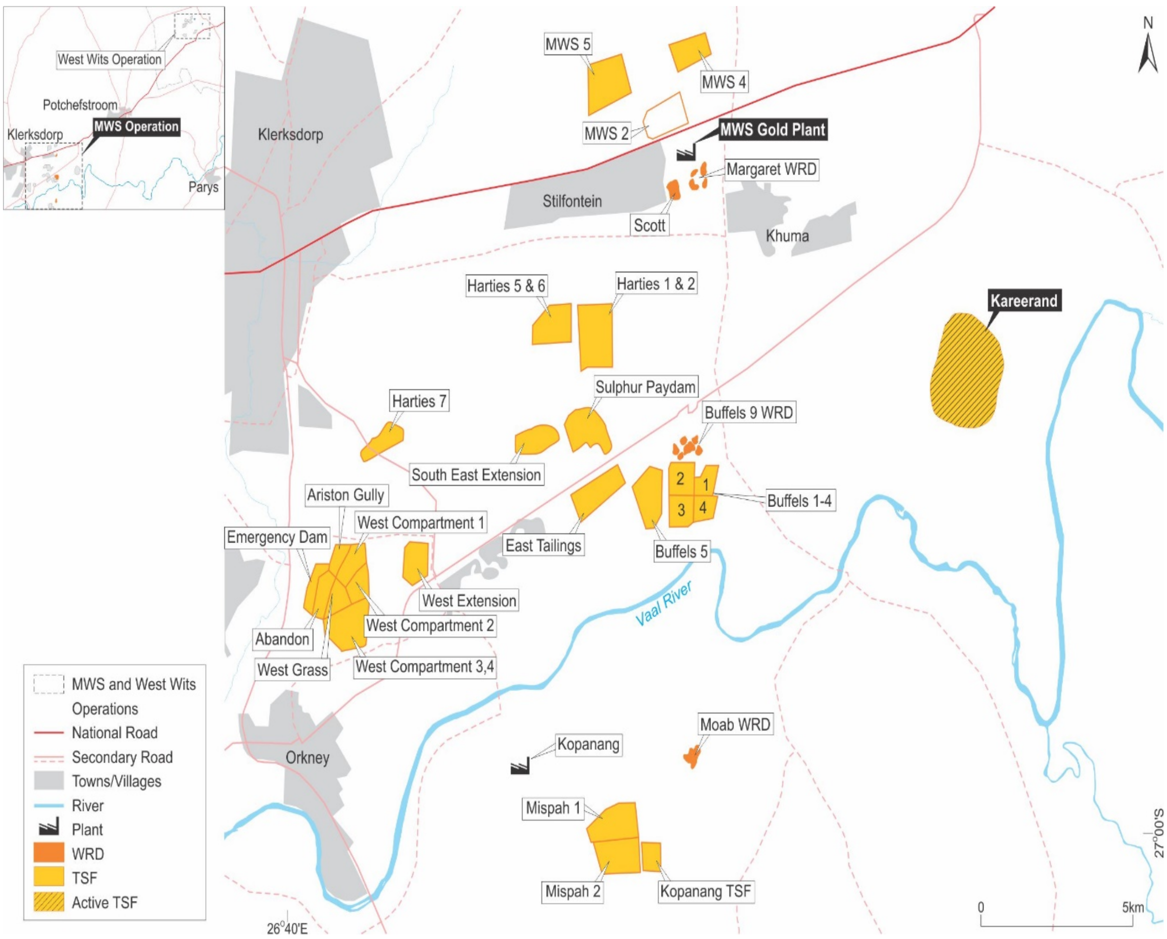
Mine Waste Solutions is comprised of two distinct, geographically separated, operations namely the MWS Operation located on the Free State - North West provincial boundary, and the West Wits Operation situated in the West Rand Region of the Gauteng Province. Each operation will be discussed separately due to their geographical locations.

Mine Waste Solutions and its associated mineral rights are wholly owned by Harmony. Harmony acquired the assets as part of the transaction to take full ownership and control of AngloGold's remaining South African business, as of October 1, 2020.

The location of MWS and West Wits is presented in figure below.



The following graphic illustrates the location of the MWS Operation, along with certain infrastructure.



The following graphic illustrates the location of the West Wits Operation, along with certain infrastructure is

The MWS Operation is located in the Vaal River area, and straddles the Free State, North West provincial border of South Africa, close to the town of Klerksdorp. The MWS Gold Plant (26° 50'8.66"E; 26° 47'41.83"S) is situated close to the town of Stilfontein, while the TSFs and WRD for this operation are scattered over an area that stretches approximately 13.5km north to south and 14.0km east to west.

The West Wits Operation is situated in the West Rand Region of the Gauteng Province. The West Wits Operation is situated approximately 75km west of Johannesburg. The site is approximately 7km south of Carletonville. West Wits Operation occupies an area of 4,176ha in extent and is close to the boundary between Gauteng and North West Province.

The West Wits Operation reprocesses tailings from the Old North TSF dumps and waste rock from the Savuka WRD at the Savuka Plant (26° 25'20.31"E and 27° 24'11.30"S).

There is no material litigation (including violations or fines) against Harmony that threatens its mineral rights, tenure, or operations.

Operational Infrastructure

Infrastructure in the region is well established supporting the numerous operational gold mines in the area. The regional infrastructure includes national and provincial paved road networks, power transmission and distribution networks, water supply networks and communication infrastructure.

The MWS Operation is accessible from Johannesburg via the N12 national road and R502 regional road in Klerksdorp, North West. A large network of either tarred roads or well-maintained gravel roads exist between the tailing dams, WRDs and the MWS Plant that are scattered in the area. The West Wits Operations near Carletonville are accessible via the N12 national road and R500 regional road from Johannesburg.

The surface infrastructure associated with MWS and West Wits is presented in the graphic under "– *Property Description*" above.

Geology

Material contained in the TSFs and WRDs predominantly originates from deep level gold mines, operated by Harmony and others, mostly located in Klerksdorp and Carletonville. The West Wits mining operations predominantly extract tabular gold-bearing conglomeratic reefs, namely the CLR and VCR. The MWS Operation, however, mainly exploits TSFs and WRD derived from the VR.

The Witwatersrand reefs occur within the Archean Witwatersrand Basin which hosts the Witwatersrand Supergroup succession. The VCR horizon is located at the top of the Turffontein Subgroup of the CRG, capping the Witwatersrand Supergroup. The VR horizon is situated within the Krugersdorp Formation, in the Johannesburg Subgroup of the CRG. The CLR is situated near the base of the Johannesburg Subgroup.

The TSF material comprises previously treated residues of gold-bearing conglomeratic reefs processed by CIL. They are man-made "deposits" and are not the result of natural sedimentary processes. The grade of the TSFs is determined by the grade of the ore source at the time that they were processed, and the processing efficiency.

The WRDs are unconsolidated and are comprised of untreated, low grade, gold-bearing material from underground workings. The WRDs are also man-made deposits, with very little structure or continuity, and one in which the grade does not behave as a natural mineral deposit.

The most significant mineral in the TSFs and WRDs is quartz, which makes up more than 60% of the bulk mineral composition. The gold predominantly occurs in pyrite. Other minerals identified include uranium, iron oxide, titanium oxide and calcite from the VR, VCR and CLR conglomerates.

History

The MWS Operation commenced production in 1952 and was the original gold processing plant for the Stilfontein Gold Mine. Following the rise in the uranium price in the 1970s, the operation investigated uranium recovery from the Stilfontein Gold Mine's gold tailings dams and commissioned the uranium plant in mid-1979. The plant operated until 1989, processing 29.4Mt of tailings and recovering 4.56t of U_3O_8. In 2003, the plant was converted into a gold tailings treatment operation and no further uranium was produced at that stage.

In 2007, First Uranium (Pty) Ltd (South Africa) ("**First Uranium**") acquired the MWS Operation with the purpose of treating the tailings dams for both gold and uranium. The second and third processing plants were commissioned between 2007 and 2012.

On July 20, 2012, the MWS Operation were acquired by AngloGold from First Uranium. The MWS uranium plant and flotation plants were commissioned in 2014, and were further reconfigured into a more efficient operation during 2016, as part of an optimisation drive. In 2017, the uranium and flotation plants were discontinued resulting in MWS Operation again producing only gold.

On October 1, 2020, Harmony acquired all of AngloGold's surface operations, including the MWS Operations.

The Savuka Plant was commissioned in 1961 and originally designed to treat ore from Savuka Mine and TauTona Mine. In 2015, upon closure of the afore-mentioned shafts, the plant was converted into a tailings and WRD treatment facility. The Savuka Plant treats tailings material from Savuka and Mponeng TSFs, and waste rock from the WRDs from the same operations. On October 1, 2020, Harmony acquired all of AngloGold's South African business, including the surface assets which constitute the West Wits Operation.

Mineral Tenure

Refer to Item 4: "*Information on the Company – Business Overview – Regulation – Mineral Rights – South Africa"* above for a summary of the regulatory environment in South Africa.

The MWS Operation's license to operate is covered by the Environmental Authorisation under NEMA. In terms of the MPRDA, a mining right is not required to reclaim TSFs. Following the acquisition of MWS Operation, all relevant permits and licences were transferred to Harmony including the approved EMPR, the financial provision for rehabilitation liabilities for the MWS Operation mining rights, as well as the historic surface rights permits for MWS Operation. All of these permits are still valid.

West Wits operations, the following mining rights make up the full mining right area of approximately 6,673ha:

- GP30/5/1/2/2(01) MR valid from February 14, 2006 to February 13, 2036;
- GP30/5/1/2/2(248) MR valid from October 16, 2012 to October 15, 2022.

The mining rights 01MR and 248MR were ceded from AngloGold to Golden Core, a wholly-owned subsidiary of Harmony on October 1, 2020, and were successfully registered in the Mining Titles Office on June 14, 2021, as part of AngloGold's sale of their last remaining South African assets to Harmony, including its West Wits Operations.

A section 102 Application in terms of the MPRDA was submitted previously by AngloGold in March 2017, to consolidate its West Wits mining rights into a single mining right (GP30/5/1/2/2(01) MR). The AngloGold Application was approved by the DMRE in August 2020, but was, however, not implemented due to a change in circumstances as a result of the Mponeng Acquisition, and will consequently be withdrawn by AngloGold. On February 15, 2022, Golden Core submitted the Golden Core Application in terms of section 102 of the MPRDA, substantively similar to the AngloGold Application, to consolidate the mining rights and mining right areas into a single mining right (GP30/5/1/2/2(01) MR). The Golden Core Application is currently pending at the DMRE.

A summary of the status of environmental permits and licenses issued as at June 30, 2022, related to both the MWS Operation and West Wits Operation is presented in the table below.

Operation	Permit / Licence	Reference No.	Issued By	Date Granted	Validity
MWS	Atmospheric Emissions Licence: MWS Gold Plant	NWPG/CHEMWES/AEL 4.1; 4.2 & 4.17	DEDECT	September 30, 2020	September 29, 2025
	Certificate of Registration Inflammable Liquids and Substances: Chemwes Plant	Various Certificates issued for All Areas of the plant and outside sections	City Council of Matlosana		December 31, 2021
	Water Use Licence: Chemwes	08/C24B/AACIG/8368 27/2/2/C224/101/1	DWS	November 31, 2018	November 31, 2028
	New WUL issued on June 10, 2022, however it is being reviewed as it excluded some permitted activities that were in the previous WUL. Currently operating under previous WUL.				
	Environmental Authorisation for expansion of Karee	NWP/EIA/176/2008	DMRE	November 11, 2021	n/a
	Licence to construct a dam with safety risk: Chemwes	12/2/C241/37	DWS	June 18, 2010	n/a
West Wits	Atmospheric Emissions Licence	WR/16-17/AEL9/3	Dr. Kenneth Kaunda District Municipality	October 2, 2018	October 2, 2023
		08/C23E/AEFGJ/1250			
	Water Use Licence	Amended WUL submitted 2020. Waiting for approval.	DWS	November 30, 2018	n/a
		(GP) 30/5/1/2/3/2/1(01) EM			
		(GP) 30/5/1/2/2(01) MR			
	Environmental Authorisation	Waiting for transfer to Harmony to be completed.	DMRE	September 26, 2018	n/a
		Gaut 002/09-10/W0011	GDARD		
	Waste Management Licence	AGA submitted renewal application. Awaiting approval.	DMRE	July 27, 2015	Expired

Notes: DEDECT - Department of Economic Development, Environment, Conservation and Tourism.

Mining Method

The mining methodologies adopted at Mine Waste Solutions entail the hydro-mining of the TSFs and reclamation of WRDs using FELs.

The TSF material is reclaimed using several hydraulic monitoring guns which deliver high-pressure water to the face. High pressure water is transferred to the monitoring guns observing the maximum design capacity of the equipment, limited to 40 bars ("**b**"). Typically, a 25m mining face length is achieved with a water pressure in the range of 27b to 30b.

The tailings material can be selectively mined based on the positioning of the monitoring guns. The TSF face is broken by the water pressure, resulting in the slurry gravitating towards the collection sumps that deliver the slurry to the pumping stations, which is then pumped via overland pipelines to the respective plant streams. The TSFs are fed into one of the three respective plant streams, which comprise the MWS Operation. The tailings material size is appropriate for high-pressure water to re-pulp the consolidated slimes to a slurry at a minimum relative density of around 1.45. No milling is required, as the material has previously been milled through the CIL plant treatment process.

Waste rock arises from underground development and is conveyed to large dumps where it is stockpiled. The grade values are inconsistently distributed amongst these rock deposits. Waste rock from off-reef development can also become contaminated during transport to surface by mineralised rock from unpay and marginal areas.

Tracked bulldozers are used on the top of WRDs during daylight hours, demarcated by surveyed markers, in accordance with safety standards. Vertical dozing operations are prohibited. During dozing operations, the geotechnical considerations and the materials' natural angle of repose is adhered to, so as to maintain the WRD slope stability during loading operations.

Bulldozers are also used at the bottom of the WRDs to create a safe loading distance between the base of the WRD and the loading face. Loading measures take careful consideration of the existing dump design and ensures that extraction of the material is done safely. Front end loaders are used to load the dozed material into rail hoppers or trucks, which is transported to milling and mineral processing.

Mineral Processing

There are two plants, namely the MWS Gold Plant and the Savuka Plant, which are dedicated to the processing of tailings and/or WRD material. Reclaimed tailings are pumped as slurry via pipelines and WRD material is transported on trucks to the respective plants for processing.

MWS Gold Plant is currently capable of processing 78,000tpd. This excludes Stream 4 which is planned for commissioning in 2024, at an expected capacity of 8,000tpd.

The Savuka Plant is a single process flow with a current processing capacity of 10,000tpd.

Qualified Persons

The QPs preparing the TRS were employed on a full-time basis by Harmony. The QPs' qualifications, areas of responsibility and personal inspection of the property are summarized in the graphic below.

Qualified Person	Professional Organisation	Qualification	TRS Section Responsibility	Personal Insp.
Mr BJ Selebogo	SAGC	MSCC, HND (MRM), CoC Mine Survey	11, 12, 13, 17, 20, 21, 22, 23	Full time
Ms MS Maipushi	SACNASP	BSc. (Hons) (Geol)	6, 7, 8, 9, 10, 11	Full time
Mr MR Masakona	ECSA, MMMA, SAIMM	BSc. Eng (Chemical)	13, 14, 15	Full time
Mr N van Noordwyk	AMIChemE AMSAIMM	B. Eng. Chem	10, 14, 15	Full time
Mr C Badashe	MMMA	Tailings Management	13, 15	Full time
Mr SS Selamolela	MMMA	NHD – Extraction Metallurgy	13, 14, 15	Full time
Mr D de Witt	SAICA	(Hons) BCom/MBA	18, 19	Full time
Ms C Labuschagne	n/a	B. Comm ; MDP	18, 19	Full time
Ms B Diseko	SAATCA	M Environmental Management	17	Full time
Ms N Strydom	n/a	LLB H:Dip Corporate Law	17	Full time
H Mashaba	n/a	Bsc (Hons) Environmental Management	17	Full time

Exploration

Prior to 2011, grade estimations for the TSFs were based on residue grades obtained from the process plants, as well as various sampling projects in selected areas. Most of these TSFs have since been re-sampled by means of an extensive auger drilling exercise which commenced in 2011. The remaining TSFs will be re-sampled once they go out of service and become dormant.

A total of 1,471 drill holes have been drilled in these TSFs between 2011 and present.

WRDs cannot be explored using drilling because they are comprised of unconsolidated rock. No drilling is undertaken on the MWS and West Wits WRDs.

The drilling and sampling methodology in use for Harmony's TSFs has been developed specifically for the challenges posed by these deposits and is aligned with industry best practice. This protocol has been in place since 2011, and the drilling components are applied by contractors who are experienced in this specific methodology.

The drill hole samples are deemed to be representative as they provide both vertical and horizontal coverage of each TSF. Drill holes are positioned at regular intervals across the TSF.

The data spacing, density and distribution is sufficient to support the estimation of Mineral Resources for the various TSFs.

WRDs are not explored using exploration methods due to their unconsolidated nature.

The QPs are of the opinion that the quality and quantity of the exploration methods and information gathered is sufficient to support the estimation of Mineral Resources and Mineral Reserves.

Mineral Resource Estimate

The Mineral Resources were originally prepared, classified and reported according to the SAMREC, 2016. For the purposes of this report on Form 20-F, the Mineral Resources have been classified in accordance with Item 1302(d)(1)(iii)(A) of Regulation S-K. These Mineral Resources account for mining depletion recorded from July 2021 to June 2022.

The Mineral Resource estimate for the MWS Operation, as at June 30, 2022, exclusive of the reported Mineral Reserves, is summarized in the table below:

Mineral Resource Category	Source	Fiscal Year Ended June 30, 2022 Tonnes (Mt)	Grade Gold (g/t)	Grade U_3O_8 (kg/t)	Metal Content Gold (kg)	Metal Content U_3O_8 (t)	2021 Tonnes (Mt)	Grade Gold (g/t)	Grade U_3O_8 (kg/t)	Metal Content Gold (kg)	Metal Content U_3O_8 (t)	% Change
Measured	TSF	54.1	0.20	0.067	11,012	3,635	—	—	—	—	—	n/a
	WRD	—	—	—	—	—	—	—	—	—	—	n/a
Sub Total / Ave. Measured		**54.1**	**0.20**	**0.067**	**11,012**	**3,635**	—	—	—	—	—	**n/a**
Indicated	TSF	113.0	0.19	0.075	21,415	8,489	—	—	—	—	—	n/a
	WRD	2.5	0.30	—	741	—	—	—	—	—	—	n/a
Sub Total / Ave. Indicated		**115.5**	**0.19**	**0.075**	**22,156**	**8,489**	—	—	—	—	—	**n/a**
Total / Ave. Measured + Indicated		**169.6**	**0.20**	**0.073**	**33,168**	**12,124**	—	—	—	—	—	**n/a**
Inferred	TSF	—	—	—	—	—	—	—	—	—	—	n/a
	WRD	2.5	0.28	—	700	—	—	—	—	—	—	n/a
Total / Ave Inferred		**2.5**	**0.28**	—	**700**	—	—	—	—	—	—	**n/a**

Notes:

1. The Mineral Resources were originally prepared, classified and reported according to SAMREC, 2016. For the purposes of this TRS, the Mineral Reserves have been classified in accordance with Item 1302(d)(1)(iii)(A) of Regulation S-K. The QP responsible for the estimate is Mr BJ Selebogo, who is Ore Reserve Manager, and a Harmony employee.
2. The Mineral Resource tonnes are reported as in situ with reasonable prospects for economic extraction.
3. No cut-off grade has been applied for the estimation of Mineral Resources. Mineral Resource tonnes are reported based on a gold price of USD1,723/oz.
4. Tonnes are reported as million tonnes rounded to three decimal places. Gold values are rounded to zero decimal places.
5. Uranium content is reported as part of the MWS Mineral Resource estimate only.
6. Metal content does not include allowances for processing losses.
7. Mineral Resources are exclusive of Mineral Reserves. Mineral Resources are not Mineral Reserves and do not necessarily demonstrate economic viability.
8. Rounding as required by reporting guidelines may result in apparent summation differences.
9. The Mineral Resource estimate is for Harmony's 100% interest.
10. This is the first time that Harmony has reported Mineral Resource in the Form 20-F and as such it cannot be compared to a previous reporting period.

The Mineral Resource for the West Wits Operation, as at June 30, 2022, exclusive of the reported Mineral Reserves, is summarized in the table below:

Mineral Resource Category	Source	Fiscal Year Ended June 30, 2022 Tonnes (Mt)	Grade Gold (g/t)	Grade U_3O_8 (kg/t)	Metal Content Gold (kg)	Metal Content U_3O_8 (t)	2021 Tonnes (Mt)	Grade Gold (g/t)	Grade U_3O_8 (kg/t)	Metal Content Gold (kg)	Metal Content U_3O_8 (t)	% Change
Measured	TSF	—	—	—	—	—	—	—	—	—	—	n/a
	WRD	—	—	—	—	—	—	—	—	—	—	n/a
Sub Total / Ave. Measured		—	—	—	—	—	—	—	—	—	—	**n/a**
Indicated	TSF	22.9	0.36	—	8,260	—	—	—	—	—	—	n/a
	WRD	1.1	0.47	—	513	—	—	—	—	—	—	n/a
Sub Total Indicated		**24.0**	**0.37**	—	**8,773**	—	—	—	—	—	—	**n/a**
Total / Ave. Measured + Indicated		**24.0**	**0.37**	—	**8,773**	—	—	—	—	—	—	**n/a**
Inferred	TSF	—	—	—	—	—	—	—	—	—	—	n/a
	WRD	—	—	—	—	—	—	—	—	—	—	n/a
Total / Ave. Inferred		—	—	—	—	—	—	—	—	—	—	**n/a**

Notes:

1. The Mineral Resources were originally prepared, classified and reported according to SAMREC, 2016. For the purposes of this TRS, the Mineral Reserves have been classified in accordance with Item 1302(d)(1)(iii)(A) of Regulation S-K. The QP responsible for the estimate is Mr BJ Selebogo, who is Ore Reserve Manager, and a Harmony employee.
2. The Mineral Resource tonnes are reported as in situ with reasonable prospects for economic extraction.
3. No cut-off grade has been applied for the estimation of Mineral Resources. Mineral Resource tonnes are reported based on a gold price of USD1,723/oz.

4. Tonnes are reported as million metric tonnes ("Mt") rounded to three decimal places. Gold values are rounded to zero decimal places.
5. Uranium content is reported as part of the MWS Mineral Resource estimate only.
6. Metal content does not include allowances for processing losses.
7. Mineral Resources are exclusive of Mineral Reserves. Mineral Resources are not Mineral Reserves and do not necessarily demonstrate economic viability.
8. Rounding as required by reporting guidelines may result in apparent summation differences.
9. The Mineral Resource estimate is for Harmony's 100% interest.
10. This is the first time that Harmony has reported Mineral Resource in the Form 20-F and as such it cannot be compared to a previous reporting period.

Mineral Reserve Estimate

The Mineral Reserves were originally prepared, classified and reported according to SAMREC, 2016. For the purposes of this report on Form 20-F, the Mineral Reserves have been classified in accordance with Item 1302(d)(1)(iii)(A) of Regulation S-K.

Mineral Reserves are derived from the Mineral Resources, a detailed business plan and the operational planning processes. The planning team utilises and takes into consideration historical technical parameters achieved. In addition, Mineral Resource conversion to Mineral Reserves considers certain modifying factors, plant call factor, and plant recovery factors.

The Mineral Reserve estimate for the MWS Operation, as at June 30, 2021, and 2022, is summarized in the table below:

		Fiscal Year Ended June 30,						
		2022			2021			
Mineral Reserve Category	**Source**	**Tonnes (Mt)**	**Gold Grade (g/t)**	**Gold Content (kg)**	**Tonnes (Mt)**	**Gold Grade (g/t)**	**Gold Content (kg)**	**% Change**
Proven	TSF	21.1	0.26	5,553	50.0	0.24	12,137	(54.2)
Probable	TSF	419.2	0.27	113,173	355.2	0.28	97,905	15.6
Total / Ave. Proved + Probable		**440.3**	**0.27**	**118,726**	**405.2**	**0.27**	**110,042**	**7.9**

Notes:

1. The Mineral Reserves were originally prepared, classified and reported according to SAMREC, 2016. For the purposes of this TRS, the Mineral Reserves have been classified in accordance with Item 1302(d)(1)(iii)(A) of Regulation S-K. The QP responsible for the estimate is Mr BJ Selebogo, who is the Ore Reserve Manager, and a Harmony employee.
2. Tonnes, grade, and content are declared as net delivered to the mills.
3. Gold content is recovered gold after taking into consideration the modifying factors.
4. Mineral Reserves are reported using a cut-off grade of 0.23g/t and a gold price of USD1,546/oz.
5. Recovered gold (kg) is based on a conversion factor of 32.151oz/kg.

The increase in Mineral Reserves is due to the Mispah 1 TSF scheduled to be processed in MWS Plant to more than compensate for the re-statement of MWS 5 estimation Model.

The Mineral Reserve estimate for the West Wits Operation, as at June 30, 2021, and 2022, is summarized in the table below:

		Fiscal Year Ended June 30,						
		2022			2021			
Mineral Reserve Category	**Source**	**Milled Tonnes (Mt)**	**Grade (g/t Au)**	**Content Au (kg)**	**Tonnes (Mt)**	**Gold Grade (g/t)**	**Gold Content (kg)**	**% Change**
Probable	TSF	19.3	0.33	6,288	38.2	0.32	12,371	(49.2)

Notes:

1. The Mineral Reserves were originally prepared, classified and reported according to SAMREC, 2016. For the purposes of this TRS, the Mineral Reserves have been classified in accordance with Item 1302(d)(1)(iii)(A) of Regulation S-K. The QP responsible for the estimate is Mr BJ Selebogo, who is the Ore Reserve Manager, and a Harmony employee.
2. Tonnes, grade, and gold content are declared as net delivered to the mills.
3. Gold content is recovered gold after taking into consideration the modifying factors.
4. Mineral Reserves are reported using a cut-off grade of 0.28g/t and a gold price of USD1,546/oz.
5. Recovered gold (kg) is based on a conversion factor of 32.1507oz/kg.

The decrease in Mineral Reserves is due to LOM that has been shortened from 2032 to 2028, due to deposition constraint.

The tables below presents a summary of the modifying factors used to convert the Mineral Resource to the Mineral Reserve for the MWS Operation. The modifying factors are consistent with the modelling, planning and computing estimates used in determining the Mineral Reserves, which are also consistent with historical performance.

Modifying Factor	Unit	Value
Gold Accounted For (“GAF”) - Grade Cut-off	g/t	0.23
Recovery Factor	%	45.6
Plant Call Factor	%	100.0
Dilution	%	n/a
Conversion factor	oz/kg	32.15

The tables below presents a summary of the modifying factors used to convert the Mineral Resource to the Mineral Reserve for the West Wits Operation. The modifying factors are consistent with the modelling, planning and computing estimates used in determining the Mineral Reserves, which are also consistent with historical performance.

Modifying Factor	Unit	Value
GAF - Grade Cut-off	g/t	0.28
Recovery Factor	%	41.0
Mine Call Factor	%	100.0
Dilution	%	n/a

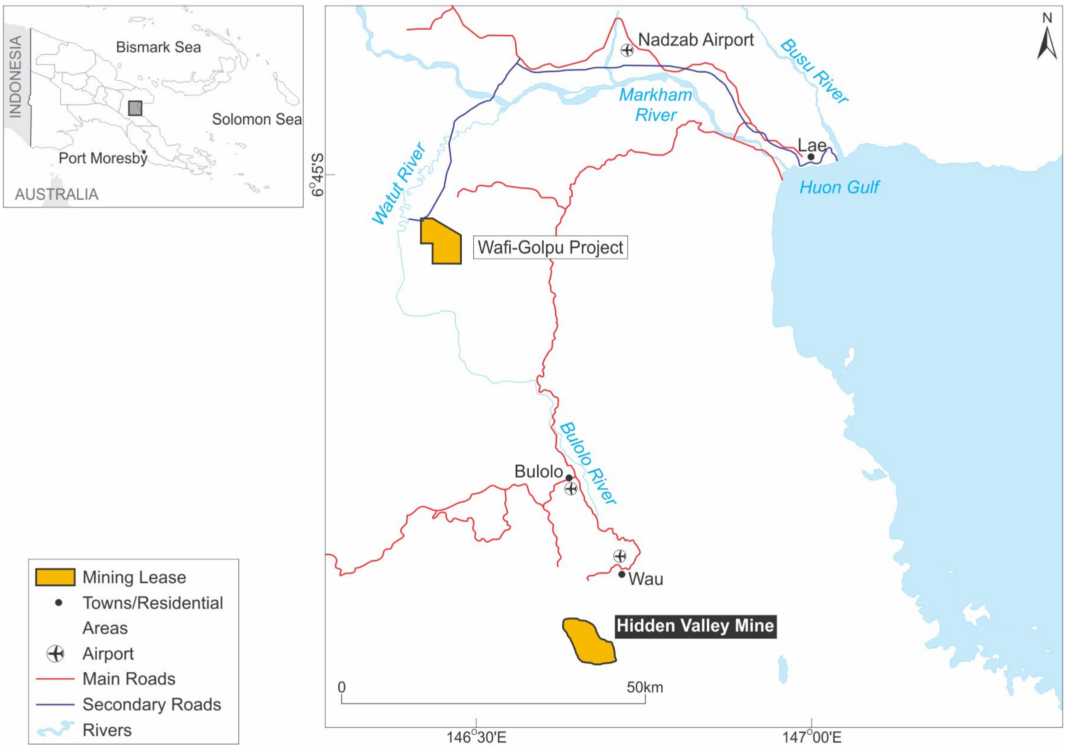
For additional information, see the TRS on each individual property, filed as an Exhibit of this annual report on Form 20-F.

Hidden Valley

Property Description

Hidden Valley is located in the Morobe Province of Papua New Guinea and is operated by Morobe Goldfields Consolidated under the name of Hidden Valley Gold Mine. The operation is 100% owned by Harmony. Hidden Valley consists of the Hidden Valley Kaveroi open pit ("**HVK**") and Hamata open pit located approximately 6km apart and an ore processing facility in steep, heavily forested, mountainous terrain. The deposit is located at latitude 7°22”S and longitude 146°39E, approximately 20km southwest of Wau within Mining Lease ML151.

The following graphic illustrates the location of Hidden Valley.



The summary of mineral tenure is presented in the table below.

Licence Holder	Licence Type	Reference No.	Effective Date	Expiry Date	Area (ha)
Morobe Consolidated Goldfields	Mining	ML151	March 4, 2005	March 3, 2030	4,098.29

Mining operations must be carried out on a continuous basis to ensure the validity of the mining lease. Any failure to maintain operations can result in a suspension. An extension to the Mining Lease was approved by the PNG Mineral Resources Authority in May 2021, with the lease expiring on March 3, 2030.

In accordance with the PNG Environment Act, an Environmental Impact Statement (“**EIS**”) was submitted to the Department of Environment and Conservation (now CEPA) in February 2004. The EIS was approved in January 2005, and Waste Discharge and Water Extraction permits issued. In October 2017, these permits were amalgamated as Environment Permit EP-L3(578). In

March 2021, an amendment to the Environment Permit was issued by CEPA and the mine presently operates under the conditions imposed by Environment Permit (EP-L3(578)), which will expire on March 29, 2030.

The holder of a Mining Lease must pay a royalty to the PNG Government that is equivalent to 2% of the net proceeds of sale of minerals (calculated as net smelter return ("**NSR**") or free-on-board ("**FOB**") export value, whichever is appropriate). A production levy of 0.3% is also payable on the gross value of production (i.e., excluding the offsets of treatment and refining charges, payable terms and freight). Hidden Valley also pays an equity payment of 0.3% of revenue to local landowners.

There are no known material legal proceedings currently impacting the site, nor are any foreseen that, if determined against the Company, would be likely to have a material negative impact on the operation.

The surface access has been obtained through negotiations with the land owners. The surface access is sufficient for LOM.

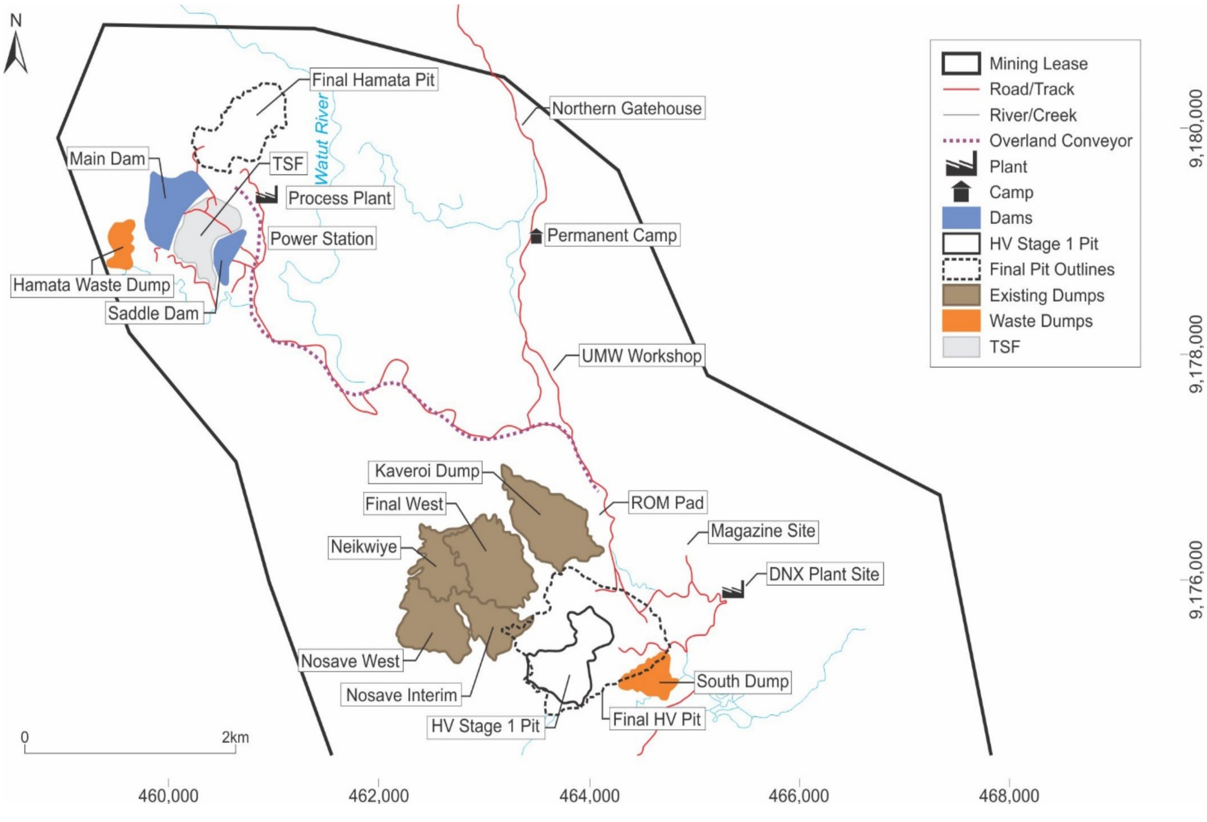
Operational Infrastructure

Wau is the closest town, with an estimated population of 5,800 (2011 census). This town was the centre of the gold rush in the 1920s and 1930s in the Morobe Goldfield. An airstrip is operational in the town. The nearest large town is Bulolo, with a population estimated at 20,000 in 2010. In the 1930s, this town was the centre of gold dredging on the Bulolo River. The town has an airport, schools, clinics and hospitals. Forestry is currently the dominant industry in the area.

Lae is an urban area, a major transport hub, and a commercial, administrative, industrial, residential, and educational centre for both the Morobe Province and PNG, with a population in 2011 (the most recent year for which PNG census data are available) of approximately 149,000.

The existing infrastructure located at the mine site is sufficient to support the current mine plan.

The surface infrastructure plan for the mine area is presented in the graphic below.



Geology

The Hidden Valley Kaveroi deposit is a vein-stockwork gold-silver deposit located in the southeast corner of the Wau Graben and is hosted by the Morobe Granodiorite. The Kaindi Metamorphics occur as a cap to the Hidden Valley Kaveroi Mineralisation. It comprises grey-black and green-brown, variably carbonaceous, schistose, quartz-rich psammites and pelites that have undergone regional greenschist metamorphism and localised, higher grade contact metamorphism on intrusive contacts with Morobe Granodiorite. The granodiorite comprises two parts; an upper homogenous granodiorite of uniform texture cut by thin aplite dykes and feldspar porphyry dykes. Below the Hidden Valley Kaveroi fault is a lower, more heterogeneous unit comprising granodiorite, diorite, adamellite, tonalite and feldspar porphyry. The lower unit tends to contain gypsum veining, not regularly seen in the upper unit.

Numerous porphyry dykes of the Eddie Creek Suite intrude both the Kaindi Metamorphics and the Morobe Granodiorite. Porphyry composition varies from hornblende-biotite to feldspar-quartz phenocryst varieties. These bodies are not general mineralised but do commonly show some alteration.

Surficial weathering, mainly by downward percolation of oxygenated meteoric water, is variable over the gold-silver deposit due to lithological, alteration and structural discontinuities. The granodiorite is usually more deeply weathered than the metasediment of the two main rock units. At the Hidden Valley Kaveroi deposit, four distinct oxidation zones are recognised; an oxide zone, partial oxidation zone, a zone of fracture oxidation, and a fresh (primary) zone. However, the effects of supergene gold enrichment or depletion (if present) are minimal for the Hidden Valley Kaveroi deposit.

History

Gold was discovered in Hidden Valley Creek by W.H. Chapman in 1927 (Lowensteub, 1982), and worked until 1929. In 1945, stream alluvial gold samples were taken close to the Hidden Valley Kaveroi discovery outcrop, but the deposit remained hidden. In 1984, CRA Exploration (Pty) Ltd ("**CRAE**") discovered the Hidden Valley Kaveroi deposit when it carried out a regional stream sediment sampling programme in the headwaters of the Upper Watut River, -80mesh sediment samples returned values of 54ppm gold. Mapping up the creeks revealed a landslide on the northern bank of Hidden Valley Creek had exposed altered and mineralised granodiorite with initial chip sampling returning 55m at 3.8ppm gold. Drilling commenced in 1985, with the third and fourth holes intersecting wide zones of mineralisation. CRA completed a Pre-Feasibility Study in 1989, and concluded the deposit was too marginal at that time to develop. In 1992, Placer Pacific Limited entered into a joint venture with CRAE but withdrew from the joint venture in 1993. In that time Placer drilled 13 holes and tested some adjacent targets. The project went through a hiatus until 1995, when CRA reviewed the project. In 1997, CRA (now known as Rio Tinto Limited) sold its interest in the Hidden Valley Kaveroi deposit to a wholly-owned subsidiary of Australian Gold Fields NL ("**AGF**"), which was subsequently placed into administration. Aurora Gold Limited ("**Aurora**") acquired the deposit from the administrators of AGF in September 1998. Aurora completed a pre-feasibility study on the project in 2002. Abelle Limited ("**Abelle**") obtained 100% ownership of the deposit in February 2003, following the merger of Abelle with Aurora.

Harmony effectively acquired 100% of Abelle on May 1, 2003. A Memorandum of Agreement between landowners and the PNG Government was signed on August 5, 2005, resulting in the mining lease for the project being granted. Harmony commenced and completed a feasibility project on the deposit and commenced construction in 2008. In August 2008, Morobe Mining Joint Ventures was formally established as a 50:50 joint venture between Harmony and Newcrest Mining Limited ("**Newcrest**"). Hidden Valley (comprising HVK and Hamata open pits) has been in operation since 2009, and was officially opened in September 2010. In October 2016, Harmony took 100% ownership of the Harmony Operations.

Mineral Tenure

Hidden Valley operates within Mining Lease, ML151, registered in the name of Morobe Consolidated Goldfields Limited which is valid until 2030.

In accordance with the PNG Environment Act, an EIS was submitted to the Department of Environment and Conservation (now CEPA) in February 2004. The EIS was approved in January 2005, and Waste Discharge and Water Extraction permits issued. In October 2017, these permits were amalgamated as Environment Permit EP-L3(578).

In December 2020, Morobe Consolidated Goldfields Limited submitted an application to CEPA for a minor amendment to Environment Permit EP-L3(578), in support of the Stage 8 expansion, in accordance with the Environment (Prescribed Activities) Regulation 2002. An amendment to Environment Permit EP-L3(578) was issued by CEPA in March 2021.

The mine presently operates in accordance with the 41 conditions prescribed by Environment Permit EP-L3(578), which will expire on March 29, 2030. The existing environmental and tenure permits and licenses are summarised below.

In accordance with Environment Permit EP-L3(578), condition 4, Morobe Consolidated Goldfields Limited reviews and updates its Hidden Valley Environmental Management Plan (“**EMP**”) every three years. The most recent iteration of the EMP (2021-2024) was submitted to CEPA for approval in March 2021.

A detailed environmental monitoring program is defined in the EMP which includes water, sediment and air quality monitoring, hydrological studies, land clearance assessment and aquatic biota studies. Water quality monitoring within the major tributaries of the Watut and Bulolo Rivers forms a critical component of the monitoring program to identify potential impacts on the downstream environment as a result of the mining operation.

Results of the monitoring program are communicated to CEPA annually through the operation’s Annual Environment Report, satisfying condition 40 of Environment Permit EP-L3(578).

A summary of the status of environmental permits and licenses issued as at June 30, 2022, is presented in the table below.

Permit / Licence	Status
Mining Lease	ML151 current. Amended May 25, 2021. Expiry March 3, 2030.
Lease for Mining Purpose	LMP80 current. Amended May 25, 2021. Expiry March 3, 2030.
Mining Easement	ME82 current. Amended May 25, 2021. Expiry March 3, 2030.
Environment Permit EP-L3 (578)	Awarded October 2017. Amended March 2021. Expires March 2030.
EIS	Approved January 2005.

Mining Method

Hidden Valley is an open pit gold-silver operation, operating conventional truck/excavator open pits and an ore-processing plant. Two separate open pits are currently in operation; the HVK pit and the Hamata pit. The HVK pit is the larger pit supplying the majority of the ore and is located some 6km from the processing plant. Hamata ore is predominately exhausted and is used for Tailings dam wall construction material.

Mining operations employ conventional open pit mining techniques with back-hoe excavators and rigid dump trucks as the primary load and haul equipment. Front-end loaders are used for crusher feed and stockpile reclaim. A number of articulated smaller dump trucks are used for construction, and mining in Hamata. Mining bench configuration consists of 18m inter-berm heights, mined as 2 x 9m benches or 3 x 3m flitches (typically in ore).

Waste is disposed in engineered valley fill waste dumps, with toes keyed in and buttressed using competent non-acid producing rock. The construction of the Neikwiye valley toe buttress and underdrain network was completed in the 2018 fiscal year and waste rock will be disposed in this dump envelope through the remainder of the mine life. Similarly under drain construction and toe buttress will be completed in the Kaveroi Valley with selective placement to continue in this area for the LOM.

The Hidden Valley processing plant was designed to treat nominally 4.2Mtpa of gold/silver bearing ore although operational issues have prevented the plant reaching its design nameplate capacity. The processing plant treats gold/silver ore from the Hidden Valley, Kaveroi and Hamata deposits. Crushed ore is conveyed from the Hidden Valley pit via a 4.5km long overland pipe conveyor. Ore from the Hamata pit is trucked to the Hamata crushing station, located next to the Hidden Valley processing plant.

Tailings are stored in a TSF located to the southwest of the process plant. Dam-wall construction of the TSF is ongoing and largely constitutes placement of suitable oxide and fresh competent material sourced from mining in the Hamata pit. The processing inventory in this Mineral Reserve estimate is constrained by remaining TSF capacity. TFS1 has a remaining capacity of ~11.3Mt with TSF2 adding an additional 7.8Mt3 of capacity. The overall remaining TSF capacity is currently estimated at 19.1Mt. Studies on the potential expansion and optimisation of tailings storage will continue to be completed to assess further asset expansion.

Mineral Processing

The Hidden Valley CIL processing plant, located adjacent to the Hamata open pit, was commissioned in 2009. The Hidden Valley processing plant is designed to treat nominally 4.2Mtpa of gold bearing ore from three separate open pits. Three distinct ore types are to be treated through two alternate treatment routes:

- whole ore processing: used to process the blend containing ore from the Hamata deposit, and oxide, transitional and primary ore from the Hidden Valley and Kaveroi deposits; and
- primary ore processing: used when processing only the primary ore from the Hidden Valley and Kaveroi deposits.

The Hamata ore is typically a gold:silver ratio of 1:1 with varying sulphur grades from 0.5% to 5.0%. Transition and primary ores have a significantly higher silver content with a gold:silver ratio of 1:15. Transition sulphur averages 0.96% while primary ore has a sulphur grade of 1.81%.

Qualified Persons

The QPs preparing the TRS were employed on a full-time basis by Harmony. The QPs' qualifications, areas of responsibility and personal inspection of the property are summarized in the graphic below.

Qualified Person	Professional Organisation	Qualifications	TRS Section Responsibility	Personal Insp.
Mr R Reid	FAIG, MAusIMM	BSc.(Hons), Grad.Dip (Sc)	3, 4, 5, 6, 7, 8, 9, 11	Regular. Last June 2022
Mr G Job	MAusIMM	BSc. MSc (Min Econ)	1, 2, 3, 15, 21, 22, 23	Regular. Last June 2022
Mr D Ross	MAusIMM	BEng (Mining)	12, 13	Regular. Last June 2022
Mr M Swart	FAusIMM(CP), RPEQ	BMetEng, MBA	10, 14	Regular. Last June 2022
Ms S Watson	MAusIMM	MSc, BSc.(Hons)	17	Regular. Last July 2022
Mr. D Hall	MAHRI & MAICD	Bachelor Commerce (HR & Industrial Psychology)	17	Regular. Last March 2020
Mr M Koehler	CAANZ	BBus Acc, Grad Dip (CA)	16, 18, 19	Regular Last August 2021

Exploration

The Hidden Valley Kaveroi deposit has had a long history of exploration dating back to the 1980s. The amount of exploration carried out over the Hidden Valley area is significant, and the volume of the results is too large to enable detailed reporting herein.

A large mapping dataset exists from detailed work completed over the years. The geological model used in the Mineral Resource estimate has been based upon combined drill hole data and surface mapping that has been completed over time. Structural mapping in and around the site and within the open pits has been conducted on a number of occasions. Observations gathered during open pit mapping have been combined with more regional mapping work completed over time by site geologists and consultants to construct a robust geological model that will support the grade estimate.

Available regional government geophysical datasets include a 1000m spaced fixed-wing airborne magnetic survey, a 400m spaced helicopter airborne magnetic survey and a 2000m spaced fixed-wing gravity survey. Available company geophysical datasets include a 50m spaced helicopter airborne magnetic survey, some prospect-specific ground magnetic survey stations, and induced polarisation surveys.

Regional stream sediment and "Ridge and Spur" soil sampling was completed by CRAE between 1983 and 1989. Additional soils and trenches were completed prior to and post the commencement of drilling. Drilling data and mining have superseded the information in the trenching programs.

Available geochemical sampling on ML151 includes a total of 24,844 surface samples. These are a mix of historical company data and Harmony collected sampling. Surface geochemical sampling techniques include soil (8,741), rock chip (12,468), wacker (2,033), auger (920) and stream sediment (245), plus some other less common techniques. Available assay suites for both historical company data and Harmony collected sampling vary widely, with assay suites generally extended to more elements in more modern times.

CRAE discovered Hidden Valley using stream sediment sampling campaign up the headwaters of the Upper Watut River in 1984. Sediment samples (-80mesh) returned values of 54ppm Au. No further information is available on the stream sediment sampling campaign. These data are not, however, used in geological modelling and Mineral Resource estimation.

Surface drilling completed to date included diamond core and reverse circulation ("**RC**") drilling. Drilling was undertaken continuously between 2009 to 2012, with some minor additional drilling done since. Some targeted deeper RC holes and diamond holes have been drilled into the deposit during 2014 to 2022, with various degrees of success to close up the drill spacing. A total of 34,086 holes measuring 1,099,053m of drilling were used in the generation of the 2022 geology and domain mode. This includes both blast and RC operational grade control drilling. A total of 1,586 drill holes, comprising 275,491m of drilling was used in the Mineral Resource estimate.

The reader should note that these numbers exclude grade control drilling. This drilling was not included in the Mineral Resource estimate due to sample support issues which would result from such closely spaced drilling.

Mineral Resource Estimate

The Mineral Resource estimate is reported in situ within the Hidden Valley lease area, as determined through the analysis of the reasonable prospect for economic extraction by opencut mining method. The cut-off value for the Mineral Resources is determined at 0.65g/t gold based on the economic assumptions presented set forth in the table below at the effective date of June 30, 2022.

Description	Unit	Value
Gold price	USD/oz	1,546
Silver price	USD/oz	22.35
AUD FX rate	USD:AUD	0.73
PGK FX rate	PGK:USD	3.5
Plant recovery factor – calculated curve (Au_rec=0.0784In(Feed_AuGrade)+0.8341)	%	88.0
Unit cost	PGK/t	10.21

Note: Unit cost includes cash operating cost, royalty and ongoing development capital.

1. This cut-off value represents typical costs for the mining method and preliminary mining and metallurgical recovery assumptions.
2. The Mineral Resources were originally prepared, classified and reported according to SAMREC, 2016. For the purposes of this report on Form 20-F, the Mineral Resources have been classified in accordance with Item 1302(d)(1)(iii)(A) of Regulation S-K. These Mineral Resources account for mining depletion recorded from July 2021 to June 2022.

The Mineral Resource estimate, as at June 30, 2022, exclusive of the reported Mineral Reserves, is summarized in the table below.

		Fiscal Year Ended June 30,										
		2022					2021					
			Grade		Metal Content			Grade		Metal Content		
Mineral Resource Category	**Open Pit**	**Tonnes (Mt)**	**Gold (g/t)**	**Silver (g/t)**	**Gold (kg)**	**Silver (kg)**	**Tonnes (Mt)**	**Gold (g/t)**	**Silver (g/t)**	**Gold (kg)**	**Silver (kg)**	**% Change**
Indicated	HVK	33.0	1.34	21.97	44,064	724,693	—	—	—	—	—	n/a
	Hamata	1.6	1.97	—	3,163	—	—	—	—	—	—	n/a
Total / Ave. Indicated		**34.6**	**1.37**	**21.97**	**47,228**	**724,693**	**—**	**—**	**—**	**—**	**—**	**n/a**
Inferred	HVK	1.2	1.21	23.12	1,489	28,521	—	—	—	—	—	n/a
	Hamata	0.2	1.50	—	284	—	—	—	—	—	—	n/a
Total / Ave. Inferred		**1.4**	**1.25**	**23.12**	**1,773**	**28,521**	**—**	**—**	**—**	**—**	**—**	**n/a**

Notes:

1. Mineral Resources are reported with an effective date of June 30, 2022, using the SAMREC Code, 2016. For the purposes of this TRS, the Mineral Resources have been classified in accordance with Item 1302(d)(1)(iii)(A) of Regulation S-K. The QP responsible for the estimate is Mr R Reid, Group Resource Geologist, and employee of Harmony PNG.
2. Mineral Resources are adjusted for mining depletion to end April 2022, with assumed production for May and June, 2022.
3. Measured Resources include surface stockpiles only.
4. Mineral Resources are reported on a 100% basis. Harmony holds a 100% interest.
5. Mineral Resources are reported exclusive of Mineral Reserves. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.

6. Mineral Resources at HVK are reported assuming a bulk open pit mining metallurgical recovery for silver and gold by sulphide flotation. Mineral Resources are reported above a gold grade cut-off of 0.65g/t on the results of a profit algorithm; this equates to a marginal ore cut-off grade. The profit algorithm takes account of metal price, grade, ore processing route, recoveries and costs. Metal price assumptions are USD1,546/oz gold, USD22.35/oz silver and a 0.73 USD/AusD exchange rate. Adjustments to these figures will potentially impact upon the economic cut-off grade.
7. Tonnages are metric tonnes. Gold and silver ounces are estimates of metal contained in tonnages and do not include allowances for processing losses.
8. Rounding as required by reporting guidelines may result in apparent differences between tonnes, grade and contained metal content. Rounding is to three significant figures.
9. Harmony is disclosing Mineral Resources in excess of (excluding) Mineral Reserves for the first time for the year ended June 30, 2022, as required by Regulation S-K 1300. As a result, historical Mineral Resources are not available.

Mineral Reserve Estimate

The Mineral Reserves were originally prepared, classified and reported according to SAMREC, 2016. For the purposes of this report on Form 20-F, the Mineral Reserves have been classified in accordance with Item 1302(d)(1)(iii)(A) of Regulation S-K.

Mineral Reserves are derived from the Mineral Resources, a detailed business plan and the operational mine planning processes. Mine planning utilizes and takes into consideration historical technical parameters achieved. In addition, Mineral Resource conversion to Mineral Reserves considers certain modifying factors, dilution, ore losses, minimum mining widths, planned mine call and plant recovery factors.

The Mineral Reserve estimate, as at June 30, 2021 and 2022, exclusive of the reported Mineral Reserves is, summarized in the table below.

		Fiscal Year Ended June 30,										
		2022					2021					
			Grade		Metal Content			Grade		Metal Content		
Mineral Reserve Category	**Open Pit**	**Tonnes (Mt)**	**Gold (g/t)**	**Silver (g/t)**	**Gold (kg)**	**Silver (kg)**	**Tonnes (Mt)**	**Gold (g/t)**	**Silver (g/t)**	**Gold (kg)**	**Silver (kg)**	**% Change**
Proven	HVK	2.5	0.86	18.32	2,191	46,672	3.4	0.95	17.31	3,206	58,661	(31.7)
	Hamata	—	—	—	—	—	0	1.63	—	0,010	—	(100.0)
Total / Ave. Proven		**2.5**	**0.86**	**18.32**	**2,191**	**46,672**	**3.4**	**0.95**	**17.31**	**3,216**	**58,661**	**(31.9)**
Probable	HVK	16.3	1.78	22.45	28,941	365,718	19.9	1.59	27.18	31,609	540,062	(8.4)
	Hamata	0.3	1.48	—	399	—	0.2	1.82	—	0,442	—	(9.8)
Total / Ave. Probable		**16.6**	**1.77**	**22.45**	**29,340**	**365,718**	**20.1**	**1.59**	**27.18**	**32,051**	**540,062**	**(8.5)**
Total / Ave. Proven + Probable		**19.1**	**1.65**	**21.89**	**31,531**	**412,390**	**23.5**	**1.50**	**25.75**	**35,267**	**598,723**	**(10.6)**

Notes:

1. Mineral Reserves are reported with an effective date of June 30, 2022, using the SAMREC Code, 2016. For the purposes of this TRS, the Mineral Reserves have been classified in accordance with Item 1302(d)(1)(iii)(A) of Regulation S-K. The QP responsible for the estimate is Mr D Ross, Group Mine Planning Engineer, and employee with Harmony PNG.
2. Mineral Resources are reported on a 100% basis. Harmony holds a 100% interest.
3. Mineral Reserves are reported using the following assumptions: open pit mining method, gold price of USD1,546/oz, silver price of USD22.35/oz at USD/AUD 0.73 exchange rate (PGK/USD 3.5 exchange rate).
4. Not all “ore” as defined at the economic cut off reports to the Mineral Reserve due to the constrained tailing storage facility with some marginal grade ore material remaining on stockpile. The Proved Mineral Reserve is limited to stockpiles. Probable Mineral Reserve is derived from the Indicated Mineral Resource.
5. Gold and silver ounces are estimates of metal contained in tonnages and do not include allowances for processing losses.
6. Rounding as required by reporting guidelines may result in apparent differences between tonnes, grade and contained metal content. Rounding is to three significant figures.

The previous Mineral Reserve estimate declared 23.5Mt of ore for 1,134koz contained gold in the HVK and Hamata open pits. The current 2022 Mineral Reserve update reports a decrease when compared to the previous year. Current Mineral Reserve estimate is 19.1Mt of ore for 1,014koz contained gold. The most significant changes in this Mineral Reserve estimate relative to the June 2021, release include:

- depletions (pit and stockpiles) to end June 2022, (-3.2Mt);
- updated geological model (+0.2Mt);
- modifying factors (-0.9Mt);
- stockpile changes (-0.8Mt).

The table below presents a summary of the Modifying Factors used to convert the Mineral Resource to the Mineral Reserve for Hidden Valley. The Modifying Factors are consistent with the modelling, planning and computing estimates used in determining the Mineral Reserves, which are also consistent with historical performance.

Modifying Factor	Unit	Value
Gold Price	USD/oz	1,546
Silver Price	USD/oz	22.35
AUD FX rate	AUD:USD	0.73
PGK FX rate	PGK:USD	3.50
Tonnage Recovery	%	100
Gold Grade Recovery		
HVK >2300mRL	%	97
HVK < 2300mRL	%	93
Hamata	%	90

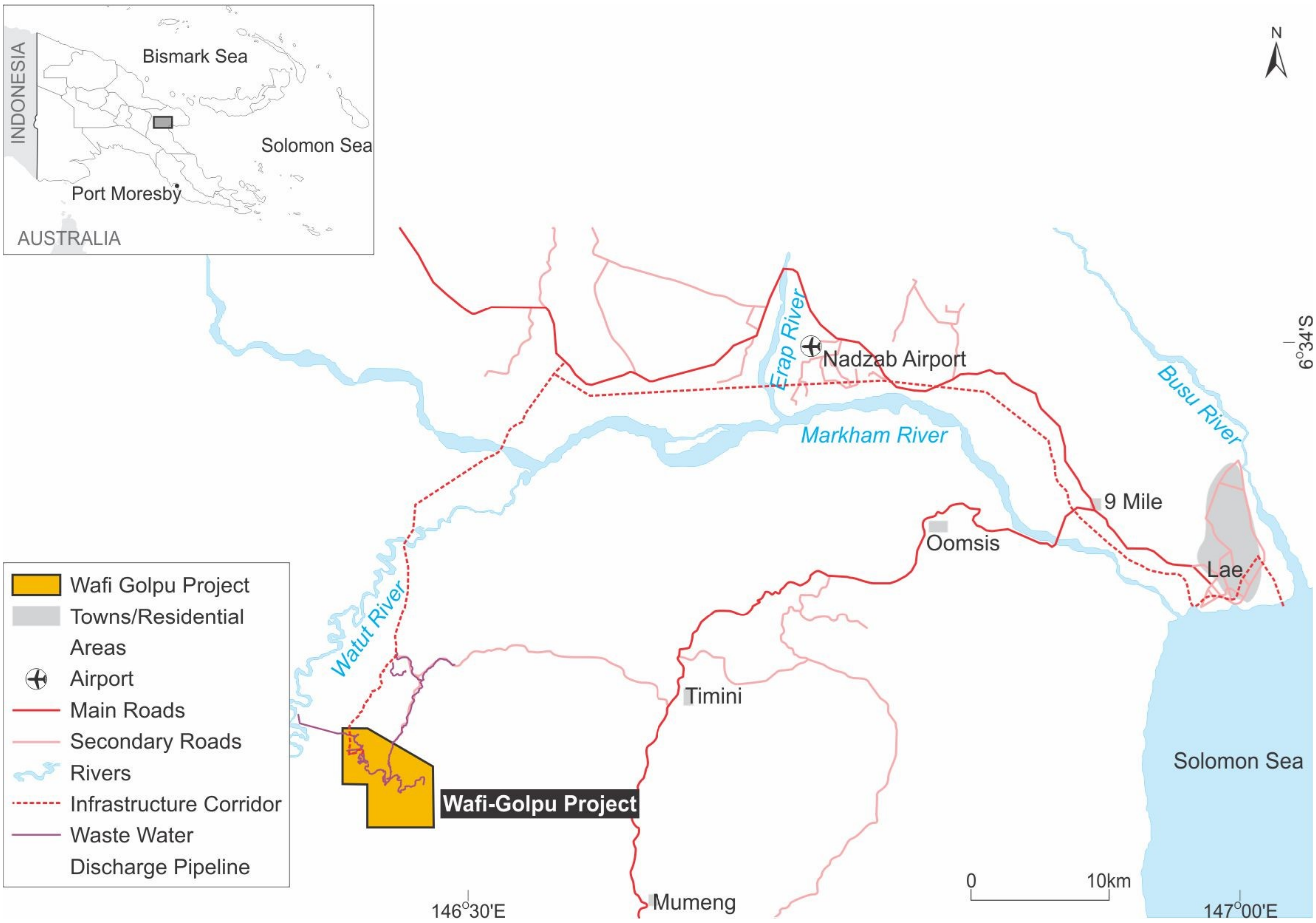
For additional information, see the TRS on each individual property, filed as an Exhibit of this annual report on Form 20-F.

Wafi-Golpu

Property Description

The Wafi-Golpu project is situated within the Morobe Province of PNG, approximately 65km southwest of Lae, the nearest commercial center. The Wafi-Golpu project comprises the Golpu copper–gold porphyry deposit (“**Golpu project**”) where Mineral Resources and Mineral Reserves were estimated. Additional Mineral Resources were estimated for the Wafi epithermal gold (“**Wafi project**”) and Nambonga copper–gold porphyry deposits (“**Nambonga project**”), however, these deposits are not currently included in the mine plan. No production has yet occurred at this property. The Wafi-Golpu project is situated at a latitude of 6°51’46.63”S and longitude of 146°27’08.20”E.

The following graphic illustrates the location of the Golpu project.



The tenements are held by the Wafi Golpu Joint Venture ("**WGJV**") which is a 50%:50% joint venture between Harmony and Newcrest. The WGJV holds two exploration licenses covering a total area of 12,984 ha, each of which is registered in the names of Wafi Mining Limited (“**Wafi Mining**”) and Newcrest PNG2 Limited (“**Newcrest PNG2**”). The deposits are located within EL440, with a range of major surface facilities to be located on EL1105.

Both tenements were in good standing as at June 30, 2022. There is no material litigation (including violations or fines) that threatens its mineral rights, tenure, or operations.

Each EL is subject to the condition that, if the PNG Government chooses, it may take-up a 30% interest in the project. The summary of mineral tenure is presented in the table below.

Licence Holder	Licence Type	Reference No.	Effective Date	Expiry Date	Area (ha)
Wafi Mining &	Exploration	EL440	March 11, 2020	March 10, 2022[1]	9,501
Newcrest PNG2	Exploration	EL1105	January 16, 2021	February 25, 2023	3,393
Total					**12,894**

1 WGJV participants lodged an application to extend the terms of EL440 for a further two years on December 6, 2021, in accordance with PNG Mining Act requirements.

A special mining lease ("**SML**") was applied for in 2016. An SML is generally issued to the exploration license holders for large scale mining operations. This lease allows the holder to:

- enter and occupy the land over which the mining lease was granted for the purpose of mining the minerals and carry on such operations and undertake such works as may be necessary or expedient for that purpose;
- construct a treatment plant on that land and treat any mineral derived from mining operations, whether on that land or elsewhere, and construct any other facilities required for treatment including waste dumps and tailings dams;
- take and remove rock, earth, soil and minerals from the land, with or without treatment;
- take and divert water situated on or flowing through such land and use it for any purpose necessary for their mining or treatment operations subject to and in accordance with the PNG Environment Act ; and
- do all other things necessary or expedient for the undertaking of mining or treatment operations on that land.

The holder of an SML must pay a royalty to the PNG Government that is equivalent to 2% of the net proceeds of sale of minerals (calculated as NSR or FOB export value, whichever is appropriate). A production levy of 0.5% is also payable on the gross value of production (i.e., excluding the offsets of treatment and refining charges, payable terms and freight).

The SML application included a Proposal for Development, which incorporated the 2016 Feasibility Study report and supporting application documents such as a National Content Plan. Amendments to these tenement applications were made in March 2018, where the location and/or nature of facilities and infrastructure was refined through the 2018 Feasibility Study Update. The Proposal for Development was also updated. Additional applications will also be made where necessary. The grant of the SML and related ancillary tenements remains subject to the completion of PNG Mining Act and PNG Environment Act processes.

The surface rights pertaining to the Wafi-Golpu project are held under customary, State, and private ownership, with the bulk of the land being customary owned. The holder of a tenement under the PNG Mining Act is liable to pay compensation to the landholders for all loss or damage suffered or foreseen to be suffered by the landholders from the exploration or mining or ancillary operations.

The WGJV does not currently hold sufficient surface rights to permit construction and operations. Surface rights will be obtained if the current tenement applications are granted. Disturbances on customary land would commence once a compensation agreement is in place for the relevant area. Additional negotiations and permits are required for construction and operations.

Environmental approval for the Golpu Development has been obtained under the PNG Environment Act and Environment (Prescribed Activities) Regulation 2002. Approval-in-Principal for the Wafi-Golpu EIS (submitted in June 2018) was granted by the PNG Minister for Environment on November 19, 2020.

A 50-year Environment Permit for the project was issued by the PNG Conservation and Environment Protection Authority on December 18, 2020 namely EP-L3(767). This permit also amalgamates previous environment permits, water extraction permits, and waste discharge permits held for exploration purposes at the project. In addition, EP-L3(767) authorises mechanised mining on a Mining Lease involving chemical processing activity, and all other associated approved activities within the boundaries of SML10, LMPME92, ME93, ME94, ME96 and ME97. The permit approves the use of Deep Sea Tailings Placement as the tailings management solution for the project. EP-L3(767) contains 57 conditions pertaining to environmental management requirements for the project. There are no known material legal proceedings currently impacting the site, nor are any foreseen that, if determined against the Company, would be likely to have a material negative impact on the operation.

The surface access has been obtained through negotiations with the land owners. The surface access is sufficient for the LOM.

Operational Infrastructure

The closest major community is Lae. Lae is an urban area, a major transport hub, and a commercial, administrative, industrial, residential, and educational center for both the Morobe Province and PNG, with a population in 2011 (the most recent year for which PNG census data are available) of approximately 149,000.

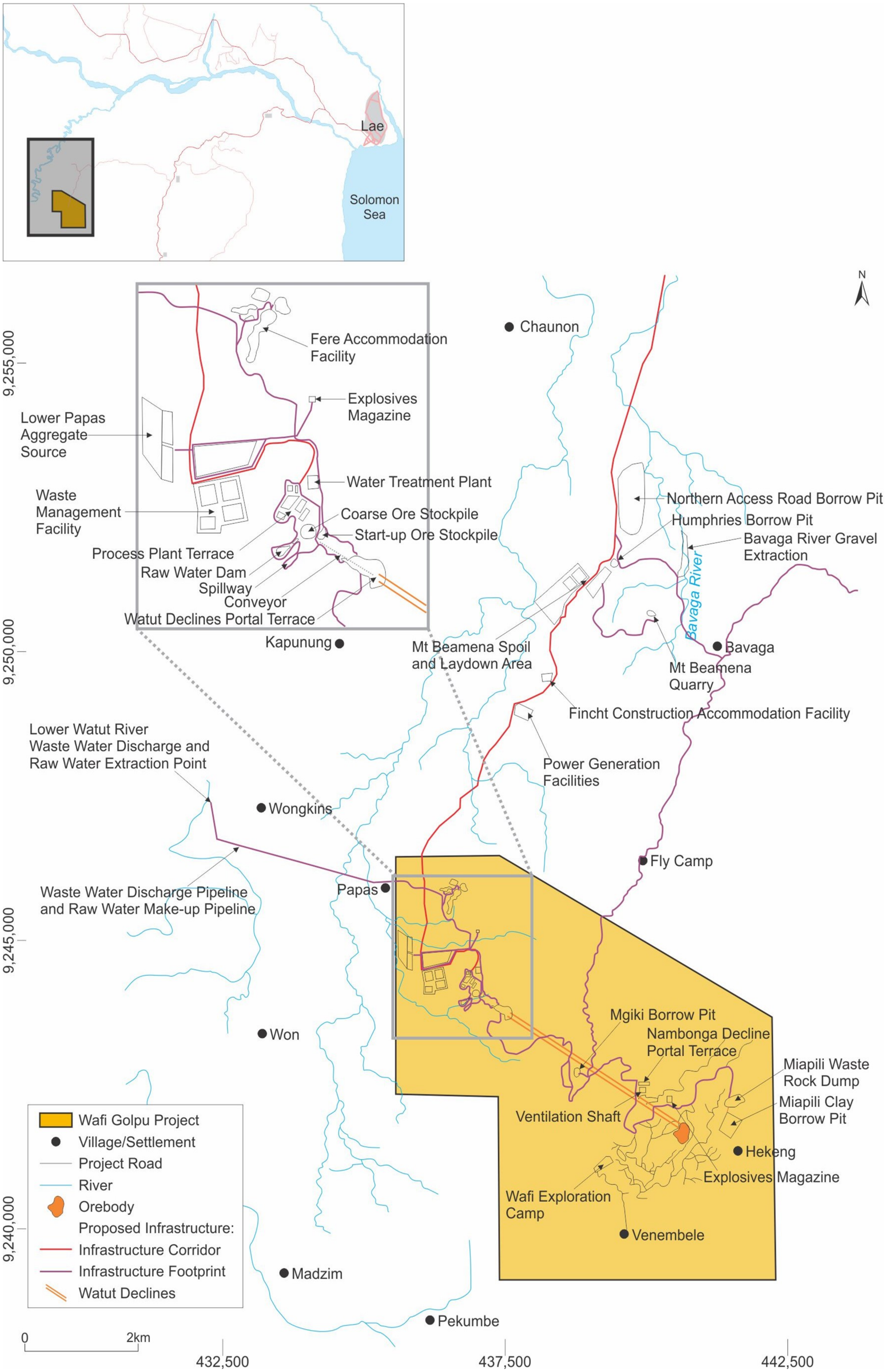
The Wafi-Golpu project is located in a mountainous area of PNG. A combination of roads and access tracks exist between Lae and the project site. However, the track components are suitable for four-wheel drive vehicles and purpose-built trucks only. During major rainfall events this access route may become closed to vehicular traffic.

Current access to the planned mine site is via a partly-sealed road from Lae to Timini, and a gravel road from Timini (Demakwa) to Wafi, with the trip taking about three to four hours depending on the weather. This road will be replaced by a new road (including bridges), the northern access road, to be constructure in the infrastructure corridor as part of project construction.

A mine access road will also be constructed from the intersection of the northern access road and the current exploration access road.

Commercial airlines operate flights between the national capital, Port Moresby, and Nadzab airport, which is approximately a one-hour drive by road from Lae. The Nadzab airstrip is sealed. Helicopter access to the mine site area is available, with a suitable area at the proposed mine site cleared for landing.

The Golpu project is a greenfield site that currently does not have any infrastructure to support the planned mining and processing operations. There is no effective local infrastructure with respect to power, water, and roads that are trafficable by vehicles other than all-wheel drive vehicles. Water supply for drilling was sourced from rivers, and power at the exploration camp (Wafi Camp) is locally generated. The surface infrastructure plan for the mine area is displayed in the graphic below, along with the start of the infrastructure corridor.


Lae
Solomon Sea
N
Chaunon
Fere Accommodation Facility
Explosives Magazine
Lower Papas Aggregate Source
Water Treatment Plant
Waste Management Facility
Coarse Ore Stockpile
Start-up Ore Stockpile
Process Plant Terrace
Raw Water Dam
Spillway
Conveyor
Watut Declines Portal Terrace
Northern Access Road Borrow Pit
Humphries Borrow Pit
Bavaga River Gravel Extraction
Bavaga River
Kapunung
Mt Beamena Spoil and Laydown Area
Bavaga
Mt Beamena Quarry
Fincht Construction Accommodation Facility
Lower Watut River Waste Water Discharge and Raw Water Extraction Point
Power Generation Facilities
Wongkins
Fly Camp
Waste Water Discharge Pipeline and Raw Water Make-up Pipeline
Papas
Mgiki Borrow Pit
Nambonga Decline Portal Terrace
Won
Miapili Waste Rock Dump
Miapili Clay Borrow Pit
Ventilation Shaft
Hekeng
Explosives Magazine
Wafi Exploration Camp
Venembele
Madzim
Pekumbe
Wafi Golpu Project
Village/Settlement
Project Road
River
Orebody
Proposed Infrastructure:
Infrastructure Corridor
Infrastructure Footprint
Watut Declines
0
2km
9,255,000
9,250,000
9,245,000
9,240,000
432,500
437,500
442,500

Geology

Wafi–Golpu is a complex, multiphase mineralised system comprising the:

- Golpu porphyry copper–gold deposit;
- Wafi epithermal gold deposit; and
- Nambonga porphyry gold–copper deposit.

In the Wafi-Golpu project area, the basement consists of a Mesozoic basement assemblage of metasedimentary units (Owen Stanley Metamorphic Complex). All of these rock types were subsequently folded and metamorphosed during the 40Ma Sepik Arc subduction/accretion event. Sedimentary, volcanic and volcaniclastic units of the Omaura Formation and Langimar Beds infilled low-lying areas in the period 30–10 Ma. Granitic magmas of the Maramuni Arc subsequently intruded the area, with a peak of activity from about 17–10Ma. All lithologies were folded and faulted during the formation of the Aure Deformation Zone, between 12–4Ma. A second intrusive suite, informally termed the Post-Maramuni belt, was emplaced from about 8–1Ma. Late-stage lithologies include shallow-water sediments and volcaniclastic units (e.g., Babwaf Conglomerate).

The deposit setting is controlled by the rotation and deformation of the Papuan peninsula.

The geology consists of:

- east to east–southeast-dipping metasedimentary rocks of the Owen Stanley Metamorphic Complex (inter-bedded conglomerate, sandstone and siltstone horizons);
- unconformably overlain by sediments and volcanic sequences of the Omaura Formation (shale and greywacke, with some reef facies limestones);
- overlain by the Langimar Beds (volcanoclastic pebble to cobble conglomerates interbedded with sandstones and reef facies limestones);
- intruded by Nambonga diorite (initial hornblende- and plagioclase-phyric porphyritic diorite. Late-stage, barren, biotite-phyric diorite, mineralised);
- emplacement of Golpu Intrusive Complex diorites including;
- Western diorite porphyry (mottled grey, plagioclase and quartz-phyric diorite);
- Golpu porphyry (hornblende and plagioclase-phyric diorite; quartz phenocrysts are absent);
- Livana porphyry (mottled grey or grey–green crowded hornblende and plagioclase-phyric diorite). A narrow intrusion with associated dykes intruded along previous intrusive contacts;
- explosive emplacement of the Wafi breccia complex (large multiphase polymictic breccia);
- late intrusion by the Hekeng Andesite (unmineralized, massive, dyke consisting of plagioclase crystals in a chlorite groundmass);
- overlain by Babwaf Conglomerate (poorly-consolidated but well-sorted conglomerate with minor siltstone and sandstone intercalations); and
- finally, unconformably overlain by the Wafi Conglomerate (poorly-consolidated conglomerate consisting of Owen Stanley metamorphic rocks and minor carbonaceous material in a poorly-sorted sandy matrix.), generally occurring in fault-bounded depressions.

The Golpu Intrusive Complex consists of multiple, hornblende-bearing diorite porphyries intruded into the host sedimentary lithologies. The porphyries are separated based on their spatial position and, where not texturally destroyed, into coarse hornblende-rich variants, feldspathic-rich units and porphyries containing quartz-eye inclusions. Intrusions range from small dykes to small stocks/bosses and apotheoses. Single intrusions pinch and swell vertically over tens of metres and form dykes, pipes and stocks.

The Wafi Diatreme complex is a roughly rectangular shaped feature, 800m by 400m at surface with steep, inward-dipping sides. The diatreme comprises intrusive and sedimentary breccias, volcaniclastic rocks and tuffs, and was intruded by several phases of unmineralised dacitic porphyries.

The Nambonga diorite porphyry stock is typically medium-grained, containing plagioclase and hornblende phenocrysts set in a feldspathic matrix. The diorite is cut by a late barren diorite phase at depth. The diorite has intruded lithologies of the Owen Stanley Metamorphic Complex, consisting of metasandstone and minor metaconglomerate.

History

Historical exploration dates back to 1977 and has included regional exploration sampling, geophysical surveys, geochemical sampling, reverse circulation and diamond core drilling.

CRAE identified mineralised float in a regional geochemical sampling programme and discovered the outcropping mineralisation of the Wafi A Zone near Mount Golpu in 1979. The Mt Wanion Exploration License (EL440) was granted in 1980 with ridge and spur sampling was completed 1980–1982. In 1983, core drilling commenced targeting the Wafi prospect, followed by geophysical surveys including a dipole-dipole induced polarisation (IP)/resistivity survey which were completed in 1985. An initial mineral resource was estimated for Wafi in 1986. In 1987, metallurgical test work identified that the primary mineralisation was highly refractory with low cyanide leach recoveries. The CRAE/Elders Resources Limited ("**Elders**") joint venture formed in 1988, and undertook core and RC drilling. The discovery of the Golpu copper–gold porphyry deposit occurred in 1990. A moving loop time domain electromagnetic geophysical survey was undertaken by the Joint Venture and the first Mineral Resource estimate for Wafi was completed in 1990.

CRAE re-acquired EL440 from Elders in 1991, they then conducted aeromagnetic, ground magnetic, self-potential ("**SP**"), IP, and controlled source audio-frequency magneto- telluric ("**CSAMT**") geophysical surveys, shallow bedrock geochemical sampling, surface lithochemical sampling, soil geochemical sampling and geological mapping. CRAE completed a pre-feasibility study in 1993 and a resource estimate for the A Zone at Wafi. Resource estimate was updated in 1996. The high-grade Link Zone was discovered at Wafi in 1997 and was followed by an updated resource estimate for A Zone, B Zone, Link Zone and C Zone.

Global Mining Services completed a due diligence re-estimate of Wafi resource estimate on behalf of AGF in 1997. AGF acquired the Wafi-Golpu project from CRAE in 1998 but the project was then placed on care and maintenance from 1999–2001, due to a commodity price downturn. Aurora acquired project ownership in 2001 and updated Wafi resource estimate on A Zone, B Zone and Link Zone in 2002. Completed check resource estimate at Wafi in 2002. Aurora merged with Abelle in 2003. An updated Wafi Mineral Resource estimate was completed in 2003.

Harmony acquired Abelle in 2004 and completed the Wafi–Golpu Concept Study. Resource estimates for selected deposits were updated in 2005, 2006 and 2007. The Golpu Standalone Pre-Feasibility Study, was completed 2007. The Wafi–Golpu Integrated Pre-Feasibility Study was completed 2007. The Nambonga porphyry was discovered in 2007.

In 2008 the WGJV between Newcrest and Harmony formed. Resource estimates were updated for selected deposits in 2010, 2011, 2012, 2014 and 2018. The Wafi Area Concept Study was completed in 2008. Highly mineralised porphyry was identified to the northwest of known Golpu mineralisation in October 2009. The Golpu Development Project Desktop Study was completed 2009. This was followed by the Wafi Concept Study (2010), the Wafi–Golpu Pre-Feasibility Study (2012), and the Wafi–Golpu Pre-Feasibility Optimisation Study (2014). Regional geological mapping and geological synthesis was completed in 2015, which led to a re-evaluation of the development approach and the Golpu Stage 2 Pre-Feasibility Study, completed in 2015. Golpu Feasibility Study was then completed 2016. On August 25, 2016 the Wafi–Golpu Joint Venture submitted an SML application to the MRA. The Special Mining Lease application included a Proposal for Development, which incorporated the 2016 Feasibility Study report and supporting application documents such as a National Content Plan. Further data collection and technical assessment undertaken in 2016–2017. The Feasibility Study Update was completed in December 2017 and submitted to the MRA in March 2018. An EIS was submitted to CEPA on June 25, 2018. Environmental approval for the Golpu project was obtained in 2020.

Mineral Tenure

The leases or permits required to develop and operate the Wafi-Golpu project are presented in the table and summarised below:

- SML 10. For Block cave mines, Watut declines portal terrace, process plant terrace, Watut process plant, Nambonga decline portal terrace, waste rock storage facilities ("**WRSFs**"), Miapilli clay borrow pit, water treatment facilities, sedimentation dams, raw water dam, explosives magazine facilities, waste management facility, concrete batch plants, electrical substations, workshops and administration buildings, accommodation facility;
- LMP 100. For Finchif construction accommodation facility and power generation facilities;
- LMP 104. For Port facilities area (including concentrate filtration plant);
- LMP 105. For outfall area;
- ME 91. For Infrastructure corridor pipelines from the northern boundary of the SML application to Lae for pipelines and power transmission lines from the power generation facilities to the northern boundary of the SML;
- ME 92. For Mine access road;
- ME 93. For northern access road;
- ME 94. For wastewater discharge pipeline (for mine dewatering) to the Watut River and co-located raw water make-up pipeline;
- ME 96. For terrestrial tailings pipeline – Lae to Wagang; and
- ME 97. For component of outfall system, specifically the seawater intake and deep sea tailings placement outfall pipelines.

Permit / Licence	Status
Exploration Licence	EL 440 - current; EL 1105 - current.
Special Mining Lease 10	Application submitted in August 2016.
Lease for Mining Purpose (LMP100, LMP104, LMP105)	Application submitted August 2016. Revisions and new applications submitted Q1 2018.
Mining Easement (ME91, ME92, ME93, ME94, ME96, ME97)	Application submitted August 2016. Revisions and new applications submitted Q1 2018.
EIR	Submitted May 2017, approved June 2017.
EIS	Submitted 2018. Approved November 2020.
Level 3 Environment Permit EP-L3 (767)	Approved December 2020. Valid for 50 years.
Environmental Management Plan	Submitted. Approved in EPL3 (767)

Mining Method

The proposed mining method is block caving on three levels, namely BC40, BC42 and BC44. The BC44 and BC42, underground services, and infrastructure areas are designed to a feasibility level of confidence. The BC40 cave footprint and thus extraction level layout are designed at a pre-feasibility confidence level. The infrastructure for BC40 is identical to that of BC44 and BC42 and is at a feasibility level of confidence. There will be no additional surface infrastructure for BC40.

Block caving was selected for the following reasons:

- orebody geometry and geotechnical conditions;
- high productivity, low operating cost mining method; and
- higher-value material located at depth can be accessed earlier in the mine plan.

The proposed mine plan uses technology conventional to block cave operations, including mine design and equipment. The mine is planned to operate 24 hours per day, every day of the year, apart from scheduled and unscheduled shutdowns.

Access to the mine workings will be via the Watut and Nambonga declines, with each generating waste rock that will either be used in construction activities, processed or deposited within the WRSFs. Block cave mining will not result in the production of waste rock because all material extracted from the block cave will be fed to the Watut process plant. Block cave mining will cause a subsidence zone of fractured rock to develop that will propagate to surface.

During caving operations, ore from the block cave drawpoints will be delivered by vehicles to an underground crusher. The crushed ore will then be conveyed to the surface. The ore conveyor emerging at the Watut declines portal terrace will continue overland for approximately 600m to deliver crushed ore to a coarse ore stockpile adjacent to the Watut process plant for processing.

Mineral Processing

The proposed Watut process plant will be a compact copper concentrator that is progressively built (in line with the profile of the mine ramp-up) to be capable of processing approximately 17Mt/a of crushed ore at peak capacity to produce a high-grade copper concentrate. The plant is designed to cater for the ore composition changes over the LOM, and blending is not expected to be required.

A two-stage ramp-up philosophy will be used. The plant will run intermittently (campaign treatment) and in 50% turndown mode for the first three years. During the mine ramp-up period, the total volume of the coarse ore stockpile and start-up stockpile will be used to maintain plant utilisation as high as practicable, minimising the number of plant stops.

Models for the two process flowsheet variations were derived from the validated base case flowsheets, using standard metal balance techniques per unit operation. The process plant will include the following:

- crushed ore stockpile and reclaim;
- single SAB milling circuit, with the ball mill operated in closed circuit with cyclones for operation at the lower design throughput of 8.42Mt/a. This will be expanded to include a second ball mill, operating in parallel with the original ball mill circuit when the plant is expanded to a design capacity of 16.84Mt/a. The target grind size is a P80 of 106μm;
- a pebble crusher circuit is included. Pebbles are recirculated to the SAG mill during the 8.42Mt/a LEAN and early years of the 16.84Mt/a Golpu flowsheet with the pebble crusher included when necessitated by increased ore hardness in the later years of mine life;
- copper flotation comprising rougher flotation, copper rougher cleaner (single Jameson cell) which processes the first rougher concentrate, copper concentrate regrind, followed by a three-stage copper cleaner, and cleaner–scavenger stage;
- additional copper flotation cells forming part of the LEAN circuit are commissioned nine years post Special Mining Lease grant to accommodate the ramping of the process plant to design capacity of 16.84Mt/a. A pyrite rougher flotation circuit, which further processes the copper rougher tailings, is introduced 10 years post Special Mining Lease grant to meet the requirements of the increased metasediment content of the ore, corresponding to the porphyry content of less than 75%;
- a pyrite concentrate regrind circuit followed by cleaner and cleaner–scavenger stages;
- concentrate dewatering and handling;
- tailings thickening, pumping and water recovery;
- reagent mixing and distribution (including lime slaking, flotation reagents, and flocculants);
- grinding media storage and addition;
- water services (including raw water, fire water, potable water, and process water); and
- air services (including high-pressure air and low-pressure process air).

Concentrate will be pumped 103km via an overland pipeline to the port facility at Lae. The processes at the port includes:

- concentrate slurry tank storage;
- concentrate filtration plant to dewater concentrate; and
- concentrate filter cake discharged onto the ground for loading onto the ship.

Thickened tailings will be pumped 103km via an overland pipeline to the coast, 6km east of Lae, where they will undergo the following:

- storage in mixing tank; and
- pumping via marine outfall pipeline into the deep water Huon Gulf.

No water will be returned to the process plant downstream of the tailings thickener.

Qualified Persons

The QPs preparing the TRS were employed on a full-time basis by Harmony. The QPs' qualifications, areas of responsibility and personal inspection of the property are summarized in the table below:

Qualified Person	Prof. Assoc.	Qualifications	TRS Section Responsibility	Personal Insp.
Mr. R Reid	FAIG, MAusIMM	BSc(Hons), Grad.Dip(Sc)	3, 4, 5, 6, 7, 8, 9, 11	Regular Last Aug 2019
Mr. G Job	MAusIMM	BSc. MSc (Min Econ)	1, 2, 3, 15, 21, 22, 23	Regular, last 2020
Caveman Consulting	n/a	n/a	12, 13	2019
Mr. M Swart	FAusIMM, RPEQ, MIEPNG	BE (Met Eng), MBA	10, 14	None[1]
Ms. S Watson	MAusIMM	MSc, BSc. (Hons)	17	Regular
Mr. M Koehler	CAANZ	BBus Acc, Grad Dip (CA)	16, 18, 19	None[1]

Note:

[1] Not deemed necessary as no plant nor infrastructure has yet been constructed on site.

Exploration

The Wafi-Golpu project has had a long history of exploration dating back to the 1980s. The amount of exploration carried out over the Wafi-Golpu project area is significant and the volume of the results are too large to enable detailed reporting herein. The exploration results that have been used in the estimation of the Mineral Resources are identified.

A number of mapping programmes were conducted over the Wafi-Golpu project area including 1:10,000 fact mapping of available outcrop. Mapping data and subsequent interpretations were used together with drill hole data to model the deposit geology and structure. A structural model for the Wafi–Golpu area was compiled in 2011.

Geophysical surveys were conducted as part of the early-stage exploration activities. The following surveys were conducted:

- CRAE,1985: Dipole-dipole IP/resistivity survey;
- CRAE/Elders, 1990: Moving loop time domain electromagnetic ("**EM**") geophysical survey; and
- CRAE, 1991–1997: Aeromagnetic, ground magnetic, SP, IP, and CSAMT geophysical surveys

WGJV staff re-examined some of the geophysical data in 2018, as follows:

- the 1985 survey, conducted using 100m and 200m dipole spacing, was compiled and inverted in three-dimensions ("**3D**"). Generally high chargeability values were noted, and clearly defined the lithocap as a strong resistor above a relatively conductive zone of clay alteration; and
- the 1990 EM survey data were inverted in 3D and show a clear conductor that coincides with the top of the Golpu deposit. This conductor is probably due to sulphide veining which, unlike magnetite, has not been affected by late advanced argillic alteration.

CRAE completed ridge and spur sampling programmes from 1980–1982. CRAE also conducted an initial trenching programme comprising 102 trenches, varying in length from 1–1,840m, for a total 34,129m of trenching. Information from these programmes was superseded by drill data.

Drilling completed to date included diamond core drilling and RC. A total of 791 drill holes (including wedges) were completed in the project area since 1983, comprising 285,757m of core drilling and 17,180m of RC drilling. No drilling has been conducted since the end of 2018.

Mineral Resource Estimate

The Mineral Resource estimate assumes a bulk mining underground extraction method such as block caving and metallurgical recovery for copper and gold by sulphide flotation.

The Mineral Resource estimate is reported based on mass mining by block cave with no internal selectivity. The 40m x 40m x 40m parent block size was an appropriate cell size for the planned bulk mining method. The shell did not represent a conceptual block cave footprint and associated draw column height of draw. However, it did represent the economic material potentially recoverable from a major block cave. The primary model was passed through a NSR calculation sheet and a breakeven value shell was generated at margin 0 to remove isolated projections and incorporate a small volume of internal waste.

The metallurgical recovery model was based on copper flotation with copper and gold recovered to concentrate. Extensive testwork was completed to establish algorithms developed from variability modelling. Metallurgical domains were based on both the host rock type and alteration style. Each metallurgical domain was assigned a recovery algorithm, typically subdivided based on Cu:S and Au:S ratios.

The NSR estimation was required only to establish the Mineral Resource reporting breakeven value shell. Mining and milling costs were based on a block caving mining method and milling through a copper concentrator. The breakeven value shell spatially constraining the grade model includes internal waste, and excluded isolated above-cut-off blocks, which reflected the potential bulk mining scenario. There was no revenue assumed from silver or molybdenum in the NSR estimate; however, these elements were estimated as part of the Mineral Resource estimation process as there may be potential for these metals to be recovered with minor circuit modifications or concentrate contract negotiations, and therefore included in future Mineral Resource estimates.

Description	Unit	Value
Gold price	USD/oz	1,200
Copper price	USD/oz	3.00
AUD FX rate	USD:AUD	0.75
PGK FX rate	PGK:USD	3.10
Plant recovery factor - calculated	%	Varies

Note:

[1] Unit cost includes cash operating cost, royalty and ongoing development capital.

The cut-off value is a NSR value that contains typical costs for the mining method and preliminary mining and metallurgical recovery assumptions.

The Mineral Resources were originally prepared, classified and reported according to SAMREC, 2016. For the purposes of this report on Form 20-F, the Mineral Resources have been classified in accordance with Item 1302(d)(1)(iii)(A) of Regulation S-K. These Mineral Resources account for mining depletion recorded from July 2021 to June 2022.

The Mineral Resource estimate for Golpu, as at June 30, 2022, exclusive of the reported Mineral Reserves is summarized in the table below.

	Fiscal Year Ended June 30,														
	2022							2021							
		Grade			Metal Content				Grade			Metal Content			
Mineral Resource Category	Tonnes (Mt)	Gold (g/t)	Copper (%)	Silver (g/t)	Gold (kg)	Copper (Mt)	Silver (kg)	Tonnes (Mt)	Gold (g/t)	Copper (%)	Silver (g/t)	Gold (kg)	Copper (Mt)	Silver (kg)	% Change
Measured	—	—	—	—	—	—	—	—	—	—	—	—	—	—	n/a
Indicated	145	0.54	0.90	1.26	78,000	1,350	182,826	—	—	—	—	—	—	—	n/a
Total / Ave. Measured + Indicated	145	0.54	0.90	1.26	78,000	1.350	182,826	—	—	—	—	—	—	—	n/a
Inferred	70	0.62	0.86	1.10	44,000	0.60	74,455	—	—	—	—	—	—	—	n/a

Notes:

1. Mineral Resources are reported with an effective date of June 30, 2022 using the SAMREC, 2016. For the purposes of this table, the Mineral Resources have been classified in accordance with Item 1302(d)(1)(iii)(A) of Regulation S-K. The QP responsible for the estimate is Mr. Ronald Reid, FAIG, whose job title is Group Resource Geologist with Harmony Gold (PNG Services) Pty Limited.
2. Mineral Resources are reported on a 50% basis as Harmony holds a 50% interest in the WGJV.
3. Mineral Resources are reported exclusive of Mineral Reserves. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
4. Mineral Resources at Golpu are reported assuming a bulk mining underground extraction method and metallurgical recovery for copper and gold by sulphide flotation. Mineral Resources are reported above a NSR cut-off, which assumes a gold price of USD1,300/oz Au, a copper price of USD3.40/lb Cu, mining cost of USD8.37/t mined, processing cost of USD9.75/t processed, general and administrative (G&A) costs of USD4.17/t processed, copper concentrate treatment charge of USD100/dmt of concentrate, transport cost of USD33.50/wet tonne of concentrate, and copper refining charges of USD0.10/lb of recovered copper. Silver and molybdenum were not valued in the NSR cut-off; however, these elements were reported within the Mineral Resource as they were expected to be recovered with minor circuit modifications or concentrate contract negotiations. Over the LOM, it is anticipated that copper recoveries will average 94% and gold recoveries will average 68%.
5. Metal contents reported do not include allowances for processing losses.
6. Rounding as required by reporting guidelines may result in apparent differences between tonnes, grade and contained metal content. Rounding is to three significant figures.
7. Harmony is disclosing Mineral Resources in excluding Mineral Reserves for the first time for the year ended June 30. 2022 as required by Regulation S-K 1300. As a result, historical Mineral Resources are not available.

Mineral Resource estimate for Wafi, as at June 30, 2022, exclusive of the reported Mineral Reserves is summarized in the table below:

	Fiscal Year Ended June 30,														
	2022							2021							
		Grade			Metal Content				Grade			Metal Content			
Mineral Resource Category	**Tonnes (Mt)**	**Gold (g/t)**	**Copper (%)**	**Silver (g/t)**	**Gold (kg)**	**Copper (Mt)**	**Silver (kg)**	**Tonnes (Mt)**	**Gold (g/t)**	**Copper (%)**	**Silver (g/t)**	**Gold (kg)**	**Copper (Mt)**	**Silver (kg)**	**% Change**
Measured	—	—	—	—	—	—	—	—	—	—	—	—	—	—	n/a
Indicated	54	1.66	—	—	0.089	—	—	—	—	—	—	—	—	—	n/a
Total / Ave. Measured + Indicated	54	1.66	—	—	89,000	—	—	—	—	—	—	—	—	—	n/a
Inferred	20	1.37	—	—	26,000	—	—	—	—	—	—	—	—	—	n/a

Notes:

1. Mineral Resources are reported with an effective date of June 30, 2022 using the SAMREC, 2016. For the purposes of this table, the Mineral Resources have been classified in accordance with Item 1302(d)(1)(iii)(A) of Regulation S-K. The QP responsible for the estimate is Mr. Ronald Reid, FAIG, whose job title is Group Resource Geologist with Harmony Gold (PNG Services) Pty Limited.
2. Mineral Resources are reported on a 50% basis as Harmony holds a 50% interest in the WGJV.
3. Mineral Resources are reported exclusive of Mineral Reserves. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
4. Mineral Resources at Wafi are reported assuming open pit mining methods with limited internal selectivity, and a process method that is anticipated to be a combination of a CIP and CIL operation, with a flotation sulphide recovery mill process. The estimates are reported at cut-offs of 0.4g/t Au for non-refractory gold mineralisation ("NRG") and 0.9g/t Au for refractory gold mineralisation ("RG"). Mineral Resources are constrained within a conceptual open pit shell that uses the following input assumptions: gold price of USD1,400/oz; mining costs of USD5.40/t mined, and process and general and administrative costs of USD17.30/t processed. Metallurgical recovery is estimated at 91% gold recovery NRG and minimum of 47% recovery for RG. Pit slope approximate overall angles range from 33° in oxidised material to 65° in fresh rock.
5. Metal contents reported do not include allowances for processing losses.
6. Rounding as required by reporting guidelines may result in apparent differences between tonnes, grade and contained metal content. Rounding is to three significant figures.
7. Harmony is disclosing Mineral Resources excluding Mineral Reserves for the first time for the year ended June 30. 2022 as required by Regulation S-K 1300. As a result, historical Mineral Resources are not available.

For additional information, see the TRS on each individual property, filed as an Exhibit of this annual report on Form 20-F.

Mineral Resource estimate for Nambonga, as at June 30, 2022, exclusive of the reported Mineral Reserves is summarized below:

	Fiscal Year Ended June 30,														
	2022							2021							
		Grade			Metal Content				Grade			Metal Content			
Mineral Resource Category	**Tonnes (Mt)**	**Gold (g/t)**	**Copper (%)**	**Silver (g/t)**	**Gold (kg)**	**Copper (Mt)**	**Silver (kg)**	**Tonnes (Mt)**	**Gold (g/t)**	**Copper (%)**	**Silver (g/t)**	**Gold (kg)**	**Copper (Mt)**	**Silver (kg)**	**% Change**
Measured	—	—	—	—	—	—	—	—	—	—	—	—	—	—	n/a
Indicated	—	—	—	—	—	—	—	—	—	—	—	—	—	—	n/a
Total / Ave. Measured + Indicated	—	—	—	—	—	—	—	—	—	—	—	—	—	—	n/a
Inferred	24	0.69	0.20	—	16,000	0.05	—	—	—	—	—	—	—	—	n/a

Notes:

1. Mineral Resources are reported with an effective date of June 30, 2022 using the SAMREC, 2016. For the purposes of this table, the Mineral Resources have been classified in accordance with Item 1302(d)(1)(iii)(A) of Regulation S-K. The QP responsible for the estimate is Mr. Ronald Reid, FAIG, whose job title is Group Resource Geologist with Harmony Gold (PNG Services) Pty Limited.
2. Mineral Resources are reported on a 50% basis as Harmony holds a 50% interest in the WGJV.
3. Mineral Resources are reported exclusive of Mineral Reserves. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
4. Mineral Resources at Nambonga are reported assuming a bulk mining underground extraction method. The Mineral Resource is reported using an assumed 0.5g/t Au cut-off grade. This cut-off grade is based on the adjacent Golpu deposit as an analogue, assumes an overall mining, processing, and general and administrative operating cost estimate of about USD15.50/t, a gold price of UDD1,300/oz, and a metallurgical recovery of 85% for gold. This equates to a cut-off grade of approximately 0.46g/t Au, based on gold only. Conceptual costs associated with copper and silver recovery were approximated as equivalent to 0.04g/t Au. The total cutoff grade for reporting purposes was 0.5g/t Au.
5. Metal contents reported do not include allowances for processing losses.
6. Rounding as required by reporting guidelines may result in apparent differences between tonnes, grade and contained metal content. Rounding is to three significant figures.
7. Harmony is disclosing Mineral Resources in excess excluding Mineral Reserves for the first time for the year ended June 30. 2022 as required by Regulation S-K 1300. As a result, historical Mineral Resources are not available.

Mineral Reserve Estimate

The Mineral Reserves were originally prepared, classified and reported according to SAMREC, 2016. For the purposes of this report on Form 20-F, the Mineral Reserves have been classified in accordance with Item 1302(d)(1)(iii)(A) of Regulation S-K.

Mineral Reserves are derived from the Mineral Resources, a detailed business plan and the operational mine planning processes. Mine planning utilizes and takes into consideration historical technical parameters achieved. In addition, Mineral Resource conversion to Mineral Reserves considers certain modifying factors, dilution, ore losses, minimum mining widths, planned mine call and plant recovery factors.

The proposed mine life will be 28 years from first production through the processing plant (excluding construction and closure phases). Cost estimates used in the preparation of the Mineral Reserves are based on the most recent mining studies completed in 2018. The Mineral Reserves consist of material that, when delivered to the mine portal, has a recovered value greater than the cost of all downstream processes, including fixed costs and associated dilution.

The mine to port area, surface services and infrastructure, BC44 and BC42, underground services, and infrastructure areas are designed to a feasibility level of confidence. The BC40 cave footprint and thus extraction level layout, are designed at a pre-feasibility confidence level. The infrastructure for BC40 is identical to that of BC44 and BC42 and is at a feasibility level of confidence. There will be no additional surface infrastructure for BC40.

The Mineral Reserve estimate for Golpu, as at June 30, 2021 and 2022, is summarized in the table below.

	Fiscal Year Ended June 30,														
	2022							2021							
		Grade			Metal Content				Grade			Metal Content			
Mineral Reserve Category	**Tonnes (Mt)**	**Gold (g/t)**	**Copper (%)**	**Silver (g/t)**	**Gold (kg)**	**Copper (Mt)**	**Silver (kg)**	**Tonnes (Mt)**	**Gold (g/t)**	**Copper (%)**	**Silver (g/t)**	**Gold (kg)**	**Copper (Mt)**	**Silver (kg)**	**% Change**
Proven	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Probable	200	0.86	1.2	—	171,000	2.45	—	200.00	0.86	1.20	—	171,000	2.45	—	—
Total / Ave. Proven + Probable	**200.00**	**0.86**	**1.20**	**—**	**171,000,**	**2.45**	**—**	**200.00**	**0.86**	**1.20**	**—**	**171,000**	**2.45**	**—**	**—**

Notes:

1. Mineral Reserves are reported with an effective date of June 30, 2022, using the SAMREC, 2016. For the purposes of this table, the Mineral Reserves have been classified in accordance with Item 1302(d)(1)(iii)(A) of Regulation S-K. The QP responsible for the estimate is Caveman Consulting.
2. Mineral Reserves are reported on a 100% basis. Harmony holds a 50% interest in the WGJV.
3. Mineral Reserves are reported using the following assumptions: block cave mining method, gold price of USD1,200/oz Au, copper price of USD3.00/lb Cu, above a net smelter return cut-off of USD10/t (development), USD60/t (BC44), USD40/t (BC42), USD19.15/t (BC40), variable metallurgical recoveries by metallurgical domain. The total dilution is estimated to be about 17% with toppling contributing approximately 1.5%.
4. Tonnes, grade, and content are declared as net delivered to the mills. Metal contained in tonnages do not include allowances for processing losses.
5. Rounding as required by reporting guidelines may result in apparent differences between tonnes, grade and contained metal content. Rounding is to three significant figures.

The previous Mineral Reserve estimate (June 2021) is identical to the current Mineral Reserve estimate and therefore no reconciliation is required.

The modifying factors are presented in the table below:

Modifying Factor	Unit	Value
Gold Price	USD/oz	1,200
Copper Price	USD/lb	3.00
Exchange Rate		
Aus Dollar : USD		0.75
PGK : USD		3.10
NSR Cutoff		
Development	USD/t	10.00
BC44	USD/t	60.00
BC42	USD/t	40.00
BC40	USD/t	19.15
Metallurgical Recoveries (by Domain)	%	Various
Total Dilution	%	17.0
Including Toppling	%	1.5

For additional information, see the TRS on each individual property, filed as an Exhibit of this annual report on Form 20-F.

Mineral Resource and Mineral Reserve Internal Controls Disclosure

Harmony's Mineral Resources and Mineral Reserves estimates are subject to internal Competent Persons reviews administered by the Central Ore Reserve Management team and cyclically by external and independent experts.

Harmony's Mineral Reserve is an outcome of the Company's business planning process which runs annually. This process operates within a comprehensive framework where all inputs, including costs and capital requirements, are generated by the operation, and reviewed at a regional and corporate level within the Company, thereby providing confidence in the estimates.

Harmony follows an embedded process of third-party reviews to provide expert independent assurance regarding the Mineral Resources and Mineral Reserves estimates and compliance to the appropriate reporting codes.

In line with Harmony's policy that each material operation will be reviewed by an independent third party on average no less than once every three years, or when triggered by a material new Mineral Resource and/or Mineral Reserve declaration, the following operations were subject to external review during 2022: Moab Khotsong, Target, Kalgold and Hidden Valley. No material issues were identified in the estimation processes and LOM plans and Compliance Certificates have been issued by the independent consultants for these operations. The certificates state that the Mineral Resources and Mineral Reserves have been estimated and reported in accordance with SAMREC, 2016. Importantly, third-party audits are also configured to assist with continuous improvement regarding leading practice in Resources and Reserves estimation and reporting.

ITEM 4A. UNRESOLVED STAFF COMMENTS

Not applicable.

ITEM 5. OPERATING AND FINANCIAL REVIEW AND PROSPECTS

You should read the following discussion and analysis together with our consolidated financial statements, including the related notes, set forth beginning on page F-1.

A discussion of the changes in our financial condition and results of operations between the fiscal years ended June 30, 2020 *and 2021, has been omitted from this Harmony* 2022 *Form 20-F, but may be found in* Item 5: *"Operating and Financial Review and Prospects", of the Harmony 2021 Form 20-F for the year ended June 30, 2021, filed with the SEC on October 29, 2021, which is available free of charge on the SEC's website at www.sec.gov and our website at www.harmony.co.za.*

Overview

Harmony is currently the largest producer of gold in South Africa and is furthermore an important producer in PNG. Our gold sales for fiscal 2022 were 46,153 kilograms of gold (1.48 million ounces of gold) and in fiscal 2022 we processed approximately 53.8 million tonnes of ore. As at June 30, 2022, our mining operations and projects reported total proved and probable Mineral Reserves of approximately 39.8 million gold and gold equivalent ounces, measured and indicated Mineral Resources (exclusive of Mineral Reserves) of approximately 51.3 million gold and gold equivalent ounces and inferred Mineral Resources (exclusive of Mineral Reserves) of approximately 38.4 million gold and gold equivalent ounces. For further information on the company's Mineral Resources and Mineral Reserves, see Item 4: *"Information on the Company - Property, Plant and Equipment - Mineral Resource and Mineral Reserve Summary Disclosure"*.

Operating segments are reported in a manner consistent with the internal reporting provided to the CODM. See note 41 "*Segment Report*" of our consolidated financial statements set forth beginning on page F-1 for further details.

For segment purposes, management distinguishes between "Underground" and "Surface", with each shaft or group of shafts or open-pit mine managed by an operational team.

Our reportable segments are as follows:

- Bambanani, Doornkop, Joel, Kusasalethu, Masimong, Moab Khotsong, Target 1, Tshepong Operations, Unisel, Mponeng, MWS (as of July 2021) and Hidden Valley; and
- all other surface operations, including those that treat historic sand dumps, WRDs and tailings dams, are grouped together under *"All other surface operations*".

A. OPERATING RESULTS

Key factors affecting our results

Gold Prices

Most of our revenues are derived from the sale of gold. As a result, our operating results are directly related to the price of gold. Historically, the price of gold has fluctuated widely. The gold price is affected by numerous factors over which we do not have control, including for instance, Covid-19 and certain geopolitical events. See Item 3: *"Key Information - Risk Factors - Strategic and Market Risks - The profitability of our operations, and cash flows generated by those operations, are affected by changes in the price of gold and other metals; a fall in the gold price below our cash cost of production and capital expenditure required to maintain production for any sustained period may lead to losses and require us to curtail or suspend certain operations"*. As a general rule, we sell the majority of our gold produced at market prices to obtain the maximum benefit from increases in the prevailing gold price.

Since fiscal 2017, Harmony entered into derivative contracts to manage the variability in cash flows from the Group's production, in order to create cash certainty and protect the Group against lower commodity prices. As at June 30, 2022 the limits set by the Board were for 20% of the production from gold over a 24-month period. The limit set by the Board for silver is 50% of the exposure over a 24-month period. Management continues to top up these programs as and when opportunities arise to lock in attractive margins for the business, but are not required to maintain hedging at these levels.

A portion of the production of the South African operations is linked to Rand gold forward sale contracts. The Rand gold forward contracts have been designated as cash flow hedging instruments and hedge accounting is applied on these contracts. US$ gold forward sale contracts were entered into for the production of the Hidden Valley operation and have been designated as cash flow hedging instruments.

Harmony's indirect subsidiary, MWS**,** acquired as part of the Mponeng Acquisition, has a contract with Franco-Nevada Barbados ("**Franco-Nevada**") pursuant to which Franco-Nevada is entitled to receive 25% of all the gold produced through MWS. As part of the Mponeng Acquisition, Harmony assumed the obligations under the Franco-Nevada contract.

The Franco-Nevada contract is a streaming agreement to purchase 25% of the gold production through MWS for a fixed amount of consideration until the balance of gold cap is delivered. The gold cap is a provision included in the contract, which stipulates the maximum quantity of gold to be sold to Franco-Nevada over the term of the contract. The consideration is determined as the lower of the quoted spot gold price as per the London Metals Exchange or US$400 per ounce, subject to an annual escalation adjustment. As the performance obligation to deliver gold is met, the contract liability unwinds into revenue.

Significant changes in the price of gold over a sustained period of time may lead us to increase or decrease our production in the near term.

Harmony's Realized Gold Price

In fiscal 2022, the average gold price received by us was R894,218 per kilogram or $1,829/oz. This average gold price includes the realized gains on the hedging instruments, where hedge accounting was applied.

There was a notable increase in the price of gold following the outbreak of Covid-19 and again after Russia's invasion of Ukraine. The price of gold in US$ terms closed at US$1,807/oz on June 30, 2022, relatively unchanged from the closing price of US$1,770/oz on June 30, 2021. The average spot gold price received (that is, excluding the impact of hedging gains or losses) for the 2022 year was 1% higher at US$1,815/oz than in 2021 (US$1,805/oz).

Harmony is exposed to the impact of any significant decreases in the commodity prices on its production. This is mitigated to some extent by commodity derivatives and hedging arrangements, but as Harmony has limitations for the volume of forward sales, commodity derivatives or hedging arrangements it may enter into for its future production, it is exposed to the impact of decreases in the commodity prices on the remainder of its unhedged production. See Item 3: *"Key Information - Risk Factors - Risk Related to Our Industry - We are exposed to the impact of any significant decreases in the commodity prices on our production",* and *" - Strategic and Market Risks - The profitability of our operations, and cash flows generated by those operations, are affected by changes in the price of gold and other metals; a fall in the gold price below our cash cost of production and capital expenditure required to maintain production for any sustained period may lead to losses and require us to curtail or suspend certain operations"*.

In addition to the US$ gold price, the gold price received is impacted by the exchange rate of the Rand and other non-US$ currencies to the US dollar. An appreciation of the Rand and other non-US$ currencies against the US dollar will result in a decrease in the revenue recorded, without considering the impact of the hedging instruments. Conversely, a depreciation of these currencies against the US dollar would result in an increase of revenue recorded. See Item 3: *"Key Information - Risk Factors - Strategic and Market Risks - Foreign exchange fluctuations could have a material adverse effect on our operational results and financial condition"*. During fiscal 2022, the exchange rate appreciated from R15.40/US$1 in fiscal 2021, to R15.21/US$1 in fiscal 2022. See "- *Exchange Rates*" below for a further discussion.

The following table sets out the average, the high and the low London Bullion Market price of gold and our average sales price during the past two fiscal years:

	Fiscal Year Ended June 30,	
	2022	**2021**
Average (US$/oz)	1,834	1,850
High (US$/oz)	2,052	2,063
Low (US$/oz)	1,726	1,681
Harmony's average sales price[1] (US$/oz))	1,829	1,719
Average exchange rate (R/US$)	15.21	15.40
Harmony's average sales price[1] (Rand/kilogram)	894,218	851,045

[1]Our average sales price differs from the average gold price due to the timing of our sales of gold within each year. In addition, the effect of hedge accounting i.e. realized gains/losses from the cash flow hedges have been included in revenue.

Costs

Our cash costs typically make up between 70% and 80% of our total costs (excluding impairments and disposal/loss on scrapping of assets). The remainder of our total costs consists primarily of exploration costs, employment termination costs, corporate and sundry expenditure, and amortization and depreciation. Our cash costs consist primarily of production costs. Production costs are incurred on labor, equipment, consumables and utilities. Labor costs are the largest component and typically comprise between 55% and 60% of our production costs.

Our US dollar translated costs are very sensitive to the exchange rate of the Rand and other non-US currencies to the US dollar. See "- *Exchange Rates*" below. Appreciation of the Rand and other non-US currencies against the US dollar increases working costs at our operations when those costs are translated into US dollars. See Item 3: "*Key Information - Risk Factors - Strategic and Market Risks - Foreign exchange fluctuations could have a material adverse effect on our operational results and financial condition*".

All-in sustaining unit costs for the Group increased by 15.6% to R835,891 per kilogram in fiscal 2022 mainly due to inflationary increases in wages and salaries, increases in consumables as well as electricity tariff increases. Royalties decreased due to lower profitability on the back of lower production, partially offsetting the increased costs. Also contributing to the increase in all-in sustaining unit costs is the inclusion of costs related to the Mponeng and MWS operations, acquired as part of the Mponeng Acquisition with effect from October 1, 2020 i.e., which contributed for the full year in fiscal 2022, compared to nine months in the prior year.

Our cash costs have increased from R600,592 per kilogram in fiscal 2021 to R701,024 per kilogram in fiscal 2022, mainly due to increased labor and energy costs and inflationary pressures on supply contracts. The increase is also attributable to the inclusion of costs attributable to the Mponeng and MWS operations for the entire fiscal year.

Management conducts a thorough review of costs at all operations to ensure that costs are properly managed and within budget. However, it should be noted that there are risks beyond our control such as safety stoppages, which would result in production being negatively affected while certain costs would still be incurred. This is discussed in more detail in Item 3: "*Key Information - Risk Factors - Risks Related to ESG - Given the nature of mining and the type of gold mines we operate, we face a material risk of liability, delays and increased cash costs of production from environmental and industrial accidents and pollution compliance breaches*" and "- *Risks Related to Our Industry- The nature of our mining operations presents safety risks*". We are also exposed to price increases on electricity, which is regulated, as well as the implementation of other levies such as carbon tax. See Item 3: "*Key Information - Risk Factors - Risks Related to Our Operations and Business - Disruptions to the supply of electricity and increases in the cost of power may adversely affect our results of operations and financial condition*" and "- *Risks Related to ESG - Compliance with emerging climate change regulations and other sustainability measures could result in significant costs for us*".

We remain subject to risks related to the volatility of commodity prices, as well as potential shortage of supply and disruptions of supply chain due to the ongoing geopolitical instability caused by Covid-19 and the related lockdowns experience worldwide as well as the conflict in Ukraine. See Item 3: "*Key Information - Risk Factors - Risks Related to Our Industry - The impact from, and measures taken to address, the Covid-19 pandemic may adversely affect our people, and may impact our business continuity, operating results, cash flows and financial condition*", "- *Strategic and Market Risks - Fluctuations in input production prices linked to commodities may adversely affect our operational results and financial condition"* and "- *Risks Related to Our Operations and Business - Actual and potential shortages of production inputs and supply chain disruptions may affect our operations and profits"*.

Production levels

In addition to gold prices, Harmony's gold income in any year is also influenced by its level of gold production. Production levels are in turn influenced by grades, tonnages mined and processed through the plant, and metallurgical recoveries. Gold production decreased between 2021 and 2022, from 1,535,352 ounces in 2021 to 1,486,517 ounces in 2022. For more information on our business and operations, see Item 4: *"Information on the Company — Business Overview"* and *"- Property, Plant and Equipment - Mineral Resource and Mineral Reserve Summary Disclosure".*

Exchange Rates

Our revenues are very sensitive to the exchange rate of the Rand and other non-US currencies to the US dollar. Since gold is generally sold in US dollars, most of our revenues are received in US dollars. Currently, the majority of our earnings are generated in South Africa. Appreciation of the Rand against the US dollar decreases our revenues, which serves to reduce operating margins and net income from our South African operations. Depreciation of the Rand against the US dollar increases the revenue, which serves to increase operating margins and net income from our South African operations. Accordingly, strengthening of the Rand generally results in poorer earnings for us if there is not a similar increase in the gold price.

The exchange rates obtained when converting US dollars to Rand are determined by foreign exchange markets, over which we have no control. The spot rate as at June 30, 2022 was R16.27 per US$1.00, compared with R14.27 per US$1.00 as at June 30, 2021, reflecting a depreciation of 14% of the Rand against the US dollar. The average exchange rate for fiscal 2022 was R15.21 per US$1.00, reflecting an appreciation of 1% of the Rand against the US dollar when compared with fiscal 2021. The average gold price received by us during fiscal 2022, before including the effect of the cash flow hedges, decreased by R16,110 per kilogram to R883,453 per kilogram from R899,563 per kilogram during fiscal 2021.

The majority of our working costs are incurred in Rand and, as a result of this, any appreciation of the Rand against the US dollar would increase our working costs when translated into US dollars. Depreciation of the Rand against the US dollar would cause a decrease in our costs in US dollar terms. Similarly, at our international operations, appreciation of the Australia dollar or Kina against the US dollar would cause an increase in our costs in US dollar terms. See Item 3: *"Key Information - Risk Factors - Strategic and Market Risks - Foreign exchange fluctuations could have a material adverse effect on our operational results and financial condition"*.

We have several credit facilities and loans denominated in US dollars. This exposes us to the changes in the Rand and Kina against the US dollar, which would affect the borrowing amount as well as the interest recognized. This will also affect the cash flows when the borrowings are raised and repaid as well as at the time of the payments of the interest.

The Rand had strengthened significantly during fiscal 2021, a year following the Covid-19 outbreak. In fiscal 2022, the Rand weakened against the US and Australian dollar and closed at R16.27/US$1.00 (2021: R14.27/US$1.00) and R11.25/A$1 (2021: R10.72/A$1) respectively. Management believes this volatility could be a reflection of growing concern in market sentiment fears surrounding recessions in key economies and current and/or further geopolitical tensions. These movements in the currencies expose the Group's operations to foreign currency gains and losses on foreign-denominated receivables and liabilities, including derivatives. They also impact the Group's translation of its international operating results and net assets into its Rand presentation currency, which resulted in a foreign exchange translation gain of R742 million for fiscal 2022 (2021: R1.2 billion loss).

Harmony has entered into foreign exchange derivative contracts in the form of zero cost collars, which establish a minimum (floor) and maximum (cap) Rand/US dollar exchange rate at which to convert US dollars to Rand. The Group also uses forward exchange contracts to manage the risks. At June 30, 2022, the nominal amount of the derivative contracts was US$60 million and is over a six-month period with a weighted average cap price of US$1=R17.98 and weighted average floor price of US$1=R15.98. Additionally, at June 30, 2022 Harmony had open forward exchange forward contracts which had a nominal amount of US$6 million spread over a three-month period at an average exchange rate of US$1 = R16.84.

The Bank of Papua New Guinea has been systematically allowed the Kina to weaken against the US dollar over several years. In fiscal 2021, the Kina weakened by 1.4% and in fiscal 2022 weakened further by 0.4%. Since the introduction of a 150 basis point trading band in June 2014, the Kina weakened by 45.42% against the US dollar as at June 30, 2022. Should the trading band continue and depending on the level the exchange rate is set at, it could have a negative impact on the results of the Hidden Valley operation, as well as the cost of development at Wafi-Golpu and other PNG exploration sites.

Geopolitical tensions

Our revenue may be affected by geopolitical factors. As a result of the geopolitical tensions and armed conflict between Russia and Ukraine due to the recent Russia's military invasion of Ukraine, the governments of the United States, the European Union ("**EU**"), the United Kingdom and other jurisdictions announced the imposition of various sanctions against Russia. Despite the fact that Harmony has limited commercial interests in Russia, Ukraine and the current areas of conflict, these and any additional sanctions or export controls, as well as any counter responses by Russia or other jurisdictions, have led to a sharp increase in oil and energy prices, which are important input costs for the group's business. Furthermore, the invasion of Ukraine and the retaliatory measures that have been taken, and could be taken in the future, by the United States, the EU, the United Kingdom, NATO and other jurisdictions have created global security concerns that could result in a regional or global conflict and otherwise have a lasting impact on regional and global economies, any or all of which could adversely affect our business. We are monitoring the developments in the armed conflict between Russia and Ukraine and their impact on various metrics such as gold price, cost of sales and capital equipment. See Item 3: *"Key Information - Risk Factors - Strategic and Market Risks - Fluctuations in input production prices linked to commodities may adversely affect our operational results and financial condition*" and "- *Rising inflation, including as a result of Russia's invasion of Ukraine, may have a material adverse effect on our business, operating results and financial condition*".

Inflation

Our operations have been materially affected by inflation. Inflation in South Africa was 7.4% at the end of fiscal 2022, up from 4.9% at the end of fiscal 2021. The increase in inflation in fiscal 2022 primarily related to global supply chain constraints due to the Covid-19 pandemic, which was then further exacerbated by Russia's invasion of Ukraine. Working costs have increased considerably over the past several years resulting in significant cost pressures for the mining industry. In addition, the effect on inflation of the increase in electricity tariffs of 9.6% in fiscal 2022 and 15.6% in fiscal 2021, together with an increase that is yet to be determined by Eskom in fiscal 2023, will have a negative effect on the profitability of our operations.

We have seen significant increases in consumable costs for our mining operations as a result of the global inflationary pressure experienced in the latter half of fiscal 2022. This increase, combined with geopolitical risks and conflicts disrupting supply chains and further compounding inflationary pressure, will see continued increases through 2023. The most significant increases in consumable costs have been seen on steel and general materials, chemicals and reagents, diesel and blasting and explosives costs.

On September 16, 2021, Harmony announced the acceptance of a three-year wage agreement by the unions, effective from July 2, 2021 to June 30, 2024. The agreement allows for the following wage increases:

- Category 4 to 8 employees will receive a wage increase of R1,000 for each year of the wage agreement. This translates to an average increase of 8.4% for employees across these categories;
- Miners, Artisans and Officials will receive a wage increase of 6% of their basic wage for each year of the agreement;
- The total average wage increase negotiated is 7.8% in year one, 7.4% in year two and 7.0% in year three; and
- 98% of Harmony employees are part of the bargaining unit covered by this wage agreement.

The inflation rate in PNG ended fiscal 2021 at 3.3%, while the annualized inflation stood at 6.9% at the end of fiscal 2022.

Our profits and financial condition could be adversely affected if, increased costs due to inflation, are not offset by a concurrent devaluation of the Rand and other non-US currencies and/or an increase in the price of gold. See Item 3: *"Key Information - Risk Factors - Strategic and Market Risks - Rising inflation, including as a result of Russia's invasion of Ukraine, may have a material adverse effect on our business, operating results and financial condition".*

Covid-19

In addition to the impact of the Covid-19 pandemic on the gold price and costs discussed above, the Covid-19 pandemic has the potential to have an adverse impact on our operations by causing supply chain delays and disruptions, import restrictions or shipping disruptions. This could be as a result of interventions in countries where new variants emerge against which the current vaccinations are not effective, where the populations have not been sufficiently vaccinated to limit the spread of the virus or where governments otherwise continue restrictive policies, such as China. Should our suppliers be based in these countries, or significant components of the products be manufactured in these countries, our ability to obtain critical consumables could be affected as well as limiting the ability of employees and important third-parties from traveling to our operations. Management is actively sourcing alternative products where necessary to ensure that there is minimal disruption to our operating activities.

With the national lockdown in South Africa, which began in March 2020, now ended and the associated regulations discontinued, Harmony manages Covid-19 as part of its day-to-day activities. This is also the case at the Hidden Valley operation in PNG. The virus will still be prevalent in normal day-to-day living, however, unlike in fiscal 2021, a significant percentage of the population has been vaccinated against Covid-19.

The extent to which the Covid-19 pandemic may impact our results in future cannot be predicted, notably the possibility of new variants that elude the current regime of vaccinations. However, the evolution of the vaccine technology during the pandemic could see a faster turnaround of the next generation than in the initial stages. See Item 3: *"Key Information - Risk Factors - Risk Related to Our Industry - The impact from, and measures taken to address, the Covid-19 pandemic may adversely affect our people, and may impact our business continuity, operating results, cash flows and financial condition"*, and note 4 *"Impact of changes in global operating and economic environment"* of our consolidated financial statements set forth beginning on page F-1 for further details.

South African Socio-Economic Environment

We are domiciled and listed in South Africa and the majority of our operations are in South Africa. As a result, we are subject to various economic, fiscal, monetary and political policies and factors that affect South African companies generally. See Item 3: "*Key Information - Risk Factors - Risks Related to ESG - The socio-economic framework in the regions in which we operate may have an adverse effect on our operations and profits*".

In particular, South African companies are subject to exchange control limitations. While exchange controls have been relaxed in recent years, South African companies remain subject to restrictions on their ability to deploy capital outside of the Southern African Common Monetary Area. See Item 10: "*Additional Information - Exchange Controls*".

We must also comply with the SLPs that have been developed for each of our South African operations. These SLPs are prepared in line with legislation governing the participation of HDSAs in mining assets.

We have been granted mining licenses under the MPRDA necessary for the conduct of our current operations. As such we have therefore already incurred expenses relating to HDSA participation. We believe the biggest challenge will lie in maintaining these licenses, as we will have a responsibility in respect of human resource development, procurement and local economic development. We are however unable to provide a specific amount of what the estimated cost of compliance will be, but we will continue to monitor these costs on an ongoing basis. See Item 4: "I*nformation on the Company - Business Overview - Regulation - Mineral Rights - South Africa – The Mining Charter.*"

Electricity in South Africa

The South African state utility, Eskom, generates approximately 90% of the electricity used in South Africa and approximately 40% of the electricity used in Africa. Eskom generates, transmits and distributes electricity to industrial, mining, commercial, agricultural and residential customers and redistributors. During fiscal 2022, the electricity supply in South Africa remained constrained, with continued power interruptions (also referred to as load shedding). The power interruptions did not have a material impact on production at the underground operations during the current fiscal year but did have a negative impact on the surface waste rock dump volumes. Increasing global demand for energy, concerns about nuclear power and the limited growth of new supply are also impacting the price and supply of energy. Actual and proposed pricing, uncertainty around the implementation of carbon taxes as well as the potential through-flow of costs to the consumer from Eskom, unrest and potential conflict in the Middle East as well as the recent armed conflict between Russia and Ukraine, among other factors, has resulted in increased demand or constrained supply and escalating oil and energy prices.

The supply and demand for electricity is still very tight especially during the evening peak periods between 5:00 p.m. and 8:00 p.m. Harmony has signed up four sites, which provide pumping and/or ventilation services, to participate in a pilot from Eskom called Critical Peak Pricing. For a limited number of hours, when the electrical network is under pressure, Eskom notifies the operation that tariffs will be increased significantly. For the rest of the time there is a saving on energy tariffs compared to non-participating shafts. In addition to this, Harmony has renewed its contract agreement with an Energy Service Company ("**ESCO**") to ensure that various energy saving projects are implemented and sustained. Although Eskom has proposed to reduce the ratio between different Time-of-Use periods, these changes were not approved by NERSA.

The South African government remains committed to ensuring energy security for the country, through the roll-out of the independent power producer program as an integral part of the energy mix. It remains committed to ensuring the provision of reliable and sustainable electricity supply, as part of mitigating the risk of carbon emissions. In 2019 the South African President announced that Eskom would be unbundled into three wholly owned subsidiaries, being Generation, Transmission and Distribution to better manage the operations. The initial plan was for Transmission to be unbundled by December 31, 2021, with Generation and Distribution to follow in December 2022. Based on the latest information available from Eskom, the legally binding merger agreement to transfer its Transmissions division to its wholly-owned subsidiary was executed but is subject to the satisfaction of certain suspensive conditions. These conditions include obtaining all applicable creditors consent, which Eskom and its advisors are currently in the process of arranging. There has been no further updates on planned completion dates for this, or the unbundling of the Generation and Distribution divisions. See Item 3: *"Key Information - Risk Factors - Risks Related to Our Operations and Business - Disruptions to the supply of electricity and increases in the cost of power may adversely affect our results of operations and financial condition"*.

Renewable energy

Energy is the critical component of the country's future policy mix. Future supply of electricity will be influenced by the extent to which renewables, primarily wind, are efficient, sustainable and ensure security of electricity supply at competitive economic prices.

Forecasts predict that renewable energy technologies, predominantly solar- and wind-based systems, will grow further in the coming decades, overcoming coal-based electricity around 2030 (IEA, 2015). South Africa is no exception and renewable energy has entered the country's electricity landscape as a significant trend.

Discussions around other technologies, such as gas-to-power and nuclear energy, are also adding to this dynamic. Significant vested interests are still at play alongside substantial state support to maintain the domination of the coal industry over the electricity supply industry in South Africa. On August 12, 2021, the Minister released the exemption which raises the registration threshold for self-generation facilities from 1MW to 100MW. This allowed us to move forward with Phase 2 and Phase 3 of our solar power plans with limited restrictions, whereas Phase 1 required a lengthy approval process through the NERSA approval channels.

Harmony is also looking at its own energy security and decarbonization, as well as ways to managing the rising cost of energy supply. To this end, we have devised our phased decarbonization strategy which includes:

- Phase 1 - 30MW solar power, which is currently under construction;
- Phase 2 - 137MW solar energy, which will be installed at our longer-life mines; and
- Phase 3 - 56MW of additional solar power.

This will be facilitated through funding obtained including:

- Phase 1 will be constructed by our independent power producer partners and will consist of three 10MW solar plants in the Free State; we have a 15-year power purchase agreement in place for this project; and
- R1.5 Billion Green Term Loan for phase 2 which closely matches the solar photovoltaic ("**PV**") projects expected cash flow and the expected energy cost savings;

All additional funding required will be drawn from our general facilities including:

- R2.5 Billion Syndicated Revolving Credit Facility; and
- US$400 million Syndicated Facility.

See Item 10: "*Material Contracts - R1.5 Billion Green Term Loan" "– R2.5 Billion Syndicated Revolving Credit Facility*", and "*- US$400 Syndicated Million Facility*". See also "*– Governance – Social and ethics committee: Chairperson's report*" on pages *203 to 205*, "*– Environment – Environmental management and stewardship*" on pages *89 to 96* and *Climate change, energy and emissions management*" on page 100 to 105 the Integrated Annual Report for the 20-F 2022.

Electricity tariffs

As a major electricity consumer and mostly being supplied by Eskom, Harmony is exposed to significant additional costs as a result of rising electricity tariffs. In February 2022, Eskom was granted a 9.6% tariff increase, which it is still assessing. Eskom's unsustainably high debt and falling sales are likely to continue to contribute to further above-inflation tariff increases. This is likely to result in further self-generation activity by Eskom's customers, which could further weaken Eskom. Although a new MYPD should provide price stability, challenges remain. See Item 3*: "Key Information - Risk Factors - Risks Related to Our Operations and Business - Disruptions to the supply of electricity and increases in the cost of power may adversely affect our results of operations and financial condition"*.

Energy efficiency

Harmony has worked closely with Eskom to manage electricity use and peak demand, underlining our commitment to reduce energy consumption. This includes demand-side management ("**DSM**") strategies to reduce electricity consumption in peak periods; timing our pumping to coincide with cheaper off-peak periods, making more efficient use of Eskom tariffs that reward load-shifting, and improving the efficiency of pumping operations.

In 2016 Harmony contracted an ESCO to improve its energy management practices and aggressively mitigate the impact of higher-than-inflation electricity price increases on its operational costs. Energy management has not only contributed to the significant reduction in electricity cost, but also assists in maintaining the performance of implemented initiatives. This way Harmony focuses on continuously implementing new initiatives and technologies, while eliminating the risk of forfeiting the benefit of completed projects. Energy management has led to R1.35 billion of saving on electricity over the contract period. For the 2022 fiscal year Harmony realized a 2.5 GWh energy saving (R22 million) on newly implemented projects at a capital expenditure of R4.5 million. Furthermore, additional energy savings of 266 GWh (R343 million) was realized in the form of maintaining previously implemented projects.

The Mponeng and MWS operations were acquired as part of the Mponeng Acquisition with effect from October 1, 2020. The 2022 fiscal year is the first to include these operations for a full year, which has led to a significant increase in energy consumption and cost, but also presents new opportunities for energy savings.

We have implemented various energy efficiency projects in recent years. See "*– Environment – Environmental management and stewardship*" on pages 89 to 96 and *"– Climate change, energy and emissions management*" on pages 100 to 105 of the Integrated Annual Report for the 20-F 2022.

Climate Change, Environmental Factors and Carbon tax

Rising temperatures, changing rainfall patterns and severe weather conditions believed to be caused by climate change remain growing concerns for businesses, investors, broader society and governments. This has led to increased pressure on companies, including those in the mining sector, to reduce GHG emissions consistent with national commitments made by numerous countries under the Paris Agreement, to promote responsible corporate practices and to increase transparency about the risks and opportunities of transitioning to a low-carbon economy. Pressure from governments, investors and broader society for mining companies to improve environmental stewardship and reduce GHG emissions, both in terms of absolute emissions and in intensity of emissions per tonne mined, is likely to increase in the future. On June 1, 2019 the Carbon Tax Act became effective. The carbon tax has been designed to fix liability on the person who conducts an activity in South Africa that results in GHG emissions above a certain threshold. The carbon tax design requires the calculation of liability to be based on the sum of GHG emissions, which result from fuel combustion, industrial processes and fugitive emissions. Taxpayers must determine emissions in accordance with the reporting methodology approved by DFFE. The tax will be phased in over time. The first phase, which was originally expected to end on December 31, 2022, has been extended to December 31, 2025, is designed to largely be revenue-neutral in terms of its aggregated impact, given the complementary tax energy incentives and reduction or credit for the current electricity levy. Tax-free allowances will then change and fall away with the basic tax-free allowance (60%) being reduced and is likely to fall away from 2026 to 2030. In phase 2 the carbon offset allowance is due to increase by 5%, the trade exposure allowance from the current 10% and the carbon budget allowance could fall away.

The National Treasury announced an alternative increase structure which is expected to see the current carbon price (US$9 per tonne) increase to US$20 per tonne by 2026, US$30 per tonne by 2030 and finally US$120 per tonne by 2050.

Based on published legislation, commentary and governmental information, management believes that the carbon tax poses a low cost to Harmony until December 31, 2025. Gas emissions reported to the DFFE for a company's National Greenhouse Gas Emission Reporting submission will be taxed at a base value of increasing from R320 to R552 per tonne of carbon dioxide equivalent (before allowances) making effective tax rate increase from R41 to R82 per tonne of carbon dioxide equivalent for years 2023 to 2025. From the second phase onwards, carbon tax might also affect the price of electricity. The impact of the carbon tax on the Company arising from electricity usage after December 31, 2025 has been modeled to grow over time as allowances are anticipated to fall away therefore progressively increasing from approximately R145m to R602m per annum for fiscal year 2026 to fiscal year 2030.

Harmony has set its internal carbon price (for the South African operations) to match that of the proposed carbon tax. Harmony is also at risk due to potential pass-through costs from its suppliers in the short term from increased fuel prices. The carbon tax on liquid fuels will be imposed at the source. It is estimated that the increased fuel price would be R0.13/liter. This is expected to have an impact on the Company's operational expenses.

Estimates are included in the life-of-mine plans and resource base models used for impairments and has affected the forecast profitability of all operations, and in some cases, the impact is significant.

Various regulators have released guidance or proposed regulations for required disclosures during the year. In March 2022, the newly formed International Sustainability Standards Board ("**ISSB"**) released exposure drafts on general requirements of sustainability reporting and climate-related disclosures. In addition, in March 2022, the SEC issued proposed rules that are intended to provide more consistent, comparable and reliable information so that investors can better evaluate the impact of climate-related matters on entities.

See Item 3: *"Key Information - Risk Factors - Risks Related to ESG - Compliance with emerging climate change regulations and other sustainability measures could result in significant costs for us"* for further discussion on the potential impact.

Production

The information set forth under the headings, *"– Delivering profitable ounces – Operational performance"* on pages 50 to 85 of the Integrated Annual Report for the 20-F 2022 is incorporated herein by reference.

Results of Operations

Years Ended June 30, 2022 and 2021

Revenue

Revenue increased by R912 million to R42,645 million in fiscal 2022, compared to R41,733 million in fiscal 2021, mainly due to the amount recognized for hedges improving from a loss of R2,296 million during fiscal 2021 to a gain of R497 million in fiscal 2022. This was offset by a decrease in revenue in gold sales.

The average gold price received (including hedging gains) increased by 5.1% from R851,045 per kilogram in fiscal 2021 to R894,218 per kilogram. However, overall gold sales decreased by 2.5% from 47,353kg in fiscal 2021 to 46,153kg mainly due to interruptions in production. The details of these changes are discussed below:

The Tshepong Operations gold sold decreased by 4.4% from 7,353 kilograms in fiscal 2021 to 7,030 kilograms in fiscal 2022. This was as a result of the grade decreasing to 4.50g/t, a 5.5% decrease from 4.76g/t achieved in fiscal 2021. This was mainly as a result of lower-than-planned square meters achieved at the mine.

At Moab Khotsong, gold sold decreased by 9.9% from 7,095 kilograms in fiscal 2021 to 6,393 kilograms in fiscal 2022, mainly due to the recovery grade decreasing by 14.5% from 7.94g/t to 6.79g/t in fiscal 2022. This was as a result of ventilation issues experienced at the mine as well as geological anomalies resulting in a loss of face-length. These issues were addressed during the year.

The Mponeng mine sold 6,041 kilograms, a 14.0% increase from the 5,299 kilograms sold in fiscal 2021, mainly as a result of a full year's production for fiscal 2022.

The Bambanani mine was closed at June 30, 2022 due to safety concerns at the mine as a result of increased seismicity. Increased seismicity resulted in access to higher-grade areas being limited and as a result the recovered grade decreased by 7.3% as well as tonnes milled decreasing by 22.5%. These events resulted in a 27.2% decrease in gold sold, from 1,975 kilograms in fiscal 2021 to 1,437 kilograms in fiscal 2022.

Joel had a 20.9% increase in tonnes milled as a result of production ramping up following the completion of 137 level decline during fiscal 2021, continuing into fiscal 2022. This was offset by a 9.6% decrease in the recovered grade to 3.59g/t due to challenging mining conditions. This translated into a 10.0% increase in gold sold from 1,414 kilograms in fiscal 2021 to 1,555 kilograms.

At Doornkop the gold sold decreased by 3.9% from 3,603 kilograms in fiscal 2021 to 3,464 kilograms in fiscal 2022. Grade was down 8.6% to 3.94g/t in fiscal 2022 as compared to 4.31g/t in fiscal 2021 as a result of a number of safety-related challenges and some infrastructure constraints, which negatively impacted on the grade. This was marginally offset by the tonnes which increased 2.7% from 851 tonnes to 874 tonnes.

Target 1 increased gold sold by 12.5% from 1,619 kilograms in fiscal 2021 to 1,821 kilograms. This is mainly as a result of the increased grade at the operation, increasing 20.7% from 3.28g/t to 3.96g/t in fiscal 2022. The production constraints from fiscal 2021 were remediated during fiscal 2022, which saw an improvement in the access to higher-grade areas.

At Kusasalethu, gold sold increased by 15.2% to 4,586 kilograms from 3,980 kilograms in fiscal 2021 as a result of the recovered grade increasing by 33.1% from 5.65g/t in fiscal 2021 to 7.52g/t in fiscal 2022.

Gold sold at Masimong decreased 4.1% from 1,993 kilograms in fiscal 2021 to 1,911 kilograms in fiscal 2022. This was mainly as a result of tonnes milled decreasing 4.7% from 510 tonnes to 486 tonnes in fiscal 2022. Grade remained relatively constant at 3.93g/t for fiscal 2022.

During fiscal 2021 a decision was taken to close Unisel mine as it has reached the end of its commercially viable life. Unisel contributed 242 kilograms in fiscal 2021.

Mine Waste Solutions increased gold sold by 40.9% from 2,043 kilograms to 2,879 kilograms in fiscal 2022. This was as a result of a 6.9% increase in the recovered grade, from 0.116g/t in fiscal 2021 to 0.124g/t. In addition, a 32.7% increase in treated tonnes to 23,443 tonnes from 17,665 tonnes in fiscal 2021 was due to a full year's production for fiscal 2022.

Phoenix operation saw a 1.4% decrease in gold sold from 777 kilograms in fiscal 2021 to 766 kilograms in fiscal 2022. This was mainly as a result of a decrease in grade of 2.4% from 0.126g/t in fiscal 2021 to 0.123g/t.

At Central Plant Reclamation, gold sold increased 4.4% in fiscal 2022, from 566 kilograms to 591 kilograms. This was mainly as a result of the better grade achieved at the operation, which increased 3.6% from 0.140g/t in fiscal 2021 to 0.145g/t in fiscal 2022. Tonnes milled increased marginally from 4,020 tonnes to 4,033 tonnes in fiscal 2022.

Kalgold's gold sold increased 2.7% from 1,112 kilograms to 1,142 kilograms in fiscal 2022. This was as a result of the 6.8% increase in grade achieved at the operation, increasing from 0.740g/t to 0.790g/t in fiscal 2022. This increase was offset by tonnes milled decreasing 5.0% from 1,507 tonnes in fiscal 2021 to 1,432 tonnes in fiscal 2022. Mining was negatively impacted by heavy rainfall as well as power outages during the year.

The gold sold from treating waste rock dumps decreased by 18.5% to 2,875 kilograms from 3,527 kilograms in fiscal 2021. This was mainly as a result of a 12.1% and 10.5% decrease in recovered grade and tonnes milled respectively.

At Hidden Valley, production was negatively impacted by the overland conveyor belt failure in January 2022 as well as geotechnical instability impacting Stage 6 of the pit. This resulted in lower grades due to limited access to high-grade ore from the pit as well as a decrease in tonnes milled due to availability at the plant. Ore milled decreased 5.6% from 3,420 tonnes in fiscal 2021 to 3,229 tonnes in fiscal 2022. Grade decreased year on year from 1.37g/t to 1.15g/t, a 16.1% decrease from fiscal 2021. These factors resulted in gold sold decreasing 23.0% from 4,755 kilograms to 3,662 kilograms in fiscal 2022.

Export Sales

All of our gold produced in South Africa during fiscal 2020 to 2022 was refined by Rand Refinery Proprietary Limited ("**Rand Refinery**"). Rand Refinery is owned by a consortium of the major gold producers in South Africa and Harmony holds a 10.4% interest at June 30, 2022. All of our gold and silver produced in PNG during fiscal 2020 to 2022 have been sold to the Australian Bullion Corporation.

Cost of sales

Cost of sales includes production costs, amortization and depreciation, impairment of assets and other items, including care and maintenance cost of restructured operations.

Production costs (cash costs/all-in sustaining costs)

The following table sets out, for our reportable segments, total kilograms produced and weighted average cash costs per kilogram and total kilograms sold and weighted average all-in sustaining costs per kilogram for fiscal 2021 and fiscal 2022:

	Year ended June 30, 2022				Year ended June 30, 2021				Percentage (increase)/ decrease	
	Cash costs		All-in sustaining costs		Cash costs		All-in sustaining costs		Cash costs per kg	All-in sustain-ing costs per kg
	(kg pro-duced)	(R/kg)	(kg sold)	(R/kg)	(kg pro-duced)	(R/kg)	(kg sold)	(R/kg)		
South Africa										
Tshepong Operations	7,022	724,539	7,030	925,100	7,419	663,030	7,353	815,333	(9)	(13)
Moab Khotsong	6,508	635,146	6,393	739,870	7,166	536,710	7,095	626,795	(18)	(18)
Mponeng	6,086	739,026	6,041	865,976	5,446	532,812	5,299	659,760	(39)	(31)
Bambanani	1,433	807,652	1,437	851,977	1,992	586,588	1,975	641,426	(38)	(33)
Joel	1,556	845,931	1,555	983,593	1,424	796,982	1,414	936,296	(6)	(5)
Doornkop	3,444	729,965	3,464	823,966	3,670	595,550	3,603	680,524	(23)	(21)
Target 1	1,800	996,938	1,821	1,210,404	1,603	1,037,115	1,619	1,232,098	4	2
Kusasalethu	4,567	678,403	4,586	739,681	3,999	742,452	3,980	814,048	9	9
Masimong	1,910	789,912	1,911	845,299	2,012	715,835	1,993	764,577	(10)	(11)
Unisel	—	—	—	—	247	721,271	242	782,126	100	100
MWS	2,899	549,621	2,879	608,952	2,057	503,635	2,043	601,978	(9)	(1)
All other surface operations	5,304	663,317	5,374	719,354	6,031	591,790	5,982	647,640	(12)	(11)
International										
Hidden Valley	3,707	591,551	3,662	1,007,986	4,689	356,233	4,755	677,659	(66)	(49)
Total kg	46,236		46,153		47,755		47,353			
Weighted average[(1)]		701,024		835,891		600,592		723,054	(17)	(16)

[1] The offsetting of the by-product income for management's reporting purposes has the effect of decreasing the cash costs and the all-in sustaining costs.

For further information about the use of Non-GAAP measures, see "*Reconciliation of Non-GAAP Measures*" below.

Our average cash costs increased by 16.7%, or R100,432 per kilogram, from R600,592 per kilogram in fiscal 2021 to R701,024 per kilogram in fiscal 2022. Cash costs per kilogram vary with the working costs per tonne (which are, in turn, affected by the number of tonnes processed) and grade of ore processed. Production costs increased by 11.2% from R29,774 million in fiscal 2021 to R33,099 million in fiscal 2022, mainly due to the inclusion of the Mponeng operations and related assets for a full year as well as inflationary pressures on costs, including labor. The war in Ukraine has placed enormous pressure on supply chains which were still recovering post Covid-19 and this has created additional cost pressure. Further, increased electricity tariffs continue to inflate production costs year on year. These increases have been offset by a 43.5% decrease in royalties for the year, from R637 million in fiscal 2021 to R360 million in fiscal 2022.

At Tshepong Operations, all-in sustaining cost increased by 13.5% from R815,333 per kilogram in fiscal 2021 to R925,100 per kilogram in fiscal 2022, mainly due to decreased production. The operation experienced a number of issues through the year, including flexibility constraints. These have been addressed in the updated life-of-mine plans.

At Moab Khotsong, all-in sustaining cost increased by 18.0% from R626,795 per kilogram in fiscal 2021 to R739,870 per kilogram in fiscal 2022, mainly as a result of a lower recovered grade due to adverse ground conditions experienced at the operation as well as inflationary increases on costs.

At Mponeng, all-in sustaining cost increased by 31.3% from R659,760 per kilogram in fiscal 2021 to R865,976 per kilogram in fiscal 2022, mainly due to some high-grade areas being inaccessible during the year, which reduced the tonnes milled as well as the recovered grade. This was further impacted by additional costs allocated to the operation based on a full year's production in fiscal 2022 as compared with nine months in fiscal 2021, as well as incurring winter tariffs on electricity which were not incurred during fiscal 2021.

At Bambanani, all-in sustaining cost increased by 32.8% from R641,426 per kilogram in fiscal 2021 to R851,977 per kilogram in fiscal 2022, mainly due to a decrease in gold produced and sold as a result of changes made to the plan during the year to address safety concerns at the mine. The revised plan resulted in a decrease in planned production for fiscal 2022 as well as early closure of the mine at the end of June 2022.

At Joel, all-in sustaining cost increased by 5.1% from R936,296 per kilogram in fiscal 2021 to R983,593 per kilogram in fiscal 2022, mainly as a result of personnel changes required at the operation combined with a lower-than-planned grade during the first six months of the year.

At Doornkop, all-in sustaining cost increased by 21.1% from R680,524 per kilogram in fiscal 2021 to R823,966 per kilogram in fiscal 2022. This was mainly due to the impact of safety-related challenges and shaft infrastructure constraints on production, which resulted in lower grade and tonnes milled for the year.

At Target 1, all-in sustaining costs decreased year on year by 1.8% from R1,232,098 per kilogram in fiscal 2021 to R1,210,404 per kilogram in fiscal 2022. This was as a result of a number of issues at the operation during the year, including pillar failures, water issues as well as the mining method being used at the operation.

At Kusasalethu, all-in sustaining costs decreased year on year by 9.1% from R814,048 per kilogram in fiscal 2021 to R739,681 per kilogram in fiscal 2022, mainly as a result of the 14.2% increase in gold production from 3,999 kilograms in fiscal 2021 to 4,567 kilograms in fiscal 2022.

At Masimong, all-in sustaining cost increased by 10.6% from R764,577 per kilogram in fiscal 2021 to R845,299 per kilogram in fiscal 2022, mainly due to decreased production.

During fiscal 2021 a decision was taken to close Unisel mine as it has reached the end of its commercially viable life. Unisel had an all-in sustaining cost of R782,126 per kilogram in fiscal 2021.

At MWS, all-in sustaining costs increased marginally year on year by 1.2% from R601,978 per kilogram in fiscal 2021 to R608,952 per kilogram in fiscal 2022. This was mainly as a result of the increased costs experienced during the year due to inflationary pressures currently being experienced globally as well as other issues driving up costs throughout the supply chain.

At Phoenix, all-in sustaining costs increased by 19.5% from R511,946 per kilogram in fiscal 2021 to R611,580 per kilogram in fiscal 2022. This was mainly as a result of the increased costs experienced during the year due to inflationary pressures currently being experienced globally as well as other issues driving up costs throughout the supply chain. The aforementioned, combined with a decrease in gold produced of 1.5% (779 kilograms in fiscal 2021 compared with 767 kilograms in fiscal 2022) resulted in the increased cost per kilogram.

At Central Plant Reclamation, all-in sustaining cost increased by 5.5% from R501,947 per kilogram in fiscal 2021 to R529,591 per kilogram in fiscal 2022. This was mainly as a result of increased costs due to inflationary pressures being marginally offset by gold produced, which increased by 4.1% (from 563 kilograms in fiscal 2021 to 586 kilograms in fiscal 2022) when compared with a 6.9% increase in cash operating costs.

At Kalgold all-in sustaining cost increased by 6.6% from R905,253 per kilogram in fiscal 2021 to R964,678 per kilogram in fiscal 2022, mainly as a result of a 11.8% increase in cash operating costs. Despite production challenges, there was a marginal increase in production of 2.5% (from 1,109 kilograms in fiscal 2021 to 1,137 kilograms in fiscal 2022).

At the waste rock dumps, all-in sustaining costs increased year on year by 11.3% from R619,692 per kilogram in fiscal 2021 to R689,630 per kilogram in fiscal 2022. The dumps realized a 21.4% decrease in production, from 3,580 kilograms in fiscal 2021 2,814 kilograms in fiscal 2022.

At Hidden Valley, all-in sustaining cost increased by 48.7% from R677,659 per kilogram in fiscal 2021 to R1,007,986 per kilogram in fiscal 2022, mainly due to lower production as a result of the breakdown of the conveyor belt in January 2022 as well as decreased grade due to the high-grade areas in Stage 6 pit being inaccessible. Further, as Hidden Valley is a diesel-intensive operation, global oil prices negatively impacted the operation.

Amortization and depreciation

Amortization and depreciation decreased from R3,875 million in fiscal 2021 to R3,683 million in fiscal 2022, primarily due to operational challenges experienced at the Hidden Valley operation, which resulted in lower production and therefore a decrease in depreciation in fiscal 2022. This was partially offset by increased depreciation at the other operations, notably MWS, where new assets were brought into use, Mponeng, which was included for the full year, and Bambanani, due to mine closure being earlier than initially planned.

Impairment of assets

An impairment charge of R4,433 million was recorded in fiscal 2022 as compared to the impairment of R1,124 million in fiscal 2021. No reversal of impairment was recorded in fiscal 2021 or 2022.

The Tshepong Operations were disaggregated into two separate cash generating units ("**CGUs**"), being the Tshepong North CGU and the Tshepong South (also known as the Phakisa section) CGU, for impairment testing at June 30, 2022. This is due to the decision taken during the fiscal 2023 budget process in June 2022 to reinvest in the two individual operations to maximize individual profitability following the change to Tshepong North's life-of-mine with the sub-75 decline project being halted. Based on the forward-looking nature of the impairment assessment, a separate impairment calculation was prepared for each of the CGUs. The disaggregation of CGUs did not have an impact on reportable segments in terms of IFRS 8 *Operating Segments* as disclosed in the segment report, since information reported to the CODM for the 2022 financial year was still for the combined Tshepong Operations. Going forward however, Tshepong North and Tshepong South will be disclosed as separate reportable segments. A total impairment of R3,622 million was recognized on these CGUs, which is made up of the following:

- An impairment of R2,296 million on property, plant and equipment of Tshepong North was recognized at June 30, 2022. This was mainly as a result of increased cost both for production and capital expenditure and the increased post-tax discount rate of 11.7% (2021: 10.1% for Tshepong Operations). The recoverable amount was also affected by the reclassification of production for the sub-75 level from reserves in the life-of-mine plan to the resource base, which is subject to a higher discount rate of 13.5% (2021: 12.4%). The post-tax recoverable amount was determined to be R1 938 million; and
- An impairment of R1,326 million on property, plant and equipment of Tshepong South was recognized at June 30, 2022. The individual life-of-mine plan included additional capital to address flexibility constraints at the operation. Costs also increased significantly as a result of inflationary pressures. The changes affected the discounted cash flows used to determine the recoverable amount of the operation. The post-tax recoverable amount, after the impact of a higher discount rate of 11.7% (2021: 10.1% for Tshepong Operations), was determined to be R1,645 million.

The impairment of R759 million on Tshepong Operations for fiscal 2021 resulted mainly from a reduction in planned gold production resulting from lower grade and change in the timing of cash flows. There was also a change in the mining profile in the revised life-of-mine plan, which impacted on the timing of cash flows, which were then later than in comparison to the prior year plan. These changes affected the discounted cash flows used to determine the recoverable amount of the operation.

An impairment of R522 million on property, plant and equipment and goodwill of Moab Khotsong was recognized at June 30, 2022, of which R302 million related to goodwill. The updated life-of-mine plan included an increase in working and capital costs as a result of inflationary pressures. The updated life-of-mine plan also includes additional capital expenditure which relates to the Zaaiplaats project after finalization of its detailed design plan during the current financial year. This impacted the discounted cash flows used to determine the recoverable amount of the operation. The recoverable amount was further impacted by an increased post-tax discount rate of 10.4% (2021: 9.4%) which resulted in the post-tax recoverable amount decreasing to R3,748 million.

The impairment of property, plant and equipment on Kusasalethu was mainly as a result of the reduction in tonnes combined with a decrease in grade over the remainder of the operation's life, leading to a decrease in planned gold production. The reduction is due to an updated plan to mitigate safety risks that exist at the operation. These changes reduced the recoverable amount to R806 million and an impairment of R145 million was recognized.

During the December 2021 period, impairments of R144 million were recognized for property, plant and equipment and goodwill of Bambanani, of which R31 million related to goodwill. The impairment of goodwill and assets on Bambanani was as a result of a change in the life-of-mine plan, moving the closure of the mine to June 2022 rather than June 2024 as planned during fiscal 2021. This was as a result of increased seismicity at the operation and the related risk increasing as pillars were mined out. The post-tax recoverable amount of R36 million, at December 2021, was derived from the expected cash flows as per the life-of-mine plans. The recoverable amount of the operation is now Rnil, as the operation was closed during June 2022.

The impairment of goodwill of Bambanani of R187 million for fiscal 2021 was mainly a result of a reduction in grade over the remainder of the operation's life. The reduction in grade is due to unexpected changes in the orebody and a lower mine call factor.

The entire carrying value of Target 3 was impaired during fiscal 2021, resulting in an impairment of R178 million. Previous plans to explore the sale of the operation were abandoned and further development was not a viable option at this stage. Therefore, management determined a recoverable amount of Rnil.

Gains/losses on derivatives

Gains on derivatives amounted to R53 million in fiscal 2022, compared to a gain of R1,022 million in fiscal 2021. Gains/losses on derivatives include the fair value movements of derivatives which have not been designated as hedging instruments for hedge accounting purposes or where hedge accounting has been discontinued, the amortization of day-one gains and losses for derivatives and the hedging ineffectiveness. The day-one adjustment arises from the difference between the contract price and market price on the day of the transaction. Factors affecting gains/losses on derivatives are discussed below.

(a) Foreign exchange derivatives

Harmony maintains a foreign exchange derivative program in the form of zero cost collars, which establish a floor and cap US$/Rand exchange rate at which to convert US dollars to Rand, and forward exchange contracts. As hedge accounting is not applied, the resulting gains and losses have been recorded in the income statement. In fiscal 2022, a loss amounting to R16 million was recorded compared to a gain of R1,217 million in fiscal 2021.

(b) US$ commodity contracts

Harmony maintains a derivative program for Hidden Valley by entering into commodity derivative contracts. The contracts comprise US$ gold forward sale derivative contracts as well as silver zero cost collars which establish a minimum (floor) and maximum (cap) silver sales price. Hedge accounting has been applied to US$ gold contracts and these are shown separately from the silver zero cost collars that are not hedge accounted. A loss of R105 million was recognized in revenue for fiscal 2022 (2021: R273 million). The unamortized portion of day-one loss was R3 million in fiscal 2022, compared with a loss of R5 million in fiscal 2021. For all other contracts, the resulting gains and losses are recorded in gains/(losses) on derivatives in the income statement. In fiscal 2022, a gain on derivative of R114 million was recorded in the income statement compared to a loss of R256 million in fiscal 2021.

(c) Rand gold contracts

Harmony utilizes Rand gold forward sale derivative contracts to hedge the risk of lower Rand gold prices. Cash flow hedge accounting is applied to these contracts (see "*-Restructuring of contracts*" below for discussion on the exceptions), resulting in the effective portion of the unrealized gains and losses being recorded in other comprehensive income (other reserves). The contracts that matured realized a loss of R2,023 million in fiscal 2021 compared to a gain of R602 million in fiscal 2022, which has been included in revenue.

During fiscal 2022 and 2021 a negligible amount of hedge ineffectiveness was experienced. The unamortized portion of the day-one loss increased marginally from R18 million in fiscal 2021 to R28 million in fiscal 2022. The restructured Rand gold contracts, for which hedge accounting was not applied, matured in fiscal 2021 with a gain of R111 million included in gains/losses on derivatives.

(d) Restructuring of contracts

The closure of Harmony's underground mines in the initial stage of South Africa's national lockdown in response to the Covid-19 pandemic resulted in a significant volume of the underlying exposure that was originally intended to be hedged being delayed. As a result, these hedged items were no longer considered to be highly probable. In response to this and in order to better match the cash flows relating to the underlying exposure, certain of the Rand gold forwards with maturities between April 15, 2020 and May 31, 2020 were effectively extended to mature between the periods July 2020 and March 2021.

The restructured gold forwards retained the pricing of the original forwards. They were not designated as hedging instruments as the difference in the costing structure would have required a different effectiveness assessment than currently used by management. Unrealized losses relating to the hedges amounting to R187 million, previously recognized in other comprehensive income, were immediately reclassified to profit or loss and disclosed under gains/(losses) on derivatives. All subsequent gains/(losses) on the restructured hedges were recognized in profit or loss.

As at June 30, 2021, all the restructured gold forwards had matured.

Foreign exchange translation gain/loss

A foreign exchange translation gain of R670 million was recorded during fiscal 2021 compared to a loss of R327 million in fiscal 2022. The loss in 2022 is predominantly caused by unfavorable translations on US dollar loan balances. The unfavorable translations on US dollar loans are attributable to the Rand weakening against the US dollar evidenced by a closing exchange rate of R16.27/US$1 (2021: R14.27/US$1). However, the average improved marginally from the prior financial year to R15.21/ US$1 (2021: R15.40/US$1).

Other operating expenses

Other operating expense decreased to R1 million in fiscal 2022 from R241 million in fiscal 2021 principally as a result of the factors discussed below.

(a) Silicosis settlement provision

During fiscal 2022, Harmony's potential cost to settle the silicosis and TB class actions increased by R23 million, compared to R80 million in fiscal 2021 as a result of changes in estimates.

(b) Loss on scrapping of property, plant and equipment

A loss on scrapping of R7 million (2021: R161 million) was recorded in fiscal 2022. This related to the abandonment of individual surface assets for which no future economic benefits are expected from their use or disposal.

(c) Remeasurement of contingent consideration

A remeasurement of the contingent consideration liability of R61 million credit (2021: R127 million expense) relating to the Mponeng Acquisition was recorded in fiscal 2022.

(d) Insurance proceeds

Insurance claim proceeds of R83 million received in fiscal 2022.

Gain on bargain purchase

A gain on bargain purchase of R303 million arose in connection with the Mponeng Acquisition during fiscal 2021. At acquisition, the fair value of the net identifiable assets acquired amounted to R4,213 million and the total consideration amounted to R3,910 million consisting of cash consideration of R3,366 million and contingent consideration of R544 million. No such transactions were entered into during fiscal 2022.

Income and mining taxes

In fiscal 2021 and 2022, the tax rates for companies were 34% for mining income and 28% for non-mining income, respectively, for South African companies and 30% for Australian companies and PNG mining companies.

Harmony's effective income and mining tax rates for fiscal 2021 and 2022 are presented in the table below:

	Fiscal year ended June 30,	
Income and mining tax	**2022**	**2021**
Effective income and mining tax rate	4%	20%

The effective tax rate for fiscal 2022 was substantially lower than the mining statutory tax rate of 34% for Harmony and our subsidiaries as a whole, mainly due to the use of unredeemed capital allowances and assessed losses. Refer to note 12 "*Taxation*" of our consolidated financial statements beginning on page F-1 for the assumptions used. These changes, together with changes in the temporary differences, had the following impacts:

- The change in rates, with majority decreasing year on year at the individual company level (other than hedge accounted derivatives) resulted in a decrease in the deferred tax expense and liability to the amount of R386 million (2021: R55 million decrease);
- The impact of impairments at the individual CGU level resulted in a decrease in the deferred tax expense and liability of R312 million;
- Unwinding of temporary differences related to unredeemed capital expenditure balance resulted in an increase of R86 million in the deferred tax expense (2021: R301 million); and
- The Rand weakened during fiscal 2022 year and the number of outstanding Rand gold contracts at June 30, 2022 decreased, resulting in a negative impact on the valuation of the Rand gold derivatives at year end. The temporary differences related to the Rand gold derivatives therefore also decreased resulting in a R170 million (2021: R184 million) decrease in the deferred tax liability and deferred tax expense. Management assessed the rates at which the temporary differences are expected to reverse and revised the rate for the vast majority of the companies from the previous non-mining tax rate of 28% rate to the non-mining tax rate of 27% which will be applicable from fiscal 2023 onwards.

Deferred tax rates for the South African operations are calculated based on estimates of the future profitability of each ring-fenced mine when temporary differences will reverse. The future profitability of each ring-fenced mine, in turn, is determined by reference to the life-of-mine plan for that operation, which is based on parameters such as the Group's long-term view of the US$ gold price and the Rand/US$ exchange rate, as well as the reserves declared for the operation. As some of these parameters are based on market indicators, they differ from one year to the next. In addition, the reserves may also increase or decrease based on updated or new geological information. Changes in the future profitability of each ring-fenced mine impact the deferred tax rates used to recognize temporary differences at these operations. The movement in deferred tax on temporary differences due to changes in estimated effective tax rates results primarily from the movement in the effective deferred tax rate at Harmony (includes Masimong), Freegold (includes Joel and Tshepong Operations), Randfontein Estates (includes Doornkop and Kusasalethu), Moab Khotsong and Mponeng. The deferred tax rate of Harmony decreased from 27.4% to 25.1% in fiscal 2022, Freegold decreased from 12.1% to 7.0% in fiscal 2022, Randfontein Estates Limited (Randfontein) increased from 5.1% to 8.7% in fiscal 2022, Moab Khotsong decreased from 17.6% to 14.7% in fiscal 2022 and Mponeng increased from 11.3% to 12.8% in fiscal 2022.

As part of the determination of the deferred tax rates for the South African entities mentioned above, consideration was given to the amended corporate income tax rate of 27% from 28% as well as the change in the mining tax rate from 34% to 33% for the 2023 financial year. The annual limitation of assessed loss utilization to 80% of taxable income was incorporated in the calculation. The changes were considered to be substantively enacted at June 30, 2022 and would affect forecast tax estimations or cash flows.

South Africa. Generally, South Africa imposes tax on worldwide income (including capital gains) of all our South African incorporated tax resident entities at a rate of 28% on non-mining income. The South African entities pay taxes separately on mining income and non-mining income. The amount of our South African mining income tax is calculated on the basis of a gold mining formula that takes into account our total revenue and profits from, and capital expenditure for, mining operations in South Africa. 5% of total mining revenue is exempt from taxation in South Africa as a result of the application of the gold mining formula. The amount of revenue subject to taxation is calculated by deducting qualifying capital expenditures from taxable mining income. The amount by which taxable mining income exceeds 5% of mining revenue constitutes taxable mining income. We and our subsidiaries account for taxes separately that are determined in respect of each entity. Hence, South Africa does not make use of any group basis of taxation.

Previously, Harmony was able to carry forward assessed losses indefinitely and offset the total accumulated balance against taxable income in the relevant year of assessment.

However, this has been amended from fiscal year 2023. Assessed losses utilized will be limited to the higher of R1 million or 80% of taxable income, and the balance remaining will be carried forward to the following year of assessment. This will essentially result in a minimum taxable income of 20%. It is intended that this proposal will contribute to providing the fiscal room for the South African Government to lower the corporate tax rate from 28% to 27%. The restriction on utilizing losses will be made on the basis that the calculation of the assessed loss restriction must be determined before any capital expenditure is deducted.

South Africa has a Controlled Foreign Company regime which effectively attributes certain types of passive income derived by offshore subsidiaries and imputes that income in taxable income as if it had been derived in South Africa under South African tax rules.

Australia. Generally, Australia also imposes tax on the worldwide income (including capital gains) of all of our Australian incorporated and tax resident entities. The current income tax rate for companies is 30%.

Harmony Gold (Australia) Proprietary Limited ("**Harmony Gold Australia**") and its wholly-owned Australian subsidiary companies are recognized and taxed as a single entity, called a consolidated group. Under the Australian Tax Consolidation rules all of the Australian subsidiary companies are treated as divisions of the Head Company, Harmony Gold Australia. As a result, inter-company transactions between group members are generally ignored for tax purposes. This allows the group to transfer assets between group members without any tax consequences, and deems all tax losses to have been incurred by Harmony Gold Australia.

PNG. PNG mining projects are taxed on a project basis. Therefore, each project is taxed as a separate entity, even though it may be one of a number of projects carried on by the same company. Capital development and exploration expenditure incurred in PNG is capitalized for tax purposes and can be deducted at 25% per annum on a diminishing value basis against project income, with the deduction being limited to the lesser of 25% of the diminished value or the income of the project for the year.

PNG mining companies are taxed at a rate of tax of 30%. Mining operations in PNG are subject to a 2% royalty and 0.5% Production Levy which are payable to the PNG Government.

Operating performance per Segment

For a further discussion on operating performance on a segment basis, refer to *"– Delivering profitable ounces – Operational Performance – Performance by Operation*" on pages 50 to 85 of the Integrated Annual Report for the 20-F 2022. Also refer to note 41 "*Segment Report*" to our consolidated financial statements set forth beginning on page F-1.

Reconciliation of Non-GAAP Measures

The World Gold Council ("**WGC**") published industry guidance in June 2013 on the calculation of "all-in sustaining costs" and "all-in cost", both of which are non-GAAP measures, and were developed to create a better understanding of the overall costs associated with producing gold. Although Harmony is not a member of the WGC, we started disclosing all-in sustaining costs in fiscal 2014. The all-in sustaining cost measure is an extension of the existing cash cost measure (referenced below) and incorporates costs related to sustaining production.

All-in sustaining costs include mine production costs, transport and refinery costs, applicable general and administrative costs, costs associated with movements in production inventories, ore stockpiles, as well as ongoing environmental rehabilitation costs, transfers for stripping activities and costs associated with royalties. Employee termination costs are included, however employee termination costs associated with major restructuring and shaft closures are excluded. The following costs are also included: local economic development ("**LED**") expenditure for continuing operations, corporate costs, sustaining exploration costs and sustaining capital expenditure including ongoing capital development ("**OCD**") expenditure and rehabilitation accretion and amortization for continuing operations. Gold ounces/kilograms sold are used as the denominator in the all-in sustaining costs per ounce/kilogram calculation. Depreciation costs are excluded.

Our cash costs consist primarily of production costs and are expensed as incurred. The cash costs are incurred to access ore to produce current mined reserves. Cash costs do not include capital development costs, which are incurred to allow access to the orebody for future mining operations and are capitalized and amortized when the relevant reserves are mined.

Total cash costs include mine production costs, transport and refinery costs, applicable general and administrative costs, ore stockpiles, as well as ongoing environmental rehabilitation costs as well as transfers for stripping activities and costs associated with royalties. Employee termination costs are included, however employee termination costs associated with major restructuring and shaft closures are excluded. The costs associated with movements in production inventories are excluded from total cash costs. Gold ounces/kilograms produced are used as the denominator in the total cash costs per ounce/kilogram calculation.

Changes in all-in sustaining costs per ounce/kilogram and cash costs per ounce/kilogram are affected by operational performance. In US dollar terms, these measures are also affected by the changes in the currency exchange rate between the Rand and the US dollar and, in the case of the PNG operations, the Kina. All-in sustaining costs, all-in sustaining costs per ounce/kilogram, total cash costs and total cash costs per ounce/kilogram are non-GAAP measures. These measures should not be considered by investors in isolation or as an alternative to production costs, cost of sales, or any other measure of financial performance calculated in accordance with IFRS. In addition, the calculation of these measures may vary from company to company and may not be comparable to other similarly titled measures of other companies. However, we believe that all-in sustaining costs per ounce/kilogram and cash costs per ounce/kilogram are useful indicators to investors and management of a mining company's performance as they provide (i) an indication of the cash generating capacities of our mining operations, (ii) the trends in all-in sustaining costs and cash costs as the Company's operations mature, (iii) a measure of a company's performance, by comparison of cash costs per ounce/kilogram to the spot price of gold and (iv) an internal benchmark of performance to allow for comparison against other companies.

While recognizing the importance of reducing all-in sustaining costs and cash costs, our chief focus is on controlling and, where possible, reducing total costs, including overhead costs. We aim to control total unit costs per ounce/kilogram produced by maintaining our low total cost structure at our existing operations. We have been able to reduce total costs by implementing a management structure and philosophy that is focused on reducing management and administrative costs.

The following is a reconciliation of total all-in sustaining costs, as a non-GAAP measure, to the nearest comparable GAAP measure, cost of sales under IFRS:

	Fiscal year ended June 30,	
	2022	2021
	(in R millions, except for ounce/ kilogram amounts)	
Total cost of sales - under IFRS	41,927	35,489
Depreciation and amortization expense	(3,683)	(3,875)
Rehabilitation costs	(136)	(135)
Care and maintenance costs of restructured shafts	(273)	(144)
Employment termination and restructuring costs	(218)	(332)
Share-based payments	(143)	(114)
Impairment	(4,433)	(1,124)
By-products credits	(903)	(1,035)
Other	280	183
Capitalized stripping	1,096	1,047
LED expenditure	138	120
Corporate, administration and other expenditure costs	1,041	724
Capital expenditure (OCD)	2,826	2,376
Capital expenditure (Exploration, abnormal expenditure and shaft capital)	1,058	1,059
Total all-in sustaining costs	38,579	34,239
Per kilogram calculation:		
Kilogram sold	46,153	47,353
Total all-in sustaining costs per kilogram	835,891	723,054
Total all-in sustaining costs (US$ million)	2,536	2,223
Per ounce calculation:		
Ounces sold	1,483,853	1,522,431
Total all-in sustaining costs per ounce	1,709	1,460

The following is a reconciliation of total cash costs, as a non-GAAP measure, to the nearest comparable GAAP measure, cost of sales under IFRS:

	Fiscal year ended June 30,	
	2022	2021
	(in R millions, except for ounce/ kilogram amounts)	
Total cost of sales - under IFRS	41,927	35,489
Depreciation and amortization expense	(3,683)	(3,875)
Rehabilitation costs	(136)	(135)
Care and maintenance costs of restructured shafts	(273)	(144)
Employment termination and restructuring costs	(218)	(332)
Share-based payments	(143)	(114)
Impairment	(4,433)	(1,124)
By-product revenue	(903)	(1,035)
Other	8	8
Gold and uranium inventory movement	267	(57)
Total cash costs	32,413	28,681
Per kilogram calculation:		
Kilograms produced	46,236	47,755
Total cash costs per kilogram	701,024	600,592
Total cash costs (US$)	2,132	1,862
Per ounce calculation:		
Ounces produced	1,486,517	1,535,352
Total cash costs per ounce	1,434	1,213

Within this report, our discussion and analysis is focused on the all-in sustaining costs and total cash costs measure.

B. LIQUIDITY AND CAPITAL RESOURCES

We centrally manage our funding and treasury policies. There are no legal or economic restrictions on the ability of our subsidiaries to transfer funds to us. We have generally funded our operations and our short-term and long-term liquidity requirements from: (i) cash generated from operations; (ii) credit facilities and other borrowings and (iii) sales of equity securities.

Harmony intends to finance its capital expenditure, other purchase obligations and debt repayment requirements in 2023 from cash on hand, cash flow from operations, existing credit facilities.

	Fiscal year ended June 30,	
	2022	**2021**
	(R in millions)	
Operating cash flows	6,924	9,179
Investing cash flows	(6,200)	(8,464)
Financing cash flows	(1,151)	(4,299)
Foreign exchange differences	56	46
Total cash flows	(371)	(3,538)

Cash flows from operating activities

Net cash provided by operations is primarily affected by the quantities of gold sold, the gold price, the Rand/US$ exchange rate, cash costs per ounce and, in the case of the international operations, the Australian dollar and PNG Kina versus US dollar exchange rate. A significant adverse change in one or more of these parameters could materially reduce cash provided by operations as a source of liquidity. Net cash generated by operations decreased from R9,179 million in fiscal 2021 to R6,924 million in fiscal 2022. This decrease is mainly due to the higher costs experienced through the year, including labor costs, consumables and electricity.

Cash flows from investing activities

Net cash utilized by investing activities decreased from R8,464 million in fiscal 2021 to R6,200 million in fiscal 2022. The decrease principally relates to the Mponeng Acquisition (R3,363 million) that occurred during fiscal 2021. The decrease as a result of the exclusion of the Mponeng Acquisition was marginally offset by an increase of R1,072 million in additions to property, plant and equipment, totaling R6,214 million in fiscal 2022 compared to R5,142 million spent in fiscal 2021.

Cash flows from financing activities

Financing activities utilized R1,151 million in fiscal 2022, compared to cash utilized of R4,299 million in fiscal 2021. This decrease in cash utilized was mainly due to the borrowings raised during the fiscal 2022. A total of R3,057 million was drawn down on the US$400 Million Syndicated Facility (defined below).

In fiscal 2022, borrowings repaid amounted to R3,601 million as compared to repayments of R3,491 million made during fiscal 2021. The draw down mentioned above was offset by the repayments made during the year, resulting in a net outflow on the borrowings of R544 million compared to the outflow of R3,491 million seen in fiscal 2021.

In fiscal 2022, a total dividend of R430 million was recognized. The board declared an interim ordinary dividend of 40 SA cents for the year ended June 30, 2022 (2021:110 SA cents). R247 million was paid on April 11, 2022 (2021: R677 million was paid on April 19, 2021). A final dividend for the 2021 year of 27 SA cents was declared by the board, amounting to R167 million which was paid on October 18, 2021. The board declared a final ordinary dividend of 22 SA cents for the year ended June 30, 2022, paid on October 17, 2022.

See note 32 *"Borrowings"* and note 34 *"Cash Generated by Operations"* to our consolidated financial statements set forth beginning on page F-1.

Outstanding Credit Facilities and Other Borrowings

On July 9, 2018, we entered into a four-year loan with Westpac Bank PNG Limited for the amount of US$24 million (R322 million) to finance the acquisition of fleet equipment for the Group's PNG operations (the "**US$24 Million Westpac Loan**"). The US$24 Million Westpac Loan is repayable in quarterly installments.

During fiscal 2021, US$6 million (R96 million) was repaid on the US$24 Million Westpac Loan. During fiscal 2022, US$6 million (R94 million) was repaid on the US$24 Million Westpac Loan and US$2 million (R25 million) remained outstanding at June 30, 2022.

The key terms of the US$24 Million Westpac Loan are:

Facility:	$24 million
Margin on term facility:	3.2% over 3-month LIBOR
Maturity:	Four years
Security:	Certain vehicles and machinery

On May 25, 2022 Harmony concluded a R1.5 billion six- and a- half-year term green loan facility with a syndicate of banks lead by ABSA Bank Limited and Nedbank Limited (the "**R1.5 Billion Green Term Loan**"). The terms of the R1.5 Billion Green Term Loan provide that amounts borrowed may be used in respect of eligible green projects, which relate to the construction, development, acquisition, maintenance, and/or operation of renewable energy installations.

The R1.5 Billion Green Term Loan becomes available in four quarterly increments of R375 million starting in November 2022. During fiscal 2022, no draw down was made on the R1.5 Billion Green Term Loan.

The key terms of the R1.5 Billion Green Term Loan are:

Term facility:	R1.5 billion
Margin:	2.65% over 3-month Johannesburg Interbank Average Rate ("**JIBAR**")
Maturity:	Six and a half years
Security:	Unsecured

On May 25, 2022 Harmony concluded a R2.5 billion sustainability-linked revolving credit facility with a syndicate of banks led by ABSA Bank Limited and Nedbank Limited (the “**R2.5 Billion Syndicated Revolving Credit Facility**”). Under the terms of the R2.5 Billion Syndicated Revolving Credit Facility all amounts borrowed must be used (i) in repayment of the R2 billion four-year syndicated term loan and revolving credit facility and (ii) for ongoing general corporate costs, working costs and working capital requirements of the Group.

During fiscal 2022, no draw down was made on the R2.5 Billion Syndicated Revolving Credit Facility leaving the entire facility available at June 30, 2022.

The key terms of the R2.5 Billion Syndicated Revolving Credit Facility are:

Revolving facility:	R2.5 billion
Margin on revolving facility:	2.4% over 3-month JIBAR
Maturity:	Three years, plus two extension options of one year each
Security:	Unsecured

On May 25, 2022 Harmony and a syndicate of local and international lenders, which was jointly arranged by Nedbank Limited and ABSA Bank Limited, concluded a US$400 million sustainability-linked syndicated term loan facility (the “**US$400 Million Syndicated Facility**”) comprising a US$100 million term facility and a US$300 million revolving credit facility.

The US$400 Million Syndicated Facility replaced the 2019 US$400 Million Facility (as defined below), and was used in part to settle the outstanding amount owed on the 2019 US$400 Million Facility. The US$400 Million Syndicated Facility is a sustainability-linked facility. Sustainability-linked metrics have been included into the agreement which would result in specific increases/decreases in the interest rate charged to the facility. During fiscal 2022, US$100 million was drawn down on both the term loan facility and the revolving credit facility, totaling US$200 million (R3,057 million), which was used to settle the 2019 US$400 Million Facility. The balance of the US$400 Million Syndicated Facility of US$200 million was available to draw down at June 30, 2022.

The key terms of the US$400 Million Syndicated Facility are:

Revolving credit facility:	US$300 million
Margin on revolving facility:	2.7% over 3-month Secured Overnight Financing Rate ("**SOFR**")
Term loan:	US$100 million
Margin on term loan facility:	2.85% over 3-month SOFR
Maturity	Three years, plus two extension options of one year each
Security	Unsecured

The R2.5 Billion Syndicated Revolving Credit Facility and the US$400 Million Syndicated Facility are both sustainability-linked facilities. These facilities are linked to certain key performance indicators ("**ESG KPIs**") which will be measured annually for the next three financial years and will result in changes to interest rate margins. The adjustments to interest rate margins for each financial year's ESG performance would impact the following financial year. The respective ESG KPIs are as follows:

KPI	**Unit of Measurement**	**Scope**	**Sustainability performance targets**		
			FY23	**FY24**	**FY25**
Greenhouse gas emissions	‘000 tonnes of Scope 1 and Scope 2 CO_2e emissions	All operations	4,485	4,279	4,074
Renewable Energy	Renewable energy consumption as % of total electricity consumed	SA operations	2 %	8 %	20 %
Water consumption	Potable water consumed (Mℓ)	SA operations	20,453	19,833	19,436

Depending on Harmony's performance in relation to these ESG KPIs, the potential change in interest rate margin is as follows:

Cumulative benefit/penalty for each financial year (basis points)	FY23	FY24	FY25
KPI			
Greenhouse gas emissions	1	2	3
Renewable Energy	1	2	3
Water consumption	1	2	3

We need to comply with certain debt covenants for the US$400 Million Syndicated Facility, the R2.5 Billion Syndicated Revolving Credit Facility and the R1.5 Billion Green Term Loan.

The debt covenant tests are as follows:

The Group's interest cover ratio shall be more than five (EBITDA[1]/Total interest paid).

Leverage[2] shall not be more than 2.5 times.

1 *EBITDA as defined in the agreement excludes unusual items such as impairment and restructuring cost.*

2 *Leverage is defined as total net debt to EBITDA.*

Recently Retired Credit Facilities and Other Borrowings

On November 8, 2018, Harmony concluded a four-year R2 billion syndicated facility with Nedbank and ABSA (the "**2018 R2 Billion Facility**") which consisted of a R600 million term facility and a R1.4 billion revolving credit facility. The margin on the R600 million term facility was 2.9% over a 3-month JIBAR and the margin on the R1.4 billion revolving credit facility was 2.8% over a 3-month JIBAR. Repayments of R75 million were made in August 2021, November 2021 and February 2022 with a final payment of R225 million made in May 2022, thereby settling the 2018 R2 Billion Facility in full.

On September 26, 2019, Harmony and a syndicate of local and international lenders, which was jointly arranged by Nedbank Limited and ABSA Bank Limited, concluded a US$400 million syndicated term loan and revolving credit facility (the "**2019 US$400 Million Facility**") consisting of a US$200 million term loan and a US$200 million revolving credit facility. The initial term of three years was extended by one year in July 2020. The margin on the US$200 million term loan was 3.1% over 3-month LIBOR and the margin on the US$200 million revolving credit facility was 2.9% over 3-month LIBOR. On June 8, 2022 US$200 million was drawn down on the US$400 Million Syndicated Facility, to settle the 2019 US$400 Million Facility in full.

Current borrowings

Current borrowings at June 30, 2022 consist solely of the remaining balance of the US$24 Million Westpac Loan of R25 million. This was repaid in July 2022 when the US$24 Million Westpac Loan matured.

Non-current borrowings

Non-current borrowings total R3,180 million at June 30, 2022. This is as a result of a US$200 million draw down under the US$400 Million Syndicated Facility. The amount owing consists of US$100 million on the term loan facility and US$100 million on the revolving credit facility.

Capital Expenditure

Total budgeted capital expenditures for fiscal 2023 are R8,453 million. See Item 4: "*Information on the Company - Business Overview - Capital Expenditures"* for details regarding the budgeted capital expenditures for each operation. We currently expect that our planned operating capital expenditures will be financed from operations, including use of our current facilities, as described in "*-Outstanding Credit Facilities and Other Borrowings" above*, and new borrowings as needed.

The following table sets forth our authorized capital expenditure as of June 30, 2022:

	R'millions
Authorized and contracted for[1]	1,944
Authorized but not yet contracted for[2]	6,300
Total	**8,244**

1 Including our share of the South-east Asia's capital expenditure of R105 million.

2 Including our share of the South-east Asia's capital expenditure of R1,323 million.

Total capital expenditure was R6,214 million in 2022, compared to R5,142 million in 2021. This represents a R1,072 million increase from 2021. This increase was due to increases seen on major capital expenditure and OCD costs. The main contributors to the increase in major capital where Moab Khotsong which increased by R190 million (R170 million of this being spent on the Zaaiplaats project), MWS which had no major capital in fiscal 2021 and spent R185 million in fiscal 2022, and Tshepong Operations where R82 million more was spent on the sub-75 decline as compared to fiscal 2021. OCD increased by R450 million with the inclusion of Mponeng for a full year contributing an additional R101 million. The remaining increase seen in OCD as a result of development costs returning back to normal levels after the Covid-19 pandemic.

Working Capital and Anticipated Financing Needs

The board believes that our working capital resources, by way of cash generated from operations, borrowings and existing cash on hand, are sufficient to meet our present working capital needs. The South African operations are generally expected to fund their capital internally. The Wafi-Golpu project in PNG is, however, expected to require additional capital expenditure over the next two to five years to complete construction, some of which will be funded from cash generated by operations and the balance by debt. We may also consider other options or structures to finance Harmony's portion of the Wafi-Golpu project. For more information on our planned capital expenditures, see "*-Capital Expenditure*" above. Also see Item 3: *"Key Information - Risk Factors - Risks Related to Our Operations and Business - Our operations have limited proved and probable reserves; exploration for additional resources and reserves is speculative in nature, may be unsuccessful and involves many risks"*. Our board believes that we will have access to adequate financing on reasonable terms given our cash-based operations and modest leverage. Our ability to generate cash from operations could, however, be materially adversely affected by increases in cash costs, decreases in production, decreases in the price of gold and appreciation of the Rand and other non-US dollar currencies against the US dollar. In addition, South African companies are subject to significant exchange control limitations, which may impair our ability to fund overseas operations or guarantee credit facilities entered into by overseas subsidiaries. See Item 10: *"Additional Information - Exchange Controls".*

The information set forth under the heading: *"– Delivering profitable ounces – Operational performance*" on pages 50 to 85 of the Integrated Annual Report for the 20-F 2022 is incorporated herein by reference. See also note 32 *"Borrowings,"* note 38 *"Commitments and Contingencies"* and note 34 *"Cash Generated by Operations"* to our consolidated financial statements set forth beginning on page F-1.

Our contractual obligations and commercial commitments consist primarily of credit facilities, post-retirement health care and environmental obligations.

Contractual obligations and contingencies

The following table summarizes our contractual obligations as of June 30, 2022:

		Payments Due by Period			
	Total	**Less Than 12 Months July 1, 2022 to June 30, 2023**	**12-36 Months July 1, 2023 to June 30, 2025**	**36-60 Months July 1, 2025 To June 30, 2027**	**After 60 Months Subsequent June 30, 2027**
	(R'millions)	**(R'millions)**	**(R'millions)**	**(R'millions)**	**(R'millions)**
Bank facilities[1]	3,553	165	3,388	—	—
Post-retirement health care[2]	251	—	—	—	251
Environmental obligations[3]	7,126	—	—	—	7,126
Silicosis settlement obligation[4]	993	139	392	279	183
Contingent consideration[5]	516	—	87	429	—
Streaming contract liability[6]	687	309	378	—	—
Total contractual obligations	**13,126**	**613**	**4,245**	**708**	**7,560**

1 See *"- Liquidity and Capital Resources - Outstanding Credit Facilities and Other Borrowings"* above. The amounts include the interest payable over the terms of the facilities. Where a variable rate is applicable, the rate at the reporting date has been used for the future periods.

2 This liability relates to post-retirement medical benefits of Freegold, Moab Khotsong and Mponeng employees at the time of acquisition as well as for former employees who retired prior to December 31, 1996 and is based on actuarial valuations conducted during fiscal 2022. See note 27 *"Other provisions – Retirement benefit obligations"* to our consolidated financial statements set forth beginning on page F-1.

3 We make provision for environmental rehabilitation costs and related liabilities based on management's interpretations of current environmental and regulatory requirements. See note 26 *"Provision for environmental rehabilitation"* to our consolidated financial statements set forth beginning on page F-1.

4 This liability relates to potential cost of settling the silicosis and TB class actions that have been instituted against the group in South Africa. See Item 3: "*Key Information - Risk Factors - Risks Related to ESG - The cost of occupational health care services and the potential liabilities related to occupational health diseases may increase in future and may be substantia*l" and note 27 "*Other provisions"* to our consolidated financial statements set forth beginning on page F-1.

5 The liability was included as part of the consideration transferred for the acquisition of the Mponeng operations and related assets. See note 14 *"Acquisitions"* and note 29 *"Contingent consideration" t*o our consolidated financial statements set forth beginning on page F-1.

6 The liability relates to the contractual obligation to deliver the stipulated gold ounces to Franco-Nevada over the remaining term of the agreement. See note 31 "*Streaming arrangements"* to our consolidated financial statements set forth beginning on page F-1.

Commercial Commitments

The following table provides details regarding our commercial commitments as of June 30, 2022:

		Amount of Commitments Expiring by Period			
	Total (R'millions)	**Less Than 12 Months July 1 , 2021 to June 30, 2022 (R'million)**	**12-36 Months July 1, 2022 to June 30, 2024 (R'million)**	**36-60 Months July 1, 2024 To June 30, 2026 (R'million)**	**After 60 Months Subsequent June 30, 2026 (R'millions)**
Guarantees[1]	979	—	—	—	979
Capital commitments[2]	1,944	1,944	—	—	—
Total commitments expiring by period	**2,923**	**1,944**	**—**	**—**	**979**

1 R479 million of these guarantees relate to our environmental and rehabilitation obligation.

2 Capital commitments consist only of amounts committed to external suppliers, although a total of R8,244 million has been approved by the board for capital expenditures.

See note 38 *"Commitments and Contingencies"* to our consolidated financial statements set forth beginning on page F-1.

Off-balance Sheet Arrangements

The Group does not have any off-balance sheet arrangements, as defined by the SEC for the purposes of the Form 20-F, that have or are reasonably likely to have a material current or future effect on the Group's financial position or results of operations.

Recent Developments

See Item 4: *"Information on the Company - History and Development of the Company - Recent Developments - Developments since June 30, 2022"*.

Related Party Transactions

For a detailed discussion of related party transactions, see Item 7: *"Related Party Transactions"*.

Recent Accounting Pronouncements

Recently adopted accounting policies, as well as recent accounting pronouncements with the potential for impact on the consolidated financial statements, are described in note 2 *"Accounting Policies"* to our consolidated financial statements set forth beginning on page F-1.

Critical Accounting Policies

Harmony's accounting policies are described in note 2 *"Accounting Policies"* to our consolidated financial statements set forth beginning on page F-1.

Use of Estimates and Making of Assumptions

The preparation of the financial statements in conformity with IFRS requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities as well as disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates. Some of our accounting policies require the application of significant judgment and estimates by management in selecting the appropriate assumptions for calculating financial estimates. By their nature, these judgments are subject to an inherent degree of uncertainty and are based on our historical experience, terms of existing contracts, management's view on trends in the gold mining industry and information from outside sources.

Our critical accounting estimates and judgments are described in more detail in note 3 *"Critical Accounting Estimates and Judgments"*, to our consolidated financial statements set forth beginning on page F-1. This discussion and analysis should be read in conjunction with such consolidated financial statements and the relevant notes.

C. RESEARCH AND DEVELOPMENT, PATENTS AND LICENSES, ETC.

Not applicable.

D. TREND INFORMATION

The information set forth under the heading: *"– Delivering profitable ounces – Operational performance*" on pages 50 to 85 of the Integrated Annual Report for the 20-F 2022 is incorporated herein by reference.

Other than as disclosed elsewhere in this annual report, we are not aware of any trends, uncertainties, demands, commitments or events for the year ended June 30, 2022 that are reasonably likely to have a material and adverse effect on our net revenues, income, profitability, liquidity or capital resources, or that would cause the disclosed financial information to be not necessarily indicative of future results of operations or financial conditions.

E. CRITICAL ACCOUNTING ESTIMATES

Not applicable

ITEM 6. DIRECTORS, SENIOR MANAGEMENT AND EMPLOYEES

A. DIRECTORS AND SENIOR MANAGEMENT

The information set forth under the heading:

- *"– Our leadership"* on pages 18 to 19

of the Integrated Annual Report for the 20-F 2022 is incorporated herein by reference.

B. COMPENSATION

The information set forth under the heading:

- *"– Remuneration report"* on pages 185 to 197

of the Integrated Annual Report for the 20-F 2022 is incorporated herein by reference.

C. BOARD PRACTICES

The information set forth under the headings:

- *"– Corporate governance"* on pages 167 to 180;
- *"– Board committees"* on pages 181 to 184;
- *"– Remuneration report"* on pages 185 to 197; and
- *"– Audit and risk committee: Chairperson's report"* on pages 198 to 202.

of the Integrated Annual Report for the 20-F 2022 is incorporated herein by reference.

D. EMPLOYEES

The information set forth under the heading:

- *"– Caring for our employees"* on pages 147 to 153

of the Integrated Annual Report for the 20-F 2022 is incorporated herein by reference.

E. SHARE OWNERSHIP

See note 37 "*Related Parties*" of our consolidated financial statements, set forth beginning on page F-1.

ITEM 7. MAJOR SHAREHOLDERS AND RELATED PARTY TRANSACTIONS

A. MAJOR SHAREHOLDERS

We are an independent gold producer, with no single shareholder exercising control. As of October 25, 2022, our issued share capital consisted of 618,071,972 ordinary shares. To our knowledge, (a) we are not directly or indirectly owned or controlled: (i) by another corporation; or (ii) by any foreign government, and (b) there are no arrangements (including any announced or expected takeover bid), the operation of which may at a subsequent date result in a change in our control.

The voting rights of our major shareholders do not differ from the voting rights of other holders of the same class of shares.

A list of the beneficial holders that hold 5% or more of our securities as of September 30, 2022 is set forth below:

Holder	Number of shares	Percentage
African Rainbow Minerals Limited[1]	74,665,545	12.12 %
Government Employees Pension Fund (PIC)	63,564,789	10.32 %
Van Eck Global Associates Corporation	57,255,865	9.29 %
Exor Capital LLP (UK)	39,518,581	6.41 %
Fairtree Capital	34,500,264	5.60 %

[1] Patrice Motsepe, our Chairman, has an indirect holding in African Rainbow Minerals Limited.

The table below shows the significant changes in the percentage ownership held by major shareholders, to the knowledge of Harmony's management, during the past three years.

	Beneficial ownership as of June 30, 2022		
	2022	2021	2020
	%	%	%
African Rainbow Minerals Limited	12.12	12.12	12.38
Public Investment Corporation of South Africa	10.28	7.77	4.85
Van Eck Associates Corporation	8.98	9.16	10.11
Fairtree Capital	5.60	5.81	5.40
Exor Capital LLP (UK)	5.30	4.08	2.52

B. RELATED PARTY TRANSACTIONS

Between July 1, 2021 and June 30, 2022, none of the directors or major shareholders of Harmony or, to the knowledge of Harmony, their families, had an interest, directly or indirectly, in any transaction or in any proposed transaction that has affected or will materially affect Harmony or its subsidiaries, other than as stated in note 37 "Related Parties" of our consolidated financial statements, set forth beginning on page F-1. Also see note 18 (b) "*Other non-current assets*", note 21 "*Investments in Associates*" and note 22 "*Investment in Joint Operations*" of our consolidated financial statements, set forth beginning on page F-1.

C. INTERESTS OF EXPERTS AND COUNSEL

Not applicable.

ITEM 8. FINANCIAL INFORMATION

A. CONSOLIDATED STATEMENTS AND OTHER FINANCIAL INFORMATION

Please refer to Item 18: "*Financial Statements".* For a discussion of our export sales, see Item 5: *"Operating and Financial Review and Prospects".*

Legal Proceedings

None of our properties is the subject of pending material legal proceedings. We have been involved in a number of claims and legal and arbitration proceedings incidental to the normal conduct of our business, such as the ones described below.

Provision for silicosis settlement

A provision of R917 million was recognized during fiscal 2017 for Harmony's potential cost to settle the silicosis and TB class actions that have been instituted against it in South Africa. At June 30, 2022 and June 30, 2021 the provision was R820 million and R854 million respectively. The decrease in fiscal 2022 is primarily due to payments of R109 million made during the year. This was offset by an increase in the change in estimate due to the timing of cash flows (R23 million) as well as the time value of money accretion (R52 million).

The provision recorded in the financial statements is subject to adjustment or reversal in the future, depending on a number of factors, including changes in benefit take-up.

See Item 3: "*Key Information - Risk Factors - Risks related to ESG - The cost of occupational health care services and the potential liabilities related to occupational health diseases may increase in future and may be substantial*" and to Note 27 "*Other Provisions - Provision for silicosis settlement"* of our consolidated financial statements set forth beginning on page F-1.

Dividend Policy

Dividends are proposed by and approved by our board of directors based on our financial performance and compliance with applicable laws, including in respect of the solvency and liquidity test contemplated in the Companies Act. Dividends are recognized when declared by the board. Our board may exercise its discretion on an annual basis, taking into consideration the prevailing market conditions, balance sheet flexibility and future capital commitments of the group. Our dividend policy is to pay a return of 20% on net free cash generated to shareholders. Under South African law, we may declare and pay dividends from any reserves included in total shareholder's equity (including share capital and share premium) calculated in accordance with IFRS, subject to the solvency and liquidity test.

See Item 3: "*Key Information - Risk Factors – Risks Related to Our Corporate and Financing Structure and Strategy - We may not pay dividends or make similar payments to our shareholders in the future" and "- Strategic and Market Risks - Fluctuations in the exchange rate of currencies may reduce the market value of our securities, as well as the market value of any dividends or distributions paid by us".* Also see Item 10: "*Additional Information – Exchange Controls – Introduction", "– Exchange Controls – Government Regulatory Considerations – Dividends", "- Taxation - Certain South African Tax Considerations – Dividends" and " - Certain Material United States Federal Income Tax Considerations – Taxation of Dividends"*.

B. SIGNIFICANT CHANGES

See Item 4: "*Information on the Company - History and Development of the Company - Recent Developments - Developments since June 30, 2022.*"

ITEM 9 THE OFFER AND LISTING

A. OFFER AND LISTING DETAILS

The principal trading market for our ordinary shares is the JSE, where they trade under the symbol "HAR". Our ordinary shares trade on the NYSE in the form of ADSs, under the symbol "HMY".

B. PLAN OF DISTRIBUTION

Not applicable.

C. MARKETS

The Securities Exchange in South Africa

The JSE is the premier stock exchange in Africa and is based in South Africa where it has operated as a marketplace for the trading of financial products for 130 years.

The JSE connects buyers and sellers in a variety of financial markets that include equities and equity derivatives, commodity derivatives, currency derivatives and interest rate instruments. It is one of the top 20 exchanges in the world in terms of market capitalization and a member of the World Federation of Exchanges.

The market capitalization of the JSE equities index (FTSE/JSE Africa All Shares Index) was R6,982 billion (US$429 billion) at June 30, 2022. The JSE mining index (FTSE/JSE Precious Metals and Mining Index) market capitalization was R690 billion (US$42 billion)[1] at June 30, 2022, 9.9% of the overall JSE market capitalization.

[1] Source: Bloomberg

Strate Settlement

Under Strate Pty Limited, South Africa's Central Securities Depository ("**CSD**"), there are essentially two types of clients: controlled and non-controlled. A controlled client is one who elects to keep his shares and cash with his broker and these shares are held in custody at the broker's chosen Custodian Bank, the CSD Participant ("**CSDP**"). A non-controlled client is one who appoints his own CSDP to act as custodian on his behalf. Equity settlements take place on a contractual T+3 (where T= trade date) settlement cycle. Securities and funds become due for settlement three business days after the trade. Contractual settlement is a market convention embodied in the rules of the JSE which states that a client has a contractual obligation to cause a JSE trade to settle on settlement day. The JSE, in its capacity as Settlement Authority, ensures that all on-market trades entered into by two JSE member firms settle three days after the trade date.

D. SELLING SHAREHOLDERS

Not applicable.

E. DILUTION

Not applicable.

F. EXPENSES OF THE ISSUE

Not applicable.

ITEM 10. ADDITIONAL INFORMATION

A. SHARE CAPITAL

Not applicable.

B. MEMORANDUM OF INCORPORATION

Information on our Memorandum of Incorporation can be found in Exhibit 1.1 filed with this Harmony 2022 Form 20-F.

Voting Rights

There are no limitations imposed by South African law or by our charter on the right of non-resident or foreign owners to hold or vote our ordinary shares.

C. MATERIAL CONTRACTS

R1.5 Billion Green Term Loan

On May 25, 2022, Harmony and a syndicate of local and international lenders entered into a R1.5 billion six and a half year syndicated green term loan. The R1.5 Billion Green Term Loan matures in November 2028.

Under the terms of the R1.5 Billion Green Term Loan, funds borrowed must be used in respect of "eligible green projects", which relate to the construction, development, acquisition, maintenance, and/or operation of renewable energy installations.

The R1.5 Billion Green Term Loan bears interest at 2.65% over three-month JIBAR.

Harmony is permitted to draw down on the R1.5 Billion Green Term Loan commencing in November 2022. As at June 30, 2022, R0 million remained outstanding on the R1.5 Billion Green Term Loan.

US$400 Million Syndicated Facility

On May 25, 2022, Harmony and a syndicate of local and international lenders, which was jointly arranged by Nedbank Limited and ABSA Bank Limited, concluded the US$400 Million Syndicated Facility comprising a US$100 million term facility and a US$300 million revolving credit facility. The US$400 Million Syndicated Facility matures in May 2025.

Under the terms of the US$400 Million Syndicated Facility funds borrowed must be used (i) in repayment of the September 2019 US$400 million three-year syndicated term loan and revolving credit facility and (ii) for exploration activities, feasibility costs, capital costs, operational costs, other corporate expenses and other strategic objectives relating to the Group outside of South Africa.

The US$100 million term loan facility bears interest of 2.85% over the three-month SOFR; the US$300 million revolving credit facility bears interest of 2.7% over three month SOFR.

During fiscal 2022, US$200 million (R3,057 million) was drawn down on the US$400 Million Syndicated Facility. US$200 million (R3,180 million) remained outstanding as at June 30, 2022.

R2.5 Billion Syndicated Revolving Credit Facility

On May 25, 2022, Harmony and a syndicate of local and international lenders entered the R2.5 Billion Syndicated Revolving Credit Facility. The R2.5 Billion Syndicated Revolving Credit Facility matures in May 2025.

Under the terms of the R2.5 Billion Syndicated Revolving Credit Facility, funds borrowed must be used (i) in repayment of the November 2018 R2 billion four-year syndicated term loan and revolving credit facility and (ii) for ongoing general corporate costs, working costs and working capital requirements of the Group.

The R2.5 Billion Syndicated Revolving Credit Facility bears interest at 2.40% over three-month JIBAR.

As at June 30, 2022, R0 million was outstanding and R2.5 billion was available under the R2.5 Billion Syndicated Revolving Credit Facility.

US$24 Million Wespac Loan

On July 9, 2018, Harmony, as a borrower, entered into the US$24 Million Westpac Loan to finance its new fleet in Hidden Valley with Westpac - Bank - PNG - Limited. The US$24 Million Westpac Loan is repayable in quarterly installments and matures in July 2022.

The US$24 Million Westpac Loan bears interest at 3.20% over three-month LIBOR.

The US$24 Million Westpac Loan is secured by a cession and pledge of vehicles and machinery purchased.

During fiscal 2022 US$6 million (R94 million) was repaid on the US$24 Million Westpac Loan and US$2 million (R25 million) remained outstanding at June 30, 2022.

Harmony Renewable Energy Projects

During June 2022, Harmony has entered into three Power Purchase Agreements ("**the PPA**") and three Land Lease Agreements ("l**and lease**") with Tshepong Photovoltaic (Pty) Ltd, Eland Photovoltaic (Pty) Ltd and Nyala Photovoltaic (Pty) Ltd ("**the seller**"). The details of the agreements states that Photovoltaic generation facilities ("**energy facilities**") will be constructed by the seller on the land that Harmony will lease to the seller and the energy output produced by the facility will be sold exclusively to Freegold, a subsidiary of Harmony. The term of the PPA is for 15 years.

Harmony will purchase energy output produced by the energy facilities, and although there is a fixed rate per megawatt-hour ("**MWh**"), there is no fixed volume of power to be delivered. Thus all payments are variable based on consumption. Energy output rates are stipulated as between R838 per MWh to R930 per MWh as indexed annually.

As defined in the PPA, a bank guarantee is required to be issued on behalf of Freegold to the seller for an amount equal to three months' worth of the estimated energy output payments as at financial close. Lombards Attorneys is responsible for issuing guarantees to the seller for the required amounts as stipulated in the PPA.

D. EXCHANGE CONTROLS

Introduction

The following is a general outline of South African exchange controls. Investors should consult a professional adviser pertaining to the exchange control implications of their particular investments.

The Republic of South Africa's exchange control regulations provide for restrictions on the exportation of capital from a Common Monetary Area member, consisting of South Africa, the Republic of Namibia, the Kingdoms of Lesotho and Eswatini. Transactions between South African residents (including corporations) and foreigners are subject to these exchange controls, which are administered by the Financial Surveillance Department of the SARB.

Since 1995 a number of exchange control regulations have been relaxed with regard to both residents and non-residents. Following the initial reforms, ongoing relaxations have been introduced with the aim of achieving a macroprudential risk-based approach to the management of foreign exchange. The reforms are being made to, among other things, enable international firms to make investments through South Africa to the rest of Africa and to further enhance opportunities for offshore portfolio diversification for resident investors. In addition, the relaxations have also significantly raised the size of the discretionary allowances available to residents for overseas transactions.

A considerable degree of flexibility is built into the system of exchange controls, and the SARB possesses substantial discretionary powers in approving or rejecting the applications that fall outside the authority granted to authorized dealers.

These comments relate to exchange controls in force at June 30, 2022. These controls are subject to change at any time, however, the government has previously announced most changes during the annual budget statement in February. It is not possible to predict whether existing exchange controls will be changed or relaxed by the South African government in the future. Investors are urged to consult a professional adviser as to the exchange control implications of their particular investments.

Government Regulatory Considerations

Shares

A foreign investor may invest freely in shares in a South African company, whether listed on the JSE or not, through normal banking channels against settlement in foreign currency or Rand from a non-resident Rand account. A foreign investor may also sell his or her share investment in a South African company and transfer the proceeds out of South Africa without restriction. However, when the Company is not listed on the JSE, the SARB must be satisfied that the sale price of any shares reflects fair market value.

Under present South African exchange control regulations, our ordinary shares and ADSs are freely transferable outside the Common Monetary Area between non-residents of the Common Monetary Area. No prior SARB approval is required for the transfer of proceeds to South Africa, in respect of shares listed on the JSE, provided these funds enter the country through the normal banking channels. In addition, the proceeds from the sale of ordinary shares on the JSE on behalf of those holders of ordinary shares who are not residents of the Common Monetary Area are freely remittable to those holders. Share certificates and warrant certificates held by non-residents will be endorsed with the words “non-resident.”

Loans

Generally, the granting of loans to us or our subsidiaries, and our ability to borrow from non-South African sources and the repatriation of dividends, interest and royalties by us will be regulated by the Exchange Control Department of the SARB. If a foreign investor wishes to lend capital to a South African company, the prior approval of the SARB must be sought mainly in respect of the interest rate and terms of repayment applicable to such loan.

Interest on foreign loans is subject to a withholding tax of 15% and freely remittable abroad, provided the loans received prior approval from the SARB. However, this rate may be reduced depending on the applicability of a double taxation treaty.

Investments

We are required to seek approval from the SARB to use funds held in South Africa to make investments outside of South Africa.

Dividends

Dividends declared by a listed company are subject to a withholding tax of 20% and freely transferable out of South Africa from both trading and non-trading profits earned in South Africa through a major bank as agent for the SARB to non-resident shareholders. However, this rate may be reduced depending on the applicability of a double taxation treaty.

Where 75% or more of a South African company’s capital, voting power, power of control or earnings is directly or indirectly controlled by non-residents, such a company is designated an “affected person” by the SARB, and certain restrictions are placed on its ability to obtain local financial assistance. We are not, and have never been, designated an “affected person” by the SARB.

If an affected entity made use of local borrowing facilities, the affected entity must apply for SARB approval prior to remitting dividends offshore. As a general rule, an affected entity that has accumulated historical losses may not declare dividends out of current profits unless and until such time that the affected entity’s local borrowings do not exceed the local borrowing limit.

E. TAXATION

Certain South African Tax Considerations

The summary set out in this section is based on current law and our interpretation thereof. Amendments to the law may change the tax treatment of acquiring, holding or disposing of our ordinary shares or ADSs, as applicable, which changes may possibly occur on a retrospective basis. The following summary is not a comprehensive description of all of the tax considerations that may be relevant to a decision to purchase, own or dispose of our ordinary shares or ADSs, and does not cover the tax consequences that depend upon your particular tax circumstances. This summary is not intended to constitute tax advice. This summary does not address the foreign tax consequences for person that are not residents of South Africa and specifically excludes the tax consequences for persons who are not residents of South Africa whose holding of shares or ADSs is effectively connected with a permanent establishment in South Africa through which the holder carries on business activities, or who is not the beneficial recipient of the dividends, or where the source of the transaction or dividends is deemed to be in South Africa. In addition, it does not cover the tax consequences for a holder that is not entitled to the benefits of the double taxation agreement concluded between the Republic of South Africa and the United States of America signed on February 17, 1997 (“**US Treaty**”). It also assumes that the holders hold the ordinary shares or ADSs on capital account (that is, for investment purposes) as opposed to on revenue account (that is for speculative purposes or as trading stock). The Supreme Court of Appeal in South Africa indicated that gains will be on revenue account if they are derived as part of a business in carrying out a scheme of profit making. We recommend that you consult your own tax adviser concerning the consequences of holding our ordinary shares or ADSs, as applicable, in your particular situation.

Dividends

With effect from April 1, 2012, South Africa introduced a Dividends Tax, which is a withholding tax on dividends effectively borne by the shareholder receiving the dividend. The rate at which Dividends Tax is levied is 20% effective from February 22, 2017 (previously 15%). Dividends Tax is imposed on, amongst others, non-resident shareholders, and it is withheld by the company declaring and paying the dividend to its shareholders or the regulated intermediary, as the case may be, as a withholding agent. Dividends Tax is not payable to the extent that the recipient is, amongst others, a South African resident company that has provided the relevant declaration and undertaking to the company declaring and paying the dividend.

Article 10 of the US Treaty provides that a dividend paid by a company that is a resident of South Africa for tax purposes to a resident of the US for tax purposes may be taxed in the US. Article 10 of the US Treaty further provides that such a dividend may also be taxed in South Africa. However, the tax charged in South Africa may not exceed 5% of the gross amount of the dividends if the beneficial owner is a company that holds directly at least 10% of the voting stock of the South African company paying the dividends. In all other cases, the US Treaty provides for a withholding tax of 15% of the gross amount of the dividends.

With effect from January 1, 2012 it is deemed that an amount will be derived by a person from a source within South Africa if the amount constitutes a dividend received by or accrued to that person. Residents of the US can make use of the lower rate as provided for in the US Treaty if the relevant declaration and undertaking are provided to Harmony beforehand. It was recently enacted that the declaration and undertaking should be renewed after a five-year period effective from July 1, 2020. No time limitation will be imposed on the validity of the declarations and undertakings if a regulated intermediary applies the Financial Intelligence Centre legislation, the common reporting standard regulations in relation to the declarations or the agreement between the Government of South Africa and the Government of the US to improve International Tax Compliance and to Implement the US Foreign Account Tax Compliance Act.

Capital Gains Tax

Capital Gains Tax ("**CGT**") was introduced in South Africa with effect from October 1, 2001. In the case of an individual, 40% in respect of years of assessment commencing March 1, 2016 (previously 33.3%) of the capital gain is included in the individual's taxable income (effectively 18%) should the individual pay tax at the marginal rate of 45% from March 1, 2017. In the case of a corporate entity or trust, 80% in respect of years of assessment commencing March 1, 2016 of such gain is included in its taxable income (effectively a rate of 22.4% for a corporate entity and 36% for a trust). CGT is only applicable to non-residents if the proceeds from the sale are sourced in South Africa or are attributable to a permanent establishment of the non-resident shareholder. The US Treaty (which will prevail in the event of a conflict) provides that the US holder of ordinary shares or ADSs will not be subject to CGT if the assets have been held as capital assets, unless they are linked to a permanent establishment of such non-resident shareholder in South Africa. To the extent that shares or ADSs are held on revenue account, a similar principle applies with reference to the payment of income tax. Subject to Article 13 of the US Treaty (as indicated below) income tax is only payable to the extent that the gain is attributable to the carrying on of a business in South Africa through a permanent establishment situated in South Africa. The current corporate rate is equal to 28%. This will be changed to 27% for fiscal year 2023 which changes the effective CGT rate of a corporate entity to 21.6%. Any gains realized on the disposal of equity shares are automatically deemed to be of a capital nature if the equity shares have been held for a continuous period of at least three years. Such provision applies automatically and is not elective. However, this deeming provision does not include an ADS.

Generally, the domestic laws of South Africa provide that an amount received or accrued in respect of the disposal of an asset that constitutes immovable property held by that person or any interest or right of whatever nature of that person to or in intellectual property where that property is situated in South Africa is deemed to have been sourced in South Africa and be subject to South African tax. It includes the disposal of any equity shares held by a person in a company if:

- 80% or more of the market value of the equity shares, ownership or right to ownership or vested interest, as the case may be, at the time of disposal thereof is attributable directly or indirectly to immovable property held otherwise than as trading stock. This requirement will include rights to variable or fixed payments as consideration for the working of, or the right to work mineral deposits, sources and other natural resources in the Republic; and
- the person directly or indirectly holds at least 20% of the equity shares in the company or ownership or right to ownership of the other entity.

The provisions of the US Treaty override the deemed source rules to the extent applicable. Article 13 of the US Treaty provides that South Africa is entitled to tax a gain that is attributable to the alienation of real property situated in South Africa, which concept includes the equivalent of a US real property interest, even if held through means of shares.

Securities Transfer Tax

Securities Transfer Tax ("**STT**") is payable in respect of the transfer of any security issued by a South African company. STT is levied at a rate of 0.25% of the taxable amount of the security concerned (generally the market value). A security is defined to include a depository receipt in a company, in addition to shares in a company. STT is not payable on the issue of any security.

Although ADSs in respect of our shares are not listed on the JSE, reference is specifically made in the legislation to the transfer of depository receipts in a South African company. As a consequence, STT will therefore be payable on the transfer of ADSs. In addition, the process of depositing shares listed on the JSE in return for ADSs, or withdrawing such shares from the deposit facility, will attract STT as and when the shares are transferred to or from the depository institution.

STT is payable by the broker or participant if a transaction is effected through a stockbroker or an exchange participant, but it may be recovered from the person acquiring the beneficial ownership of the rights concerned. In other instances, STT is payable by the person acquiring beneficial ownership.

STT is also payable on the subsequent redemption or cancellation of shares or ADSs.

Interest

South Africa has imposed a withholding tax on interest paid by any person to or for the benefit of any foreign person to the extent that the interest is regarded as having been received or accrued from a source within South Africa at the rate of 15% with effect from March 1, 2015. In terms of the US Treaty this rate is reduced to zero. However, the rate may change to 5% or 10% once the US Treaty is renegotiated. US residents can only make use of the lower rate as provided for in the US Treaty if the relevant declaration and undertaking are provided to the company paying the interest. It was recently enacted that the declaration and undertaking should be renewed after a five-year period effective from July 1, 2020. No time limitation will be imposed on the validity of the declarations and undertakings if a regulated intermediary applies the Financial Intelligence Centre legislation, the common reporting standard regulations in relation to the declarations or the agreement between the Government of South Africa and the Government of the US to improve International Tax Compliance and to Implement the US Foreign Account Tax Compliance Act.

Withholding tax on Service Fees

There is no separate withholding tax on service fees. The monitoring of service fees is now dealt with on the basis that these types of arrangements must be reported to South African Revenue Service ("**SARS**"). Transactions between residents and non-residents must thus be reported if they relate to consultancy, construction, engineering, installation, logistical, managerial, supervisory, technical or training services, in circumstances where the expenditure exceeds or is anticipated to exceed R10 million in aggregate and does not otherwise qualify as remuneration.

Capitalization Shares

Capitalization shares issued to holders of shares in lieu of cash dividends do not constitute dividends and are currently not subject to Dividends Tax. However, these shares have a base cost of zero for income tax purposes.

Certain Material United States Federal Income Tax Considerations

The following is a discussion of certain material US federal income tax consequences of acquiring, holding and disposing of the ordinary shares (for purposes of this summary, references to the ordinary shares include the ADSs, unless the context otherwise requires).

You will be a “**US holder**” if you are a beneficial owner of ordinary shares and you are:

- an individual who is a citizen or resident of the United States;
- a corporation (or other entity taxable as a corporation for US federal income tax purposes) organized under the laws of the United States, any state thereof, or the District of Columbia;
- an estate whose income is subject to US federal income tax regardless of its source; or
- a trust if: (i) a US court can exercise primary supervision over the trust’s administration and one or more US persons are authorized to control all substantial decisions of the trust or (ii) it has a valid election in effect under applicable US Treasury regulations to be treated as a US person.

This summary only applies to US holders that hold ordinary shares or ADSs as capital assets. This summary is based on the US Internal Revenue Code of 1986, as amended, (the “**Code**”), its legislative history, existing and proposed US Treasury regulations, published Internal Revenue Service ("**IRS**") rulings, the US Treaty and court decisions that are now in effect, any and all of which are subject to differing interpretations and which could be materially and adversely changed. Any such change could apply retroactively and could affect the continued validity of this summary. This summary does not consider the potential effects, both adverse and beneficial, of any proposed legislation which, if enacted, could be applied, possibly on a retroactive basis, at any time.

This summary does not purport to be a comprehensive description of all of the tax considerations that may be relevant to a decision to purchase the ordinary shares. In particular, this summary deals only with US holders that will hold the ordinary shares as capital assets within the meaning of Section 1221 of the Code. It does not address considerations that may be relevant to you if you are an investor that is subject to special tax rules, such as a bank, real estate investment trust, regulated investment company, insurance company, dealer in securities or currencies, trader in securities or commodities that elects mark-to-market treatment, person that will hold the ordinary shares as a hedge against currency risk or as a position in a “straddle” or conversion transaction, tax-exempt organization, person whose “functional currency” is not the US dollar, person liable for alternative minimum tax, person required to accelerate the recognition of any item of gross income with respect to shares or ADSs as a result of such income being recognized on an applicable financial statement or a person who owns directly, indirectly or by attribution, at least 10% of our stock. This summary also does not address any aspect of US federal non-income tax laws, such as gift or estate tax laws, or state, local, or non-US tax laws, or, except as discussed below, any tax reporting obligations of a holder of our ordinary shares.

If a partnership (including for this purpose any entity treated as a partnership for US federal income tax purposes) is a beneficial owner of the ordinary shares, the US federal income tax treatment of a partner in the partnership generally will depend on the status of the partner and the activities of the partnership. A holder of the ordinary shares that is a partnership and partners in such a partnership should consult their own tax advisors about the US federal income tax consequences of acquiring, holding, and disposing of the ordinary shares.

We believe that we will not be a passive foreign investment company ("**PFIC**"), for US federal income tax purposes for the current taxable year and do not expect to become a PFIC in the foreseeable future. However, we cannot assure you that we will not be considered a PFIC in the current or future years. If Harmony were to be treated as a PFIC, US holders of ordinary shares or ADSs would be required (i) to pay a special US addition to tax on certain distributions and gains on sale and (ii) to pay tax on any gain from the sale of ordinary shares or ADSs at ordinary income (rather than capital gains) rates in addition to paying the special addition to tax on this gain. Such holder may also be required to file IRS Form 8621. Additionally, dividends paid by Harmony would not be eligible for the reduced rate of tax described below under "- *Taxation of Dividends*". The remainder of this discussion assumes that Harmony is not a PFIC for US federal income tax purposes. ***You should consult your own tax advisers regarding the potential application of the PFIC regime.***

Each prospective purchaser should consult his or her tax advisor with respect to the US federal, state, local and non-US tax consequences of acquiring, owning, or disposing of shares or ADSs.

US holders of ADSs

For US federal income tax purposes, a US holder of ADSs generally will be treated as the owner of the corresponding number of underlying ordinary shares held by The Bank of New York Mellon as depositary ("**Depositary**") for the ADSs, and references to ordinary shares in the following discussion refer also to ADSs representing the ordinary shares.

Deposits and withdrawals of ordinary shares by US holders in exchange for ADSs will in general not result in the realization of gain or loss for US federal income tax purposes. Your tax basis in withdrawn ordinary shares will be the same as your tax basis in the ADSs surrendered, and your holding period for the ordinary shares will include the holding period of the ADSs.

Taxation of Dividends

Distributions paid out of Harmony's current or accumulated earnings and profits (as determined for US federal income tax purposes), before reduction for any South African withholding tax paid by Harmony with respect thereto, will generally be taxable to you as dividend income, and will not be eligible for the dividends received deduction allowed to corporations. Distributions that exceed Harmony's current and accumulated earnings and profits will be treated as a non-taxable return of capital to the extent of your basis in the ordinary shares and thereafter as capital gain. However, we do not maintain calculations of our earnings and profits in accordance with US federal income tax accounting principles. You should therefore assume that any distribution by us with respect to the shares will be reported as ordinary dividend income. You should consult your own tax advisers with respect to the appropriate US federal income tax treatment of any distribution received from us.

Dividends paid by Harmony generally will be taxable to non-corporate US holders at the reduced rate normally applicable to long-term capital gains, provided that either (i) Harmony qualifies for the benefits of the US Treaty, or (ii) with respect to dividends paid on the ADSs, the ADSs are considered to be "readily tradable" on the NYSE, and certain other conditions are met. You will be eligible for this reduced rate only if you are an individual, and have held the ordinary shares or ADSs for more than 60 days during the 121 day period beginning 60 days before the ex-dividend date.

For US federal income tax purposes, the amount of any dividend paid in Rand will be included in income in a US dollar amount calculated by reference to the exchange rate in effect on the date the dividends are received by you or the Depositary (in the case of ADSs), regardless of whether they are converted into US dollars at that time. If you or the Depositary, as the case may be, convert dividends received in Rand into US dollars on the day they are received, you generally will not be required to recognize foreign currency gain or loss in respect of this dividend income.

Effect of South African Withholding Taxes

As discussed above in "- *Taxation - Certain South African Tax Considerations - Dividends*", under current law, South Africa imposes a withholding tax of 20% on dividends paid by Harmony. A US holder will generally be entitled, subject to certain limitations, to a foreign tax credit against its US federal income tax liability, or a deduction in computing its US federal taxable income, for South African income taxes withheld by Harmony.

US holders that receive payments subject to this withholding tax will be treated, for US federal income tax purposes, as having received the amount of South African taxes withheld by Harmony, and as then having paid over the withheld taxes to the South African taxing authorities. As a result of this rule, the amount of dividend income included in gross income for US federal income tax purposes by a US holder with respect to a payment of dividends may be greater than the amount of cash actually received (or receivable) by the US holder from Harmony with respect to the payment.

The rules governing foreign tax credits are complex. You should consult your tax adviser concerning the foreign tax credit implications of the payment of South African withholding taxes.

Taxation of a Sale or other Disposition

Upon a sale or other disposition of ordinary shares or ADSs, other than an exchange of ADSs for ordinary shares and vice versa, you will generally recognize US source capital gain or loss for US federal income tax purposes equal to the difference between the amount realized and your adjusted tax basis in the ordinary shares or ADSs. Your tax basis in an ordinary share or ADS will generally be its US dollar cost. This capital gain or loss will be long-term capital gain or loss if your holding period in the ordinary shares or ADSs exceeds one year. However, regardless of your actual holding period, any loss may be treated as long-term capital loss to the extent you receive a dividend that qualifies for the reduced rate described above under " - *Taxation of Dividends*" and also exceeds 10% of your basis in the ordinary shares. The deductibility of capital losses is subject to significant limitations.

Foreign currency received on the sale or other disposition of an ordinary share will have a tax basis equal to its US dollar value on the settlement date. Foreign currency that is purchased will generally have a tax basis equal to the US dollar value of the foreign currency on the date of purchase. Any gain or loss recognized on a sale or other disposition of a foreign currency (including its use to purchase ordinary shares or upon exchange for US dollars) will be US source ordinary income or loss.

To the extent you incur STT in connection with a transfer or withdrawal of ordinary shares as described under "-*Certain South African Tax Considerations - Securities Transfer Tax*" above, such securities transfer tax will not be a creditable tax for US foreign tax credit purposes.

Information with Respect to Foreign Financial Assets

US holders of “specified foreign financial assets” with an aggregate value in excess of US$50,000 at the end of the taxable year, or US$75,000 at any time during the taxable year, are generally required to file an information report with respect to such assets with their tax returns. “Specified foreign financial assets” may include financial accounts maintained by foreign financial institutions, as well as the following, but only if they are not held in accounts maintained by financial institutions: (i) stocks and securities issued by non-United States persons, (ii) financial instruments and contracts held for investment that have non-United States issuers or counter parties and (iii) interests in foreign entities. US holders are urged to consult their tax advisors regarding the application of this reporting requirement to their ownership of the ordinary shares.

US Information Reporting and Backup Withholding Rules

Payments of dividends and other proceeds with respect to ordinary shares or ADSs by US persons will be reported to you and to the IRS as may be required under applicable regulations. Backup withholding may apply to these payments if you fail to provide an accurate taxpayer identification number or certification of exempt status or fail to comply with applicable certification requirements. Some holders are not subject to backup withholding. You should consult your tax adviser as to your qualification for an exemption from backup withholding and the procedure for obtaining an exemption.

F. DIVIDENDS AND PAYING AGENTS

Not applicable.

G. STATEMENT BY EXPERTS

Not applicable.

H. DOCUMENTS ON DISPLAY

Our current Memorandum of Incorporation may be examined at our principal place of business at: Randfontein Office Park, Corner of Main Reef Road and Ward Avenue, Randfontein, 1759, South Africa.

We file annual reports on Form 20-F with, and furnish periodic reports on Form 6-K to, the SEC. You can obtain access to the documents filed via the Electronic Data Gathering, Analysis, and Retrieval (EDGAR) system on the SEC’s website (*http://www.sec.gov*).

This Harmony 2022 Form 20-F reports information primarily regarding Harmony’s business, operations and financial information relating to the fiscal year ended June 30, 2022. For more recent updates regarding Harmony, you may inspect any reports, statements or other information that Harmony files with the SEC.

No material referred to in this annual report as being available on our website is incorporated by reference into, or forms any part of, this annual report. References herein to our website shall not be deemed to cause such incorporation.

I. SUBSIDIARY INFORMATION

Not applicable.

ITEM 11 QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

The information set forth under the heading *“Cautionary statement about forward-looking statements”* on the inside front cover is incorporated herein by reference.

General

We are exposed to market risks, including credit risk, foreign currency risk, commodity price risk and interest rate risk associated with underlying assets, liabilities and anticipated transactions. Following periodic evaluation of these exposures, we may enter into derivative financial instruments to manage these exposures. We have policies in areas such as counterparty exposure and hedging practices, which have been approved by our audit and risk committee. We do not hold or issue derivative financial instruments for trading or speculative purposes.

We did not apply hedge accounting to incidental hedges held in the past.

In accordance with IFRS 9 - *Financial Instruments*, we account for our derivative financial instruments as hedging transactions if the following criteria are met:

- in the case of a hedge of an anticipated future transaction, there is a high probability that the transaction will occur, and
- in the case of a cash flow hedge, the hedging instrument is expected to be highly effective.

During fiscal 2022 and 2021, we designated the majority of the gold forward sales contracts as cash flow hedging instruments and applied hedge accounting to these transactions. See "- *Commodity Price Sensitivity"* below.

Foreign Currency Sensitivity

In the ordinary course of business, we enter into transactions denominated in foreign currencies (primarily US dollars, Australian dollars and PNG Kina). In addition, we incur investments and liabilities in US dollars, Australian dollars and PNG Kina from time to time. As a result, we are subject to transaction and translation exposure from fluctuations in foreign currency exchange rates.

Harmony enters into foreign exchange hedging contracts to manage these risks. This can take the form of zero cost collars, which establish a minimum (floor) and maximum (cap) Rand/US dollar exchange rate at which to convert the US dollars we receive on our gold sales to Rand or outright forward contracts that fix the forward exchange rate. At June 30, 2022, the nominal amount of the zero cost collars is US$60 million spread over a six-month period with a weighted average cap price of US$1=R17.98 and weighted average floor price of US$1=R15.98. Additionally, at June 30, 2022 Harmony had open foreign exchange forward contracts which had a nominal amount of US$6 million spread over a three-month period at an average exchange rate of US$1=R16.84.

Commodity Price Sensitivity

General

Our revenues and costs are very sensitive to the exchange rate of the Rand and other non-US currencies to the US dollar because our gold is sold in US dollars, but most of our operating costs are incurred in Rand and other non-US currencies. During fiscal 2022 and 2021, Harmony entered into forward sales to establish the sales price in advance of its future gold production, which includes the foreign exchange rate. See "- *Foreign Currency Sensitivity"* above.

The market price of gold has a significant effect on our results of operations, our ability to pay dividends and undertake capital expenditures, and the market price of our ordinary shares.

Gold prices have historically fluctuated widely and are affected by numerous industry factors over which we do not have any control. See Item 3: *"Key Information - Risk Factors - Strategic and Market Risks - The profitability of our operations, and cash flows generated by those operations, are affected by changes in the price of gold and other metals; a fall in the gold price below our cash cost of production and capital expenditure required to sustain production for any sustained period may lead to losses and require us to curtail or suspend certain operations"*. The aggregate effect of these factors, all of which are beyond our control, is impossible for us to predict.

Harmony's Hedging Policy

As a general rule, we sell our gold production at market prices. However, commencing in fiscal 2017, Harmony entered into derivative contracts to manage the variability in cash flows from the Group's production, in order to create cash certainty and protect the Group against lower commodity prices. See Item 5: *"Operating and Financial Review and Prospects* - O*perating Results - Revenue".*

Commodity Sales Agreements

At June 30, 2022, the open Rand gold forward sale contracts amounted to 378,000 ounces spread over 21 months at an average of R1,035,000. The open US$ gold forward contracts amounted to 57,000 ounces spread over 21 months at an average of US$1,880/oz. The open US$ silver zero cost collars amounted to 950,000 ounces spread over 20 months with a weighted average floor of US$25.31/oz and a weighted average cap of US$28.27/oz.

At June 30, 2021, the open Rand gold forward sale contracts amounted to 309,000 ounces spread over 18 months at an average of R976,000/kg. The open US$ gold forward contracts amounted to 73,000 ounces spread over 24 months at an average of US$1,743/oz. The open US$ silver zero cost collars amounted to 2,055,000 ounces spread over 15 months with a weighted average floor of US$21.72/oz and a weighted average cap of US$23.99/oz.

Interest Rate Sensitivity

Our interest rate risk arises mainly from long-term borrowings. We have variable interest rate borrowings. Variable rate borrowings expose us to cash flow interest rate risk. Interest rate risk arising from long-term borrowings is offset by cash, restricted cash and restricted investments held at variable rates.

The sensitivity analysis was performed based on 25 basis points for all Rand denominated borrowings and financial assets and 100 basis points for US$ denominated borrowings in fiscal 2021 as an indicator of the potential impact of interest rate changes to the group. Management has reassessed this during fiscal 2022 to ensure that it is still a reasonable estimation of possible changes. In fiscal 2022, the analysis was performed on a sensitivity of 88 and 185 basis points for Rand and US$ denominated borrowings respectively and 88 basis points for financial assets. The analysis assumes that all other variables remain constant.

Sensitivity analysis-borrowings

	Fiscal year ended June 30,	
	2022	**2021**
	(R in millions)	
Rand denominated borrowings		
Increase in 88 basis points (2021:25 basis points)	—	(1)
Decrease in 88 basis points (2021:25 basis points)	—	1
US$ denominated borrowings		
Increase in 185 basis points (2021:1 basis points)	(59)	—
Decrease in 185 basis points (2021:1 basis points)	59	—

Sensitivity analysis - financial assets

	Fiscal year ended June 30,	
	2022	2021
	(R in millions)	
Increase in 88 basis points (2021:25 basis points)	59	16
Decrease in 88 basis points (2021:25 basis points)	(59)	(16)

For further information on sensitivities, see note 39 "*Financial Risk Management*" to our consolidated financial statements set forth beginning on page F-1.

ITEM 12. DESCRIPTION OF SECURITIES OTHER THAN EQUITY SECURITIES

A. DEBT SECURITIES

Not applicable.

B. WARRANTS AND RIGHTS

Not applicable.

C. OTHER SECURITIES

Not applicable.

D. AMERICAN DEPOSITARY SHARES

On October 7, 2011, Harmony appointed Deutsche Bank Trust Company Americas in place of The Bank of New York Mellon as its Depositary for the ADSs evidenced by ADRs. A copy of our form of amended and restated deposit agreement (the "**Deposit Agreement**") among the Depositary, owners and beneficial owners of ADRs and Harmony was filed with the SEC as an exhibit to our Form F-6 filed on September 30, 2009.

The Depositary collects fees for delivery and surrender of ADSs directly from investors depositing shares or surrendering ADSs for the purpose of withdrawal or from intermediaries acting for them. The Depositary collects fees for making distributions to investors by deducting those fees from the amounts distributed or by selling a portion of the distributable property to pay the fees.

The principal terms regarding fees and charges that an ADS holder might have to pay, as well as any fee and other payments made by the Depositary to us as part of the Deposit Agreement, are summarized below:

Fees and Expenses

Persons depositing shares or withdrawing shares holders must pay:	For:
\$5.00 (or less) per 100 ADSs (or portion of 100 ADSs)	• The execution and delivery of ADRs • The surrender of ADRs
\$0.02 (or less) per ADS	• Any cash distribution to you
A fee equivalent to the fee that would be payable if securities distributed to you had been shares and the shares had been deposited for issuance of ADSs	• Distribution of securities distributed to holders of deposited securities which are distributed by the Depositary to ADR holders
Registration or transfer fees	• Transfer and registration of equity shares on our share register to or from the name of the Depositary or its agent when you deposit or withdraw shares
Expenses of the Depositary	• Cable, telex and facsimile transmissions (when expressly provided in the Deposit Agreement) • Converting foreign currency
Taxes and other governmental charges the Depositary or the custodian have to pay on any ADR or share underlying an ADR, for example, stock transfer taxes, stamp duty or withholding taxes	• As necessary
Any charges incurred by the Depositary or its agents for servicing the deposited securities	• As necessary

In addition, ADR holders must pay any tax or other governmental charge payable by the Depositary or its custodian on any ADS or ADR, deposited security or distribution. If an ADR holder owes any tax or other governmental charge, the Depositary may:

- refuse to effect any transfer of such ADRs or any withdrawal of ADSs;
- withhold any dividends or other distributions; or
- sell part or all of the ADSs evidenced by such ADR,

and may apply dividends or other distributions or the proceeds of any sale in payment of the outstanding tax or other governmental charge. The ADR holder remains liable for any shortfall.

Fees and payments made by the Depositary

The Depositary has agreed to reimburse Harmony for expenses Harmony incurs that are related to the maintenance expenses of our ADR facility. The Depositary has agreed to pay the standard out-of-pocket maintenance costs for the ADRs, which consist of the expenses of printing and distributing dividend checks, electronic filing of US federal tax information, mailing required tax forms, stationery, postage, facsimile, and telephone calls. The amount of reimbursement available to Harmony is not necessarily tied to the amount of fees the Depositary collects from investors.

During the fiscal year ended June 30, 2022, Harmony received net direct and indirect payments of R11,583,540 from the Depositary.

PART II
ITEM 13 DEFAULTS, DIVIDEND ARREARAGES AND DELINQUENCIES

Not applicable.

ITEM 14 MATERIAL MODIFICATIONS TO THE RIGHTS OF SECURITY HOLDERS AND USE OF PROCEEDS

Not applicable.

ITEM 15 CONTROLS AND PROCEDURES

A. DISCLOSURE CONTROLS AND PROCEDURES

As of June 30, 2022, Harmony's management, with the participation of our Chief Executive Officer (“**CEO**”) and Financial Director (“**FD**”), carried out an evaluation, pursuant to Rule 13a-15 promulgated under the Exchange Act of the effectiveness of our “disclosure controls and procedures”. Based on the foregoing, our management, including the CEO and FD, concluded that our disclosure controls and procedures were effective as of June 30, 2022.

B. MANAGEMENT’S ANNUAL REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

Harmony's management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rule 13a-15(f) under the Exchange Act . Under Section 404 of the Sarbanes-Oxley Act of 2002 (the "**Sarbanes-Oxley Act**"), management is required to assess the effectiveness of our internal control over financial reporting as of the end of each financial year and report, based on that assessment, whether Harmony's internal control over financial reporting is effective.

Harmony's internal control over financial reporting is a process designed under the supervision of the CEO and FD to provide reasonable assurance regarding the reliability of our financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles.

Harmony’s internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Company are being made only in accordance with authorizations of management and directors of the Company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the Company’s assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management assessed the effectiveness of Harmony's internal control over financial reporting as of June 30, 2022. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organisations of the Treadway Commission in "Internal Control – Integrated Framework (2013)". Based on this assessment, our management has determined that, as of June 30, 2022, Harmony's internal control over financial reporting was effective.

PricewaterhouseCoopers Inc., an independent registered public accounting firm, which has audited the consolidated financial statements included in this Annual Report, has issued an attestation report on the effectiveness of Harmony’s internal control over financial reporting as of June 30, 2022.

C. ATTESTATION REPORT OF THE REGISTERED PUBLIC ACCOUNTING FIRM

See report of PricewaterhouseCoopers Inc., an independent registered public accounting firm, which is included on page F-2 of exhibit 99.1. The consolidated financial statements, together with the report of PricewaterhouseCoopers Inc., are incorporated by reference to exhibit 99.1 and shall be deemed filed as part of the Harmony 2022 Form 20-F.

D. CHANGES IN INTERNAL CONTROL OVER FINANCIAL REPORTING

There has been no change in Harmony's internal control over financial reporting that occurred during fiscal 2022 that has materially affected or is reasonably likely to materially affect, Harmony's internal control over financial reporting.

ITEM 16A. AUDIT COMMITTEE FINANCIAL EXPERT

Mr John Wetton, independent non-executive chairman of the audit and risk committee, is regarded as being the Company's "audit committee financial expert" as defined by the rules of the SEC.

In addition, the audit and risk committee members through their collective experience meet a majority of the definitions of the SEC for an "audit committee financial expert" in both the private and public sectors. The members have served as directors and officers of numerous public companies and have over the years developed a strong knowledge and understanding of IFRS, overseeing the preparation, audit and evaluation of financial statements. We believe that the combined knowledge, skills and experience of the audit and risk committee, and their authority to engage outside experts as they deem appropriate to provide them with advice on matters related to their responsibilities, enable them, as a group and under the guidance of Mr Wetton, to act effectively in the fulfillment of their tasks and responsibilities required under the Sarbanes-Oxley Act.

ITEM 16B. CODE OF ETHICS

The information set forth under the heading:

- "-*Corporate governance*" on pages 167 to 180 of the Integrated Annual Report for the 20-F 2022 is incorporated herein by reference.

ITEM 16C. PRINCIPAL ACCOUNTANT FEES AND SERVICES

A. AUDIT FEES

The following sets forth the aggregate fees billed for each of the last two fiscal years for professional fees to our principal accountants for the audit of the annual financial statements or for services normally provided by the accountant in connection with statutory and regulatory filings or engagements for those fiscal years.

Fiscal year ended June 30, 2021	Rand	50 million
Fiscal year ended June 30, 2022	Rand	45 million

B. AUDIT-RELATED FEES

The following sets forth additional aggregate fees to those reported under "Audit Fees" in each of the last two fiscal years that were provided by the principal accountant that are reasonably related to the performance of the audit or review of the financial statements:

Fiscal year ended June 30, 2021	Rand	6 million
Fiscal year ended June 30, 2022	Rand	6 million

Fees related to interim reviews.

C. TAX FEES

The following sets forth the aggregate fees billed in each of the last two fiscal years for professional services rendered by the principal accountant for tax compliance, tax advice and tax planning:

Fiscal year ended June 30, 2021	Rand	—
Fiscal year ended June 30, 2022	Rand	—

Services comprised advice on disclosure for completion of certain tax returns.

D. ALL OTHER FEES

The following sets forth the aggregate fees billed in each of the last two fiscal years for products and services provided by the principal accountant not described above, including advisory services related to our Interactive Date File (XBRL information):

Fiscal year ended June 30, 2021	Rand	1 million
Fiscal year ended June 30, 2022	Rand	1 million

E. AUDIT AND RISK COMMITTEE PRE-APPROVAL POLICIES AND PROCEDURES

Our audit and risk committee pre-approves our engagement of PricewaterhouseCoopers Inc. to render audit or non-audit services in terms of its non-audit services policy. All of the services described above were approved in terms of the Company's delegation of authority framework and the audit and risk committee's policy on non-audit services.

ITEM 16D. EXEMPTIONS FROM THE LISTING STANDARDS FOR AUDIT COMMITTEES

Not applicable.

ITEM 16E. PURCHASE OF EQUITY SECURITIES BY THE ISSUER AND AFFILIATED PURCHASERS

None.

ITEM 16F. CHANGE IN REGISTRANT'S CERTIFYING ACCOUNTANT

Not applicable.

ITEM 16G. CORPORATE GOVERNANCE

Significant ways in which Harmony's corporate governance practices differ from practices followed by US domestic companies under the listing standards of the New York Stock Exchange ("NYSE").

Foreign private issuers, such as Harmony, must briefly highlight any significant ways in which their corporate governance practices differ from those followed by US domestic companies subject to the listing standards of the NYSE. Set out below is a brief summary of the significant differences.

US domestic companies are required to have a nominating/corporate governance committee and all members of this committee must be non-executive directors. The JSE Listing Requirements also require the appointment of such a committee, and stipulate that all members of this committee must be non-executive directors, the majority of whom must be independent. Harmony has a nomination committee comprised of five non-executive board members, three of whom are independent. The lead independent non-executive director serves as chairman of the nomination committee. For US domestic companies, all members of this committee are required to be independent. The current chairman of our board of directors, Dr Patrice Motsepe, is a member of the nomination committee and is also chairman of one of Harmony's largest shareholders, African Rainbow Minerals Limited, and is thus not independent. He is, however, in terms of South African governance practices, permitted to be a member of the nomination committee.

US domestic companies are required to have a compensation committee composed entirely of independent directors. Harmony has appointed a remuneration committee, comprised of four board members, all of whom are non-executive and three of whom are independent. Andre Wilkens holds 101,301 shares in Harmony and is an executive manager of African Rainbow Minerals Limited. Consequently, he is not independent under NYSE listing rules. He is, however, in terms of South African governance practices, permitted to be a member of the remuneration committee.

The non-executive directors of US domestic companies must meet at regularly scheduled executive sessions without management. Although the JSE Listing Requirements do not require such meetings, the board meets without executives after each board meeting. The board also has unrestricted access to all company information, records, documents and property. Directors may, if necessary, take independent professional advice at the Company's expense and non-executive directors have access to management and may meet separately with management, without the attendance of executive directors.

US domestic companies are required to have an audit committee composed entirely of independent directors. The Companies Act requires that the members of the audit committee be approved by shareholders on an annual basis at a company's annual general meeting. Both the Companies Act and the JSE Listings Requirements require that the audit committee be composed entirely of independent directors. Harmony has appointed an audit and risk committee, currently comprising five non-executive directors, all of whom are independent, as defined under the Companies Act, the JSE Listings Requirements and the listing standards of the NYSE.

ITEM 16H. MINE SAFETY DISCLOSURE

Not applicable.

GLOSSARY OF MINING TERMS

The following explanations are not intended as technical definitions, but rather are intended to assist the general reader in understanding certain terms as used in this annual report.

Alluvial: the product of sedimentary processes in rivers, resulting in the deposition of alluvium (soil deposited by a river).

All-in sustaining costs: all-in sustaining costs include mine production costs, transport and refinery costs, applicable general and administrative costs, costs associated with movements in production inventories, ore stockpiles, as well as ongoing environmental rehabilitation costs as well as transfers for stripping activities and costs associated with royalties. Employee termination costs are included, however employee termination costs associated with major restructuring and shaft closures are excluded. The following costs are also included: LED expenditure for continuing operations, share-based payments for continuing operations, corporate costs, sustaining exploration costs and sustaining capital expenditure including OCD expenditure and rehabilitation accretion and amortization for continuing operations. Depreciation costs are excluded. All-in sustaining costs per ounce and per kilogram are attributable all-in sustaining costs divided by attributable ounces or kilograms of gold sold.

Auriferous: a substance that contains gold (Au).

Beneficiation: the process of adding value to gold products by transforming gold bullion into fabricated gold products.

By-products: Any products emanating from the core process of producing gold, including silver and uranium in South Africa and copper, silver and molybdenum in Papua New Guinea.

Carbon in leach (CIL): Gold is leached from a slurry of gold ore with cyanide in agitated tanks and adsorbed on to carbon granules in the same circuit. Granules are separated from the slurry and treated to remove the gold.

Carbon in pulp (CIP): Gold is leached conventionally from a slurry of gold ore with cyanide in agitated tanks. The leached slurry passes into the CIP circuit where carbon granules are mixed with the slurry and gold is absorbed onto the carbon. Granules are separated from the slurry and treated to remove gold.

Carbon in solution (CIS): a process similar to CIP except that the gold, which has been leached by the cyanide into solution, is separated by the process of filtration (solid/liquid separation). The solution is then pumped through six stages where the solution comes into contact with the activated carbon granules.

Cash costs: total cash costs include site costs for all mining, processing and administration, reduced by contributions from by-products and include royalties and production taxes. Depreciation, rehabilitation, corporate administration, retrenchment, capital and exploration costs are excluded. Total cash costs per ounce and per kilogram are attributable total cash costs divided by attributable ounces or kilogram of gold produced.

Conglomerate: a coarse-grained classic sedimentary rock, composed of rounded to sub-angular fragments larger than 2mm in diameter (granules, pebbles, cobbles, boulders) set in a fine-grained matrix of sand or silt, and commonly cemented by calcium carbonate, iron oxide, silica or hardened clay.

Cut-off grade: the grade (i.e. the concentration of metal or mineral in rock) that determines the destination of the material during mining. For purposes of establishing “prospects of economic extraction,” the cut-off grade is the grade that distinguishes material deemed to have no economic value (it will not be mined in underground mining or if mined in surface mining, its destination will be the waste dump) from material deemed to have economic value (its ultimate destination during mining will be a processing facility). Other terms used in similar fashion as cut-off grade include net smelter return, pay limit, and break-even stripping ratio.

Decline: an inclined underground access way.

Depletion: the decrease in quantity of ore in a deposit or property resulting from extraction or production.

Development: process of accessing an orebody through shafts or tunneling in underground mining.

Dilution: unmineralized rock that is by necessity, removed along with ore during the mining process that effectively lowers the overall grade of the ore.

Economically viable: when used in the context of Mineral Reserve determination, means that the qualified person has determined, using a discounted cash flow analysis, or has otherwise analytically determined, that extraction of the Mineral Reserve is economically viable under reasonable investment and market assumptions.

Electro-winning: the process of removing gold from solution by the action of electric currents.

Elution: removal of the gold from the activated carbon before the zinc precipitation stage.

Exploration: activities associated with ascertaining the existence, location, extent or quality of mineralized material, including economic and technical evaluations of mineralized material.

Fabricated gold: gold on which work has been performed to turn it into a product, such as jewelry, which differs from a pure investment product, such as a gold bullion bar.

Footwall: the underlying side of a fault, orebody or stope.

Forward sale: the sale of a commodity for delivery at a specified future date and price.

Gold reserves: the gold contained within proved and probable reserves on the basis of recoverable material (reported as mill delivered tons and head grade).

Gold produced: refined gold derived from the mining process, measure in ounces or kilograms in saleable form.

Grade: quantity of gold contained in a unit weight of gold-bearing material, generally expressed in ounces per short ton of ore or in kilograms per metric tonne.

Greenfield: a potential mining site of unknown quality.

Head grade: the grade of the ore as delivered to the metallurgical plant.

Indicated mineral resource: that part of a Mineral Resource for which quantity and grade or quality are estimated on the basis of adequate geological evidence and sampling. The level of geological certainty associated with an Indicated Mineral Resource is sufficient to allow a qualified person to apply modifying factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit. Because an Indicated Mineral Resource has a lower level of confidence than the level of confidence of a Measured Mineral Resource, an Indicated Mineral Resource may only be converted to a probable Mineral Reserve.

Inferred mineral resource: that part of a Mineral Resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. The level of geological uncertainty associated with an Inferred Mineral Resource is too high to apply relevant technical and economic factors likely to influence the prospects of economic extraction in a manner useful for evaluation of economic viability. Because an Inferred Mineral Resource has the lowest level of geological confidence of all Mineral Resources, which prevents the application of the modifying factors in a manner useful for evaluation of economic viability, an Inferred Mineral Resource may not be considered when assessing the economic viability of a mining project and may not be converted to a Mineral Reserve.

Leaching: dissolution of gold from crushed or milled material, including reclaimed slime, prior to absorption on to activated carbon.

Level: the workings or tunnels of an underground mine that are on the same horizontal plane.

Measured mineral resource: that part of a Mineral Resource for which quantity and grade or quality are estimated on the basis of conclusive geological evidence and sampling. The level of geological certainty associated with a Measured Mineral Resource is sufficient to allow a qualified person to apply modifying factors, as defined in this section, in sufficient detail to support detailed mine planning and final evaluation of the economic viability of the deposit. Because a Measured Mineral Resource has a higher level of confidence than the level of confidence of either an Indicated Mineral Resource or an Inferred Mineral Resource, a Measured Mineral Resource may be converted to a Proven Mineral Reserve or to a Probable Mineral Reserve.

Measures: conversion factors from metric units to US units are provided below.

Metric unit		US equivalent
1 tonne	= 1 t	= 1.10231 short tons
1 gram	= 1 g	= 0.03215 ounces
1 gram per tonne	= 1 g/t	= 0.02917 ounces per short ton
1 kilogram per tonne	= 1 kg/t	= 29.16642 ounces per short ton
1 kilometer	= 1 km	= 0.621371 miles
1 meter	= 1 m	= 3.28084 feet
1 centimeter	= 1 cm	= 0.3937 inches
1 millimeter	= 1 mm	= 0.03937 inches
1 hectare	= 1 ha	= 2.47105 acres

Metallurgical plant: a processing plant used to treat ore and extract the contained gold.

Mill delivered tons: a quantity, expressed in tons, of ore delivered to the metallurgical plant.

Milling/mill: the comminution of the ore, although the term has come to cover the broad range of machinery inside the treatment plant where the gold is separated from the ore.

Mine Call Factor: the ratio, expressed as a percentage, of the total quantity of recovered and unrecovered mineral product after processing with the amount estimated in the ore based on sampling.

Mineralization: the presence of a target mineral in a mass of host rock.

Mineralized material: a mineralized body that has been delineated by appropriately spaced drilling and/or underground sampling to support a sufficient tonnage and average grade of metals to warrant further exploration. Such a deposit does not qualify as a reserve until a comprehensive evaluation based upon unit cost, grade, recoveries, and other material factors conclude legal and economic feasibility.

Mineral reserves: an estimate of tonnage and grade or quality of Indicated and Measured Mineral Resources that, in the opinion of the qualified person, can be the basis of an economically viable project. More specifically, it is the economically mineable part of a Measured or Indicated Mineral Resource, which includes diluting materials and allowances for losses that may occur when the material is mined or extracted.

Mineral Resource: a concentration or occurrence of material of economic interest in or on the Earth's crust in such form, grade or quality, and quantity that there are reasonable prospects for economic extraction. A Mineral Resource is a reasonable estimate of mineralization, taking into account relevant factors such as cut-off grade, likely mining dimensions, location or continuity, that, with the assumed and justifiable technical and economic conditions, is likely to, in whole or in part, become economically extractable. It is not merely an inventory of all mineralization drilled or sampled.

Modifying factors: the factors that a qualified person must apply to Indicated and Measured Mineral Resources and then evaluate in order to establish the economic viability of Mineral Reserves. A qualified person must apply and evaluate modifying factors to convert Measured and Indicated Mineral Resources to Proven and Probable Mineral Reserves. These factors include but are not restricted to: mining; processing; metallurgical; infrastructure; economic; marketing; legal; environmental compliance; plans, negotiations, or agreements with local individuals or groups; and governmental factors. The number, type and specific characteristics of the modifying factors applied will necessarily be a function of and depend upon the mineral, mine, property, or project.

Pre-feasibility study: a comprehensive study of a range of options for the technical and economic viability of a mineral project that has advanced to a stage where a qualified person has determined (in the case of underground mining) a preferred mining method, or (in the case of surface mining) a pit configuration, and in all cases has determined an effective method of mineral processing and an effective plan to sell the product. A pre-feasibility study includes a financial analysis based on reasonable assumptions, based on appropriate testing, about the modifying factors and the evaluation of any other relevant factors that are sufficient for a qualified person to determine if all or part of the Indicated and Measured Mineral Resources may be converted to Mineral Reserves at the time of reporting. The financial analysis must have the level of detail necessary to demonstrate, at the time of reporting, that extraction is economically viable. A pre-feasibility study is less comprehensive and results in a lower confidence level than a feasibility study. A pre-feasibility study is more comprehensive and results in a higher confidence level than an initial assessment.

Open-pit/Opencast/Open cut: mining in which the ore is extracted from a pit. The geometry of the pit may vary with the characteristics of the orebody.

Ore: a mixture of mineralized material from which at least one of the contained minerals can be mined and processed at an economic profit.

Ore grade: the average amount of gold contained in a ton of gold bearing ore expressed in ounces per ton or grams per tonne.

Orebody: a well-defined mass of mineralized material of sufficient mineral content to make extraction economically viable.

Ounce: one Troy ounce, which equals 31.1035 grams.

Overburden: the soil and rock that must be removed in order to expose an ore deposit.

Placer: a sedimentary deposit containing economic quantities of valuable minerals mainly formed in alluvial environments.

Precipitate: the solid product of chemical reaction by fluids such as the zinc precipitation referred to below.

Probable reserves: the economically mineable part of an Indicated and, in some cases, a Measured Mineral Resource

Prospect: an area of land with insufficient data available on the mineralization to determine if it is economically recoverable, but warranting further investigation.

Prospecting license: an area for which permission to explore has been granted.

Proved reserves: (i) quantity is computed from dimensions revealed in outcrops, trenches, workings or drill holes; grade and/or quality are computed from the results of detailed sampling; and (ii) the sites for inspection, sampling and measurement are spaced so closely and the geologic character is so well defined that size, shape, depth and mineral content of reserves are well-established.

Pyrite: a brassy-colored mineral of iron sulphide (compound of iron and sulfur).

Qualified Person: (i) a mineral industry professional with at least five years of relevant experience in the type of mineralization and type of deposit under consideration and in the specific type of activity that person is undertaking on behalf of the registrant and (ii) an eligible member or licensee in good standing of a recognized professional organization at the time the technical report is prepared. Regulation S-K 1300 details further recognized professional organizations and also relevant experience.

Quartz: a mineral compound of silicon and oxygen.

Recovery grade: the actual grade of ore realized after the mining and treatment process.

Reef: a gold-bearing sedimentary horizon, normally a conglomerate band, which may contain economic levels of gold.

Refining: the final stage of metal production in which final impurities are removed from the molten metal by introducing air and fluxes. The impurities are removed as gases or slag.

Rehabilitation: the process of restoring mined land to a condition approximating its original state.

Sampling: taking small pieces of rock at intervals along exposed mineralization for assay (to determine the mineral content).

Shaft: a shaft provides principal access to the underground workings for transporting personnel, equipment, supplies, ore and waste. A shaft is also used for ventilation and as an auxiliary exit. It is equipped with a surface hoist system that lowers and raises conveyances for men, materials and ore in the shaft. A shaft generally has more than one conveyancing compartment.

Slimes: the finer fraction of tailings discharged from a processing plant after the valuable minerals have been recovered.

Slurry: a fluid comprising fine solids suspended in a solution (generally water containing additives).

Smelting: thermal processing whereby molten metal is liberated from beneficiated mineral or concentrate with impurities separating as lighter slag.

Spot price: the current price of a metal for immediate delivery.

Stockpile: a store of unprocessed ore.

Stope: the underground excavation within the orebody where the main gold production takes place.

Stripping: the process of removing overburden to expose ore.

Sulphide: a mineral characterized by the linkages of sulfur with a metal or semi-metal, such as pyrite, FeS.

Syncline: a basin-shaped fold.

Tailings: finely ground rock of low residual value from which valuable minerals have been extracted is discarded and stored in a designed dam facility.

Tailings dam (slimes dam): Dam facilities designed to store discarded tailings.

Ton: one ton is equal to 2,000 pounds (also known as a “short” ton).

Tonnage: quantities where the ton or tonne is an appropriate unit of measure. Typically used to measure reserves of gold-bearing material in situ or quantities of ore and waste material mined, transported or milled.

Tonne: one tonne is equal to 1,000 kilograms (also known as a "metric" tonne).

(in this Annual Report we have used metric tonnes unless specified otherwise and we may have used Ton(s) and Tonne(s) interchangeably)

Trend: the arrangement of a group of ore deposits or a geological feature or zone of similar grade occurring in a linear pattern.

Unconformity: the structural relationship between two groups of rock that are not in normal succession.

Waste: ore rock mined with an insufficient gold content to justify processing.

Waste rock: the non-mineralized rock and/or rock that generally cannot be mined economically that is hoisted to the surface for disposal on the surface normally close to the shaft on an allocated dump.

Yield: the actual grade of ore realized after the mining and treatment process.

Zinc precipitation: a chemical reaction using zinc dust that converts gold solution to a solid form for smelting into unrefined gold bars.

CERTAIN ABBREVIATIONS

b	barrs
cm	Centimeter
cmg/t	Centimeter-grams per metric tonne
dmt	Dry metric tonne
g	Gram
g/t	Grams per metric tonne
ha	Hectare
kg	Kilogram
kg/t	Kilogram per metric tonne
km	Kilometer
km2	Square kilometer
koz	Thousand troy ounces
ktpm	Thousand kilograms per month
lb	Pound
m	Meter
M	Million
mm	Millimeter
Moz	Million troy ounces
Mt	Million metric tonnes
Mtpa	Million metric tonnes per annum
oz	Troy ounce
oz/kg	Ounce per kilogram
ppm	Parts per million
t	Metric tonne
t/m3	Metric tonne per cubic meter
US$/oz	United States dollars per troy ounce
R/kg	South African Rand per kilogram

PART III

ITEM 17 FINANCIAL STATEMENTS

Not applicable.

ITEM 18 FINANCIAL STATEMENTS

The following consolidated financial statements, together with the report of PricewaterhouseCoopers Inc. Johannesburg, Republic of South Africa (PCAOB ID No. 1308), are incorporated by reference to exhibit 99.1 and shall be deemed filed as part of the Harmony 2022 Form 20-F:

- Index to Financial Statements;
- Report of Independent Registered Public Accounting Firm; and
- Consolidated Financial Statements.

ITEM 19. EXHIBITS

1.1	Amended Memorandum of Incorporation of Harmony dated February 1, 2018 http://www.sec.gov/Archives/edgar/data/1023514/000162828019012525/exhibit1amendedmoi.htm
2.1	Notice of annual general meeting dated October 25, 2022 to be held on November 29, 2022.
2.2	Amended and Restated Deposit Agreement among Harmony, Deutsche Bank Trust Company Limited, as Depositary, and owners and holders of American Depositary Receipts, dated as of October 7, 2011 (incorporated by reference to Harmony's Annual Report on Form 20-F for the fiscal year ended June 30, 2011, filed on October 24, 2011) http://www.sec.gov/Archives/edgar/data/1023514/000119312511278584/d242812dex22.htm
2.3	Form of ADR (included in Exhibit 2.2) (incorporated by reference to Harmony's Annual Report on Form 20-F for the fiscal year ended June 30, 2011, filed on October 24, 2011) http://www.sec.gov/Archives/edgar/data/1023514/000119312511278584/d242812dex22.htm
4.1	Deed of Extinguishment of Royalty (Wafi-Golpu Project) dated February 16, 2009 (incorporated by reference to Harmony's Annual Report on Form 20-F for the fiscal year ended June 30, 2009, filed on October 26, 2009) http://www.sec.gov/Archives/edgar/data/1023514/000095012309053204/u07679exv4w25.htm
4.2	Common terms agreements for Harmony Gold Mining Company Limited with Nedbank Limited (acting through its Nedbank Corporate and Investment Banking division) (as Original Lender, Original Hedge Provider, Global coordinator and Bookrunner, Mandated Lead Arranger and Sustainability Coordinator) and Nedbank Limited (London Branch) (as Original Lender) and Absa Bank Limited (acting through its Corporate and Investment Banking Division) (as Original Lender, Original Hedge Provider, Global Goordinator and Bookrunner, Mandated Lead Arranger, Sustainability Coordinator, Sustainability Agent and Facility Agent) and Firstrand Bank Limited (acting through its Rand Merchant Bank Division) (as Mandated Lead Arranger, Original Hedge Provider and Original Lender) and J.P. Morgan Securities PLC (as Lead Arranger) and Citibank, N.A., South African branch (as Lead Arranger and Original Lender) and HSBC Bank PLC - Johannesburg branch (as Arranger and Original Lender) and State Bank of India (acting through its Johannesburg Branch) (as Mandated Lead Arranger and Original Lender) and JPMORGAN Chase Bank, N.A., London branch (Original Lender) and Project and Trade Finance core fund (as Original Lender) and Federated Hermes Project and Trade Finance Tender Fund (as Original Lender) and Federated Hermes Project and Trade Finance Master Fund (as Original Lender) and Bank of China Limited, Johannesburg branch (as Mandated Lead Arranger and Original Lender) and Goldman Sachs International Bank (as Original Lender) and Industrial Development Corporation of South Africa Limited (as Original Lender) and Investec Bank Limited (acting through its Investment Banking division: Corporate Solutions) (as Original Lender and Lead Arranger) and Ninety One SA Proprietary Limited (acting as agent and portfolio manager of Ninety One Assurance Limited) (as Original Lender) and HSBC Bank PLC (as Original Hedge Provider) and JPMORGAN Chase Bank, N.A. (as Original Hedge Provider) and Citibank N.A., London branch (as Original Hedge Provider).
4.3	Revolving ZAR Facility Agreement, amongst Harmony Gold Mining Company Limited (as Borrower and (Obligors' Agent) with The Financial Institutions Listed on Schedule 1 and and Absa Bank Limited (acting through its Corporate and Investment Banking division) (as Facility Agent)
4.4	Revolving USD Facility Agreement, amongst Harmony Gold Mining Company Limited (as Borrower and (Obligors' Agent) with The Financial Institutions Listed In Schedule 1 and Absa Bank Limited (acting through its Corporate and Investment Banking division) (as Facility Agent)
4.5	Term Facility A Agreement amongst Harmony Gold Mining Company Limited (as Borrower and Obligors' Agent) with with The Financial Institutions Listed in Schedule 1 and Absa Bank Limited (acting through its Corporate and Investment Banking division) (as Facility Agent)
4.6	Term Facility B Agreement amongst Harmony Gold Mining Company Limited (as Borrower and Obligors' Agent) with The Financial Institutions Listed in Schedule 1 and Nedbank Limited (acting through its Nedbank Corporate and Investment Banking division) (as Sustainability Coordinator) and Absa Bank Limited (acting through its Corporate and Investment Banking division) (as Sustainability Agent, Sustainability Coordinator and Facility Agent)
4.10	Wafi-Golpu Joint Venture Agreement, dated May 22, 2008 between Wafi Mining Limited, Newcrest PNG 2 Limited and Wafi-Golpu Services Limited (incorporated by reference to Harmony's Annual Report on Form 20-F for the fiscal year ended June 30, 2017, filed on October 26, 2017) http://www.sec.gov/Archives/edgar/data/1023514/000162828017010249/exhibit439wafi-golpujointv.htm
4.14	Harmony Gold Mining Company Limited Deferred Share Plan 2018 Scheme Rules http://www.sec.gov/Archives/edgar/data/1023514/000162828019012525/exhibit452deferredsharepla.htm

4.18 ARM - BBEE Loan Agreement, dated 28 June 2021, entered between Harmony Gold Mining Limited and the trustees for the time being of ARM - Broad Based Economy Empowerment Trust http://www.sec.gov/Archives/edgar/data/1023514/000162828021020809/exhibit418hmyloanagreement.htm

8.1 Significant subsidiaries of Harmony Gold Mining Company Limited

†12.1 Certification of the principal executive officer required by Rule 13a-14(a) or Rule 15(d)-14(a), pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

†12.2 Certification of the principal financial officer required by Rule 13a-14(a) or Rule 15(d)-14(a), pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

†13.1 Certification of the principal executive officer, pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

†13.2 Certification of the principal financial officer, pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

††15.1 Integrated Annual Report for the 20-F 2022 dated October 31, 2022

96.1 Technical Report Summary of the Mineral Resources and Mineral Reserves for Target Gold Mine, Free State Province, South Africa (incorporated by reference to Harmony’s Annual Report on Form 20-F for the fiscal year ended June 30, 2022, filed on October 31, 2022)

96.2 Technical Report Summary of the Mineral Resources and Mineral Reserves for Tshepong Operations, Free State Province, South Africa (incorporated by reference to Harmony’s Annual Report on Form 20-F for the fiscal year ended June 30, 2022, filed on October 31, 2022)

96.3 Technical Report Summary of the Mineral Resources and Mineral Reserves for Joel Mine, Free State Province, South Africa (incorporated by reference to Harmony’s Annual Report on Form 20-F for the fiscal year ended June 30, 2022, filed on October 31, 2022)

96.4 Technical Report Summary of the Mineral Resources and Mineral Reserves for Free State Surface Operations, Free State Province, South Africa (incorporated by reference to Harmony’s Annual Report on Form 20-F for the fiscal year ended June 30, 2022, filed on October 31, 2022)

96.5 Technical Report Summary of the Mineral Resources and Mineral Reserves for Moab Khotsong Operations, Free State Province, South Africa (incorporated by reference to Harmony’s Annual Report on Form 20-F for the fiscal year ended June 30, 2022, filed on October 31, 2022)

96.6 Technical Report Summary of the Mineral Resources and Mineral Reserves for Mponeng Mine, Carletonville, South Africa (incorporated by reference to Harmony’s Annual Report on Form 20-F for the fiscal year ended June 30, 2022, filed on October 31, 2022)

96.7 Technical Report Summary of the Mineral Resources and Mineral Reserves for Kalgold Mine, North West Province, South Africa (incorporated by reference to Harmony’s Annual Report on Form 20-F for the fiscal year ended June 30, 2022, filed on October 31, 2022)

96.8 Technical Report Summary of the Mineral Resources and Mineral Reserves for Mine Waste Solutions (MWS) and West Wits Operations, North West and Gauteng Provinces, South Africa (incorporated by reference to Harmony’s Annual Report on Form 20-F for the fiscal year ended June 30, 2022, filed on October 31, 2022)

96.9 Technical Report Summary of the Mineral Resources and Mineral Reserves for Kusasalethu Mine, Gauteng Province, South Africa (incorporated by reference to Harmony’s Annual Report on Form 20-F for the fiscal year ended June 30, 2022, filed on October 31, 2022)

96.10 Technical Report Summary of the Mineral Resources and Mineral Reserves for Doornkop Mine Gauteng Province, South Africa (incorporated by reference to Harmony’s Annual Report on Form 20-F for the fiscal year ended June 30, 2022, filed on October 31, 2022)

96.11 Technical Report Summary of the Mineral Resources and Mineral Reserves for Hidden Valley Mine, Morobe Province, Papua New Guinea (incorporated by reference to Harmony’s Annual Report on Form 20-F for the fiscal year ended June 30, 2022, filed on October 31, 2022)

96.12	Technical Report Summary of the Mineral Resources and Mineral Reserves for Wafi-Golpu Project, Morobe Province, Papua New Guinea (incorporated by reference to Harmony's Annual Report on Form 20-F for the fiscal year ended June 30, 2022, filed on October 31, 2022)
99.1	Consolidated Financial Statements 2022 dated October 31, 2022

† This certification will not be deemed "filed" for purposes of Section 18 of the of 1934, as amended (the "**Exchange Act"**), or otherwise subject to the liability of that section. Such certification will not be deemed to be incorporated by reference into any filing under the Securities Act of 1933, as amended (the "**Securities Act**"), or the Exchange Act, except to the extent that the Registrant specifically incorporates it by reference.

†† Certain of the information included in Exhibit 15.1 is incorporated by reference into the Harmony 2022 Form 20-F, as specified elsewhere in this report, in accordance with Rule 12b-23(a) of the Exchange Act. With the exception of the items so specified, the Integrated Annual Report for the 20-F 2022 is not deemed to be filed as part of Harmony 2022 Form 20-F.

101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Linkbase Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

SIGNATURES

Pursuant to the requirements of Section 12 of the Exchange Act, we hereby certify that we meet all of the requirements for filing on Form 20-F and that we have duly caused this annual report to be signed on our behalf by the undersigned, thereunto duly authorized.

HARMONY GOLD MINING COMPANY LIMITED

By: /s/ Peter Steenkamp

Peter Steenkamp

Chief Executive Officer

Date: October 31, 2022

+Exhibit 15.1: Integrated Annual Report for the 20-F 2022 dated October 31, 2022

INTEGRATED ANNUAL REPORT FOR THE 20-F 2022

CONTENTS

About Harmony

About this report

This integrated annual report is the primary platform we use to provide our stakeholders with a balanced, holistic and transparent overview of our strategy, business model, performance and value creation.

Our value creation encompasses how we create, preserve and deplete value through our primary business activities and corporate citizenship commitment. We consider the short term as 12 months, medium term one to three years and long term more than four years. The report content is available for all our stakeholders, but primarily considers the information needs of our investors, financiers and other providers of financial capital.

Scope and boundary

Harmony's 2022 Integrated annual report includes financial and non-financial information about our ESG and operational performance of our operations and activities in South Africa and Papua New Guinea for the financial year ended 30 June 2022 (FY22). We included significant events between year end and the date of approving this report.

Our overarching governance framework, using an integrated risk-based approach, guides all our decisions and is critical in ensuring and protecting value creation and delivery of our strategic objectives.

In compiling this report, we have determined our reporting boundary by taking into account:

OUR REPORTING BOUNDARY

Strategy	Risks and opportunities	Business model	Material matters	Operational performance	Governance

FINANCIAL REPORTING BOUNDARY

Wholly-owned subsidiaries/entities	Joint arrangements	Investments where we have significant influence

STAKEHOLDERS

Investors and financiers	Employees and unions	Communities, traditional leaders and NGOs	Government and regulators	Suppliers

Materiality

Harmony follows the principle of materiality to determine our report content. In 2022, we conducted a double materiality assessment to identify those matters that impact our ability to create value (financial materiality) and our impact on society, communities and the environment (impact materiality). We consider these matters as key to our performance now or in future, and therefore our ability to deliver on our strategy.

Key to determining materiality is engaging with stakeholders to identify their primary concerns. For a better understanding, see the section on stakeholder engagement. Our materiality process and material matters, and risks and opportunities are discussed in this report. These sections provide context for how we manage material matters.

Our 2022 suite of reports

- **Environmental, social and governance report (ESG Report) 2022**
  This report provides insight into our ESG performance for 2022 and over the past five years, along with our aspirations. It is intended as a useful guide to support analysis and provides information about our shared value.
- **Mineral Resources and Mineral Reserves 2022**
  We produce the statement of Harmony's Mineral Resources and Mineral Reserves (South Africa and Papua New Guinea) in accordance with SAMREC and section 12.13 of the JSE Listings Requirements (as updated from time to time).
- **Report to shareholders 2022**
  We outline our contributions to key stakeholders and recent developments impacting these relationships in this report. It also includes the summarised consolidated financial statements, notice of annual general meeting (AGM) and proxy form.
- **Financial report 2022**
  The financial report is a comprehensive report of our financial performance for 2022. It includes the consolidated separate parent company annual financial statements.
- **Operational report 2022**
  We provide detailed technical and operational information about our operations in this report.
- **Form 20-F**
  This is an annual report filed with the United States Securities and Exchange Commission, in compliance with the listing requirements of the New York Stock Exchange.
- **Climate-related financial disclosures* 2022**
  Harmony made a strategic decision to align its annual reporting with international best practice in terms of global climate reporting. We use this report to disclose our TCFD governance, risk management, strategy and metrics and targets. (**Referred to in our reporting suite as TFCD report.*)

Reporting frameworks, guidelines and standards

We are guided by the following in compiling this report:

	IAR	ESG	FR	MRR
Integrated Reporting Framework	✓	✓		
Companies Act 71 2008, as amended (Companies Act)	✓	✓	✓	
JSE Listings Requirements, www.jse.co.za	✓	✓	✓	✓
King IV Report on Corporate Governance™ for South Africa, 2016 (King IV)*	✓	✓	✓	
International Financial Reporting Standards (IFRS)	✓	✓	✓	
CDP Water	✓	✓		
Task Force on Climate-related Financial Disclosures (TCFD)	✓	✓		
United Nations Sustainable Development Goals (UN SDGs)	✓	✓		
World Gold Council Responsible Mining Principles	✓	✓		
South African Code for the Reporting of Exploration Results, Mineral Resources and Mineral Reserves	✓			✓
South African Mineral Asset Valuation Code (SAMVAL)	✓			✓
Global Reporting Initiative (GRI) Standards for sustainability reporting	✓	✓		
International Council on Mining and Metals – 10 principles	✓	✓		
United Nations Global Compact (UNGC)	✓	✓		
Voluntary Principles on Security and Human Rights	✓	✓		

We have also considered the Principles for Responsible Investment, a UN-supported international network of investors, which reflect the increasing prominence of ESG issues to investors.

Metrics and currency

While our reporting currency is the South African rand, US dollar equivalents of significant financial metrics, along with percentage movements, are provided to aid sector and peer comparisons.

The key metrics used in this report include:

- PGK – kina, the currency of Papua New Guinea
- Moz – million ounces
- Mt – million tonnes
- Mlb – million pounds
- All production volumes are in metric tonnes (t), unless specifically stated as imperial tons.

We have included the US dollar equivalent amounts of certain information and transactions in Rand, Kina and A$. Unless otherwise stated, we have translated assets and liabilities at the spot rate for the day, while the US$ equivalents of cash costs and all-in sustaining costs have been translated at the average rate for the year (R15.40 per US$1.00 for fiscal 2021 and R15.66 per US$1.00 for fiscal 2020). By including these US dollar equivalents in this annual report, we are not representing that the Rand, Kina and A$ amounts actually represent the US dollar amounts, as the case may be, or that these amounts could be converted at the rates indicated.

Icons used in this report

OUR STRATEGIC PILLARS

Responsible stewardship

Operational excellence

Cash certainty

Effective capital allocation

CAPITAL INPUTS

Human capital

Financial capital

Manufactured capital

Intellectual capital

Natural capital

Social and relationship capital

Directors' responsibility

for the integrated annual report 2022

The Harmony board of directors has ultimate accountability for the integrity and accuracy of this integrated annual report. The board believes this report has been prepared in accordance with the Integrated Reporting Framework. Based on the recommendations of the audit and risk committee and the social and ethics committee, the board has reviewed the report and confirms it addresses the most material issues currently facing Harmony and presents a balanced, accurate and representative view of the company and its strategy, its performance in the past financial year and its future ability to create and preserve value. The remuneration report was reviewed and approved by the remuneration committee.

The board approved this report on 25 October 2022.

Dr Patrice Motsepe
Chairman

Boipelo Lekubo
Financial director

John Wetton
Chairperson: audit and risk committee

Vishnu Pillay
Chairperson: remuneration committee

Peter Steenkamp
Chief executive officer

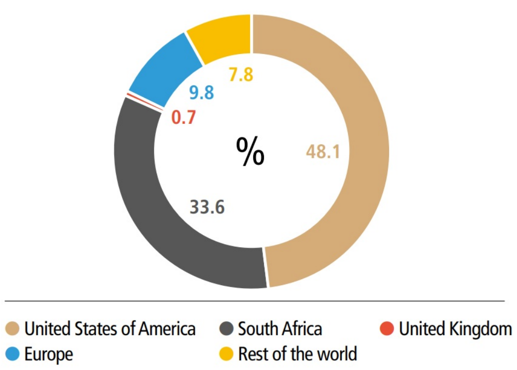
Mavuso Msimang
Lead independent non-executive director

Karabo Nondumo
Chairperson: social and ethics committee

Who we are

Harmony is a global, sustainable gold mining and exploration company with a copper footprint in our Tier 1 Wafi-Golpu asset. We are also a significant operator of gold tailings retreatment facilities.

Geographic representation of shareholders
at 30 June 2022



Headquartered in Randfontein, South Africa, Harmony has a primary listing on Johannesburg's stock exchange, the JSE Limited (HAR) and an American depositary receipt programme listed on the New York Stock Exchange (HMY). African Rainbow Minerals Limited (ARM) is our largest shareholder with a 12.12% stake. Our remaining shareholders are geographically diverse and include some of the largest fund managers globally. The largest shareholder base is in the United States (48%), followed by South Africa.

70+ years' gold mining experience in South Africa and almost two decades operating in Papua New Guinea	**1.5Moz** produced (2021: 1.5Moz)
Market capitalisation of **R32.0 billion (US$2.0 billion)** at 30 June 2022 (2021: R32.5 billion (US$2.3 billion))	**39.8Moz** gold and gold equivalent Mineral Reserves (2021: 42.5Moz)

What we do

Exploration and acquisitions
Exploring for and evaluating economically viable gold-bearing orebodies and/or value-accretive acquisitions.

Mining and processing
Establishing, developing and operating mines and related processing infrastructure. Ore mined is milled and processed by our gold plants to produce gold doré bars.

Sales and financial management
Generating revenue through the sale of gold produced and optimising efficiencies to maximise financial returns.

Stewardship and responsible mine closure
Empowering communities and employees throughout and beyond the life of our mines. Being responsible to our environment during operations. Restoring mining-impacted land for alternative economic use post-mining and approving mine closure commitments.

How we do it

Mining with purpose

Our purpose is to be a global, sustainable gold producer, creating shared value for all stakeholders while leaving a lasting positive legacy through:

- Creating longevity, profitability and sustainability
- Committing to safe, ethical, social and ecologically responsible mining
- Positioning our business to contribute to a low-carbon future.

Our mission

To create value by operating safely and sustainably, and growing our margins.

Our values

Safety
No matter the circumstances, safety is our main priority

Accountable
We are all accountable for delivering on our commitments

Achievement
Achievement is core to our success

Connected
We are all connected as one team

Honesty
We uphold honesty in all our business dealings and communicate openly with stakeholders

Delivering impact

At Harmony, we understand that our activities and the way we conduct our business affects the lives of the people we employ, the communities surrounding our mines and the environment. This impact has economic and social implications for our stakeholders and the countries where we operate.

In line with our purpose, we strive to ensure that our overall contribution is positive and that our positive legacy endures once mining stops.

Doing what we **know best**

Our embedded ESG practices will create lasting legacies and ensure a sustainable future for all stakeholders

- Safety – a core value that always precedes production
- Focus – quality ounces and cost reduction aimed at lowering all-in sustaining costs
- Proven track record – sustaining and prolonging operating lives of deep-level mines
- Wealth of mining expertise – combined, senior executive management and prescribed officers have decades of industry experience
- Digitisation – driving further improvements in our safety journey
- Decarbonisation – greener energy mix, focusing on renewables
- Collaboration – feeding excess energy generated by our solar plants while working with government on additional solutions that address the energy crisis in South Africa.

We are geared to the rand gold price, with rand costs and US dollar revenue

- Positioned to benefit from gold price and foreign exchange (operating free cash flow highly geared to current gold price environment).

As a 1.5Moz gold producer, we are expanding our margins through organic growth and new projects as we transition into a low-cost copper-gold producer

- Transition to a low-cost copper-gold miner – Tier 1 copper-gold asset in Papua New Guinea, Wafi-Golpu. This will be further strengthened on closing the Copper Mountain transaction, when we would add a near-term copper project to our portfolio
- Emerging-market specialist (South Africa and Papua New Guinea)
- Meaningful value-enhancing improvement in South African recovered grade through acquisition and development
- Locking in high margin for future returns
- Acquisition synergies and other investments have potential to reduce all-in sustaining costs.

We have re-engineered our portfolio and deleveraged our balance sheet to create optionality and pay a dividend while growing the company

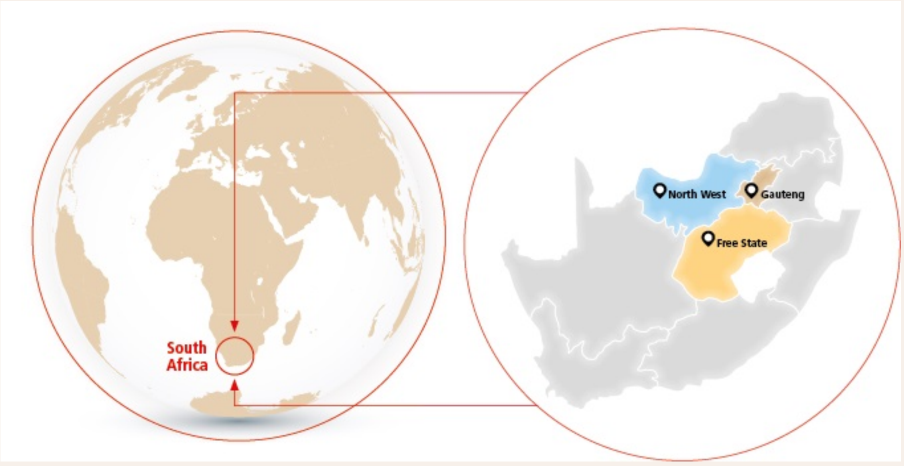
- Positive shareholder returns through sustainable mining
- Strengthened balance sheet supports future growth and capital returns
- Capital allocated towards high-grade underground assets and high-margin surface operations to deliver superior returns and improved cash flow generation
- Portfolio value supported by joint ownership of Wafi-Golpu asset.

Our operations

With operations in South Africa and Papua New Guinea, Harmony is a profitable, sustainable gold producer creating shared value for all stakeholders and leaving a lasting positive legacy – delivering high-impact and greener gold through embedding ESG in everything we do. With an abundance of opportunities to deploy capital across the world, we carefully determine which projects will deliver optimal shareholder returns on the basis of where we operate, how we manage risk and what skills we can leverage.

We have actively pursued opportunities to extend the life of some of our larger and higher-grade assets, adding lower-risk, higher-margin ounces to our portfolio. This included re-engineering our portfolio between 2017 and 2021 through the Hidden Valley, Moab Khotsong and Mponeng acquisitions, reducing our debt and identifying substantial opportunities in our existing portfolio through exploration and brownfield projects. On 6 October 2022, we entered into an agreement with Copper Mountain Corporation, to acquire its wholly-owned Eva Copper Project in Queensland, Australia. The total consideration is up to US$230 million, and includes an upfront cash payment as well as two contingent payments based on various criteria. The closing of the transaction is still subject to certain customary conditions but has received approval from the South African Reserve Bank.

To demonstrate our commitment to good ESG practices and achieving a low-carbon future, we are accelerating the expansion and rollout of numerous renewable energy projects.



South African operations

Location: Witwatersrand Basin and Kraaipan Greenstone Belt
Production: 1.37Moz (92%) (FY21: 1.38Moz (90%))
Total workforce: 45 002
Assets:

- **Eight** underground operations*
- **One** open-pit mine
- **Several** surface source operations.

We have grouped our underground assets based on grade and life-of-mine (LoM) as follows:

- High-grade, long-life assets: Moab Khotsong and Mponeng
- Short to medium-life assets with a focus on free-cash generation: Tshepong Operations*, Doornkop, Joel, Target 1, Kusasalethu and Masimong

Major capital allocation for our underground assets will be determined by grade and returns.

Our high-margin surface assets comprise Mine Waste Solutions, Phoenix, Central Plant reclamation and dumps.

At 30 June 2022, our South African operations accounted for 71% of group Mineral Resources and 54% of group Mineral Reserves, both inclusive of gold and gold equivalent ounces.

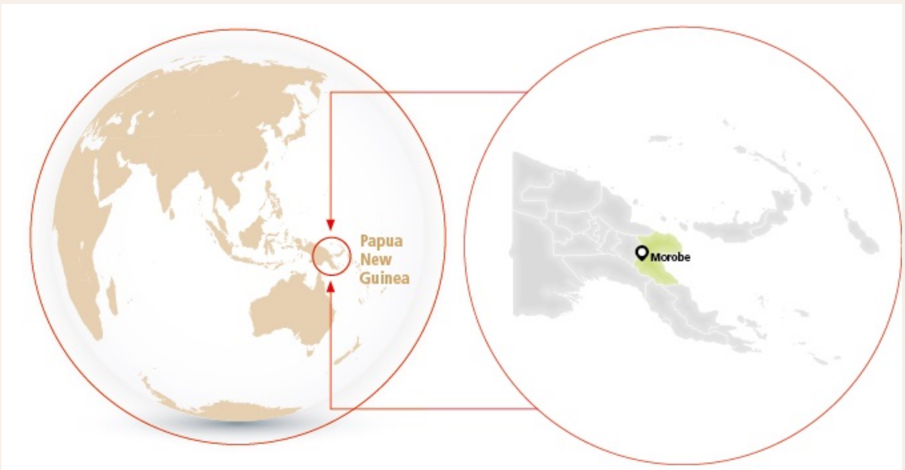
* *At 30 June 2022, includes Tshepong Operations, which will be restructured in FY23 and reported as Tshepong North and Tshepong South.*

Papua New Guinea operations

Location: New Guinea Mobile Belt in Morobe
Production: 0.12Moz (8%) (FY21: 0.15Moz (10%))
Total workforce: 2 306
Assets:

- **Hidden Valley** (open-pit gold and silver mine)
- **Wafi-Golpu** project (significant copper-gold portfolio)
- **Multiple** exploration areas.

At 30 June 2022, our Papua New Guinea operation accounted for 29% of group Mineral Resources and 46% of group Mineral Reserves, both inclusive of gold and gold equivalent ounces.



South Africa

Underground

North West	West Rand[1]		
Moab Khotsong	**Doornkop**	**Kusasalethu**	**Mponeng**
6 518	4 093	4 127	5 287
209 237oz 6.79g/t grade	110 726oz 3.94g/t grade	146 833oz 7.52g/t grade	195 669oz 7.25g/t grade
22 years[2] 10.2Moz Resources 4.0Moz Reserves	**16 years** 7.4Moz Resources 1.9Moz Reserves	**2 years** 3.9Moz Resources 0.3Moz Reserves	**7 years** 24.3Moz Resources 1.9Moz Reserves

Free State			
Tshepong Operations[3]	**Target 1**	**Joel**	**Masimong**
9 074	1 859	2 063	2 033
225 763oz 4.50g/t grade	57 872oz 3.96g/t grade	50 026oz 3.59g/t grade	61 407oz 3.93g/t grade
8 years 25.6Moz Resources 1.7Moz Reserves	**6 years** 3.5Moz Resources 0.6Moz Reserves	**8 years** 3.0Moz Resources 0.6Moz Reserves	**2 years** 0.8Moz Resources 0.1Moz Reserves

WORKFORCE *(includes permanent employees and contractors)*

PRODUCTION

LOM

Surface

Surface	Waste rock dumps		
Kalgold	**Free State**	**North West**	**West Rand**
684	431*	766*	1 031*
36 555oz 0.79g/t grade	20 834oz 0.37g/t grade	20 062oz 0.35g/t grade	49 576oz 0.28g/t grade
11 years 2.0Moz Resources 0.8Moz Reserves	**±1 year** 0.25Moz Resources	**±1 year** 0.05Moz Resources	**±1 year** 0.02Moz Resources

Tailings		
North West	**Free State**	
Mine Waste Solutions (MWS)	**Phoenix**	**Central Plant Reclamation (CPR)**
1 425	359	248
93 205oz 0.12g/t grade	24 659oz 0.12g/t grade	18 840oz 0.15g/t grade
17 years 2.7Moz Resources 2.2Moz Reserves	**6 years** 0.5Moz Resources 0.3Moz Reserves	**13 years** 0.4Moz Resources 0.4Moz Reserves

[1] Border between Gauteng and North West.
[2] Includes Zaaiplaats.
[3] From FY23, Tshepong Operations will be reported on separately as Tshepong North and Tshepong South.
** Some of this material is treated along with reef, while some is treated at dedicated waste rock treatment plants. The numbers for the Free State, North West and West Rand facilities above exclude MWS, Phoenix, CPR and Kalgold.*

Papua New Guinea

Surface	Project
Hidden Valley	**Wafi-Golpu Project**
2 191	59
119 182oz 1.15g/t grade	n/a
5 years 3.1Moz Resources 1.2Moz Reserves	**27 years** 37.7Moz Resources 17.0Moz Reserves

Our business model

As a sustainability-conscious organisation, our business model was designed to help us manage our capitals and deliver on our strategy. In turn, we are able to reduce our negative impacts, sustain or create positive impacts, mitigate risks and leverage opportunities. Only then can we have meaningful and strategic engagements with our stakeholders to further entrench sustainability and value creation in our business.

Inputs

Human capital

Workforce skills and know-how

- Permanent and contract employees: 47 373 (FY21: 48 112)
- Training: 94% of workforce
- Transformation to create a more diverse and representative workforce, focused on recruiting from local communities.

Financial capital

Includes funds from financing or generated by productivity

- Total equity: R30.1 billion (US$1.9 billion) (FY21: R31.2 billion (US$2.2 billion))
- Cash generated by operating activities: R6.9 billion (US$456 billion) (FY21: R9.2 billion (US$596 million)).

Manufactured capital

Physical infrastructure or technology we use

- Operational and associated infrastructure and equipment
- Production costs: R33.1 billion (US$2.2 billion) (FY21: R29.8 billion (US$1.9 billion))
- Capital expenditure: R6.2 billion (US$407 million) (FY21: R5.1 billion (US$331 million))
- Mining rights and leases
- Exploration spend R214 million (US$14 million) (FY21: R177 million (US$11 million)).

Intellectual capital

Intangibles associated with our brand and reputation, organisational systems and related procedures

- Skills and expertise as global leader in deep-level gold mining
- Digitalisation under way
- Unique systems and processes.

Natural capital

Natural resources, such as our orebodies, water and energy, used to operate our business

- Mineral Reserves: 39.80Moz gold and gold equivalents (FY21: 42.45Moz)
- Land under management: 92 255ha (FY21: 95 255ha)
- Ore milled: 53.80Mt (FY21: 49.25Mt)
- Resources consumed:
  - Water for primary activities: 33 417 000m³ (FY21: 30 306 000m³)
  - Electricity: 4 253 000MWh (FY21: 4 123 000MWh).

Social and relationship capital

Relationships with all stakeholders

- Values and code of ethics guiding engagement
- Governance and corporate responsibilities
- Stakeholders: investors and financiers; employees and unions' communities, traditional leaders and NGOs; government and regulators; and suppliers.

How our business converts value

Our **strategy** is to produce safe, profitable ounces and improve margins through responsible stewardship, operational excellence, cash certainty and effective capital allocation.

Our **business activities** are mining gold from mature deep-level and surface operations; processing ore; and selling the product to the market for further refinement. We also deliver on capital projects.

- Exploration and acquisitions
- Mining and processing
- Sales and financial management
- Stewardship and responsible mine closure

(page 2, About Harmony)

Our **competitive advantage** is that we are a world leader in surface and deep-level mature asset mining. We are uniquely skilled, with extensive institutional knowledge, in prolonging the operating lives of mining assets. We understand mutually beneficial stakeholder engagement, enabling us to thrive in emerging markets.

We prioritise stakeholder engagement and create shared value to maintain our **social licence to operate**.

Our future commitment is we have operated for over 70 years and intend to operate for another seven decades by organically growing our Mineral Reserve base and pursuing value-accretive acquisitions.

Factors impacting our value creation

What we can manage:

- Safety
- Grade and volume mined
- Costs, efficiencies and productivity
- Stakeholder relations.

What is beyond our control:

- Gold price and global market
- Exchange rate volatility
- Regulatory policy and political uncertainty
- Mounting community expectations and socio-economic challenges.

Outputs

Our primary product is the gold we produce and sell to the market

Our services include processing and sales.

Gold produced
1.49Moz
(FY21: 1.54Moz)

Our activities result in the following by-products and waste, linked to our production volumes, that we continually work to reduce and mitigate:

Total CO_2 emissions
5 813 435t
(FY21: 5 135 182t)

Mining waste generated Total milled
53.80Mt
(FY21: 49.25Mt)

Hazardous waste to landfill
803t
(FY21: 524t)

Outcomes

Human capital

- Tragically, 13 lives lost
- A year of no strikes indicates a strong and mature relationship with unions
- Three-year wage settlement finalised in September 2021
- Focus on gender diversity
- Transformed workforce in South Africa, with 56% of management from designated groups (FY21: 60%)
- Spent on wages and salaries: R17.0 billion (US$1 125 million) (FY21: R15.3 billion (US$995 million))
- Skills training and development spend: R661 million (US$43 million) on (FY21: R488 million (US$32 million))
- Robust Covid-19 response and vaccination programme.

SDG key deliverables

- Building partnerships and relationships in the organisation
- Respecting diversity, empowerment and equality
- Investing in education and skills.

Financial capital

- Revenue generated: R42.6 billion (FY21: R41.7 billion)
- Headline earnings: R3.1 billion (US$199 million) (FY21: R6.0 billion (US$387 million))
- Share price: down by 1%, decreasing market capitalisation to R32.0 billion (US$2.0 billion)
- Net debt: up to R757 million (US$47 million) (FY21: R542 million (US$38 million))
- Production profit: R9.5 billion (US$628 million) (FY21: R12.0 billion (US$777 million))
- Refinanced funding facilities comprising a US$400 million and R2.5 billion sustainability-linked facilities as well as a R1.5 billion green loan.

SDG key deliverables

- Contributing to our host countries' GDP
- Support township economies
- Creating value for our shareholders
- Building longevity for our operations.

Manufactured capital

- Approval of Zaaiplaats and Kareerand extension projects
- Completed the upgrade of the Oracle enterprise resource planning.

SDG key deliverables

- Convert liabilities into assets
- Optimum land use
- Integrate renewable and water treatment into local infrastructure
- Invest in infrastructure through local economic development.

Intellectual capital

- Employees trained: 65 238 (FY21: 49 346)
- Tertiary bursaries: 126 (FY21: 119)
- More digitised business to operate effectively in 21st century
- Established the business improvement office
- Continued embedding our proactive safety culture (Thibakotsi journey) overseen by leadership and guided by our roadmap.

Natural capital

- Rehabilitation and environmental stewardship: spent R328 million (US$21 million) on rehabilitating 31.8ha (FY21: R281 million (US$18 million); 4.46ha)
- Progressed our 30MW solar generation project to reduce dependency on fossil fuel generated electricity
- Reduction of 1.3TWh electricity at an investment of R181 million with cumulative savings of R1.3 billion and 1.5Mt of CO_2.

SDG key deliverables

- Pollution prevention
- Efficient resource consumption
- Environmental footprint reduction
- Reduce dependency on natural resources.

Social and relationship capital

- Total economic value distributed: R34.8 billion (FY21: R31.9 billion)
- Social licence to operate and mine community development investment:
  - South Africa: R138 million (US$9 million) (FY21: R102 million (US$7 million))
  - Papua New Guinea: R33 million (US$2 million) (FY21: R34 million (US$2 billion))
- Preferential/local procurement spend:
  - South Africa (discretionary): R11.2 billion (US$736 million) (FY21: R10.7 billion (US$695 million))
  - Papua New Guinea: R2.3 billion (US$153 million) (FY21: R2.3 billion (US$149 million))
- Taxes and royalties paid: R675 million (US$44 million) (FY21: R1.2 billion (US$79 million)).

SDG key deliverables

Create alternative economies
- Sustainable livelihoods
- Healthy relationships and partnerships with communities
- Support upliftment and wellbeing.

Our trade-off considerations and disciplined capital allocation.

Our business strategy aims to efficiently convert our natural capital into value across the other five capitals. Creating and optimising that value inevitably requires resource allocation and trade-offs in how and when resources are allocated. The result is an overall creation, transformation or erosion of value across the various capitals.

Responsible stewardship

Resource allocation and trade-off	Outcome
Ensuring we mine responsibly and embed a proactive safety culture requires an investment of financial and human capital into our training and processes It also requires financial capital into our environmental management efforts. We ensure we appropriately balance our stewardship goals with our capital investment requirements. We invested: • R78.5 million of our financial capital in our vaccination programme, reaching 84% of our workforce and 4 764 community members.	**Our net impact on the capitals:** + Acted on our duty of care for employee safety and health. = Mitigated and managed the environmental impact of our activities. +/= Engaged with stakeholders, invested in communities, paid taxes and royalties, and complied with regulations. − Financial expenditure on employee healthcare, managing Covid-19 and environmental management. − 13 lives lost.

Operational excellence

Resource allocation and trade-off	Outcome
Operational excellence For Harmony to continue operating safely, optimally and meeting or exceeding operational plans, we invest human, manufactured, intellectual and financial capital. We invested: • 2 299 336 hours of our human capital in safety, skills development and training.	**Our net impact on the capitals:** + Invested in employees' safety, skills development and training. + Invested in technology upgrades as well as system and process improvements to optimise and increase efficiencies and productivity. = Invested in maintaining mining infrastructure (plant, machinery and equipment) and sustaining our business. − Financial expenditure to promote operational excellence and achieve cash certainty.

Cash certainty

Resource allocation and trade-off	Outcome
Cash certainty Ensuring cash certainty means we must protect and grow our financial capital by preserving cash, reducing costs and debt and adapting to exchange rate fluctuations. • R1.5 billion green loan secured • R894 218/kg gold price • 0.1 times net debt:EBITDA ratio • The derivative programme stood at a net positive value of R645 million (US$40 million) (2021: R1.6 billion (US$111 million)).	**Our net impact on the capitals:** Enhance financial capital to preserve cash and reduce costs and debt.

Effective capital allocation

Resource allocation and trade-off	Outcome
Effective capital allocation Clear targets inform our capital allocation decisions. Our pipeline of organic growth projects is aimed at addressing the Ore Reserve replacement risk and ensuring future growth. Each of our capital allocations decisions are aimed at ensuring total shareholder return – both share appreciation and dividends. We invest financial and social and relationship capital. • R6 214 million of financial capital spent on capital expenditure • R430 million dividend paid.	**Our net impact on the capitals:** Developing project pipeline to ensure availability of Ore Reserves to be mined. In the longer term, acquisitions and projects will contribute to operational cash flows and margins. Total cost of acquisitions, debt incurred and project development is balanced against longer-term financial benefits. Dividends paid to shareholders and ensuring the company attracts investments from current and new providers of financial capital.

Key:

Human capital

Financial capital

Manufactured capital

Intellectual capital

Natural capital

Social and relationship capital

Value created

Value preserved

Value eroded

Our leadership
Board of directors

COMMITTEE

- 🔴 Audit and risk
- 🟠 Social and ethics
- ⚫ Remuneration
- 🔵 Nomination
- 🟢 Investment
- 🟤 Technical

Board leadership

Non-executive chairman

Dr Patrice Motsepe (60)
BA, LLB, DOCTOR OF COMMERCE (HONORIS CAUSA), DOCTOR OF MANAGEMENT AND COMMERCE (HONORIS CAUSA)

Appointed non-independent non-executive chairman on 23 September 2003
Member: 🔵

Independent non-executive deputy chairperson

Karabo Nondumo (44)
BAcc, HDip (ACC), CA(SA)

Appointed 3 May 2013
Chairperson: 🟠
Member: 🟢🔴🔵

Lead independent non-executive director

Mavuso Msimang (81)
MBA (PROJECT MANAGEMENT), BSc

Appointed 26 March 2011
Chairperson: 🔵
Member: 🟠

Executive directors

Chief executive officer

Peter Steenkamp (62)
BEng (MINING), MINE MANAGER'S CERTIFICATES METAL MINES, FIERY MINES, CPIR, MDP, BLDP

Appointed chief executive officer on 1 January 2016

Financial director

Boipelo Lekubo (39)
BCom (HONS), CA(SA)

Joined Harmony in June 2017 and appointed financial director on 3 March 2020

Executive director: stakeholder relations and corporate affairs

Mashego Mashego (58)
BA (EDUCATION), BA (HONS) (HUMAN RESOURCES MANAGEMENT), JOINT MANAGEMENT DEVELOPMENT PROGRAMME, GLOBAL EXECUTIVE DEVELOMENT PROGRAMME

Joined Harmony in 2005 and appointed executive director on 24 February 2010

Independent non-executive directors

Joaquim Chissano (83)
PhD (HONORIS CAUSA)

Appointed 20 April 2005
Member: 🟢🟠

Bongani Nqwababa (56)
BAcc (Hons), FCA, MBA
Appointed 18 May 2022

Chairperson: 🟢
Member: ⚫🔴

Vishnu Pillay (65)
BSc (HONS), MSc

Appointed 8 May 2013
Chairperson: ⚫
Member: 🟤🟢🔵

Martin Prinsloo (53)
CA(SA)

Appointed 18 May 2022
Member: 🟤🟢⚫

Given Sibiya (54)
BCom, BAcc, CA(SA)

Appointed 13 May 2019
Member: 🟠🔴

Peter Turner (66)
NHD MECHANICAL ENGINEERING

Appointed 19 February 2021
Member: 🟢🟤

John Wetton (73)
CA(SA), FCA

Appointed 1 July 2011
Chairperson: 🔴
Member: 🟢🟠⚫

Non-executive director

André Wilkens (73)
MINE MANAGER'S CERTIFICATE OF COMPETENCY MDPA, RMIIA, MINI MBA OIL AND GAS

Appointed 7 August 2007
Chairperson: 🟤
Member: 🟢⚫

Executive management

Harmony's executive management team comprises the chief executive officer, financial director and an executive director. Together with five senior group executives, they serve as the group executive committee. This committee is supported by five corporate executives, who make up the group chief executive's office and report to either the chief executive officer or financial director.

There are also regional executive committees for South Africa and Papua New Guinea (South-east Asia).

Senior group executives

Chief operating officer: South Africa

Beyers Nel (45)
BEng (MINING ENGINEERING), MBA, Pr Eng, MINE MANAGER'S CERTIFICATE OF COMPETENCY

Chief executive officer: South-east Asia, New business

Johannes van Heerden (49)
BCompt (HONS), CA(SA)

Enterprise risk and investor relations

Marian van der Walt (49)
MBA (OXFORD) (CUM-LAUDE), BCOM (LAW), LLB, HIGHER DIPLOMA IN TAX, DIPLOMAS IN CORPORATE GOVERNANCE AND INSOLVENCY LAW, CERTIFICATE IN BUSINESS LEADERSHIP AND INVESTOR RELATIONS (UK)

Sustainable development

Melanie Naidoo-Vermaak (48)
BSc (HONS), MSc (SUSTAINABLE DEVELOPMENT), MBA

Human capital

Anton Buthelezi (57)
NATIONAL DIPLOMA (HUMAN RESOURCES MANAGEMENT), BTECH (LABOUR RELATIONS) MANAGEMENT, ADVANCED DIP. IN LABOUR LAW, CERT. IN BUSINESS LEADERSHIP

Corporate executives

Chief audit executive

Besky Maluleka-Ngunjiri (46)
BCompt (HONS), CTA, CIA, CCSA

Chief financial officer: treasury

Herman Perry (50)
Bcom (HONS), CA(SA)

Executive: Special projects

Abré van Vuuren (62)
BCom, DEVELOPMENT PROGRAMME IN LABOUR RELATIONS, MANAGEMENT DEVELOPMENT PROGRAMME, ADVANCED LABOUR LAW PROGRAMME, BOARD LEADERSHIP PROGRAMME

Executive: Ore Reserve Management

Jaco Boshoff (52)
Bsc (Hons), MSc, MBA,
Pr Sci Nat, MSAIMM,
MGSSA

Group company secretary

Shela Mohatla (37)
MBA, FCG (CGISA), BAdmin IR, PGDip CORPORATE LAW, PMD

Chairman's review

"More than just a moral imperative, safety must be our foremost value and a leadership priority. Eliminating safety incidents is the key to successfully delivering Harmony's strategic objectives."

Dear shareholders and stakeholders

Harmony achieved its objectives of delivering safe and profitable ounces, while advancing its strategy of becoming a low-cost, and globally competitive gold and copper producer. We continued to create value for our shareholders and stakeholders in South Africa and Papua New Guinea.

I am pleased to report that Harmony produced approximately 1.5Moz of gold in FY22, through continued sustainable mining practices.

The higher average gold price received, including hedging and improved revenue, enabled Harmony to declare a final dividend of 22 South African cents (1 US cent) per share. An interim dividend of 40 cents per share was paid in April 2022. Dividends are paid on the basis that the company is sustainable and that dividend payments will not inhibit future value-enhancing growth opportunities.

We are encouraged by investors who still consider gold as a safe haven asset and a hedge against geopolitical uncertainty in periods of extreme volatility.

On 6 October 2022, Harmony announced that it had entered into an agreement to acquire the entity that owns 100% of the Eva Copper Project and a package of regional exploration tenements from Copper Mountain Mining Corporation in Australia. This acquisition will position Harmony well and scale up its portfolio and contributes to further commodity and geographical diversification. The transaction also expedites our transition to become a low-cost copper-gold mining company and opens a new frontier within an attractive mining area in Australia, supplementing our 50% interest in the tier 1 copper-gold Wafi-Golpu Project.

Read more about our performance and recent acquisition in the **CEO's review**.

Safety is at the heart of Harmony's culture

Ensuring the well-being of all employees and contractors and maintaining a safe and healthy work environment is fundamental to delivering our strategic objectives.

Despite our proactive safety culture and absolute commitment to safety, 13 employees regrettably lost their lives in mine-related incidents. We extend our deepest condolences to the families of those who lost their lives at our operations and all those affected by these tragedies. We remain committed to achieving our goal of zero loss of life. The board and management are working together to increase safe production objectives, as discussed by our CEO in the **CEO's review**.

Our risk mitigation measures are outlined in **risk and opportunities**.

Ensuring a safe working environment and culture requires an integrated and risk-based approach to decision making throughout Harmony. We decided to close Bambanani mine due to the increased seismic activity. We also invested in additional controls to mitigate risk at all our operations.

Our partners

As a responsible corporate citizen, we are committed to continue supporting our employees and host communities and to improving their living conditions.

We fully support government's development endeavours and are committed to social initiatives that address unemployment by empowering youth and women and by investing in small businesses through preferential procurement.

We paid R3.5 billion (US$232 million) in taxes and royalties to the South African government, R270 million (US$18 million) to the state of Papua New Guinea, R17.0 billion (US$1.1 billion) in wages and salaries, and spent R11.2 billion (US$736 million) on local procurement.

Supporting a sustainable global transition

Harmony's strategic decisions are guided and underpinned by four strategic pillars, namely: operational excellence; responsible stewardship; cash certainty; and effective capital allocation.

We are committed to taking appropriate climate action measures, which includes reaching net-zero carbon emissions by 2045.

The importance of copper and silver, in the global transition towards a low-carbon economy will add to the long-term value proposition of Harmony. To meet demand and limit the increase in the global average temperature to 1.5°C, worldwide production of base metals is expected to increase exponentially over the next 30 years. The mining industry's contribution to climate action could rise even faster as the energy needed to meet growing demand surges.

Harmony invested in decarbonisation by setting science-based targets to reduce emissions in line with the Paris Agreement goals, implementing energy efficiency and renewable energy initiatives and allocating capital towards projects and metals that advance our decarbonisation strategy.

Our Social Labour Plans (SLPs) and Corporate Social Investment (CSI) expenditure are enabling community resilience to climate change and are supporting a sustainable transition to a low-carbon world.

Since 2016, initiatives at Harmony's operations saved 1.3TWh of electricity, translating to a reduction of 1.5 million tons of carbon dioxide and over R1.3 billion in electricity costs.

Harmony's decarbonisation strategy aims to create lasting impact and a sustainable future for our stakeholders. As we continue to become even more energy-efficient and begin to switch to lower-cost renewable power, energy costs and carbon emissions will reduce. Fast-tracking decarbonisation initiatives reduces risks, helping Harmony to position for the expected tightening of carbon regulations. Harmony has secured early long-term access to renewable power with potential for other scarce sustainable resources such as low-carbon hydrogen.

Harmony will also benefit from more flexible, sustainability-linked funding, as outlined by our CEO in the **CEO's review**. The company has secured new debt facilities that tie finance costs to achieving sustainability targets. In addition, a R1.5 billion green loan has been ring-fenced to fund phase 2 of the 137MW renewable solar energy rollout.

Good governance

Our board is guided by King IV in ensuring the sustainability of our business and advancing the highest standards of corporate governance in South Africa.

As part of the board's good governance and transition plan, we bid farewell to two of Harmony's longest-serving board members, Fikile de Buck and Dr Simo Lushaba, who retired at the 2021 AGM. We wish them and Modise Motloba, our former deputy chairman, who resigned on 27 June 2022, success in their future endeavours.

The company subsequently appointed two new independent non-executive directors and reorganised the board's composition to best leverage the skills, independence and diversity of members across its committees.

Bongani Nqwababa and Martin Prinsloo joined Harmony on 18 May 2022. Bongani serves as chairperson of the investment committee and member of the remuneration and audit and risk committees. Martin is a member of the audit and risk and the technical and investment committees. Both appointees are chartered accountants with mining directorship experience. Their financial and investment expertise in the chemicals, mining and extractives industries, adds value to Harmony.

Lastly, Joaquim Chissano and Andre Wilkens, who retire by rotation this year, although eligible, will not be seeking re-election to the board. This will be effective as of the conclusion of the 2022 AGM. On behalf of the board I would like to thank them for their contribution over many years.

Mandatory audit firm rotation

Harmony recommended EY for election at the upcoming AGM, as required by the Independent Regulatory Board for Auditors from 1 April 2023. This rotation will assist in ensuring auditor independence and overall audit quality. .

Recognition

I would like to express my deep gratitude to each of our board members for their guidance and advice throughout the year. The board's range, depth of skills and expertise are invaluable in building the resilience Harmony needs to overcome challenges and create value for our shareholders and stakeholders.

Harmony is committed to operating in a manner that will create long-term sustainable value for our shareholders, employees, communities living near our mining operations and all other stakeholders. Continuous investment in our people alongside organic and external growth is key to our long-term success.

On behalf of the board, I would like to thank our CEO, Peter Steenkamp, the executives, managers and employees of Harmony for their dedication to delivering Harmony's strategic objectives.

Dr Patrice Motsepe
Chairman

25 October 2022

Chief executive officer's review

An emerging market gold mining specialist with near-term copper

We maintained our position as South Africa's largest gold producer by volume in FY22, focusing on effective capital allocation across four core business areas, and prioritising grade and margins. Our robust balance sheet enabled us to continue creating value for our stakeholders through a diversified portfolio. The Harmony equity story comprises four key components namely:

- our high-grade underground assets
- an underground portfolio optimised for cash generation
- our high-margin surface retreatment plants in South Africa and
- an international business set to differentiate Harmony with the Tier 1 Wafi-Golpu copper-gold asset in Papua New Guinea and the recent announcement of the planned acquisition of the Eva Copper project in Australia.

As a group, we met our revised production guidance and delivered 46 236kg (1 486 517oz) of gold (FY21: 47 755kg/1 535 352oz). The 3% reduction from FY21 was mainly due to Papua New Guinea, where production was severely impacted by the overland conveyor belt failure at Hidden Valley, resulting in a 21% decline in gold production from FY21. In addition, pre-emptive safety-related stoppages, mining constraints and supply chain disruptions at our South African operations negatively impacted production. However, development grades were higher or in line with reserve grades at all our underground operations.

Key focus areas

Our key focus areas during the year were improving safety, delivering meaningful returns, active cost management and growing our ounces. On the back of value-accretive mergers and acquisitions we ensured continued value creation for our stakeholders into the future by focusing on our key focus areas during the year, including our brownfield and greenfield projects pipeline as well as responsible capital allocation towards ESG-focused initiatives.

Improving safety

Safety is Harmony's top imperative. We drive our safety journey through impactful initiatives such as our humanistic Thibakotsi culture transformation programme. Through this and our robust risk management framework, we achieved some extraordinary safety milestones as a company. There were significant improvements in falls of ground and incidents related to rail-bound equipment. We also saw an increase in white flag (accident-free) days and, for the first time in our history, had a loss-of-life-free January and February. Our lost time injury frequency rate (LTIFR) trended below six per million shifts for three consecutive quarters.

As safety will always take precedence over production, our performance is disappointing. Despite the progress in the areas listed above, we regrettably lost 13 colleagues in mine-related incidents. We extend our sincere condolences to their families, friends and colleagues.

In memoriam

- Thembile Simon Mabala (Phakisa rock drill operator)
- Pule Jan Mokhatsi (Moab Khotsong stope team member)
- Richard Mohapi (Mponeng rock drill operator)
- Thobela Gwangxu (Kusasalethu winch operator)
- Mbongeni Zulu (Kusasalethu stope team member)
- Sicelo Tshovana (Doornkop artisan)
- Andile Michael Mafilika (Kusasalethu stope team leader)
- Makoae Cosma Makhang (Doornkop tramming team leader)
- Sifiso Siphamandla Gumede (Kusasalethu fitter and turner)
- Emmanuel Zolile Dhlamini (Kusasalethu engineering assistant)
- Joao Andre Nhanthumbo (Kusasalethu engineering assistant)
- Lemohang Lerato (Kusasalethu engineering assistant)
- Linda Mgudzi (Kusasalethu development team member)

We also lost Juliao Macamo (Moab Khotsong stope team leader) after year-end.

Driven by our safety-first approach Bambanani was closed during the year due to increased seismicity as the mine neared the end of its life. We will retain the highly skilled crews within the group. I would like to extend my gratitude to past and current Bambanani crews for their contribution to the success of the mine over many years.

Delivering meaningful returns

Focus on diversifying our portfolio, disciplined capital allocation and improving grades enables us to deliver meaningful returns to our shareholders. We were pleased to declare an interim and final dividend of 40 and 22 South African cents (3 and 1 US cent) per share, respectively, for the financial year.

We will remain disciplined and focused as we grow, particularly in capital allocation. We therefore made a strategic decision in FY22 to reallocate capital towards projects and operations that will deliver the highest possible returns. We lowered our overall risk profile and prioritised investment in high-grade assets to ensure our mines remain safe and profitable.

We executed a tough decision in restructuring Tshepong Operations to create a smaller but immediately profitable operation. Going forward, it will be reported separately as Tshepong North and Tshepong South. The Tshepong North sub-75 project was suspended and the life of mine reduced from 19 to seven years. Capital earmarked for Tshepong North will be reallocated to projects delivering higher returns. R650 million (US$40 million) in capital, as well as employees, will be moved to Zaaiplaats and the Kareerand expansion project. Recovered grade from Tshepong North is expected to improve from 4.38g/t to 5.24g/t so that the new life of mine is profitable from the first year and net present value improves over a shorter life of mine.

By investing in grade, we can drive down costs over time. To safely lift the outputs of our mining crews from the current average of 260m^2 per month to 300m^2 per month, we will advance our Thibakotsi journey with the technologically advanced S300 programme designed to optimise output at the rockface, fine-tune shifts and implement appropriate technologies in narrow-reef underground mining environments. Some of our crews are already mining at 700m^2 per month, creating a significant opportunity to improve overall productivity.

Active cost management

We invest in our high-grade underground assets to ensure we deliver superior returns and improve cash flow. As such, our underground assets are grouped per grade and life of mine. Major capital allocation is prioritised in terms of grade and returns.

Stringent controls ensured that cash costs only increased by 8% in line with our planning parameters in FY22 (excluding Unisel, which closed in FY21, and Mponeng and related assets). Labour, contractors and electricity accounted for 77% of our South African cash operating costs. Our wage agreement kept the increase in fixed labour costs below 6%. Higher electricity tariffs primarily increased our overall costs, which were 13% higher.

Care and maintenance costs also increased by 90% to R273 million (US$18 million) from R144 million (US$9 million) due to closure of the Kopanang gold plant as well as the Vaal River surface operations at the end of FY21.

Growing our ounces

As part of our objective to grow our ounces through value-accretive acquisitions, we will consider and assess all opportunities, provided they are affordable and meet our investment criteria for value creation.

To strengthen our long-term financial and operational capacity by improving cash flow and growth profiles, various exploration projects are underway or planned to address production gaps, replace ounces and increase life of mine:

- In **South Africa**, our brownfield projects, announced in FY21, include the Target 1 recapitalisation project (expected to be completed by December 2022), the Doornkop 207/212 project, and exploration at Mponeng, Joel, Doornkop and Kalgold. We are also conducting studies at Target North where drilling is underway.
- In **Papua New Guinea**, brownfield exploration focuses on developing new satellite areas through the Kerimenge deposit with an Inferred Resource of 16.4Mt at 1.07g/t for 17 582kg (565 000oz) of gold. The Tier 1 Wafi-Golpu copper-gold project also continues as we work with Newcrest to progress the special mining lease permitting process.
- In **Australia**, we are set to take ownership of Eva Copper (an open-pit operation with a conventional crush, grind and flotation circuit) and Copper Mountain Mining Corporation exploration grounds, as announced on 6 October 2022. Copper, a strategic metal in developing renewable energy technology, also supports our participation in the global transition to a low-carbon economy.

Mining with purpose

Investment in our people is creating positive change and building trust among our stakeholders. We remain committed to our long-term sustainability and our people in terms of the three-year wage agreement for the period 1 July 2021 to 30 June 2024.

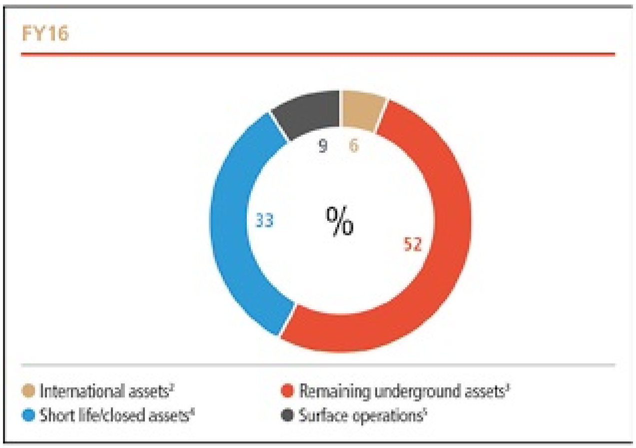
A greener and more equitable future is certainly within sight for our stakeholders. As part of our journey to be net-carbon zero by 2045, we began the build of phase 1 of our renewable energy programme during the year. We will fund the second phase with a R1.5 billion green term loan. These initiatives will also de-risk our operations and improve margins.

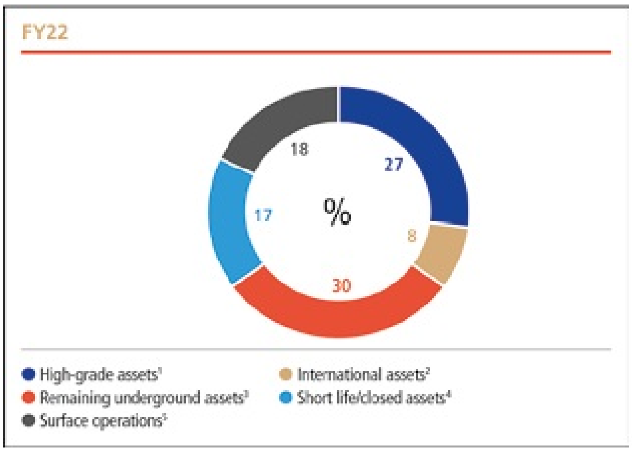
Our efforts are acknowledged by ESG rating agencies that recognise Harmony as a dedicated top performer in our sector. Our FTSE Russell rating improved from 3.4 to 4, placing Harmony in the top 9% in the gold sub-sector, and Sustainalytics placed us at a higher 37.6 in FY22 from 40.2 in FY21, demonstrating strong management of risk exposures.

Our growth journey

Reflecting on achievements since our growth strategy began in FY16, it is evident that the business has been repositioned through organic expansion and investment for future success, sustainability and delivery of long-term value.

Gold production split across a more profitable and de-risked portfolio





1 Moab Khotsong and Mponeng.
2 Hidden Valley.
3 Target 1, Tshepong Operations, Joel and Doornkop.
4 Unisel, Bambanani, Kusasalethu and Masimong.
5 Kalgold, Mine Waste Solutions, Phoenix, Central Plant reclamation and dumps.

Our acquisitive growth journey began with the purchase of our joint venture partner's 50% share in Hidden Valley in FY17, providing potential to contribute approximately 5 600kg (180 000oz) of gold per annum to Harmony's production profile. This was followed by investments in Moab Khotsong in FY18.

The company made a strategic decision in FY22 to redirect capital to high-grade underground assets and high-margin surface operations to help deliver on our strategy of safe, profitable ounces and increase cash conversion from reserves. This augments our organic growth efforts, including exploration drilling in FY18 at Kalgold (a safe and low-risk, open-pit mine providing an expanded, robust mineralised system extending beyond current resource limits) and incorporation of Mponeng and Mine Waste Solutions into the Harmony portfolio in FY21.

Our future focus

Planning for FY23 and beyond, safety remains non-negotiable as we maintain our focus on successfully executing key projects, delivering operational excellence through S300, growing our margins and advancing our copper footprint. The acquisition of the Australian Eva Copper project has introduced near-term copper production into our portfolio, in line with our strategy of becoming a low-cost, global gold and copper mining company. Harmony and its joint venture partner, Newcrest, continue to work with the Government of Papua New Guinea as we progress the Special Mining Lease permitting process for the Tier 1 Wafi-Golpu copper-gold asset.

Growth and replacement of ounces will be achieved through ongoing investment in our organic pipeline and progressing our pre-feasibility projects. Inorganic expansion into Africa and South-east Asia will also be considered, provided this meets our investment criteria.

We remain in a high-capital investment cycle. This impacted free cash in FY22 and will continue into FY23 as we invest in our high-grade assets and surface retreatment business to create long-term value.

Conclusion

Our business model places Harmony in a solid position to deliver operationally. However, our journey is not yet complete. Our portfolio will continue to evolve as we strive to produce safe, profitable ounces and further our efforts to grow production across the three core business areas.

I believe that concluding a year without any loss of life is possible and achieving this goal remains our priority.

Thank you to all our stakeholders for their ongoing support, which enables Harmony to achieve its goals. I commend our hard-working and dedicated employees across the globe for their contributions to our success.

Peter Steenkamp
Chief executive officer

Our external operating environment

We are committed to ensuring the resilience and sustainability of our business in a challenging external operating environment. Through mining with purpose, we can plan and respond to an ever-changing context influenced by economic, social, political and environmental pressures at a macro-economic and national level.

Global macro-environment

1 Economic and geopolitical factors

Context	Impact on Harmony	Our response
Geopolitical uncertainty Investor sentiment, commodity prices and exchange rates are impacted by heightened geopolitical tensions and economic uncertainty. During the year, the world faced challenges of rising inflation, the Covid-19 aftermath, the war in Ukraine and tensions between the United States and China.	This affects the commodity market and gold price, which in turn, impacts our financial capital. A potential positive impact on our business is likely to arise from investors using gold as a hedge against geopolitical uncertainty.	We analyse potential outcomes to ensure we respond proactively and appropriately. These responses are guided by our derivative and hedging strategies, appropriate capital allocation and restructuring underperforming assets, among others.
Gold price There has been a renewed wave of uncertainty, specifically for gold, as inflation is increasing. This uncertainty is compounded by concerns of low economic growth, the increasing risk of political conflict and further supply chain disruptions. The higher US dollar gold price amid global geopolitical uncertainty and inflation concerns contributed to a higher rand gold price received. The gold price continued to rise as the world recovered from the Covid-19 aftermath. Prices peaked at US$2 052.41/oz on 8 March 2022. The gold price was significantly higher than the US$1 776.60/oz at the beginning of FY22, increasing to US$1 806.89/oz at year end.	The higher gold price positively contributed to our revenue. However, despite our stringent controls and leaner operating model, we are not immune to the effects of rising costs. As such, it is imperative for us to continue scrutinising our costs while adapting to increasing inflation with protracted supply chain disruptions.	Our hedging strategy is proving successful. Our selective hedging approach supports stronger margins and cash flows. We will only hedge if we are certain that we can achieve a minimum margin of 25% above all-in sustaining costs and inflation. Additionally, we continue using conservative price assumptions to maintain a reasonable margin.
Gold market Global demand for gold remained robust. The market is particularly driven by continued demand for investment by central banks and other institutions.	This means we can continue producing and initiating plans to invest in future projects and production.	We achieved our revised annual total production guidance of between 1.48Moz and 1.56Moz, meeting global demand.

2 Environmental factors

Context	Impact on Harmony	Our response
Decarbonisation Transitional and physical climate-related risks are a global concern, with global warming increasing the likelihood, frequency and severity of natural disasters. To address this, broader society and investors want companies to set net zero targets underpinned by the Paris Agreement. In addition, investors are reducing exposures to carbon-intensive industries as traditional financing moves towards the green bond market.	Climate change impacts the gold mining sector through physical changes to the environment and the societal and economic mobilisation necessary to achieve net zero. Positive impacts include the financial and stewardship benefits of diversifying our energy mix.	Harmony's recognition of climate change and our commitment to climate change mitigation and adaptation are embedded in our business strategy and decision making. We have responded by: • Accelerating the expansion and rollout of renewable energy products • Securing a R1.5 billion green loan linked to sustainable KPIs to advance our decarbonisation aspirations • Updating our environmental and climate change strategies, and developing our decarbonisation strategy aligned to the Science-Based Targets initiative (SBTi) • Leveraging existing collaborative partnerships and frameworks (sustainable development, preferential procurement, community initiatives, etc) and developing new partnerships in transitioning to net zero.

3 Governance and transparency

Context	Impact on Harmony	Our response
ESG data quality and disclosure The increased awareness of environmental and social challenges is changing ways of doing business. This is due to global organisations and investors compelling companies to strategically understand ESG risks and integrate ESG into their business strategies. This includes increased requirements for transparent reporting, disclosing climate-related risks in financial results and net zero initiatives, such as green bonds. Although organisations can adopt frameworks and guidelines voluntarily, there is increasing pressure on mining companies to demonstrate responsible allocation and management of capital, and committing to dealing with ESG issues.	If we do not deliver on ESG commitments or report transparently, we will fail to create sustainable value for our stakeholders, and lose trust and credibility. This will ultimately impact our profitability and sustainability.	Sustainable development is embedded in our business processes and practices. Our capital allocation is based on ensuring sustainability and how we can derisk the business while improving margins and our ESG credentials. We have considered our most material ESG impacts and matters impacting our financial sustainability through a double materiality process, which informs our interrogation of these matters and ensures the integrity of our external reporting.
Shareholder activism Shareholders are putting pressure on companies to reposition or accelerate their business strategies, and holding them accountable to their ESG commitments.	Non-compliance with increasing ESG requirements or failing to meet ESG targets could impact our market capitalisation and reputation.	We are enhancing our ESG commitments by including sustainability metrics in our funding agreements. We are guided by our sustainable development framework to ensure we deliver on ESG commitments and that our disclosure is credible, transparent and robust. To meet shareholder expectations, we focus on continuously improving our ESG performance, while aligning our corporate targets with the UN SDGs and other guidelines where relevant.

Regional factors

1 Economic and geopolitical factors		
Context	**Impact on Harmony**	**Our response**
Geopolitical uncertainty The mining industry is a significant contributor to South Africa's economy. The industry is impacted by, among others, policy and regulatory uncertainty, global competition, infrastructure decay, electricity disruptions and changing exploration strategies. Papua New Guinea's minerals play a significant role in its economy, which is affected by a rapidly changing external environment. Some of these challenges include balancing the government's development aspirations in time of geopolitical uncertainty.	These are unpacked below.	Our derisked and diversified portfolio continues to perform well. We have various business improvement initiatives and capital projects that futureproof our business. We remain committed to Papua New Guinea through our Hidden Valley expansion and various exploration programmes. Negotiations with the Papua New Guinea government to secure the Wafi-Golpu special mining lease continue.
Exchange rate volatility The rand is affected by global market factors such as inflation, interest rate increases and commodity prices. In South Africa, the rand is affected by central banking policies, domestic political uncertainty and investor sentiment around the country's energy reliability challenges.	The average of the rand appreciated against the US dollar in FY22, with an average exchange rate of R15.21/US$1 (FY21: R15.40/US$1). A foreign exchange translation loss of R327 million (US$21 million) compared to a R670 million gain (US$44 million) in FY21 mainly reflects unfavourable translations on US dollar loan balances. These in turn are attributable to the rand weakening against the US dollar, opening at R14.27/US$1 and closing at R16.27/US$1.	We are focused on maintaining production levels. Even at the relatively lower exchange rate, the group's South African operations are generating a margin and positive cash flow. Our derivative strategy is to only lock in pricing at favourable rates, which was observed briefly towards the end of the 2021 calendar year. We will await further opportunities to cover up to 25% of Harmony's foreign exchange revenue exposure.
Sovereign rating South Africa's credit rating outlook is stable at BB-, with an upturn in near-term economic performance and improved public finances. Papua New Guinea's long-term foreign and local currency sovereign credit rating of B was revised to stable from negative.	Adverse credit ratings deter some investors, threatening our long-term value and affecting our market capitalisation.	We regularly engage with investors to provide a realistic understanding of our potential operating and financial performance.

2 Environmental factors

Context	Impact on Harmony	Our response
Water Global warming poses risks to our water supply, and increases the severity of extreme weather events across our geographies. Although South Africa experienced high rainfall this year, water availability remains unpredictable. In contrast, Papua New Guinea is likely to experience intensified flash floods, landslides and coastal flooding.	Inadequate water supply or flooding could disrupt our mining operations and mineral processing, and damage property or equipment.	Our water management strategy articulates our commitment to climate change mitigation and adaptation at a strategic level.
Electricity cost and reliability Harmony's primary energy source is electricity purchased from the state-owned power utility, Eskom, generated by coal-fired power stations. Electricity is expensive and supply continuously interrupted due to loadshedding. As an open pit mine, the Hidden Valley operation is less energy intensive and draws its power from the country's Ramu grid, a reliable source predominately generated by hydropower (some 70%).	We have initiated alternative power generation projects to reduce reliance on the inconsistent national power grid. We also have a pipeline of renewable and alternative energy projects in various stages of development.	We are committed to our renewable energy programme, which will reduce our costs and decarbonise Harmony while ensuring a more reliable source of power. Power options for the Wafi-Golpu project, including renewable energy, continue to be assessed.

3 Social factors

Context	Impact on Harmony	Our response
Social licence to operate The nature of the extractive sector means that mining companies must pay particular attention to their social licence to operate. This is a tacit approval by local communities and other stakeholders to operate a project. To maintain a social licence to operate, companies must navigate complex social, economic and political dynamics over time to avoid conflicts with host communities.	National legislative requirements and needs communicated to us by our host communities influence the implementation of our socio-economic strategy. In South Africa, our strategy is largely dictated by requirements under the MPRDA. In Papua New Guinea, it is governed by a memorandum of agreement. Failing to engage with stakeholders jeopardises our social licence to operate and could reduce opportunities in the market.	We take our role as a responsible corporate citizen seriously and continuously strive to preserve our social licence to operate. We constructively engage with stakeholders to share value, better understand and manage expectations, and secure and maintain our social licence to operate.

4 Governance and transparency		
Context	**Impact on Harmony**	**Our response**
There are several new and amendment bills and draft policies before the South African parliament, which were delayed by the pandemic. This prolonged regulatory uncertainty, particularly on managing and reporting environmental impacts in and surrounding mining operations.	Uncertainty on future fiscal, legislative and regulatory environment causes us to exercise caution when assessing the viability of future investment in South Africa and Papua New Guinea.	In both jurisdictions, we engage with government directly and indirectly through industry representative bodies to find viable and constructive solutions to the aspirations and concerns of all stakeholders.

Our risks and opportunities

Harmony follows an integrated risk-based approach to business. Our exposure to risks and opportunities inherent to mining and factors in our external environment impact our ability to achieve our strategy and deliver sustainable returns over time.

Through identifying and understanding our material risk drivers and their interrelated dynamics, we are better able to manage their impacts and position Harmony to capitalise on opportunities, meet future challenges and deliver on our growth prospects. It also creates value by enabling employees to make risk-based decisions that consider Harmony's strategy, risks and resilience through established risk management practices.

Our systems and processes are underpinned by effective governance and active management, and enable us to proactively evaluate, manage and mitigate risks. We have built our expertise in operating in emerging environments and we are experienced in managing socio-political challenges for over seven decades. This includes our ability to navigate the challenges of our various stakeholders, especially at our deep-level, labour-intensive and unionised gold mines in South Africa.

Our enterprise risk management (ERM) process

Our approach is to implement and maintain an integrated risk and resilience management framework, methodology and system that enables us to apply an integrated risk-based approach to our strategy, business planning and business management. This ensures sustainability and resilience. The process we follow aligns with the ISO31000:2018 Risk Management Guidelines and the COSO's enterprise risk management framework, ensuring that we are implementing global best practice risk management at Harmony.

Our risk management approach is informed by our business strategy and related objectives. To achieve our goals, identifying and understanding the factors that could limit our ability to deliver on our strategy is vital. Equally, we need to understand those factors that present opportunities.

Since 2019, our enterprise risk management team focused on progressively evolving Harmony from risk-competent to risk-intelligent, enabling us to make risk-based decisions within our risk appetite and tolerance levels.

A risk-intelligent Harmony means the ability to:

Speak a common risk language	**Think holistically about risk and uncertainty**	**Take the right risks for reward (managing threats and capitalising on opportunities)**	**Effectively use forward- thinking risk concepts and tools to make better decisions**	**Creating lasting value and ensuring sustainability**	**Continuously learn (Exclaim for risk, KPIs monitoring)**

We finalised our ERM policy, risk management guidelines plan and risk appetite framework in 2021. Combined, these aim to improve the effectiveness of risk management at Harmony through a more holistic and forward-looking approach to managing risk and uncertainty. We have appointed the Institute of Risk Management South Africa to do frequent maturity assessments and to apply best practice to our ERM processes and standards. We are entering the middle stages of our five-year maturity development plan.

Summary of the risk management process

Oversight of risk governance process ↔ Executive management ↔ Implementation and daily management

Oversight of risk governance process

Board
Top strategic, operational and safety-specific risks plus mitigating actions are reported quarterly to the board by the audit and risk as well as technical committees. Other board committees review specific risks within their mandates. The top strategic, emerging, operational and safety risks that fall outside our risk appetite and tolerance levels are reported to the board. These reports include risk treatment strategies and business continuity management plans on how the risks are managed

Executive management

Quarterly review of Harmony's strategic risk profile to:
- Assess its completeness
- Consider external and internal factors that could lead to new/ emerging risks and opportunities
- Review the likelihood and impact/ consequence of existing risks and assess any new or emerging risks and opportunities to determine residual ratings
- Review the completeness, effectiveness and/or relevance of mitigating actions and evaluate resulting residual risk ranking.

Implementation and daily management

Operational management teams
Implement, oversee and training of risk management.

ERM teams
Implementing and maintaining one integrated risk and resilience management framework, methodology and system that supports Harmony's strategic pillars

Safety
Four-layered, risk-based approach to actively manage safety in South Africa and Papua New Guinea.

Operations
Each operation maintains, updates and regularly reviews its risk register. These are formally reviewed weekly by regional general managers and country-based executive and management teams.

Harmony's risk management strategy

In 2018, we adopted the Harmony risk management strategy to achieve safe, profitable production at all our operations. This strategy focuses on embedding a culture of risk awareness and mitigation in all our employees – from miners to executive management – to ensure we operate safely and productively. The modernisation and digitisation of systems and processes across the group has been key to effectively rolling out this strategy.

Refer to **Safety** for more on the roll-out of this strategy in the safety sphere.

Our risk management strategy is a four-layered approach to identifying, assessing and controlling all hazards and risks that could impact our ability to achieve safe and profitable production.

We continue our ERM journey which includes a focus on safety and creating risk awareness throughout the company.

Determining our most significant risks and opportunities

Once we have determined the group's risk appetite and tolerance levels, we monitor these while identifying and managing those most material to Harmony. While group risk appetite and tolerance levels are formally reviewed annually, they are continuously monitored for relevance against changing macro-environment factors.

Group risk exposure

- Our business is gold mining – a high-risk/high-reward business
- We operate across the gold mining value chain – from exploration, feasibility studies, building and buying mines, operating mines to closure followed by rehabilitation
- We are exposed to gold price and exchange rate volatility – we mitigate some of this exposure through derivative programmes
- We operate well in emerging economies and manage associated socio-political impacts
- We continue investing in exploration – one of the most effective ways to grow an orebody and create value
- We have an appetite for change and continuous improvement – we continuously look for innovative ways to improve our existing mines and acquire assets that we can improve operationally
- We have the skills to deal with the challenges of multi-stakeholder labour relations – implicit in deep-level, narrow-reef gold mining in South Africa
- Our experienced teams have strong values and are committed to deliver.

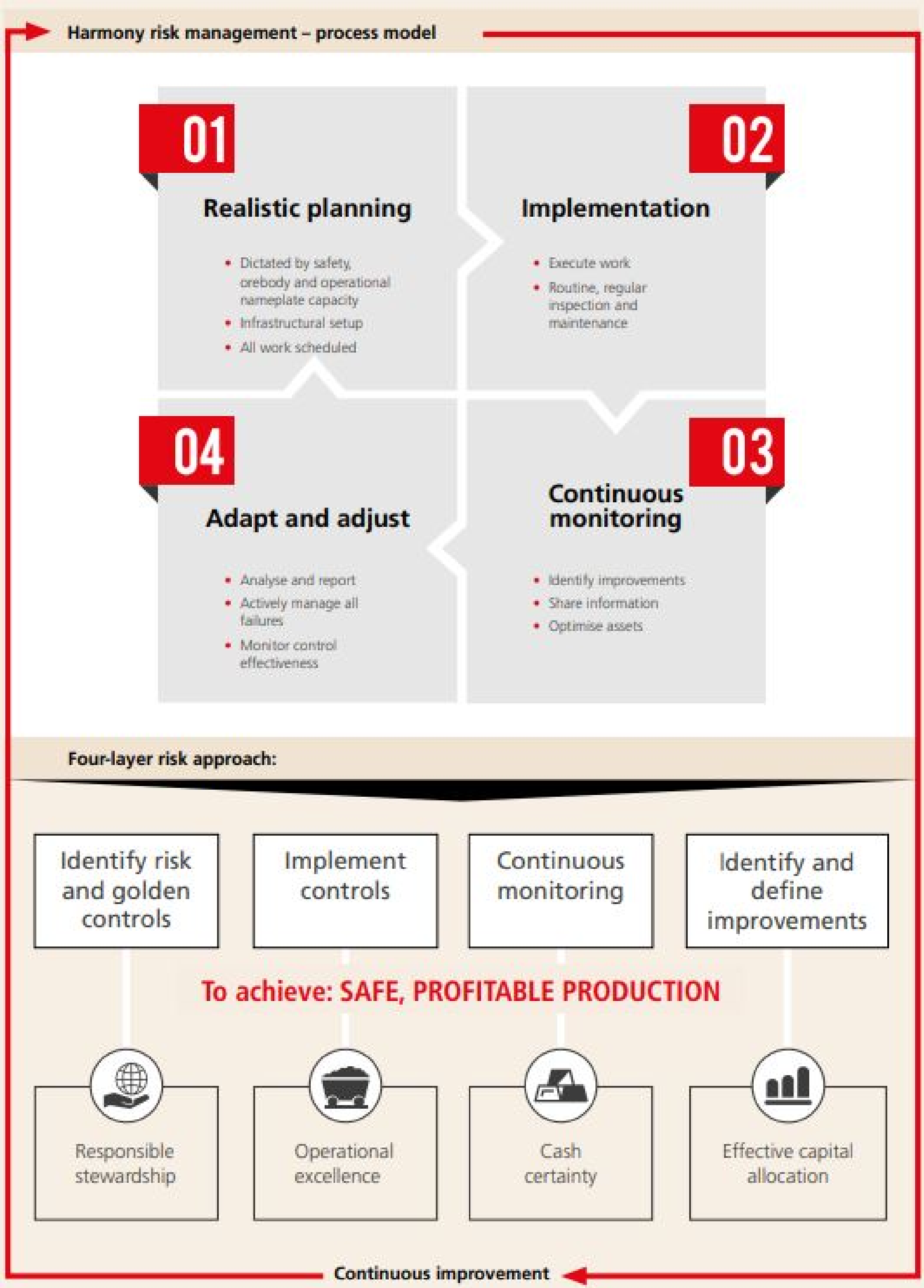
Risk appetite and tolerance

Harmony's risk appetite and tolerance levels are measured against our nine risk categories that were carefully selected by the group executive committee and the board to evaluate the risk impact we are exposed to and reduce the risk exposure through our mitigation strategies. We only report to the board on the risks that are outside our risk appetite and tolerance levels.

Our top strategic risks and opportunities

Our risk profile is based on potential events or factors that present a threat or an opportunity. These downside risks and upside opportunities are considered in our daily business activities and once identified, are integral to formulating and implementing our group strategy.

The diagrams of our strategic risk and opportunity profiles are based on our assessment of the residual rankings, and ranked in order of priority.



Golden controls are the main controls identified to mitigate or treat a specific risk.

Terminate	Treat	Tolerate	Transfer	Take
The risk exposure is outside appetite and tolerance. Risk response strategies are not able to reduce the impact of the risk should it materialise (to within appetite and tolerance). Harmony makes an informed decision to withdraw or not to be involved in an activity so that we are not exposed to a particular risk.	A measure that is modifying risk. Treat is the process of selecting and executing actions and making decisions to reduce the risk exposure and bring the risk within the risk appetite and tolerance levels.	The level of risk Harmony is willing to accept with the potential benefit of gain or burden of loss from a particular risk. *Note: There is often a level of tolerance associated with any risk outside of appetite and tolerance, because of the time it will take to implement the risk response strategies in bringing the risk within appetite and/or tolerance levels.*	Risk transfer and risk sharing are forms of risk treatments involving the agreed upon distribution of risk with other parties. It could be a complete transfer, eg insurance and/or an agreement to share the risk exposure, for example partnerships, cooperative agreements and mergers and acquisitions.	An informed decision to be made on a particular risk, and mostly associated with upside risk or benefit.

Environmental risk matrix

Potential sustainability impact	Low	Medium	High
High		Point source emissions, effluents and waste	Health and safety Energy use and GHG emissions
Medium	Physical impacts of climate change Bribery and corruption	Preserving critical skills base Water quality	Water security Community relations
Low	Human rights	Land use and biodiversity	

Potential business impact

Our material matters

To mine with purpose, we consider factors that we impact or could affect our ability to create and preserve value over time – our material matters. Our material matters inform the content of our integrated and ESG reports – presenting the most material information to providers of financial capital and other stakeholders.

Determining materiality

To identify material matters, we conducted a thorough materiality determination process. This year, we considered our broader impact through a double materiality lens:

- How a material matter impacts society, communities and the environment
- How a material matter impacts Harmony's ability to create value over time.

The matters identified align with the capitals we impact, our risks and strategy, and are prioritised and grouped into material and broader (social, environmental, financial/operational and ethical) themes.

Materiality determination process

External review	• The external review considered external factors identified by global risk reports, industry materiality mapping and our industry peers.
Internal Review	The internal review considered: • Internal factors identified in our risk register and strategy • Our impact on sustainability factors through reviewing the output of our GRI material aspects assessment.
Executives and those charged with governance prioritise identified matters	• We interrogated and analysed the results from our internal and external reviews and how these compared to previously identified material matters • We identified additional matters to be analysed and prepared a list of potential matters for approval by executives and senior management • These matters were confirmed through an online survey, and the results shared with the board for approval.
Output	• 23 material matters and eight material themes were identified, grouped into four broader themes and used in the integrated and ESG report.

Broader themes	Material themes	Material matters
Social	Employee health and safety	A Ensuring employee safety B Protecting employee health and wellbeing
	Supporting our people	C Maintaining sound labour relations D Driving equity, inclusion and diversity E Instilling an enabling culture and empowered workforce
	Partnering for thriving, sustainable communities and our social licence to operate	F Engagement and partnership for sustainable communities G Supply chain transformation and preferential procurement
Environmental	Environmental conservation and protection	H Tailings Storage Facility management and safety I Pollution prevention J Climate change and extreme weather susceptibility
	Resource management	K Addressing energy use and climate change L Water management M Land management, biodiversity and post-closure sustainability
Financial/ operational	Pursuing operational sustainability	N Re-engineering our portfolio and growing our profitable ounces O Pursuing technology and innovation for environmental, operational and safety improvements P Pursuing zero emissions and renewable alternatives
	Managing business resilience	Q Adapting to a changing context R Navigating commodity price and currency/forex fluctuations S Managing capital access and allocation for profitability
An ethical organisation	Ethical and accountable leadership	T Governance excellence U Fair and responsible remuneration
	Ethical mining	V Upholding human rights W Ensuring legal, regulatory and compliance excellence

Our material themes and matters

We unpack the material themes below and ESG-related material matters under the relevant sections in this report.

Material themes	Material matters
Social	
Employee health and safety In line with our purpose and commitment to responsible mining, our focus on zero harm is an investment in our people and business. A safe, healthy workforce means engaged, motivated and productive workers. This in turn minimises operational stoppages, reduces potential legal liabilities and averts reputational damage.	• Ensuring employee safety • Protecting employee health and wellbeing.
Supporting our people A meaningful employee value proposition is key to a satisfied workforce, reducing the risk of labour-related disruptions and ensuring employee retention. As a fair and responsible employer, promoting inclusivity and equality, we can deliver on our strategy and create sustained and shared value for all our stakeholders. This includes open engagement, development and training, and fair and responsible pay. These factors positively impact employees by enabling them to improve their living conditions and have better access to social services, healthcare, education and training. They also contribute to attracting and retaining talent.	• Maintaining sound labour relations • Driving equity, inclusion and diversity • Instilling an enabling culture and empowered workforce.
Partnering for thriving, sustainable communities and our social licence to operate We recognise that partnering with communities, local municipalities, small businesses and various levels of government contributes to engaged, economically sustainable communities. In addition, strategic procurement facilitates the creation of sustainable businesses and entrepreneurial development, while reducing inequalities and supporting job creation as well as the sustainable socio-economic development of communities and regions where we operate. Failing to embrace our communities could result in miscommunication, expectation misalignment, erosion of trust and potential unrest – threatening our social licence.	• Engagement and partnership for sustainable communities • Supply chain transformation and preferential procurement.

Material themes	Material matters
Environmental	
Environmental conservation and protection Mining is one of the industrial sectors with the greatest potential impact to the biophysical environment through pollution, depleting natural resources and disrupting land use and management. By not managing our environmental impacts responsibly, we put our mining licence, reputation and business at risk. As a sustainability-conscious business, we understand that environmental protection is essential to operating effectively, responsibly and sustainably.	• Tailings Storage Facility management and safety • Pollution prevention • Climate change and extreme weather susceptibility • Prudent use of natural resources.
Resource management Our operations require natural resource inputs to operate safely and efficiently. These include energy from renewable and non-renewable sources, water and the land we mine. We need to manage these finite, shared and fragile resources responsibly as an ethical, social and business imperative. Mismanagement results in financial loss, credibility loss, and business risk and liability. Resource management aligns with pursuing operational sustainability (detailed below).	• Addressing energy use and climate change • Water management • Land management, biodiversity and post-closure sustainability.

Material themes	Material matters
Financial/operational	
Pursuing operational sustainability A resilient and profitable business can invest in sustaining itself and employees, rewarding investors and, as a responsible corporate citizen, honouring its socio-economic commitments. New technology presents opportunities to improve safety and enhance our ability to improve cost and productivity efficiencies, as well as overall financial management. However, failure to adopt digital technologies may influence the upskill or reskilling of existing employees and retaining talent. The global trend towards zero-emission industries is accelerating. Our portfolio of assets is characterised by high energy use and will remain so, given our future deepening projects. This poses an environmental impact and cost implication linked to carbon tax. We are diversifying from a depleting Ore Reserve base to low-carbon assets to ensure a future production pipeline of quality reserves that will enable us to operate sustainably and profitably.	• Re-engineering our portfolio and growing our profitable ounces • Pursuing technology and innovation for environmental, operational and safety improvements • Pursuing zero emissions and renewable alternatives
Managing business resilience Mining is a cyclical business – as commodity prices fluctuate, so too does available funding for exploration and project development. Our shareholders expect a level of performance that ensures sustainable returns on their investment. In contrast, our broader stakeholder groups expect performance that ensures sustainable benefits. Balancing these expectations is a business imperative and reflects management's ability to navigate good and bad times. Our exposure to factors in our external environment and the risks and opportunities inherent to mining can affect our ability to achieve strategic objectives and generate broad sustainable value. It is vital for our sustainability that we anticipate, identify and understand all external influences that affect our business, and develop appropriate responses.	• Adapting to a changing context. • Navigating commodity price and currency/forex fluctuations • Managing capital access and allocation for profitability

Material themes	Material matters
An ethical organisation	
Ethical and accountable leadership Good governance is overarching and embodies everything we do as a business. We believe ethical leadership equals ethical mining. Our board has a responsibility and commitment to Harmony's responsible corporate citizenship, ethical leadership and robust governance standards in line with global good governance practice. The rise of global ESG standards adds to this governance agenda, as failure to embrace these goals may impact Harmony's market capitalisation and reputation. The annual reviews of our board composition, fair and responsible remuneration practices as well as our governance frameworks and disclosures are aligned with best practice to ensure we are held accountable for delivering on our sustainability targets and ambition.	• Governance excellence • Fair and responsible remuneration.
Ethical mining As ESG issues come to the fore globally, we believe our industry is setting benchmarks for ethical conduct and transparent disclosure that create value across the capitals = corporate trust and credibility. Changing regulatory landscapes in our operating territories create uncertainty, delay key decisions, could affect investor sentiment towards Harmony and could impact our sustainability and licence to operate. As a responsible employer, we adhere to corporate policies, comply with applicable laws and regulations, engage with our stakeholders regularly and contribute, directly or indirectly, to the general wellbeing of communities where we operate.	• Upholding human rights • Ensuring legal, regulatory and compliance excellence • Transparent disclosure.

Stakeholder engagement

Why stakeholder engagement matters

We engage with our stakeholders, principally employees, unions, host communities and government authorities, to address a wide range of issues and ultimately retain our social licence to operate. This is particularly important for Harmony as mineral deposits are geographically fixed, which can lead to unique socio-economic, environmental and political challenge.

Our approach

We are guided by our stakeholder engagement policy to address our stakeholders' needs and concerns. We updated the policy in FY22 to include all group operating units. We have supporting engagement plans, which cover our activities in South Africa and Papua New Guinea. These plans enable us to understand stakeholders' concerns, identify and prioritise material issues and potential risks, and determine response measures. Our plans and policy are regularly updated to remain relevant and effective.

To secure the involvement and commitment of our stakeholders, we have proactively adopted measures and practices to inform and guide these engagements in line with our stakeholder engagement policy.

When engaging, we are guided by our values and strategic intent to:
- Develop relationships founded on integrity, transparency and trust
- Support government by establishing collaborative partnerships
- Balance and align our goals and stakeholder expectations
- Establish accountability
- Improve stakeholders' understanding of Harmony's challenges, requirements and concerns
- Support value creation by maintaining awareness of broader economic and ESG issues.

Our stakeholder engagement approach aims to build and maintain lasting relationships with all our stakeholders, fostering partnerships and helping us better understand each other, and build trust and identify areas for collaboration. It enables Harmony to understand stakeholder needs and expectations and better manage our social performance, potential risks and opportunities.

Managing stakeholder relationships

The quality of relationships (page 29) with stakeholders and how well these are managed affect our ability to deliver on our strategy. In addition, building long-term, stable, mutually beneficial relationships protects and maintains our social licence to operate and creates shared value for all our stakeholders.

Harmony established a stakeholder relations committee in FY22 to guide the effective implementation of a cohesive stakeholder management and communication strategy. This strategy provides consistency and alignment in Harmony's communication with internal and external stakeholders and facilitates proactive and collaborative stakeholder management, including grievances in accordance with the AA1000 Stakeholder Engagement Standard.

Governance

Our stakeholder engagement processes are informed by relevant legislation and standards, including ISO 14001, ISO 9000 and the AA1000 Stakeholder Engagement Standard. They also consider King IV and related recommendations on inclusive stakeholder engagement and the importance of addressing legitimate stakeholder concerns.

The social and ethics committee is responsible for governance and oversight of stakeholder relations with the board having ultimate accountability.

Our key stakeholders

Harmony has many stakeholders. For the purpose of this report, we identify the most material stakeholders – those with whom we engage more frequently – based on their role in:
- Delivering our strategic goals
- Contributing to our social performance
- Addressing risks, for example, highlighting issues that could lead to significant project or business risk.

Details of each stakeholder are presented on the following pages.

Investors and financiers

Includes capital providers, current and future shareholders and, indirectly, investment analysts and financial media

Why we engage

We have meaningful engagements to maintain the confidence of existing investors and financiers, and to attract investments in our business. This enables us to sustain our business and growth as we can continue generating positive earnings and share price growth and delivering shareholder returns. We engage to inform stakeholders about our progress on ESG commitments, manage their expectations of financial, operating and ESG performance, and report on our progress of delivering on our strategic objectives.

2022 key conversations

ESG is embedded in everything we do, alongside ongoing efforts to enhance our disclosure. We are committed to derisking the business while improving our margins and sustainability credentials.

With this in mind, we engaged with investors and financiers on the progress against each strategic pillar:

- Responsible stewardship: We regularly engage with our investors and financiers about our commitment to our safety journey and risk-based approach. Key commitments to the market this year included launching our decarbonisation strategy, articulating our targets and anticipated cost savings and announcing the closure of Bambanani due to its increased seismic activity and how this would be executed responsibly
- Operational excellence: Investor concerns relate to meeting production targets and controlling operating costs in the face of inflation pressure. We have received recognition for the good work we do managing our assets
- Cash certainty: In response to investor interest in our cash generation ability and margins of surface operations, we openly engaged about our selective hedging approach and conservative price assumptions to maintain a reasonable margin
- Effective capital allocation: Investors continue to seek to understand how we go about prioritising our capital spend and our ability to generate returns on how capital is invested to generate returns. Our challenge is to balance investments for long-term financial, environmental and social sustainability while delivering positive returns to shareholders. We communicated our commitment to effective capital allocation to meet these requirements, invested in additional high-grade, long-life assets and successfully secured a R1.5 billion green loan ringfenced for renewable initiatives.

How we create value

- Embedding ESG in the business – responsible stewardship underpins mining with purpose
- Strengthening our delivery on sustainable KPIs and the UN SDGs as they apply to our business
- Generating positive margins and cash flow
- Maintaining balance sheet flexibility
- Delivering on production guidance
- Investing in organic growth
- Unlocking value from synergies after integrating acquired assets.

Overall economic value created

Dividends paid to shareholders: R430 million (US$28 million) (FY21: R684 million (US$44 million))

Future value creation and stay-in-business (total capital and exploration expenditure): R6.4 billion (US$423 million) (FY21: R5.3 billion (US$344 million))*

South Africa
R5.1 billion (US$333 million) (FY21: R3.9 billion (US$253 million))

Papua New Guinea
R1.4 billion (US$90 million) (FY21: R1.4 billion (US$91 million))

** For the purposes of economic value created, capital and exploration expenditure is included as part of employee and supplier spending.*

Related material themes

- Employee health and safety
- Supporting our people
- Partnering for thriving, sustainable communities and our social licence to operate
- Environmental conservation and protection
- Resource management
- Pursuing operational sustainability
- Managing business resilience
- Ethical and accountable leadership
- Ethical mining.

Capitals impacted

Employees and unions

Provide human capital, including skills and experience

Why we engage

In mining with purpose, our duty of care begins with our employees – the heart of our business. Harmony believes in being a fair and responsible employer, investing in and developing our workforce, and in addressing employees' needs and concerns through focused engagements. We aim to report transparently about our progress on delivering against our strategic objectives and ESG commitments.

2022 key conversations

- Safety remains a top priority and concern for the business and our people. We proactively and regularly engage to embed our safety culture through Thibakotsi. We introduced e-learning for employees working in high-risk mining areas.
- We engaged with employees on the Bambanani mine closure, ensuring they understood their options for section 189 retrenchment or opportunities to be reabsorbed into the company.
- We maintained stable, constructive and peaceful labour relations. No active wage negotiations took place as our current wage agreement covers 1 July 2021 to 30 June 2024. We continue open engagements with our majority unions.

How we create value

- Ensuring a positive, safe working environment
- Empowering employees by investing in training and development
- Employing people from host communities
- Promoting transformation and female representation
- Attracting and retaining the skills and expertise required
- Motivating and rewarding employees for value-added performance
- Promoting harmonious, cooperative relations with employees and unions
- Making impactful social and environmental contributions that our workforce can be proud of.

Overall economic value created

Wages and salaries paid: R17.0 billion (US$1.1 billion) to 47 373 employees (FY21: R15.3 billion (US$995 million) and 48 113)
Training and skills development: R661 million (US$43 million) (FY21: R468 million (US$30 million))

South Africa
R16.1 billion (US$1.1 billion) (FY21: R14.5 billion (US$938 million))

Papua New Guinea
R829 million (US$54 million) (FY21: R871 million (US$57 million))

Related material themes

- Employee health and safety
- Supporting our people
- Partnering for thriving, sustainable communities and our social licence to operate
- Ethical and accountable leadership
- Ethical mining.

Capitals impacted

Communities, traditional leaders and NGOs

An aspect of social and relationship capital that represents responsible corporate citizenship and impacts our social licence to operate

Why we engage

The communities surrounding our operations are an important part of what we do as they are impacted by our operations. We aim to identify, understand and manage our impact and their expectations, achieving measurable social outcomes and building sound relationships around operations through our engagements.

In Papua New Guinea, where the majority of land is customary, our host communities often include our landowner stakeholders.

2022 key conversations

In South Africa, we hosted multiple community forums where we communicated about progress on our social and labour plan (SLP) commitments and project implementation, our vaccination programme and addressing local employment, and procurement and enterprise development needs and opportunities.

In Papua New Guinea, we hosted 1 160 engagements during FY22, which ranged from updates on Wafi-Golpu project permitting, our continuing data collection and environmental studies, and ongoing efforts to maximise employment and socio-economic development opportunities at our Hidden Valley operation consistent with the mine's memorandum of agreement.

How we create value

- Investing in local economic development and corporate social investment initiatives
- Maintaining constructive relationships with communities
- Understanding, managing and addressing stakeholder expectations and concerns
- Contributing to socio-economic upliftment
- Promoting self-sustaining activities to create jobs and alleviate poverty
- Embracing safe and sustainable mining to make a positive socio-economic contribution.

Overall economic value created

Investments in CSI and socio-economic development initiatives: R140 million (US$9 million) (FY21: R136 million (US$9 million))

South Africa
R138 million* (US$9 million) (FY21: R102 million* (US$7 million))

Papua New Guinea
R2 million (US$0.1 million) (FY21: R34 million (US$2 million))

**Includes SLP commitments and CSI.*

Related material themes

- Partnering for thriving, sustainable communities and our social licence to operate.

Capitals impacted

Governments and regulators

Enact legislation and related regulations that Harmony must comply with to earn or retain its regulatory licence to operate, aligning and managing interests, needs and expectations

Why we engage

We engage with national, provincial and local governments about legislation, regulations, policies and guidelines that influence how we conduct business. By engaging, we aim to meet or exceed regulatory requirements and maintain our government and regulatory stakeholders' confidence.

2022 key conversations

In South Africa, the DMRE appealed Harmony's application for a Mineral and Petroleum Resources Development Act section 102 application for Kalgold mine.

In Papua New Guinea, negotiations for a special mining lease for the Wafi-Golpu Project continue. We made meaningful progress in delineating the key fiscal and commercial positions of the parties. Negotiations paused during the period of the national election. We also progressed approvals for the construction of Tailings Storage Facility No 2 at Hidden Valley and are seeking resolution by the State of a royalty payment dispute related to our Memorandum of Agreement.

How we create value

- Contributing to national income by paying taxes and royalties on profits and earnings
- Maintaining constructive relationships with governments and regulators
- Maintaining our mining and related permits and licences in good standing.

Overall economic value created

Taxes and royalties paid: R675 million (US$44 million) (FY21: R1.3 billion (US$88 million))

Personal income tax on employee salaries and wages paid: R3.1 billion (US$206 million) (FY21: R2.4 billion (US$157 million))

South Africa
R578 million (US$38 million) (FY21: R1.2 billion (US$79 million))

Papua New Guinea
R97 million (US$6 million) (FY21: R127 million (US$8 million))

Related material themes

- Partnering for thriving, sustainable communities and our social licence to operate
- Environmental conservation and protection
- Resource management
- Ethical and accountable leadership
- Ethical mining.

Capitals impacted

Suppliers

Provide raw materials, inputs and services essential to our business

Why we engage

We support the broader economy by procuring goods and services to operate our business. Supplier engagement is essential to meet procurement targets and commitments related to our mining rights and agreements, manage costs, deliver on our strategic objectives and support long-term viability.

2022 key conversations

In South Africa we support the government's imperative to facilitate sustainable socio-economic development and broader participation in the economy, mainly through procurement and enterprise and supplier development.

In Papua New Guinea, we engage with local suppliers and landowner companies. We target major contracts and procurement activities that will have a significant effect on communities' involvement, ownership and improved business development.

How we create value

- Focusing on local preferential procurement to support local economies
- Engaging with suppliers and contractors to build cooperative, trust-based relationships and manage costs
- Ensuring services are delivered as agreed and align with our values and strategic objectives
- Honest and timely communication
- Indirectly contributing to the broader economy.

Overall economic value created

Procuring goods and services: R16.6 billion (US$1.1 billion) (FY21: R14.6 billion (US$948 million))

South Africa
Total procurement (discretionary) spend:
R14.3 billion (US$940 million) (FY21: R10.7 billion (US$693 million)). Of this, 78% (R11.2 billion (US$736 million)) was preferential procurement with BEE* entities (FY21: 74% or R7.9 billion (US$515 million))

Papua New Guinea
Total procurement spend:
R2.3 billion (US$153 million) (FY21: R2.3 billion (US$253 million)):
In-country: 48% (R1.1 billion (US$73 million)) (FY21: 51% or R1.2 billion (US$150 million))
Morobe: 49% (R558 million (US$37 million)) (FY21: 49% or R489 million (US$32 million))

** Refers to >25% + 1 vote historically disadvantaged person-owned and controlled companies.*

Related material themes

- Partnering for thriving, sustainable communities and our social licence to operate
- Environmental conservation and protection
- Ethical and accountable leadership
- Ethical mining.

Capitals impacted

Sustainable development

ESG in practice

To deliver on our ESG commitments, we are guided by a framework that ensures sustainable development principles are embedded in everything we do, including our strategy, daily operations and decision making.

Our approach

Including all elements of sustainable development under the **responsible stewardship** strategic pillar	Guided by **sustainable development guidelines and frameworks**	Supporting the achievement of the **UN SDGs**	Enhancing **disclosure and measuring our performance** through benchmarking against global best practice and industry peers, and setting group targets

Our sustainable development framework is supported by ESG philosophies, with key tenets for measuring our progress against achieving specific targets.

ENVIRONMENTAL PHILOSOPHY	SOCIAL PHILOSOPHY	GOVERNANCE PHILOSOPHY
To co-exist with the natural environment, we must understand and fully appreciate the negative impacts of our operations. Our environmental philosophy enables us to manage, mitigate or offset environmental risks associated with our operations. The philosophy sets out clear plans for us to operate, decommission or close our mines responsibly beyond compliance. Performance, reputational benefit and risk management form the cornerstone of this philosophy.	We have a responsibility to: • Create relationships of trust with our employees, suppliers, host communities and government • Promote shared value for all • Close our operations with dignity, knowing that we have created positive and enduring value where we operated.	Ethical mining equals ethical leadership that equals corporate trust. Good governance lies at the heart of our performance and our reporting. Guided by our policies and codes, we aim to do the right thing and tell our story honestly. Harmony is a business, but we operate in a broader, interlinked context. Considering every element of those links in our thinking and actions will make Harmony a sustainable business – poised for growth.
Tenets		
• Decarbonising our business • Environmental stewardship of natural resources • Restoration and value creation.	• Employee and community safety and health • Employment, labour relations and fair practice • Human rights and diversity • Philanthropy and socio-economic development.	• Fairness and equality • Inclusivity • Political stability • Governance • Assurance and transparency • Accountability • Corruption and conflict • Risk and performance management • Values and ethics.

The social and ethics committee is responsible for governance of the sustainable development framework, with the board having ultimate accountability.

Reporting and disclosure

Reporting and disclosure are important components of our framework:

- We voluntarily report in accordance with guidelines issued by the GRI. Harmony has a self-declared compliance to the core level of the GRI Standards
- We report on environmental information aligned with CDP Water
- Our reporting aligns with TCFD.

Assurance

Corporate credibility is crucial to our business and reinforces the need for us to build on our reputational capital. We achieve heightened credibility through our sustainable development performance and reporting. We assure six material indicators at reasonable level and an additional 16 indicators at limited assurance – all aligned to our materiality index. Through our limited assurance process in 2022, we closed out gaps identified in the gap analysis or self-assessment against the World Gold Council's Responsible Gold Mining Principles that was undertaken in FY21, as required for year one of the three-year World Gold Council certification process. We continue improving our assurance programme to cover key performance indicators and the level of assurance.

Responsible stewardship

Responsible stewardship supports our operating philosophy of profit with purpose, and hinges on maintaining strong relationships by engaging and collaborating with stakeholders. We are mindful of our responsibilities as a corporate citizen, environmental stewards and in truly living our values.

In line with our aim to produce safe, profitable ounces, we continuously consider the impacts of our business activities on the countries where we operate, our employees, host communities and the environment. We also evaluate the effectiveness of our plans to manage and mitigate these impacts. We keenly understand the importance of inclusive stakeholder engagement and partnerships that enable Harmony to mine gold responsibly and sustainably.

Over the next five years, we will continue to strengthen our delivery on sustainable development KPIs and the SDG targets most relevant to our business.

Sustainable development guidelines and frameworks

The 17 UN **SDGs** were adopted by member states in 2015 with 169 indicators and targets. They are aimed at creating a better world by 2030 by eliminating poverty, fighting inequality and ensuring that the world is safe from the worst effects of climate change. An important aspect is the role of the private sector, to support governments, civil society and the public, in achieving these targets.

We aligned our sustainable development framework to the SDGs in 2018.

The **World Gold Council's** Responsible Gold Mining Principles address key ESG issues for the gold mining sector and set out clear expectations for consumers, investors and the downstream supply chain on what constitutes responsible gold mining. After completing the required year one gap analysis, we are in year two of a three-year process for formal certification against these principles.

The **TCFD** was established by the Financial Stability Board and provides recommendations on measuring, reporting and responding to climate-related risks. We produced our third report against these recommended climate-related financial disclosures in FY22.

The **CDP** motivates organisations to disclose their environmental impacts. We submit an annual performance report to CDP Water to help us manage our risks and opportunities.

As a member of the **Minerals Council South Africa**, we subscribe to its membership compact, a mandatory code of ethical business conduct, and its guiding principles.

Although we are not a member, our sustainable development framework recognises the principles articulated by the **International Council on Mining and Metals (ICMM)**. These principles are expressed in our various sustainable development policies and position statements.

Although we are not a signatory to the **UNGC** or **Voluntary Principles on Security and Human Rights**, we have adopted their principles to support our sustainable development framework.

We consider the **Organisation for Economic Co-operation and Development's (OECD)** guidelines for responsible investment. Harmony has adopted key aspects of the international tailings standards and will take decisions on full implementation once the operating guidelines have been released.

Aligning with the SDGs

We understand our role in contributing to broader sustainable development issues. We have identified areas where we can lessen our negative impacts and increase our positive impacts through targeted efforts. These include taking action against climate change and fossil-fuelled energy consumption, ending poverty, efficiently managing our use of scarce natural resources such as water and land, while protecting biodiversity and observing human rights.

Equally, as a private-sector company, we are committed to supporting the governments in South Africa and Papua New Guinea in reaching these goals. Our core purpose also aligns our business objectives with the SDGs.

We have prioritised eight SDGs directly aligned with our business strategy and its four pillars. We have also identified five SDGs where we can meaningfully contribute through our sustainable development framework and by meeting our socio-economic development commitments. Many of the SDGs are interconnected. Collaboration is an SDG that is core to all others and calls for partnerships, and pooled efforts and resources to bring sustained beneficial change to our people.

Tier 1 – central to our core business and strategy

	What Harmony is doing
3 GOOD HEALTH AND WELL-BEING **Ensure good health and promote the wellbeing of all**	Harmony prioritises the safety, health and wellbeing of our employees because no product is as important as our employees, who should return home safely and healthy every day. Our approach extends beyond the mine boundary to the communities affected by our operations and where many of our employees live. We believe that contributing to the health and wellbeing of our communities facilitates an ecosystem in which our business and all stakeholders can thrive.
5 GENDER EQUALITY **Promote gender equality and empower women and girls**	Gender equality and inclusivity is an important aspect of our human resources policy. We have gender diversity targets and are actively increasing the number of women employed across the company at all levels.
6 CLEAN WATER AND SANITATION **Ensure availability and sustainable management of water and sanitation for all**	The climatic conditions in our two geographies are significantly different. South Africa is characterised as a water-stressed region and Papua New Guinea is a high-rainfall, tropical climate. As such, our water management strategies consider the risks, needs and impact of each geography, mine, the surrounding environment and communities with whom we share this resource. We manage and mitigate our impacts on water-catchment areas by ensuring we do not degrade the quality or affect ecosystem health. Our overarching objective is to conserve this natural resource by improving our water efficiencies through reuse and recycling. We contribute to SDG 6 through socio-economic projects that include assisting municipalities in managing their waste water.
7 AFFORDABLE AND CLEAN ENERGY **Ensure access to affordable, reliable, sustainable and modern energy for all**	South Africa experiences power outages due to various stages of loadshedding implemented by the country's power utility. We are investing in alternative energy sources, including three solar photovoltaic (PV) plants. Given the energy shortage in South Africa, our first imperative is to reduce consumption to increase availability for the country's economic growth and societal needs. This is driven by our energy efficiency programme and a pipeline of projects at different stages of development which will depressurise the grid by adding 200MW to the grid in the short term. For social upliftment, we are liberating land for green energy projects that will feed into the grid.
8 DECENT WORK AND ECONOMIC GROWTH **Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work**	To achieve our strategic objectives and ensure our long-term viability, we aim to be a fair and responsible employer that respects the rights of employees to associate freely. We aim to enhance the lives of our 47 373 employees by enabling them to improve their living conditions, and to have better access to social services, healthcare, education and training.

Ensure **sustainable, responsible consumption and production** patterns	A key pillar of our business strategy is operational excellence. By re-engineering our portfolio for quality assets, optimising our processes, grade management and costs, we improve and sustain productivity and efficiencies. This inherently involves the efficient use of natural resources, responsible waste management, sustainable procurement practices and regular reporting to stakeholders.
Take urgent action to **combat climate change and its impacts**	Mining and extractive processes are highly energy intensive. The energy we consume is mostly generated by fossil fuels in South Africa, a contributing factor to climate change. To reduce our impact and help combat climate change, we are transforming our portfolio into low-carbon assets. We launched our decarbonisation strategy, set net zero targets and are investing in alternative energy sources.
Protect, restore and **promote the sustainable use of terrestrial ecosystems, halt and reverse land degradation**, and **halt biodiversity loss**	Our mining activities negatively impact natural ecosystems. Guided by our environmental strategy and related policies and procedures, we aim to mitigate these impacts by restoring land and biodiversity, and planning for post-mine closure.

Tier 2 – SDGs we support through our existence and sustainable development activities

What Harmony is doing

End poverty in all its forms everywhere	Our 47 373 employees support an estimated 475 000 dependants, local businesses and municipalities in the communities where they live. Many of our socio-economic initiatives create empowerment, employment and economic upliftment through, among others, sustainable economic activities – see SDG 11 – and help to combat poverty.
End hunger, **achieve food security** and **promote sustainable agriculture**	We support broad-based agriculture and commercial agricultural ventures to establish alternative, sustainable economic activities that will continue beyond mining operations and contribute to food security.
Ensure inclusive and equitable **quality education** and promote **lifelong learning** opportunities	We aim to advance mathematics, science and technology at secondary schools in our South African communities. We promote training in entrepreneurial and portable skills, and in information and communication technology among the youth. Ongoing training and skills development for our employees are a business imperative.
Make cities and human settlements **inclusive**, **safe**, **resilient** and **sustainable**	Our socio-economic development strategy focuses on agricultural, infrastructure and sustainable energy projects, which have greater potential to deliver sustainable benefits to communities. This is supported by preferential and local procurement, as well as enterprise and supplier development. The aim is to help establish sustainable communities that are economically viable post-mining. Infrastructure projects (such as roads in South Africa and water and sanitation in Papua New Guinea) help boost host community resilience.

Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

Through ethical mining, we aim to drive ethical business practices, meet or exceed regulatory requirements, and continue partnering with key stakeholders.

We have established stakeholder forums where we engage in dialogue with our various stakeholders to understand their needs and expectations. By being honest and transparent and delivering on commitments, we build credibility. We work closely with our local governments through various structures to ensure that we are jointly identifying opportunities to support our communities.

In Papua New Guinea, we have assisted with law and order infrastructure including magistrates houses and police stations, among others, to improve access to peace and justice for our communities. We have also established a memorandum of agreement that allows our asset protection department to offer reserve policing capabilities.

Collaboration

Collaboration with various stakeholders

We believe that mutually beneficial partnerships enable SDG achievement. We partner with communities, municipalities, tertiary institutions, small businesses and governments, locally and nationally, for sustainable development. We continue strengthening current partnerships and building new partnerships by having constructive engagements and addressing our stakeholders' needs and concerns.

Measuring how we perform

We recognise the importance of reporting transparently and accurately, and continue working to enhance the quality and quantity of our ESG disclosures. We monitor our ESG scores closely, particularly areas where we may be underperforming against our industry peers. Our ESG performance is annually assessed by global ratings agencies. In FY22, we received the following scores:

FTSE4Good

4.0 out of 5.0 FTSE Russell ESG rating

- Environment: 4.2
- Social: 3.0
- Governance 5.0.

Harmony ranks 91st percentile improving from 64th percentile last year.

MSCI

- CCC to B ESG rating

Overall, we performed better than the industry average but acknowledge that we need to improve our health and safety, labour management and community relations performance.

Sustainalytics

Harmony ranks in the top 50 under the precious metals category.

Bloomberg Gender-Equality Index 2021

Harmony was included in the Bloomberg Gender Equality Index 2022.

CDP – Driving Sustainable Economies

CDP score of "A" for water management.

Mining for the future

This year, we again illustrated that sustainability is the driving force of our business. We progressed in future-proofing Harmony, which is evident in the successful implementation of our decarbonisation strategy and net-zero targets. We are aiming to be carbon neutral by 2045 in collaboration with our stakeholders on this journey. In the short to medium term, we will remain focused on renewable energy sources so that, in addition to our copper and silver output necessary for renewable electrification and transportation, Harmony will be well positioned to support the transition to a clean energy future.

Delivering profitable ounces

Operational performance

Operational excellence is one of four strategic pillars on which Harmony has built its business and is vital to delivering on our strategy – to create value by operating safely and sustainably, and by growing our margins. In striving to maintain operational excellence, we prioritise safety, ensure strict cost control and management of grades mined and encourage disciplined mining to improve productivity and efficiencies.

Our approach

Our approach to improved operational performance is driven by our commitment to operational excellence and to ensuring safe, consistent, predictable and profitable production. We aim to create an enabling and safe environment to achieve our operational plans, reduce unit costs and improve productivity to maximise the generation of free cash flow. Operational excellence is central to generating cash flow.

Key focus areas of our operational excellence programme:

Safety and health
- Journey to proactive safety
- Agile response to the Covid-19 pandemic
- Risk management and focus on critical controls
- Bottom-up safety transformation

Grade management and mining flexibility
- Limit mining below cut-off grade
- Incorporate flexibility into our mining plans.

Capital allocation
- Prioritised and focused capital allocation for growth and to sustain the business.

Infrastructure maintenance
- Fewer unplanned stoppages.

Cost management
- Focused cost management and project delivery
- Improved productivity
- Higher grade assets will drive down costs in the long run.

Environmental and social management
- Sustainable and responsible environmental stewardship
- Community engagement and social upliftment.

Capitals affected

Directly
- Manufactured capital
- Human capital
- Intellectual capital

Indirectly
- Financial capital
- Social and relationship capital
- Natural capital

Stakeholders affected
- Employees and unions
- Investors and financiers
- Governments and regulators
- Communities, traditional leaders and NGOs
- Suppliers.

Link to strategy
- Responsible stewardship
- Operational excellence
- Cash certainty
- Effective capital allocation

Responsible committees
- Technical
- Social and ethics

Related risks
- Loss of life/safety
- Security of electricity power supply and the impact of higher electricity costs
- Depleting Ore Reserve base
- Supply chain disruptions (including supply of goods and increasing costs)
- Divergent gold price and foreign exchange fluctuations (from planned levels)
- Geopolitical risks
- Ore Reserve/mining inflexibility (Iceberg management model)
- Labour and community unrest during wage negotiations
- Failure to achieve our operational objectives.

Safety and operational risk management

Managing safety risks: Safety is a material risk for Harmony. As such, it is imperative to ensure safe production, prevent loss-of-life incidents and embed a proactive safety culture across all our operations. We have adopted global best practice safety standards, a four-layered approach based on risk management, implemented modernised safety systems, and intensified our focus on leadership development and training to address behaviour to achieve our goal of ensuring that each employee safely returns home every day.

Managing operational risks: Operational risk management is an integral feature of our business and operating strategy. It entails managing risks effectively while working productively. Our risk-based approach helps ensure that all supporting systems are functioning efficiently. Safety hazards and operational business risks are identified and dealt with continuously at each of our operations.

Harmony's top operational risks are:

- Loss of life/safety
- Security of electricity power supply and the impact of higher electricity costs
- Depleting Ore Reserve base
- Supply chain disruptions (including supply of goods and increasing costs).

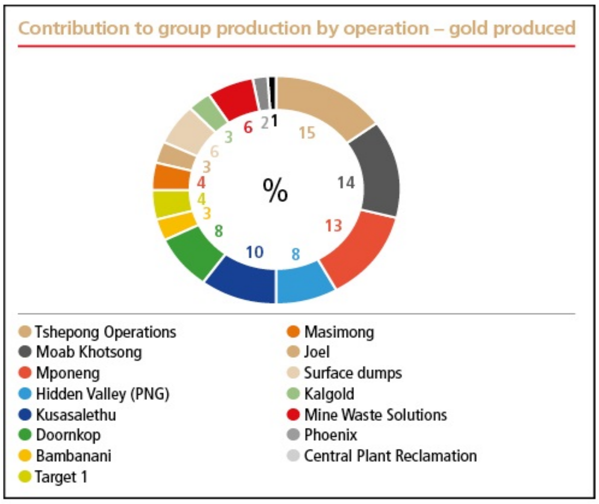
Our performance FY22

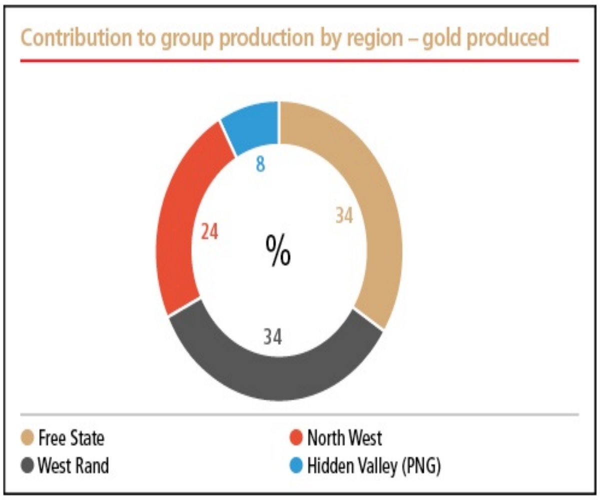
The safety and health of our employees and their families remains our top priority. In FY22, we continued our safety journey to embed a proactive safety culture throughout the company.

Group production for FY22 decreased by 3% to 1.49Moz of gold (FY21: 1.54Moz). This was in line with our revised guidance of 1.48Moz to 1.56Moz. The average underground recovered grade decreased by 3% to 5.37g/t from 5.51g/t, mainly due to lower grades achieved at Moab Khotsong, Mponeng and Doornkop. Mponeng and related assets were included in our results for the full year versus only nine months in the previous financial year and production increased by 11% year on year for these operations. Bambanani was nearing the end of its economic life, however, due to safety concerns, a decision was taken to close the mine earlier than anticipated. It was no longer possible to operate the mine in accordance with Harmony's safety protocols given the high risk of seismicity. Production for Bambanani was negatively affected decreasing by 28% year on year.

The average gold price received increased by 5% to R894 218/kg (FY21: R851 045/kg) for the financial year driven by higher gold prices while the rand to US dollar exchange rate remained fairly constant. Revenue increased by 2% to R42 645 million (FY21: R41 733 million), driven by the higher gold price. All-in sustaining costs rose 16% to R835 891/kg from R723 054/kg in FY21, mainly due to lower-than-expected gold production at Hidden Valley, Moab Khotsong, Doornkop, Bambanani and Mponeng. This resulted in a production profit of R9 546 million, 20% lower compared with R11 958 million in FY21.

Group capital expenditure for FY22 rose 21% to R6 192 million from R5 103 million in FY21. This reflects the inclusion of Mponeng and related assets for the full financial year as well as our continued focus on capital investment into growth projects. Capital expenditure related to growth projects increased 96% to R1 220 million compared with R622 million spent in FY21.





FY22 focus areas and actions	How we performed
Continue embedding a proactive safety culture	South African lost-time injury frequency rate improved by 9% to 5.90 per million shifts from 6.46 in FY21.
Ensure we meet our operational plans and generate free cash flow	Operational challenges at our South African operations, the earlier-than-anticipated closing of Bambanani and the conveyor belt failure at Hidden Valley resulted in our production plans not being met. Operational free cash at R2.9 billion was higher than planned, mainly due to the higher gold price received and lower-than-planned capital spend.
Create synergies in the West Wits region that will unlock value	Reef ore from Kusasalethu is now being processed at Mponeng plant while Kusasalethu plant will focus on the processing of waste ore. Savuka plant mill section was closed and the plant will focus on the retreatment of slimes dams.
Pursue organic brownfields growth strategy	Brownfield exploration at Hidden Valley and Kalgold to optimise existing open-pit operations and extend mine life, with brownfield exploration at our underground operations in South Africa.
Continue to drive down unit costs by improving our safety performance, delivering on our production plans, and increasing the productivity of our mining teams	Improvements from our surface operations and an excellent performance from Kusasalethu was negated by numerous operational challenges in South Africa and Hidden Valley.

Key operational metrics FY22 – year-on-year (YoY) comparison

	Unit	YoY move	YoY %	**FY22**	FY21	Comments
Gold price	R/kg	↑	5.1	**894 218**	851 045	Average gold price received increased YoY, boosting revenue.
Underground yield	g/t	↓	-2.5	**5.37**	5.51	Mainly affected by lower grades at Moab Khotsong, Mponeng and Doornkop.
Margin	%	↓	-56.3	**7**	16	Margins lower at most operations when compared with the previous year. Kusasalethu and Moab Khotsong were our most profitable underground operations for the reporting period, delivering operating free cash flow margins of 20% and 13% respectively.
Gold produced	kg	↓	-3.2	**46 236**	47 755	
– South Africa	kg	↓	-1.2	**42 529**	43 066	Affected by the closure of Bambanani in the current year and Unisel in the previous year. Surface operations stopped at Vaal River and Savuka marginal ore dumps.
– Papua New Guinea	kg	↓	-20.9	**3 707**	4 689	Gold production at Hidden Valley was mainly affected by the overland conveyor belt failure in January 2022.
All-in sustaining cost	R/kg	↑	15.6	**835 891**	723 054	The increase in all-in sustaining cost was mainly due to the inclusion of Mponeng and related assets for the full year, the conveyor belt failure at Hidden Valley combined with an increase in sustaining capital expenditure.

FY23 outlook

In the next financial year, gold production is estimated to be between 1.4Moz and 1.5Moz at an all-in sustaining cost of less than R900 000/kg. Underground recovered grade is planned to be about 5.45g/t to 5.60g/t.

Looking ahead, we have a number of growth opportunities. We obtained the necessary permitting for the Kareerand extension towards the end of the financial year. The Zaaiplaats project will continue to be a focus area for Moab Khotsong in FY23. Target mine is progressing well with the infrastructure relocation project expected to be completed by the end of the calendar year.

Exploration drilling at Kalgold has yielded favourable results and the operation has the potential to be further expanded. We are also drilling in the vicinity of Target North, situated in the Witwatersrand Basin.

Key focus areas and actions in FY23:

- Continue to embed a proactive safety culture
- Ensure we meet our operational plans and generate free cash flow
- Create synergies in the West Wits region that will unlock value
- Pursue organic brownfields growth strategy
- Continue to drive down unit costs by improving our safety performance, delivering on our production plans, and increasing the productivity of our mining teams.

FY23 production and capital guidance

Operation	Production (oz)	Capital expenditure[1] (Rm)	Life-of-mine (years)
Moab Khotsong	204 000 - 215 000	1 337	22
Mponeng	198 300 - 215 500	811	7
Tshepong North	104 000 - 110 000	479	7
Tshepong South	88 000 - 92 000	516	8
Doornkop	120 000 - 126 000	742	16
Joel	59 000 - 62 000	276	8
Target 1	61 700 - 69 000	454	6
Kusasalethu	123 000 - 129 000	208	2
Masimong	63 000 - 66 000	101	2
Underground operations – total[2]	**1 021 000 - 1 084 500**	**4 924**	
South African surface operations (tailings and waste rock dumps)	~120 000	126	13+
Mine Waste Solutions (MWS)	82 500 - 89 600	1 554	17
Kalgold	36 100 - 42 100	78	11
Hidden Valley[3]	152 000 - 155 000	1 772	5
Total	**~1 400 000 – 1 500 000**	**8 454**	

[1] *Excludes Wafi-Golpu.*
[2] *At an underground recovered grade of ~5.45g/t to 5.60g/t.*
[3] *Includes capitalised stripping costs.*

Performance by operation

South Africa – underground operations

For the year under review we noted improved production results from Kusasalethu, Target 1 and Joel, with Mponeng being included for 12 months compared with only nine months in FY21. The improvement from these operations was, however, offset by the earlier-than-anticipated closure of Bambanani at the end of June 2022 as well as mining and infrastructure-related challenges at Moab Khotsong, Tshepong Operations and Doornkop. The result was a 2% decrease in production for FY22 to 34 326kg (1 103 605oz) compared with 34 978kg (1 124 563oz) in FY21. With action plans in place to address these constraints improved results are expected for FY23.

South Africa – surface operations

Production at these operations improved marginally to 8 203kg (263 730oz) in FY22 from 8 088kg (260 034oz) in the previous year with excellent results from Mine Waste Solutions being a stand-out. During the year it was decided to halt production at Kopanang plant due to it being unprofitable to continue. We also stopped waste rock dumps being milled at Savuka plant in favour of focusing on the retreatment of slimes dams. Kalgold showed a marginal improvement and continues to focus on regaining flexibility in order to overcome operational challenges.

Papua New Guinea – opencast operations

Hidden Valley's gold production declined 21% in FY22 to 3 707kg (119 182oz) from 4 689kg (150 755oz) in FY21, and silver production decreased 12% to 55 687kg (1 790 378oz) from 63 482kg (2 040 994oz). Gold and silver production was negatively impacted by the overland conveyor belt failure in January 2022. During this time lower grade ore was processed from stockpiles. The overland conveyor belt has since been repaired and we have implemented controls to reduce the risk of this happening again. Production profit was 55% lower at R1 036 million (US$68 million) from R2 309 million (US$150 million) in FY21 while operating free cash flow was a negative R46 million (US$3 million) compared with R1 117 million (US$73 million) in FY21 due to the above mentioned challenges.

South Africa – underground operation

Tshepong Operations

		FY22	FY21	FY20
Number of employees				
– Permanent		**8 186**	8 292	8 224
– Contractors		**888**	872	792
Total		**9 074**	9 164	9 016
Operational				
Volumes milled	(000t) (metric)	**1 561**	1 558	1 417
	(000t) (imperial)	**1 721**	1 718	1 562
Gold produced	(kg)	**7 022**	7 419	7 293
	(oz)	**225 763**	238 526	234 475
Gold sold	(kg)	**7 030**	7 353	7 399
	(oz)	**226 019**	236 404	237 882
Grade	(g/t)	**4.50**	4.76	5.15
	(oz/t)	**0.131**	0.139	0.150
Productivity	(g/TEC)	**71.76**	74.59	73.24
Development results				
– Total metres (excluding capital metres)		**21 705**	20 813	17 551
– Reef metres		**2 562**	2 385	3 131
– Capital metres		**1 126**	1 000	140
Financial				
Revenue	(Rm)	**6 351**	6 214	5 452
	(US$m)	**418**	403	348
Average gold price received	(R/kg)	**903 407**	845 031	736 863
	(US$/oz)	**1 847**	1 707	1 463
Cash operating cost	(Rm)	**5 088**	4 919	4 252
	(US$m)	**334**	319	271
Production profit	(Rm)	**1 267**	1 349	1 154
	(US$m)	**83**	87	74
Capital expenditure	(Rm)	**1 514**	1 112	930
	(US$m)	**100**	72	59
Operating free cash flow[1]	(Rm)	**(251)**	183	270
	(US$m)	**(16)**	12	17
Cash operating cost	(R/kg)	**724 539**	663 030	583 018
	(US$/oz)	**1 482**	1 339	1 158
All-in sustaining cost	(R/kg)	**925 100**	815 333	713 202
	(US$/oz)	**1 892**	1 647	1 416
Average exchange rate	(R/US$)	**15.21**	15.40	15.66
Safety				
Loss of life		**1**	2	2
Lost-time injury frequency rate	per million hours worked	**5.92**	5.44	5.05
Environment				
Electricity consumption	(GWh)	**593**	566	549
Water consumption – primary activities	(Ml)	**2 955**	2 940	2 813
Greenhouse gas emissions	(000tCO_2e)	**641**	590	581
Intensity data per tonne treated				
– Energy		**0.38**	0.36	0.39
– Water		**1.89**	1.89	1.98
– Greenhouse gas emissions		**0.41**	0.38	0.41
Number of reportable environmental incidents		**—**	—	—
Community				
Local economic development	(Rm)	**26**	19	32
Training and development	(Rm)	**128**	86	94

[1] *Operating free cash flow = revenue – cash operating cost – capital expenditure as per operating results.*

Tshepong Operations continued

Other salient features	
Status of operation	Steady-state operation: development continues
Life-of-mine*#	Tshepong North (7 years) and Tshepong South (8 years)
Nameplate hoisting capacity (per month)	283 000 tonnes (312 000 tons)
Compliance and certification	• New order mining right – December 2007 • ISO 14001 • ISO 9001.

* *During June 2022 a decision was taken to restructure Tshepong Operations and separate the complex into two operations, being Tshepong North and Tshepong South (also known as the Phakisa section).*

\# *Unless specified, Tshepong Operations refers to the full Tshepong complex, including both the North and South operations mentioned above.*

Mineral Reserve estimates at 30 June 2022

	Proved			Probable			Total		
Reserves (metric)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)
	7.9	6.02	48	0.5	7.24	4	8.4	6.09	51
Reserves (imperial)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)
	8.7	0.176	1 532	0.6	0.211	119	9.3	0.178	1 652

Overview of operations

Tshepong Operations is a deep-level underground mining operation in the Free State, near the town of Welkom, some 250km from Johannesburg. It is an integrated mining complex that includes the Tshepong and Phakisa underground mines/sections. These two operations were amalgamated into a single complex from FY18 and reported as Tshepong Operations. The amalgamation was, however, reviewed at the end of FY22 and a decision taken to restructure Tshepong Operations. As a result, the Sub-75 project has been suspended and these two operations will be reported separately in future with Tshepong reported as Tshepong North and Phakisa as Tshepong South.

Tshepong North is a mature underground operation that uses conventional undercut mining, while the newer Tshepong South uses the conventional undercut and opencut mining method. Rock from Tshepong South is transported via a railveyor system to Nyala shaft, from where it is hoisted to surface. The principal gold-bearing orebody exploited by both sections is the Basal Reef, with the B Reef mined as a high-grade secondary reef. Mining is conducted at depths of 1 500m to 2 300m. Ore mined is processed at the Harmony One plant, with gold recovered using the gold cyanide leaching process.

Operating performance FY22

Regrettably, there was one loss-of-life incident at Tshepong Operations in FY22. The lost-time injury frequency rate deteriorated 9% to 5.92 per million hours worked (FY21: 5.44). The management team remains committed to improving the safety performance of these operations.

In FY22, Tshepong Operations was the group's largest contributor of gold production at 15%, producing 7 022kg (225 763oz). This was 5% lower than the 7 419kg (238 526oz) produced in FY21. Tonnes milled remained constant year on year at 1.56 million tonnes at a recovered grade of 4.50g/t, 5% lower than the 4.76g/t achieved in FY21.

Revenue rose 2% to R6 351 million (FY21: R6 214 million) due to a 7% increase in the average gold price to R903 407/kg (FY21: R845 031/kg). Cash operating costs were up 3% to R5 088 million (FY21: R4 919 million), mainly due to annual wage and electricity tariff increases. Capital expenditure increased 36% to R1 514 million (FY21: R1 112 million), mainly for ongoing development and plant optimisation. Operating free cash flow deteriorated to a negative of R251 million in FY22 compared with a positive of R183 million in FY21, reflecting the increase in capital expenditure.

Our focus areas in FY23

The key focus for FY23 will be to complete the restructuring of Tshepong North and focus on managing the two operations as separate business units. The safety of employees, however, remains a top priority.

South Africa – underground operation

Moab Khotsong

		FY22	FY21	FY20
Number of employees				
– Permanent		**5 562**	5 369	5 343
– Contractors		**956**	840	1 086
Total		**6 518**	6 209	6 551
Operational				
Volumes milled	(000t) (metric)	**959**	903	746
	(000t) (imperial)	**1 059**	995	822
Gold produced	(kg)	**6 508**	7 166	6 592
	(oz)	**209 237**	230 391	211 938
Gold sold	(kg)	**6 393**	7 095	6 799
	(oz)	**205 539**	228 109	218 592
Grade	(g/t)	**6.79**	7.94	8.84
	(oz/t)	**0.198**	0.232	0.258
Productivity	(g/TEC)	**97.26**	109.73	102.76
Development results				
– Total metres (excluding capital metres)		**7 755**	6 981	8 815
– Reef metres		**1 424**	1 144	1 173
– Capital metres		**2 668**	2 070	1 363
Financial				
Revenue	(Rm)	**5 779**	6 048	5 008
	(US$m)	**380**	393	320
Average gold price received	(R/kg)	**903 905**	852 392	736 533
	(US$/oz)	**1 848**	1 722	1 463
Cash operating cost	(Rm)	**4 134**	3 846	3 283
	(US$m)	**272**	250	210
Production profit	(Rm)	**1 740**	2 206	1 664
	(US$m)	**114**	144	106
Capital expenditure	(Rm)	**894**	633	498
	(US$m)	**59**	41	32
Operating free cash flow[1]	(Rm)	**752**	1 569	1 228
	(US$m)	**49**	102	78
Cash operating cost	(R/kg)	**635 146**	536 710	497 953
	(US$/oz)	**1 299**	1 084	989
All-in sustaining cost	(R/kg)	**739 870**	626 795	566 942
	(US$/oz)	**1 513**	1 266	1 126
Average exchange rate	(R/US$)	**15.21**	15.40	15.66
Safety				
Loss of life		**1**	1	1
Lost-time injury frequency rate	per million hours worked	**5.65**	7.92	7.95
Environment[2]				
Electricity consumption	(GWh)	**745**	757	738
Water consumption – primary activities	(Ml)	**6 406**	6 191	5 975
Greenhouse gas emissions	(000tCO_2e)	**804**	903	784
Intensity data per tonne treated				
– Energy		**0.78**	0.84	0.99
– Water		**6.69**	6.86	8.01
– Greenhouse gas emissions		**0.84**	0.87	0.81
Number of reportable environmental incidents[3]		**1**	1	—
Community				
Local economic development	(Rm)	**23**	10	22
Training and development	(Rm)	**85**	58	56

[1] *Operating free cash flow = revenue – cash operating cost – capital expenditure as per operating results.*
[2] *Figures include Nufcor.*
[3] *Figures include reportable incidents in Zaaiplaats.*[2] *Figures include Nufcor.*

Moab Khotsong continued

Other salient features	
Status of operation	Steady-state operation. Focus on Zaaiplaats and Great Noligwa pillar capital projects
Life-of-mine	22 years (including Zaaiplaats)
Nameplate hoisting capacity (per month)	160 000 tonnes (176 000 tons)
Compliance and certification	• New order mining right • ISO 14001.

Mineral Reserve estimates at 30 June 2022

	Proved			Probable			Total		
Reserves (metric)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)
	2.7	7.48	20	12.0	8.78	105	14.7	8.54	125
Reserves (imperial)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)
	3.0	0.218	647	13.2	0.256	3 384	16.2	0.249	4 031

Overview of operations

Moab Khotsong is a deep-level mine near the towns of Orkney and Klerksdorp, some 180km south-west of Johannesburg. The mine, which began producing in 2003, was acquired from AngloGold Ashanti Limited in March 2018.

Mining is based on a scattered mining method, together with an integrated backfill support system that incorporates bracket pillars. The geology at Moab Khotsong is structurally complex, with large fault-loss areas between the three mining areas (top mine (Great Noligwa), middle mine and lower mine (growth project and Zaaiplaats project in execution phase). The mine exploits the Vaal Reef as its primary orebody. The economic reef horizons are mined between 1 791m and 3 052m below surface. Ore mined is processed at the Great Noligwa gold plant. The plant uses the reverse gold leach method, with gold and uranium being recovered through gold cyanide and acid uranium leaching.

Operating performance FY22

Regrettably, there was one loss-of-life incident at Moab Khotsong in FY22 The lost-time injury frequency rate for FY22 ended at 5.65 per million hours worked, 29% lower compared with the 7.92 per million hours worked recorded in FY21.

The operation suffered geological structure intersections resulting in the re-establishment of high-grade panels in the middle mine. Further structure and seismicity challenges resulted in the loss of ground and a decrease in available face length to mine. As a result, the recovered grade fell by 14% from 7.94g/t in FY21 to 6.79g/t in the current year. Gold production decreased year on year by 9% to 6 508kg (209 237oz) (FY21: 7 166kg, 230 391oz), partially offset by a 6% increase in tonnes milled to 959 000 tonnes (FY21: 903 000 tonnes).

The mine is the group's second-largest gold operation, contributing 14% of total production. Revenue decreased 4% to R5 779 million (FY21: R6 048 million), mainly due to the lower gold production. The average gold price received increased 6% to R903 905/kg (FY21: R852 392/kg). Cash operating costs were 7% higher at R4 134 million (FY21: R3 846 million), mainly due to annual wage and electricity tariff increases. Capital expenditure rose 41% to R894 million (FY21: R633 million), mainly as a result of capital expenditure for the Great Noligwa pillar extraction as well as the Zaaiplaats project. A total of R351 million was spent in respect of ongoing development.

Moab Khotsong was the second biggest contributor to operating free cash flow at R752 million in FY22. This was, however, considerably lower than the R1 569 million recorded in FY21, reflecting the decrease in production as well as the increase in capital expenditure.

Our focus areas in FY23

With 22 years' (including Zaaiplaats) life-of-mine left, the focus in FY23 will be on increasing mining face length and achieving the reserve grade. Planned project capital expenditure for FY23 related to the Great Noligwa pillars and Zaaiplaats project is forecasted at R690 million.

South Africa – underground operation

Mponeng

		FY22	FY21	FY20
Number of employees				
– Permanent		**4 692**	4 650	
– Contractors		**595**	658	
Total		**5 287**	5 308	
Operational				
Volumes milled	(000t) (metric)	**840**	683	
	(000t) (imperial)	**926**	753	
Gold produced	(kg)	**6 086**	5 446	
	(oz)	**195 669**	175 092	
Gold sold	(kg)	**6 041**	5 299	
	(oz)	**194 222**	170 367	
Grade	(g/t)	**7.25**	7.97	
	(oz/t)	**0.211**	0.233	
Productivity	(g/TEC)	**105.62**	124.95	
Development results				
– Total metres (excluding capital metres)		**8 331**	6 299	
– Reef metres		**1 249**	815	
– Capital metres		**—**	—	
Financial				
Revenue	(Rm)	**5 620**	4 750	
	(US$m)	**369**	308	
Average gold price received	(R/kg)	**930 257**	896 474	
	(US$/oz)	**1 902**	1 811	
Cash operating cost	(Rm)	**4 498**	2 902	
	(US$m)	**296**	188	
Production profit	(Rm)	**1 133**	1 812	
	(US$m)	**74**	117	
Capital expenditure	(Rm)	**605**	493	
	(US$m)	**40**	32	
Operating free cash flow[1]	(Rm)	**517**	1 356	
	(US$m)	**34**	88	
Cash operating cost	(R/kg)	**739 026**	532 812	
	(US$/oz)	**1 511**	1 076	
All-in sustaining cost	(R/kg)	**865 976**	659 760	
	(US$/oz)	**1 771**	1 333	
Average exchange rate	(R/US$)	**15.21**	15.40	
Safety				
Loss of life		**1**	—	
Lost-time injury frequency rate	per million hours worked	**8.71**	8.09	
Environment				
Electricity consumption	(GWh)	**908**	680	
Water consumption – primary activities	(Ml)	**2 798**	2 250	
Greenhouse gas emissions	(000tCO_2e)	**980**	708	
Intensity data per tonne treated				
– Energy		**1.08**	1.00	
– Water		**3.33**	3.29	
– Greenhouse gas emissions		**1.17**	1.04	
Number of reportable environmental incidents		**—**	—	
Community				
Local economic development	(Rm)	**31**	1	
Training and development	(Rm)	**65**	11	

[1] *Operating free cash flow = revenue – cash operating cost – capital expenditure as per operating results.*

The results and figures for FY21 in the table above are for the nine months from 1 October 2020 to 30 June 2021.

Mponeng continued

Other salient features	
Status of operation	Steady-state operation: development continues
Life-of-mine	7 years
Nameplate hoisting capacity (per month)	165 000 tonnes (182 000 tons)
Compliance and certification	• New order mining right • ISO 14001.

Mineral Reserve estimates at 30 June 2022

	Proved			Probable			Total		
Reserves (metric)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)
	2.3	8.09	19	4.3	9.12	39	6.6	8.76	58
Reserves (imperial)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)
	2.5	0.236	597	4.7	0.266	1 258	7.3	0.255	1 855

Overview of operations

Mponeng is a deep-level mine near the town of Carletonville, some 90km south-west of Johannesburg. The mine, which began producing in 1986, was acquired from AngloGold Ashanti Limited in October 2020.

The orebody is extracted mostly by breast-mining methods with associated waste mining in addition to the reef being extracted. The dilution from these waste sources is captured and incorporated in the tonnage calculation, with historical performance being the benchmark. The mine exploits the Ventersdorp Contact Reef as its primary orebody. The economic reef horizons are mined between 3 160m and 3 740m below surface. Ore mined is processed at the Mponeng gold plant. The plant uses the conventional gold leach method, with gold recovered through carbon-in-pulp technology.

Operating performance FY22

The current year's results represents the first full financial year for Mponeng since its acquisition in October 2020.

Regrettably, there was one loss-of-life incident in the first quarter of FY22. The lost-time injury frequency rate deteriorated to 8.71 per million hours worked in FY22 (FY21: 8.09). The management team remains committed to improving the safety performance.

Mponeng is the group's third-largest gold producer, contributing 13% of total production. In FY22, Mponeng was impacted by seismicity affecting available face length in higher grade areas and ultimately volumes mined. As a result the recovered grade in FY22 decreased 9% to 7.25g/t (FY21: 7.97g/t). Volumes of ore milled were 23% higher at 840 000 tonnes when compared with 683 000 tonnes in the nine months during the previous financial year. Gold produced for FY22 was 6 086kg (195 669oz) compared with 5 446kg (175 092oz) in FY21.

Revenue increased 18% to R5 620 million (FY21: R4 750 million), mainly due to the increase in gold production. The average gold price received increased 4% to R930 257/kg (FY21: R896 474/kg). Cash operating cost at R4 498 million (FY21: R2 902 million) reflects the inclusion of a full year's expenses as well as annual wage and electricity tariff increases. Capital expenditure rose 23% to R605 million (FY21: R493 million), again reflecting a full year and was mainly for ongoing development.

Mponeng was the third-largest contributor to operating free cash flow at R517 million in FY22. This was however lower that the R1 356 million achieved in FY21, reflecting the increase in production and capital expenditure.

Our focus areas in FY23

Focus will be on improving the safety performance as well as achieving planned production.

South Africa – underground operation
Bambanani

		FY22	FY21	FY20
Number of employees				
– Permanent		**1 070**	1 508	1 561
– Contractors		**50**	131	129
Total		**1 120**	1 639	1 690
Operational				
Volumes milled	(000t) (metric)	**176**	227	200
	(000t) (imperial)	**194**	250	221
Gold produced	(kg)	**1 433**	1 992	2 132
	(oz)	**46 072**	64 044	68 545
Gold sold	(kg)	**1 437**	1 975	2 162
	(oz)	**46 201**	63 498	69 510
Grade	(g/t)	**8.14**	8.78	10.66
	(oz/t)	**0.237**	0.256	0.310
Productivity	(g/TEC)	**86.53**	107.37	112.43
Development results				
– Total metres (excluding capital metres)		**911**	1 414	1 184
– Reef metres		**—**	—	—
– Capital metres		**—**	—	—
Financial				
Revenue	(Rm)	**1 286**	1 687	1 591
	(US$m)	**85**	110	102
Average gold price received	(R/kg)	**895 101**	854 392	735 972
	(US$/oz)	**1 830**	1 726	1 461
Cash operating cost	(Rm)	**1 157**	1 168	1 025
	(US$m)	**76**	76	65
Production profit	(Rm)	**123**	531	551
	(US$m)	**8**	35	36
Capital expenditure	(Rm)	**25**	71	50
	(US$m)	**2**	5	3
Operating free cash flow[1]	(Rm)	**103**	448	517
	(US$m)	**7**	29	33
Cash operating cost	(R/kg)	**807 652**	586 588	480 620
	(US$/oz)	**1 652**	1 185	954
All-in sustaining cost	(R/kg)	**851 977**	641 426	522 990
	(US$/oz)	**1 742**	1 295	1 039
Average exchange rate	(R/US$)	**15.21**	15.40	15.66
Safety				
Loss of life		**—**	2	—
Lost-time injury frequency rate	per million hours worked	**2.97**	2.70	2.71
Environment				
Electricity consumption	(GWh)	**134**	133	132
Water consumption – primary activities	(Ml)	**811**	1 024	1 120
Greenhouse gas emissions	(000tCO_2e)	**144**	138	140
Intensity data per tonne treated				
– Energy		**0.76**	0.58	0.66
– Water		**4.59**	4.51	5.60
– Greenhouse gas emissions		**0.82**	0.61	0.70
Number of reportable environmental incidents		**—**	—	1
Community				
Local economic development	(Rm)	**6**	4	8
Training and development	(Rm)	**18**	22	23

[1] *Operating free cash flow = revenue – cash operating cost – capital expenditure as per operating results.*

Bambanani continued

Other salient features	
Status of operation	Mature operation closed in FY22 (June 2022)
Life-of-mine	Closed
Nameplate hoisting capacity (per month)	32 000 tonnes (35 000 tons)
Compliance and certification	• New order mining right – December 2007 • ISO 14001 – not certified but operates according to standard's requirements • ISO 9001.

Mineral Reserve estimates at 30 June 2022

	Proved			Probable			Total		
Reserves (metric)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)
	—	—	—	—	—	—	—	—	—
Reserves (imperial)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)
	—	—	—	—	—	—	—	—	—

Overview of operations

Bambanani is a mature, deep-level mine in the Free State, near Welkom and some 260km south of Johannesburg. It comprises two surface shafts, with the East shaft used to convey employees and West shaft used to hoist ore to the surface.

Bambanani has been one of Harmony's most successful and profitable mines. It was nearing the end of its economic life but it was decided to close the mine earlier than anticipated. This on the basis that it was no longer possible to operate the mine in accordance with Harmony's safety protocols, given the high risk of seismicity. The mine was closed at the end of FY22 and employees from the mine will be redeployed within the group.

Operating performance FY22

The lost-time injury frequency rate deteriorated to 2.97 per million hours worked in FY22 (FY21: 2.70).

Gold production decreased 28% to 1 433kg (46 072oz) (FY21: 1 992kg, 64 044oz), mainly due to a 22% decrease in tonnes milled to 176 000 tonnes (FY21: 227 000 tonnes). This was mainly due to the closing of Bambanani at the end of the financial year with production winding down towards June 2022. The underground recovered grade decreased 7% to 8.14g/t (FY21: 8.78g/t).

Revenue declined 24% to R1 286 million (FY21: R1 687 million) as a result of the lower production. This was partially offset by the higher gold price received of R895 101/kg (FY21: R854 392/kg).

Cash operating costs decreased 1% to R1 157 million (FY21: R1 168 million), affected by the closure of the operation. Capital expenditure decreased 64% to R25 million (FY21: R71 million), mainly spent in the first quarter of the financial year before the decision was taken to close the operation. The operation generated operating free cash flow of R103 million in FY22, compared with R448 million in FY21.

Our focus areas in FY23

The mine was closed at the end of FY22.

South Africa – underground operation
Doornkop

		FY22	FY21	FY20
Number of employees				
– Permanent		**3 322**	3 374	3 249
– Contractors		**771**	772	585
Total		**4 093**	4 146	3 924
Operational				
Volumes milled	(000t) (metric)	**874**	851	681
	(000t) (imperial)	**963**	938	750
Gold produced	(kg)	**3 444**	3 670	2 994
	(oz)	**110 726**	117 993	96 259
Gold sold	(kg)	**3 464**	3 603	3 038
	(oz)	**111 370**	115 839	97 673
Grade	(g/t)	**3.94**	4.31	4.40
	(oz/t)	**0.115**	0.126	0.128
Productivity	(g/TEC)	**81.17**	89.14	74.83
Development results				
– Total metres (excluding capital metres)		**6 500**	6 271	6 042
– Reef metres		**1 449**	1 713	1 474
– Capital metres		**2 708**	1 149	315
Financial				
Revenue	(Rm)	**3 106**	3 077	2 270
	(US$m)	**204**	200	145
Average gold price received	(R/kg)	**896 779**	853 957	747 282
	(US$/oz)	**1 834**	1 725	1 484
Cash operating cost	(Rm)	**2 514**	2 186	1 699
	(US$m)	**165**	142	109
Production profit	(Rm)	**654**	937	540
	(US$m)	**43**	61	35
Capital expenditure	(Rm)	**491**	425	281
	(US$m)	**32**	28	18
Operating free cash flow[1]	(Rm)	**102**	466	290
	(US$m)	**7**	30	19
Cash operating cost	(R/kg)	**729 965**	595 550	567 632
	(US$/oz)	**1 493**	1 203	1 127
All-in sustaining cost	(R/kg)	**823 966**	680 524	649 041
	(US$/oz)	**1 685**	1 374	1 289
Average exchange rate	(R/US$)	**15.21**	15.40	15.66
Safety				
Loss of life		**2**	1	1
Lost-time injury frequency rate	per million hours worked	**5.59**	6.89	6.10
Environment				
Electricity consumption	(GWh)	**214**	212	204
Water consumption – primary activities	(Ml)	**1 011**	787	665
Greenhouse gas emissions	(000tCO_2e)	**231**	222	217
Intensity data per tonne treated				
– Energy		**0.25**	0.25	0.30
– Water		**1.16**	0.92	0.98
– Greenhouse gas emissions		**0.27**	0.26	0.32
Number of reportable environmental incidents		**—**	—	—
Community				
Local economic development	(Rm)	**10**	6	9
Training and development	(Rm)	**75**	53	41

[1] *Operating free cash flow = revenue – cash operating cost – capital expenditure as per operating results.*

Doornkop continued

Other salient features	
Status of operation	Mining takes place on the South Reef at this single-shaft operation
Life-of-mine	16 years
Nameplate hoisting capacity (per month)	103 000 tonnes (113 000 tons)
Compliance and certification	• New order mining right – October 2008 • ISO 14001 • ISO 9001 • OHSAS 18001 • Cyanide code certified.

Mineral Reserve estimates at 30 June 2022

	Proved			Probable			Total		
Reserves (metric)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)
	5.9	4.46	26	7.9	4.29	34	13.8	4.36	60
Reserves (imperial)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)
	6.5	0.130	842	8.7	0.125	1 093	15.2	0.127	1 934

Overview of operations

Doornkop is a deep-level single-shaft operation in Gauteng, some 30km west of Johannesburg, on the northern rim of the Witwatersrand Basin. While a mature operation, it still has 16 years life-of-mine remaining.

The operation focuses on narrow-reef conventional mining of the South Reef gold-bearing conglomerate reef. Mining is undertaken to a depth of 2 219m below surface. Ore is processed at the Doornkop plant, which uses the carbon-in-pulp process to extract gold.

Operating performance FY22

Regrettably, there were two loss-of-life incidents at Doornkop. The lost-time injury frequency rate improved 19% to 5.59 per million hours worked in FY22 (FY21: 6.89). The management team remains committed to improving safety performance.

Doornkop was affected by safety-related incidents as well as compressed air and shaft infrastructure-related challenges during FY22. Despite these challenges, volumes milled increased by 3% to 874 000 tonnes (FY21: 851 000 tonnes). The recovered grade, however, decreased by 9% to 3.94g/t (FY21: 4.31g/t), negatively affecting gold production which decreased by 6% to 3 444kg (110 726oz) from 3 670kg (117 993oz).

Revenue rose 1% to R3 106 million (FY21: R3 077 million) due to a 5% rise in the gold price to R896 779/kg (FY21: R853 957/kg). Cash operating costs were 15% higher at R2 514 million (FY21: R2 186 million) mainly due to annual wage and electricity tariff increases. Additional cost relating to compressed air generation amounted to approximately R60 million. Capital expenditure increased 16% to R491 million from R425 million in FY21, mainly on ongoing development.

Our focus areas in FY23

Continued focus on safety remains a top priority. Achieving planned development targets to enable the full life-of-mine production build-up and enhance mining flexibility will be a priority for FY23.

South Africa – underground operation
Joel

		FY22	FY21	FY20
Number of employees				
– Permanent		**1 839**	1 823	1 883
– Contractors		**224**	209	131
Total		**2 063**	2 032	2 014
Operational				
Volumes milled	(000t) (metric)	**434**	359	349
	(000t) (imperial)	**478**	396	384
Gold produced	(kg)	**1 556**	1 424	1 391
	(oz)	**50 026**	45 783	44 722
Gold sold	(kg)	**1 555**	1 414	1 412
	(oz)	**49 994**	45 461	45 397
Grade	(g/t)	**3.59**	3.97	3.99
	(oz/t)	**0.105**	0.116	0.116
Productivity	(g/TEC)	**71.05**	63.97	64.01
Development results				
– Total metres (excluding capital metres)		**3 364**	3 397	2 734
– Reef metres		**1 104**	1 806	832
– Capital metres		**—**	—	—
Financial				
Revenue	(Rm)	**1 411**	1 199	1 037
	(US$m)	**93**	78	66
Average gold price received	(R/kg)	**907 660**	848 131	734 620
	(US$/oz)	**1 856**	1 713	1 459
Cash operating cost	(Rm)	**1 316**	1 135	999
	(US$m)	**87**	74	64
Production profit	(Rm)	**103**	75	27
	(US$m)	**7**	5	2
Capital expenditure	(Rm)	**225**	172	151
	(US$m)	**15**	11	10
Operating free cash flow[1]	(Rm)	**(129)**	(108)	(113)
	(US$m)	**(9)**	(7)	(8)
Cash operating cost	(R/kg)	**845 931**	796 982	718 024
	(US$/oz)	**1 730**	1 610	1 426
All-in sustaining cost	(R/kg)	**983 593**	936 296	826 970
	(US$/oz)	**2 011**	1 891	1 642
Average exchange rate	(R/US$)	**15.21**	15.40	15.66
Safety				
Loss of life		**—**	—	—
Lost-time injury frequency rate	per million hours worked	**4.62**	3.42	2.03
Environment				
Electricity consumption	(GWh)	**94**	88	85
Water consumption – primary activities	(Ml)	**979**	907	853
Greenhouse gas emissions	($000tCO_2e$)	**101**	92	90
Intensity data per tonne treated				
– Energy		**0.22**	0.25	0.24
– Water		**2.25**	0.92	2.44
– Greenhouse gas emissions		**0.23**	0.26	0.26
Number of reportable environmental incidents		**—**	—	—
Community				
Local economic development	(Rm)	**6**	4	6
Training and development	(Rm)	**24**	19	18

[1] *Operating free cash flow = revenue – cash operating cost – capital expenditure as per operating results.*

Joel continued

Other salient features	
Status of operation	Twin-shaft operation – technically challenging, decline project completed
Life-of-mine	8 years
Nameplate hoisting capacity (per month)	60 000 tonnes (83 000 tons)
Compliance and certification	• New order mining right – December 2007 • ISO 14001 • ISO 9001 • SAS 18001.

Mineral Reserve estimates at 30 June 2022

	Proved			Probable			Total		
Reserves (metric)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)
	2.8	5.01	14	1.0	4.85	5	3.7	4.97	19
Reserves (imperial)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)
	3.1	0.146	448	1.1	0.142	149	4.1	0.145	597

Overview of operations

Joel is a twin-shaft mining operation in the Free State, some 290km south-west of Johannesburg, on the southern edge of the Witwatersrand Basin.

A pre-developed scattered mining system is used. This enables unpay and geologically complex areas to be left unmined, while considering the overall panel configuration and stability of footwall development. This allows for mining to be selective, based on the proven Ore Reserve during the development phase. The primary economic reef mined is the narrow tabular Beatrix Reef deposit, accessed via conventional grid development. Mining is currently being conducted to a depth of 1 379m below collar. As the Joel plant was decommissioned in FY19, ore mined is now processed at the Harmony One plant.

Operating performance FY22

Joel achieved 2 000 000 loss-of-life free shifts during the year under review.

In FY22, gold production increased by 9% to 1 556kg (50 026oz) (FY21: 1 424kg, 45 783oz). Volume of ore milled rose 21% to 434 000 tonnes (FY21: 359 000 tonnes) partially offset by a 10% decrease in the recovered grade to 3.59g/t (FY21: 3.97g/t). Challenging mining conditions resulted in a 9% decrease in the average mining grade directly impacting the recovered grade.

The increase in gold production combined with a 7% increase in the gold price to R907 660/kg (FY21: R848 131/kg) resulted in a 18% increase in revenue to R1 411 million (FY21: R1 199 million). Cash operating costs rose 16% to R1 316 million (FY21: R1 135 million), mainly due to annual wage and electricity tariff increases as well as the increase in production. Capital expenditure was 31% higher at R225 million (FY21: R172 million), mainly for ongoing development and major capital related to the cooling project.

Our focus areas in FY23

The key focus areas in FY23 will be managing mining practices to ultimately improve recovered grades, as well as ongoing exploration drilling to identify new reserves below 137 level and in the Klippan area.

South Africa – underground operation
Target 1

		FY22	FY21	FY20
Number of employees				
– Permanent		**1 516**	1 550	1 682
– Contractors		**343**	315	380
Total		**1 859**	1 865	2 062
Operational				
Volumes milled	(000t) (metric)	**455**	488	543
	(000t) (imperial)	**501**	537	598
Gold produced	(kg)	**1 800**	1 603	2 244
	(oz)	**57 872**	51 536	72 146
Gold sold	(kg)	**1 821**	1 619	2 237
	(oz)	**58 547**	52 052	71 921
Grade	(g/t)	**3.96**	3.28	4.13
	(oz/t)	**0.116**	0.096	0.121
Productivity	(g/TEC)	**90.42**	76.55	108.58
Development results				
– Total metres (excluding capital metres)		**1 544**	2 211	2 152
– Reef metres		**55**	368	96
– Capital metres		**194**	96	191
Financial				
Revenue	(Rm)	**1 648**	1 410	1 524
	(US$m)	**108**	92	97
Average gold price received	(R/kg)	**904 992**	870 640	681 388
	(US$/oz)	**1 851**	1 758	1 353
Cash operating cost	(Rm)	**1 794**	1 662	1 505
	(US$m)	**118**	108	96
Production profit	(Rm)	**(164)**	(257)	25
	(US$m)	**(11)**	(16)	1
Capital expenditure	(Rm)	**384**	368	347
	(US$m)	**25**	24	22
Operating free cash flow[1]	(Rm)	**(530)**	(621)	(327)
	(US$m)	**(35)**	(40)	(21)
Cash operating cost	(R/kg)	**996 938**	1 037 115	670 647
	(US$/oz)	**2 039**	2 095	1 332
All-in sustaining cost	(R/kg)	**1 210 404**	1 232 098	817 066
	(US$/oz)	**2 475**	2 488	1 623
Average exchange rate	(R/US$)	**15.21**	15.40	15.66
Safety				
Loss of life		**—**	1	—
Lost-time injury frequency rate	per million hours worked	**10.08**	9.99	9.62
Environment				
Electricity consumption	(GWh)	**206**	219	212
Water consumption – primary activities	(Ml)	**871**	597	471
Greenhouse gas emissions	(000tCO_2e)	**222**	232	229
Intensity data per tonne treated				
– Energy		**0.45**	0.45	0.39
– Water		**1.92**	1.22	0.87
– Greenhouse gas emissions		**0.50**	0.48	0.42
Number of reportable environmental incidents		**—**	—	—
Community				
Local economic development	(Rm)	**5**	4	8
Training and development	(Rm)	**43**	40	38

[1] *Operating free cash flow = revenue – cash operating cost – capital expenditure as per operating results.*

Target 1 continued

Other salient features	
Status of operation	Optimisation project well underway, expected to be completed by the end of the calendar year
Life-of-mine	6 years
Nameplate hoisting capacity (per month)	97 000 tonnes (107 000 tons)
Compliance and certification	• New order mining right – December 2007 • ISO 14001 • ISO 9001 • OHSAS 18001 • Cyanide code certified.

Mineral Reserve estimates at 30 June 2022

	Proved			Probable			Total		
Reserves (metric)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)
	2.7	4.32	12	1.7	4.11	7	4.4	4.24	19
Reserves (imperial)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)
	3.0	0.126	378	1.9	0.120	228	4.9	0.124	606

Overview of operations

Target 1 is an advanced, single-shaft, deep-level mine in the Free State, some 270km south-west of Johannesburg. It has a planned life-of-mine of six years.

While most of the ore extracted comes from mechanised mining (massive mining techniques), conventional stoping is still employed primarily to destress areas ahead of mechanised mining. The gold mineralisation currently exploited is contained in a succession of Elsburg and Dreyerskuil quartz pebble conglomerate reefs. These reefs are mined to a depth of around 2 300m below surface. Ore mined is milled and processed at the Target plant, with gold recovered by means of gold cyanide leaching.

Operating performance FY22

The lost-time injury frequency rate at Target 1 deteriorated marginally to 10.08 per million hours worked in FY22 (FY21: 9.99). The management team remains committed to improving safety performance.

Gold production increased 12% to 1 800kg (57 872oz) from 1 603kg (51 536oz) in FY21. This was mainly due to significant improvement in the recovered grade to 3.96g/t, 21% higher than the 3.28g/t recorded in FY21. Tonnes milled, however, decreased 7% to 455 000 tonnes (FY21: 488 000 tonnes). Flexibility remains a challenge and vehicle availability were some of the constraints affecting production.

The substantial increase in production is reflected in the increase in revenue to R1 648 million, 17% higher than the R1 410 million recorded in FY21. The gold price contributed to the rise in revenue with a 4% increase to R904 992/kg (FY21: R870 640/kg). Cash operating costs rose 8% to R1 794 million (FY21: R1 662 million), mainly due to annual wage and electricity tariff increases as well as an increase in the cost of consumables.

Capital expenditure increased 4% to R384 million (FY21: R368 million), mainly for ongoing development and other shaft capital as major project capital declined by 39%.

Our focus areas in FY23

The optimisation project is expected to be completed by the end of the calendar year, resulting in improved production results and ultimately lower unit costs.

South Africa – underground operation
Kusasalethu

		FY22	FY21	FY20
Number of employees				
– Permanent		**3 648**	3 764	4 237
– Contractors		**479**	496	603
Total		**4 127**	4 260	4 840
Operational				
Volumes milled	(000t) (metric)	**607**	708	615
	(000t) (imperial)	**669**	780	678
Gold produced	(kg)	**4 567**	3 999	3 015
	(oz)	**146 833**	128 570	96 934
Gold sold	(kg)	**4 586**	3 980	3 085
	(oz)	**147 444**	127 959	99 185
Grade	(g/t)	**7.52**	5.65	4.90
	(oz/t)	**0.219**	0.165	0.143
Productivity	(g/TEC)	**98.93**	81.32	57.08
Development results				
– Total metres (excluding capital metres)		**2 817**	2 202	3 039
– Reef metres		**1 025**	282	1 019
– Capital metres		**—**	—	—
Financial				
Revenue	(Rm)	**4 139**	3 400	2 293
	(US$m)	**272**	221	146
Average gold price received	(R/kg)	**902 634**	854 201	743 153
	(US$/oz)	**1 846**	1 725	1 476
Cash operating cost	(Rm)	**3 098**	2 969	2 562
	(US$m)	**204**	193	164
Production profit	(Rm)	**1 053**	445	(284)
	(US$m)	**69**	29	(19)
Capital expenditure	(Rm)	**210**	205	188
	(US$m)	**14**	13	12
Operating free cash flow[1]	(Rm)	**831**	226	(458)
	(US$m)	**55**	15	(29)
Cash operating cost	(R/kg)	**678 403**	742 452	849 782
	(US$/oz)	**1 387**	1 500	1 687
All-in sustaining cost	(R/kg)	**739 681**	814 048	923 054
	(US$/oz)	**1 513**	1 644	1 833
Average exchange rate	(R/US$)	**15.21**	15.40	15.66
Safety				
Loss of life		**8**	2	2
Lost-time injury frequency rate	per million hours worked	**8.11**	9.83	10.72
Environment				
Electricity consumption	(GWh)	**612**	636	599
Water consumption – primary activities	(Ml)	**2 877**	2 832	2 720
Greenhouse gas emissions	(000tCO_2e)	**661**	661	635
Intensity data per tonne treated				
– Energy		**1.01**	0.90	0.97
– Water		**4.74**	4.00	4.42
– Greenhouse gas emissions		**1.09**	0.93	1.03
Number of reportable environmental incidents		**2**	2	—
Community				
Local economic development	(Rm)	**8**	8	9
Training and development	(Rm)	**16**	14	38

[1] *Operating free cash flow = revenue – cash operating cost – capital expenditure as per operating results.*

Kusasalethu continued

Other salient features	
Status of operation	Mature, steady-state operation positioned for profitability
Life-of-mine	2 years
Nameplate hoisting capacity (per month)	172 000 tonnes (190 000 tons)
Compliance and certification	• New order mining right – December 2007 • ISO 14001 • ISO 9001 • Cyanide code.

Mineral Reserve estimates at 30 June 2022

	Proved			Probable			Total		
Reserves (metric)	**Tonnes (Mt)**	**Grade (g/t)**	**Gold (000kg)**	**Tonnes (Mt)**	**Grade (g/t)**	**Gold (000kg)**	**Tonnes (Mt)**	**Grade (g/t)**	**Gold (000kg)**
	1.3	6.97	9	0.03	6.84	0.2	1.3	6.97	9
Reserves (imperial)	**Tons (Mt)**	**Grade (oz/t)**	**Gold (000oz)**	**Tons (Mt)**	**Grade (oz/t)**	**Gold (000oz)**	**Tons (Mt)**	**Grade (oz/t)**	**Gold (000oz)**
	1.4	0.203	294	0.03	0.199	7	1.5	0.203	301

Overview of operations

Kusasalethu is a mature, deep-level mine 90km west of Johannesburg, near the border of Gauteng and North West provinces. Mining is at a depth of 3 388m with two years' life-of-mine remaining.

The mine comprises twin vertical and twin sub-vertical shaft systems and uses conventional mining methods in a sequential grid layout. It exploits the Ventersdorp Contact Reef as its primary orebody. Ore mined is treated at the Mponeng plant.

Operating performance FY22

Tragically, eight lives were lost at Kusasalethu in four separate incidents in FY22. The management team remains committed to improving safety performance.

A 33% increase in underground recovered grade to 7.52g/t (FY21: 5.65g/t) saw gold production increase 14% to 4 567kg (146 833oz) (FY21: 3 999kg, 128 570oz), despite tonnes milled being 14% lower at 607 000 tonnes (FY21: 708 000 tonnes).

Revenue rose 22% to R4 139 million (FY21: R3 400 million), reflecting higher production and a 6% increase in average gold price received to R902 634/kg (FY21: R854 201/kg).

Cash operating costs were 4% higher at R3 098 million (FY21: R2 969 million), mainly due to annual wage and electricity tariff increases. Capital expenditure rose 2% to R210 million (FY21: R205 million), mainly for ongoing development. Operating free cash flow amounted to R831 million, reflected the increase in production and commodity price, compared with an operating cash flow of R226 million in FY21.

Our focus areas in FY23

The key focus for FY23 will be to improve the mine's safety performance.

South Africa – underground operation
Masimong

		FY22	FY21	FY20
Number of employees				
– Permanent		**1 907**	1 943	2 083
– Contractors		**126**	121	135
Total		**2 033**	2 064	2 218
Operational				
Volumes milled	(000t) (metric)	**486**	510	489
	(000t) (imperial)	**536**	563	539
Gold produced	(kg)	**1 910**	2 012	1 999
	(oz)	**61 407**	64 687	64 269
Gold sold	(kg)	**1 911**	1 993	2 027
	(oz)	**61 440**	64 076	65 169
Grade	(g/t)	**3.93**	3.95	4.09
	(oz/t)	**0.115**	0.115	0.119
Productivity	(g/TEC)	**83.86**	81.23	79.22
Development results				
– Total metres (excluding capital metres)		**3 321**	2 833	2 246
– Reef metres		**723**	1 044	759
– Capital metres		**—**	—	—
Financial				
Revenue	(Rm)	**1 733**	1 636	1 401
	(US$m)	**114**	106	89
Average gold price received	(R/kg)	**906 822**	820 780	691 282
	(US$/oz)	**1 854**	1 658	1 373
Cash operating cost	(Rm)	**1 509**	1 440	1 241
	(US$m)	**99**	94	79
Production profit	(Rm)	**229**	209	143
	(US$m)	**15**	13	9
Capital expenditure	(Rm)	**49**	29	24
	(US$m)	**3**	2	2
Operating free cash flow[1]	(Rm)	**176**	166	136
	(US$m)	**12**	11	8
Cash operating cost	(R/kg)	**789 912**	715 835	620 804
	(US$/oz)	**1 615**	1 446	1 233
All-in sustaining cost	(R/kg)	**845 299**	764 577	655 888
	(US$/oz)	**1 729**	1 544	1 302
Average exchange rate	(R/US$)	**15.21**	15.40	15.66
Safety				
Loss of life		**—**	—	—
Lost-time injury frequency rate	per million hours worked	**4.18**	2.86	7.51
Environment				
Electricity consumption	(GWh)	**132**	133	138
Water consumption – primary activities	(Ml)	**805**	383	510
Greenhouse gas emissions	(000tCO_2e)	**142**	139	146
Intensity data per tonne treated				
– Energy		**0.27**	0.26	0.28
– Water		**1.66**	0.75	1.04
– Greenhouse gas emissions		**0.29**	0.27	0.30
Number of reportable environmental incidents		**1**	1	—
Community				
Local economic development	(Rm)	**8**	5	11
Training and development	(Rm)	**25**	23	23

[1] *Operating free cash flow = revenue – cash operating cost – capital expenditure as per operating results.*

Masimong continued

Other salient features	
Status of operation	Mature, single-shaft operation nearing the end of its life
Life-of-mine	2 years
Nameplate hoisting capacity (per month)	112 000 tonnes (124 000 tons)
Compliance and certification	• New order mining right – December 2007 • ISO 14001 • ISO 9001 • OHSAS 18001.

Mineral Reserve estimates at 30 June 2022

	Proved			Probable			Total		
Reserves (metric)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)
	0.7	4.95	4	0.3	3.47	1	1.0	4.55	5
Reserves (imperial)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)
	0.8	0.144	117	0.3	0.101	30	1.1	0.133	147

Overview of operations

Masimong is a deep-level mine in the Free State, near Welkom, some 260km from Johannesburg. The operation is close to the end of its mine life, with two years of mining left. Masimong is a mine that reflects the effectiveness of Harmony's business model.

The Masimong complex comprises two shafts with 5 Shaft used as the operating shaft and 4 Shaft for ventilation, pumping and a second escape outlet. Masimong exploits the Basal Reef and B Reef, using a conventional tabular narrow-reef stoping method. Mining is conducted at a depth of 1 650m to 2 010m below collar. Ore mined is processed at the nearby Harmony One plant.

Operating performance FY22

Masimong recorded 2.5 million loss-of-life free shifts during FY22.

Gold production decreased by 5% to 1 910kg (61 407oz) (FY21: 2 012kg, 64 687oz), mainly due to a 5% decrease in tonnes milled to 486 000 tonnes (FY21: 510 000 tonnes). Underground recovered grade was marginally lower at 3.93g/t for FY22 (FY21: 3.95g/t).

A 10% increase in gold price received to R906 822/kg (FY21: R820 780/kg) contributed to the 6% increase in revenue to R1 733 million (FY21: R1 636 million).

Cash operating costs rose 5% to R1 509 million (FY21: R1 440 million), mainly due to annual wage increases and electricity tariff increases. Capital expenditure increased to R49 million from R29 million in FY21.

Our focus areas in FY23

The Masimong management team will focus on maintaining the safety and production performance.

South Africa – underground operation
Unisel

		FY22	FY21	FY20
Number of employees				
– Permanent		—	—	750
– Contractors		—	—	77
Total		—	—	827
Operational				
Volumes milled	(000t) (metric)	—	57	219
	(000t) (imperial)	—	63	242
Gold produced	(kg)	—	247	982
	(oz)	—	7 941	31 573
Gold sold	(kg)	—	242	994
	(oz)	—	7 780	31 958
Grade	(g/t)	—	4.33	4.48
	(oz/t)	—	0.126	0.130
Productivity	(g/TEC)	—	80.40	98.59
Development results				
– Total metres (excluding capital metres)		—	—	1 048
– Reef metres		—	—	299
– Capital metres		—	—	—
Financial				
Revenue	(Rm)	—	224	681
	(US$m)	—	15	43
Average gold price received	(R/kg)	—	925 979	684 727
	(US$/oz)	—	1 870	1 360
Cash operating cost	(Rm)	—	178	573
	(US$m)	—	12	37
Production profit	(Rm)	—	42	101
	(US$m)	—	3	6
Capital expenditure	(Rm)	—	—	7
	(US$m)	—	—	—
Operating free cash flow[1]	(Rm)	—	46	100
	(US$m)	—	3	6
Cash operating cost	(R/kg)	—	721 271	583 274
	(US$/oz)	—	1 457	1 158
All-in sustaining cost	(R/kg)	—	782 126	613 382
	(US$/oz)	—	1 580	1 218
Average exchange rate	(R/US$)	—	15.40	15.66
Safety				
Loss of life		—	—	—
Lost-time injury frequency rate	per million hours worked	—	1.88	1.66
Environment				
Electricity consumption	(GWh)	—	18	51
Water consumption – primary activities	(Ml)	—	269	414
Greenhouse gas emissions	(000tCO_2e)	—	18.45	54.00
Intensity data per tonne treated				
– Energy		—	0.31	0.23
– Water		—	4.72	1.89
– Greenhouse gas emissions		—	0.32	0.25
Number of reportable environmental incidents		—	—	—
Community				
Local economic development	(Rm)	—	—	4
Training and development	(Rm)	—	3	8

[1] *Operating free cash flow = revenue – cash operating cost – capital expenditure as per operating results.*

The FY21 results and figures in the table above are for the four months until 31 October 2020.

Unisel continued

Other salient features	
Status of operation	Mature operation closed in FY21 (October 2020)
Life-of-mine	Closed
Nameplate hoisting capacity (per month)	63 000 tonnes (69 000 tons)
Compliance and certification	• New order mining right – December 2007 • ISO 9001.

Overview of operations

Unisel is a single-shaft, intermediate-depth mine in the Free State, near Virginia, some 270km south-west of Johannesburg. Having been in production since 1979, Unisel has reached the end of its life, and was closed in the first half of FY21. This mine served a myriad of stakeholders in the province well over its 40-year life. This segment has been included for comparative purposes only.

South Africa – surface operation

Mine Waste Solutions (tailings retreatment)

		FY22	FY21	FY20
Number of employees				
– Permanent		**487**	479	
– Contractors		**938**	797	
Total		**1 425**	1 276	
Operational				
Volumes milled	(000t) (metric)	**23 443**	17 665	
	(000t) (imperial)	**25 851**	19 479	
Gold produced	(kg)	**2 899**	2 057	
	(oz)	**93 205**	66 133	
Gold sold	(kg)	**2 879**	2 043	
	(oz)	**92 563**	65 684	
Grade	(g/t)	**0.124**	0.116	
	(oz/t)	**0.004**	0.003	
Productivity	(g/TEC)	**350.68**	302.38	
Financial				
Revenue	(Rm)	**2 642**	1 889	
	(US$m)	**174**	123	
Average gold price received	(R/kg)	**753 912**	729 882	
	(US$/oz)	**1 542**	1 474	
Cash operating cost	(Rm)	**1 593**	1 036	
	(US$m)	**105**	67	
Production profit	(Rm)	**1 054**	751	
	(US$m)	**69**	49	
Capital expenditure	(Rm)	**264**	70	
	(US$m)	**17**	5	
Operating free cash flow[1]	(Rm)	**314**	385	
	(US$m)	**21**	25	
Cash operating cost	(R/kg)	**549 621**	503 635	
	(US$/oz)	**1 124**	1 017	
All-in sustaining cost	(R/kg)	**608 952**	601 978	
	(US$/oz)	**1 245**	1 216	
Average exchange rate	(R/US$)	**15.21**	15.40	
Safety				
Loss of life		**—**	—	
Lost-time injury frequency rate	per million hours worked	**3.21**	4.04	
Environment				
Electricity consumption	(GWh)	**205**	142	
Water consumption – primary activities	(Ml)	**6 704**	6 222	
Greenhouse gas emissions	(000tCO_2e)	**222**	154	
Intensity data per tonne treated				
– Energy		**0.01**	0.01	
– Water		**0.29**	0.35	
– Greenhouse gas emissions		**0.01**	0.01	
Number of reportable environmental incidents		**1**	1	
Community				
Local economic development	(Rm)	**—**	—	
Training and development	(Rm)	**7**	1	

[1] *Operating free cash flow = revenue – Franco-Nevada non-cash consideration – cash operating cost – capital expenditure as per operating results.*

The results and figures for FY21 in the table above are for the nine months from 1 October 2020 to 30 June 2021.

Mine Waste Solutions (tailings retreatment) **continued**

Other salient features	
Status of operation	Tailings retreatment
Life-of-mine	17 years

Mineral Reserve estimates at 30 June 2022

	Proved			Probable			Total		
Reserves (metric)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)
	21.1	0.26	6	166.8	0.24	41	187.8	0.25	46
Reserves (imperial)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)
	23.2	0.008	179	183.8	0.007	1 307	207.1	0.007	1 485

Overview of operations

Mine Waste Solutions is a tailings retreatment operation near Klerksdorp in North West province. It reprocesses low-grade material from tailing storage facilities scattered across the Vaal River and Stilfontein area to reduce the tailings footprint.

The operation was acquired from AngloGold Ashanti Limited in October 2020.

Harmony's subsidiary Chemwes Pty Limited, the owner of Mine Waste Solutions, has a contract with Franco-Nevada Barbados (Franco-Nevada) where Franco-Nevada is entitled to receive 25% of all the gold produced through Mine Waste Solutions.

As at 30 June 2021, the balance of gold ounces to be delivered to Franco-Nevada amounted to 84 429oz. For the year ended 30 June 2022, 23 272oz has been delivered to Franco-Nevada, bringing the remaining balance of gold ounces to be delivered as at year end to 61 157oz.

Operating performance FY22

The current year's results represents the first full financial year for Mine Waste Solutions since its acquisition in October 2020.

The lost-time injury frequency rate at Mine Waste Solutions improved 21% to 3.21 per million hours worked in FY22 (FY21: 4.04). The management team remains committed to improving safety performance.

Mine Waste Solutions processed 23.4 million tonnes in FY22 compared with 17.7 million tonnes in FY21, a 32% increase. The average recovered grade for FY22 was 7% higher at 0.124g/t (FY21: 0.116g/t), resulting in gold production increasing by 41% to 2 899kg (93 205oz) from 2 057kg (66 133oz) in the previous year.

The higher production resulted in revenue increasing 40% to R2 642 million for FY22 (FY21: R1 889 million). The average gold price received increased 3% to R753 912/kg (FY21: R729 882/kg). All-in sustaining costs increased marginally to R608 952/kg from R601 978/kg in FY21. Capital expenditure of R264 million was incurred in FY22 (FY21: R70 million), mainly on the west complex pump station and Kareerand expansion project.

Our focus areas in FY23

With an extended life-of-mine dependent on the Kareerand project, the main focus will be to ensure project timelines are met. Continued focus will be on optimising costs and efficiencies to further enhance performance.

South Africa – surface operation
Kalgold

		FY22	FY21	FY20
Number of employees				
– Permanent		**257**	270	253
– Contractors		**427**	430	361
Total		**684**	700	614
Operational				
Volumes milled	(000t) (metric)	**1 432**	1 507	1 541
	(000t) (imperial)	**1 579**	1 662	1 700
Gold produced	(kg)	**1 137**	1 109	1 153
	(oz)	**36 555**	35 655	37 070
Gold sold	(kg)	**1 142**	1 112	1 151
	(oz)	**36 717**	35 752	37 006
Grade	(g/t)	**0.79**	0.74	0.75
	(oz/t)	**0.023**	0.021	0.022
Productivity	(g/TEC)	**102.32**	121.92	128.80
Financial				
Revenue	(Rm)	**1 029**	955	855
	(US$m)	**68**	62	55
Average gold price received	(R/kg)	**900 713**	859 070	742 533
	(US$/oz)	**1 842**	1 735	1 474
Cash operating cost	(Rm)	**867**	776	674
	(US$m)	**57**	50	43
Production profit	(Rm)	**159**	179	183
	(US$m)	**10**	12	12
Capital expenditure	(Rm)	**203**	208	99
	(US$m)	**13**	14	6
Operating free cash flow[1]	(Rm)	**(41)**	(36)	84
	(US$m)	**(3)**	(2)	6
Cash operating cost	(R/kg)	**762 547**	699 546	584 218
	(US$/oz)	**1 559**	1 413	1 160
All-in sustaining cost	(R/kg)	**964 678**	905 253	690 239
	(US$/oz)	**1 973**	1 828	1 371
Average exchange rate	(R/US$)	**15.21**	15.40	15.66
Safety				
Loss of life		**—**	—	—
Lost-time injury frequency rate	per million hours worked	**8.47**	3.21	1.65
Environment				
Electricity consumption	(GWh)	**54**	53	54
Water consumption – primary activities	(Ml)	**376**	267	307
Greenhouse gas emissions	(000tCO_2e)	**58**	75	72
Intensity data per tonne treated				
– Energy		**0.04**	0.03	0.04
– Water		**0.26**	0.18	0.20
– Greenhouse gas emissions		**0.05**	0.05	0.05
Number of reportable environmental incidents		**—**	—	—
Community				
Local economic development	(Rm)	**3**	1	8
Training and development	(Rm)	**7**	6	9

[1] *Operating free cash flow = revenue – cash operating cost – capital expenditure ± impact of run-of-mine costs as per operating results.*

Kalgold continued

Other salient features	
Status of operation	Open-pit mining operation
Life-of-mine	11 years
Nameplate hoisting capacity (per month)	112 000 tonnes (124 000 tons)
Compliance and certification	• New order mining right – August 2008 • ISO 14001 • ISO 9001.

Mineral Reserve estimates at 30 June 2022

	Proved			Probable			Total		
Reserves (metric)	**Tonnes (Mt)**	**Grade (g/t)**	**Gold (000kg)**	**Tonnes (Mt)**	**Grade (g/t)**	**Gold (000kg)**	**Tonnes (Mt)**	**Grade (g/t)**	**Gold (000kg)**
	5.6	0.94	5	15.8	1.16	18	21.4	1.10	24
Reserves (imperial)	**Tons (Mt)**	**Grade (oz/t)**	**Gold (000oz)**	**Tons (Mt)**	**Grade (oz/t)**	**Gold (000oz)**	**Tons (Mt)**	**Grade (oz/t)**	**Gold (000oz)**
	6.2	0.028	170	17.4	0.034	587	23.6	0.032	758

Overview of operations

Kalgold is a long-life, open-pit gold mine on the Kraaipan Greenstone Belt, 55km south-west of Mahikeng in North West province.

Mining takes place from the A-zone pit, where activities are ramping up at the pillar between the A-zone and Watertank pit. Mined ore is processed at the carbon-in-leach Kalgold plant.

Operating performance FY22

Kalgold maintained its loss-of-life free record in FY22.

Gold production increased 3% to 1 137kg (36 555oz) (FY21: 1 109kg, 35 655oz), due to a 7% increase in the recovered grade to 0.79g/t (FY21: 0.74g/t). The increase in grade was, however, partially offset by lower tonnes milled at 1.4 million tonnes, 5% lower than the previous year (FY21: 1.5 million tonnes). Production was impacted by heavy rainfall as well as power outages in the second and third quarters of the year.

The increase in production combined with a 5% increase in the gold price to R900 713/kg (FY21: R859 070/kg) resulted in a 8% increase in revenue for FY22 to R1 029 million (FY21: R955 million). Cash operating costs increased 12% to R867 million (FY21: R776 million), mainly due to annual wage and electricity tariff increases as well as other above-inflationary increases on consumables such as diesel.

Capital expenditure decreased by 2% to R203 million (FY21: R208 million), mainly for capitalised stripping costs.

Our focus areas in FY23

The key focus areas in FY23 will be to optimise the pit design to produce safe, profitable ounces by mining the A-zone, Windmill and Watertank pits. Feasibility studies are underway to potentially expand milling capacity. The results from exploration drilling at Kalgold outline an expanded, robust mineralised system that extends beyond current resource limits.

South Africa – surface operation

Phoenix (tailings retreatment)

		FY22	FY21	FY20
Number of employees				
– Permanent		**85**	86	83
– Contractors		**274**	247	261
Total		**359**	333	344
Operational				
Volumes milled	(000t) (metric)	**6 229**	6 190	6 227
	(000t) (imperial)	**6 868**	6 827	6 866
Gold produced	(kg)	**767**	779	818
	(oz)	**24 659**	25 046	26 299
Gold sold	(kg)	**766**	777	823
	(oz)	**24 627**	24 982	26 459
Grade	(g/t)	**0.123**	0.126	0.131
	(oz/t)	**0.004**	0.004	0.004
Productivity	(g/TEC)	**378.21**	375.24	385.12
Financial				
Revenue	(Rm)	**689**	620	589
	(US$m)	**45**	40	38
Average gold price received	(R/kg)	**899 012**	798 310	715 787
	(US$/oz)	**1 838**	1 612	1 421
Cash operating cost	(Rm)	**441**	396	363
	(US$m)	**29**	26	23
Production profit	(Rm)	**249**	227	223
	(US$m)	**16**	15	14
Capital expenditure	(Rm)	**28**	4	7
	(US$m)	**2**	—	—
Operating free cash flow[1]	(Rm)	**220**	221	219
	(US$m)	**14**	14	14
Cash operating cost	(R/kg)	**574 438**	508 162	443 972
	(US$/oz)	**1 175**	1 026	882
All-in sustaining cost	(R/kg)	**611 580**	511 946	453 937
	(US$/oz)	**1 251**	1 034	901
Average exchange rate	(R/US$)	**15.21**	15.40	15.66
Safety				
Loss of life		**—**	—	—
Lost-time injury frequency rate	per million hours worked	**1.64**	—	—
Environment				
Electricity consumption	(GWh)	**40**	41	40
Water consumption – primary activities	(Ml)	**102**	305	320
Greenhouse gas emissions	(000tCO_2e)	**43**	43	43
Intensity data per tonne treated				
– Energy		**0.01**	0.01	0.01
– Water		**0.02**	0.05	0.05
– Greenhouse gas emissions		**0.007**	0.01	0.01
Number of reportable environmental incidents		**1**	1	—

[1] *Operating free cash flow = revenue – cash operating cost – capital expenditure as per operating results.*

Phoenix (tailings retreatment) continued

Other salient features	
Status of operation	Tailings retreatment
Life-of-mine	6 years

Mineral Reserve estimates at 30 June 2022

	Proved			Probable			Total		
Reserves (metric)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)
	36.5	0.29	10	—	—	—	36.5	0.29	10
Reserves (imperial)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)
	40.3	0.008	335	—	—	—	40.3	0.008	335

Overview of operations

Phoenix is a tailings retreatment operation in Virginia, Free State.

It retreats tailings from Harmony's tailings storage facilities in the Free State region to extract any residual gold, using the Saaiplaas plant. It is 100% owned by the black economic empowerment company, Tswelopele Beneficiation Operation Proprietary Limited, of which Harmony is a 76% shareholder.

Operating performance FY22

Phoenix maintained its good safety performance.

Gold production was marginally lower at 767kg (24 659oz) from 779kg (25 046oz) in FY21, a 2% decrease. This was due to a 2% decrease in the recovered grade to 0.123g/t (FY21: 0.126g/t). Volumes of ore processed remained constant at 6.2 million tonnes (FY21: 6.2 million tonnes). Lower gold production was offset by the 13% rise in average gold price received to R899 012/kg (FY21: R798 310/kg), resulting in a 11% increase in revenue to R689 million (FY21: R620 million).

All-in sustaining cost rose 19% to R611 580/kg (FY21: R511 946/kg), mainly due to an 11% increase in cash operating cost. Cash cost increased mainly due to annual labour and electricity increases as well as above-inflationary increases on consumables such as chemicals. Capital expenditure for FY22 increased to R28 million (FY21: R4 million), mainly on the St Helena toe-drain and buttresses.

Operational success depends on maintaining plant efficiency and reducing pump and pipe failures (adequate spillage control).

Our focus areas in FY23

Focus will be on improving operational and plant efficiency to mitigate operational risk.

South Africa – surface operation
Central Plant Reclamation (tailings retreatment)

		FY22	FY21	FY20
Number of employees				
– Permanent		**97**	96	97
– Contractors		**151**	153	151
Total		**248**	249	248
Operational				
Volumes milled	(000t) (metric)	**4 033**	4 020	4 020
	(000t) (imperial)	**4 447**	4 434	4 433
Gold produced	(kg)	**586**	563	625
	(oz)	**18 840**	18 101	20 094
Gold sold	(kg)	**591**	566	625
	(oz)	**19 001**	18 197	20 093
Grade	(g/t)	**0.145**	0.140	0.155
	(oz/t)	**0.004**	0.004	0.005
Productivity	(g/TEC)	**299.58**	291.34	325.83
Financial				
Revenue	(Rm)	**538**	482	468
	(US$m)	**35**	31	30
Average gold price received	(R/kg)	**911 134**	851 505	749 216
	(US$/oz)	**1 863**	1 720	1 488
Cash operating cost	(Rm)	**290**	271	234
	(US$m)	**19**	18	15
Production profit	(Rm)	**246**	211	234
	(US$m)	**16**	14	15
Capital expenditure	(Rm)	**18**	13	12
	(US$m)	**1**	1	1
Operating free cash flow[1]	(Rm)	**231**	198	222
	(US$m)	**15**	13	14
Cash operating cost	(R/kg)	**494 060**	480 975	373 798
	(US$/oz)	**1 010**	971	742
All-in sustaining cost	(R/kg)	**529 591**	501 947	389 611
	(US$/oz)	**1 083**	1 014	774
Average exchange rate	(R/US$)	**15.21**	15.40	15.66
Safety				
Loss of life		**—**	—	—
Lost-time injury frequency rate	per million hours worked	**—**	—	—
Environment				
Electricity consumption	(GWh)	**23**	23	24
Water consumption – primary activities	(Ml)	**220**	203	171
Greenhouse gas emissions	(000tCO_2e)	**25**	27	25
Intensity data per tonne treated				
– Energy		**0.01**	0.01	0.01
– Water		**0.05**	0.05	0.04
– Greenhouse gas emissions		**0.007**	0.01	0.01
Number of reportable environmental incidents		**—**	—	—

[1] *Operating free cash flow = revenue – cash operating cost – capital expenditure as per operating results.*

Central Plant Reclamation (tailings retreatment) continued

Other salient features	
Status of operation	Tailings retreatment
Life-of-mine	13 years

Mineral Reserve estimates at 30 June 2022

	Proved			Probable			Total		
Reserves (metric)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)
	—	—	—	47.9	0.27	13	47.9	0.27	13
Reserves (imperial)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)
	—	—	—	52.8	0.008	413	52.8	0.008	413

Overview of operations

Central Plant Reclamation is a tailings retreatment operation near Welkom in the Free State. Originally built to process waste-rock dumps, it was converted into a tailings retreatment facility in FY17.

Operating performance FY22

The operation maintained processing volumes at 4 million tonnes, but realised a 4% improvement in recovered grade to 0.145g/t (FY21: 0.140g/t) that resulted in an 4% increase in gold production to 586kg (18 840oz) (FY21: 563kg, 18 101oz). This, combined with a 7% increase in the gold price received to R911 134/kg (FY21: R851 505/kg), resulted in revenue increasing 12% to R538 million (FY21: R482 million).

All-in sustaining cost increased 6% to R529 591/kg (FY21: R501 947/kg). Capital expenditure for FY22 rose 38% to R18 million (FY21: R13 million) on higher plant maintenance.

Our focus areas in FY23

Key focus areas in FY23 will be to continue safe operations and deliver operational excellence by maintaining costs and improving mining efficiencies.

South Africa – surface operation
Waste rock dumps

		FY22	FY21	FY20
Operational				
Volumes milled	(000t) (metric)	**9 043**	10 107	4 476
	(000t) (imperial)	**9 972**	11 145	4 936
Gold produced	(kg)	**2 814**	3 580	1 753
	(oz)	**90 471**	115 099	56 630
Gold sold	(kg)	**2 875**	3 527	1 780
	(oz)	**92 433**	113 395	57 229
Grade	(g/t)	**0.311**	0.354	0.392
	(oz/t)	**0.009**	0.010	0.011
Financial				
Revenue	(Rm)	**2 612**	3 079	1 388
	(US$m)	**172**	200	89
Average gold price received	(R/kg)	**908 626**	872 960	779 835
	(US$/oz)	**1 858**	1 763	1 549
Cash operating cost	(Rm)	**1 921**	2 127	853
	(US$m)	**126**	138	54
Production profit	(Rm)	**663**	933	527
	(US$m)	**44**	61	34
Capital expenditure	(Rm)	**34**	39	2
	(US$m)	**2**	3	—
Operating free cash flow[1]	(Rm)	**657**	913	533
	(US$m)	**43**	59	34
Cash operating cost	(R/kg)	**682 694**	594 033	486 792
	(US$/oz)	**1 396**	1 200	967
All-in sustaining cost	(R/kg)	**689 630**	619 692	484 507
	(US$/oz)	**1 410**	1 252	962
Average exchange rate	(R/US$)	**15.21**	15.40	15.66
Safety				
Loss of life		**—**	—	—
Lost-time injury frequency rate	per million hours worked	**—**	—	—
Environment				
Electricity consumption	(GWh)	*****	*	*
Water consumption – primary activities	(Ml)	*****	*	*
Greenhouse gas emissions	(000tCO_2e)	*****	*	*
Intensity data per tonne treated				
– Energy		*****	*	*
– Water		*****	*	*
– Greenhouse gas emissions		*****	*	*
Number of reportable environmental incidents		**—**	—	—

* *Electricity and water consumption and related emission and intensity data for the respective plants at which the waste rock dumps are processed are accounted for as part of the primary operation's environmental results.*

[1] *Operating free cash flow = revenue – cash operating cost – capital expenditure as per operating results.*

Waste rock dumps **continued**

Other salient features	
Status of operation	Processing waste-rock dumps depends on the availability of spare plant capacity and plant requirements for grinding material
Life-of-mine	±1 year

Mineral Reserve estimates at 30 June 2022

	Proved			Probable			Total		
Reserves (metric)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)
	—	—	—	—	—	—	—	—	—
Reserves (imperial)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)
	—	—	—	—	—	—	—	—	—

Overview of operations

Production from processing surface rock dumps, situated across Harmony's operations, depends entirely on the availability of spare mill capacity at the various operational plants. Waste and waste rock dump deliveries to Kusasalethu plant (near the border of Gauteng and North West provinces) supplement mining volumes to secure sufficient backfill to use as support in stoping areas. Waste rock dumps near Orkney (acquired with Moab Khotsong operations) are treated at the Great Noligwa and Mispah plants. Milling of waste rock dumps at the Doornkop plant in Gauteng began in FY18. Waste rock dumps and tailings facilities acquired with Mponeng are treated at Mponeng, Kusasalethu and Savuka plants. Surface ore treated at Kopanang plant was unprofitable and closed during the first quarter of FY22. The plant is currently on care and maintenance.

Operating performance FY22

Tonnes milled for FY22 decreased 11% to 9.0 million tonnes (FY21: 10.1 million tonnes), mainly due to the closure of Kopanang plant. The recovered grade for FY22 decreased to 0.311g/t, 12% lower than the 0.354g/t recorded in FY21. This resulted in lower gold production at 2 814kg (90 471oz) in FY22 and was 21% lower than the 3 580kg (115 099oz) recorded in FY21. Revenue for these operations was 15% lower at R2 612 million (FY21: R3 079 million) partially offset by a higher gold price of R908 626/kg for FY22 (FY21: R872 960/kg).

All-in sustaining cost rose 11% to R689 630/kg (FY21: R619 692/kg). Capital expenditure for FY22 decreased by 13% to R34 million (FY21: R39 million), mainly related to Savuka plant tailings.

Our focus areas in FY23

The priority for FY23 will be to continue safe, profitable production by maintaining costs and improving mining efficiencies.

Papua New Guinea

Hidden Valley

		FY22	FY21	FY20
Number of employees				
– Permanent		**1 478**	1 474	1 434
– Contractors		**713**	754	748
Total		**2 191**	2 228	2 182
Operational				
Volumes milled	(000t) (metric)	**3 229**	3 420	3 906
	(000t) (imperial)	**3 561**	3 772	4 307
Gold produced	(kg)	**3 707**	4 689	4 872
	(oz)	**119 182**	150 755	156 639
Gold sold	(kg)	**3 662**	4 755	4 949
	(oz)	**117 736**	152 876	159 113
Grade	(g/t)	**1.15**	1.37	1.25
	(oz/t)	**0.033**	0.040	0.036
Financial				
Revenue	(Rm)	**3 158**	4 028	3 748
	(US$m)	**208**	262	239
Average gold price received	(R/kg)	**862 505**	847 027	757 348
	(US$/oz)	**1 764**	1 711	1 504
Cash operating cost	(Rm)	**2 193**	1 670	1 696
	(US$m)	**144**	108	108
Production profit	(Rm)	**1 036**	2 309	2 109
	(US$m)	**68**	150	134
Capital expenditure	(Rm)	**1 249**	1 260	959
	(US$m)	**82**	82	61
Operating free cash flow[1]	(Rm)	**(46)**	1 117	871
	(US$m)	**(3)**	73	56
Cash operating cost	(R/kg)	**591 551**	356 233	348 054
	(US$/oz)	**1 210**	719	691
All-in sustaining cost	(R/kg)	**1 007 986**	677 659	562 648
	(US$/oz)	**2 067**	1 383	1 120
Average exchange rate	(R/US$)	**15.21**	15.40	15.66
Safety				
Loss of life		**—**	—	—
Lost-time injury frequency rate	per million hours worked	**0.21**	—	0.68
Environment				
Electricity consumption	(GWh)	**63**	103	120
Water consumption – primary activities	(Ml)	**1 930**	1 983	1 810
Greenhouse gas emissions	(000tCO_2e)	**43**	158	165
Intensity data per tonne treated				
– Energy		**0.02**	0.03	0.04
– Water		**0.60**	0.58	0.46
– Greenhouse gas emissions		**0.053**	0.05	0.04
Number of reportable environmental incidents		**—**	—	7

[1] *Operating free cash flow = revenue – cash operating cost – capital expenditure ± impact of run-of-mine costs as per operating results.*

Hidden Valley continued

Other salient features	
Status of operation	Open-pit mining operation producing gold and silver (by-product)
Life-of-mine	5 years

Mineral Reserve estimates at 30 June 2022

	Proved			Probable			Total		
Reserves (metric)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)
	2.5	0.86	2	16.3	1.78	29	18.8	1.65	31
Reserves (imperial)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)
	2.8	0.025	70	18.0	0.052	930	20.8	0.048	1 001

Overview of operations

The Hidden Valley Mine is an open-pit gold and silver operation in Morobe Province, Papua New Guinea, some 210km north-west of Port Moresby. The mine is located at elevations of 1 700m to 2 800m above sea level in steep mountainous and forested terrain that receives around 3m of rainfall per year. The major gold and silver deposits of Hidden Valley are in the Morobe Granodiorite of the Wau Graben.

Crushed ore is conveyed from the pit via a 5.5km overland pipe conveyor and treated at the Hidden Valley processing plant, using a two-stage crushing circuit followed by a semi-autogenous grinding mill, gravity, counter current decantation/ Merril Crowe circuit for silver and a carbon-in-leach circuit for gold.

Operating performance FY22

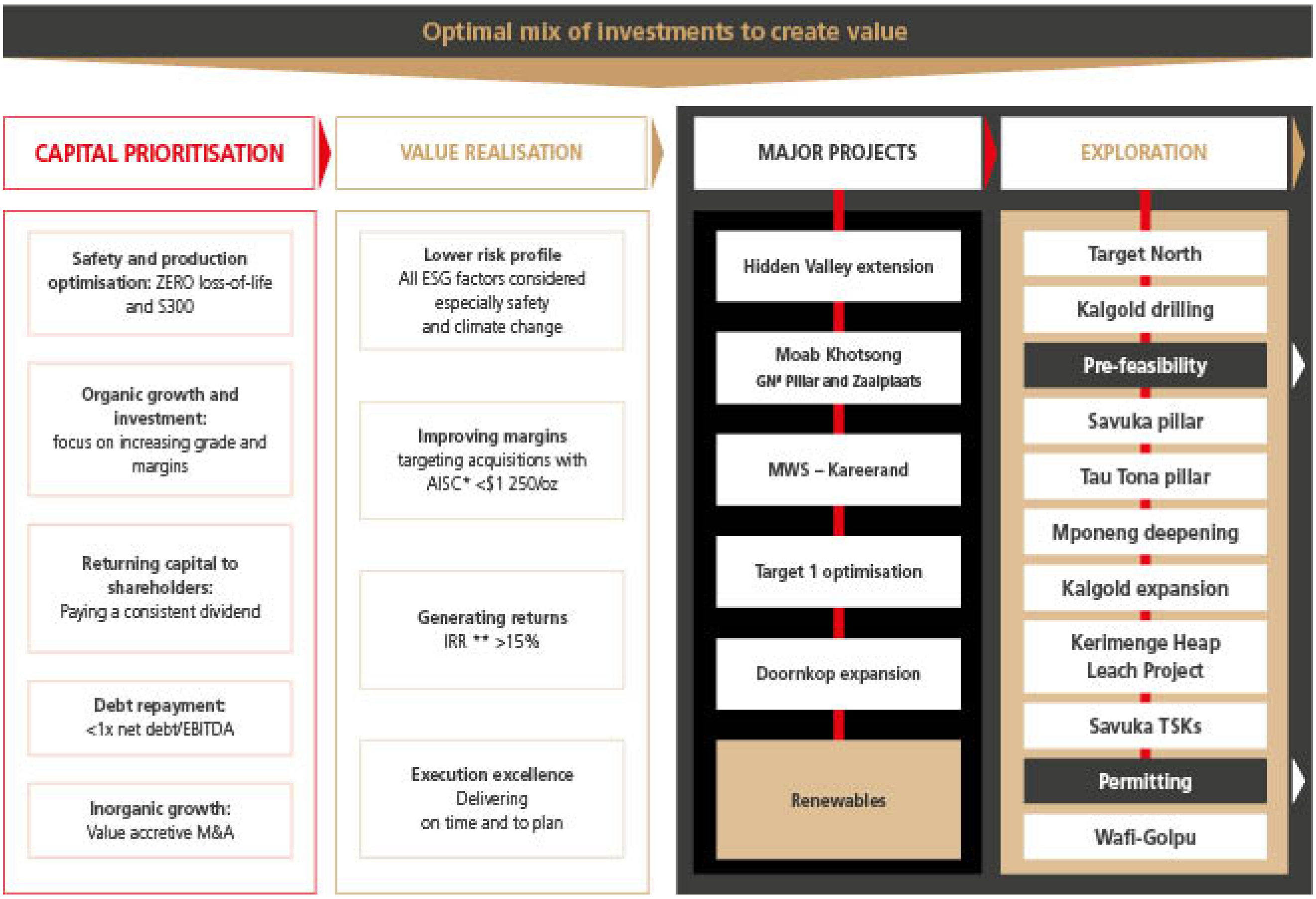
Hidden Valley's safety performance is among the best in the industry, with a sixth consecutive year of zero loss-of-life incidents and nearly 3.5 million loss-of-life free shifts in FY22. This is testament to the culture of zero harm, safety coaching and leadership, as well as the use of critical control management that has been embedded operationally to drive safety.

On 5 January 2022, the overland conveyor belt was damaged, resulting in the plant not being able to process ore for an extended period. Despite the failure, volumes milled for FY22 only decreased by 6% to 3.2 million tonnes (FY21: 3.4 million tonnes). This was mainly due to stockpiles being processed during this time. However, the lower grade ore processed affected the recovered grade, which decreased 16% from 1.37g/t in FY21 to 1.15g/t for FY22. As a result, gold production declined 21% to 3 707kg (119 182oz) (FY21: 4 689kg, 150 755oz) and revenue decreased 22% to R3 158 million (FY21: R4 028 million). The average gold price received increased by 2% to R862 505/kg (FY21: R847 027/kg). The all-in sustaining cost rose 49% to R1 007 986/kg (US$2 067/oz) (FY21: R677 659/kg, US$1 383/oz), also largely impacted by the overland conveyor failure.

Our focus areas in FY23

The key focus in FY23 will be to safely mine the current cutback to produce 152 000oz to 155 000oz.

Exploration and projects



* AISC: All in sustaining cost
** IRR: Internal rate of return
\# GN: Great Noligwa

Exploration

Our exploration strategy is to predominantly pursue brownfields exploration targets close to existing infrastructure. This will drive short to medium-term organic Mineral Reserve replacement and growth to support our current strategy of increasing quality ounces and to mitigate the risk of a depleting Mineral Reserve base.

Key work streams underpinning the FY22 exploration programme include:

- Brownfield exploration at Hidden Valley and Kalgold to optimise existing open-pit operations and extend mine life
- Brownfield exploration at our underground operations in South Africa
- Greenfield exploration at Target North
- Reviewing exploration opportunities as part of our new business strategy.

Target North
The exploration drilling programme from surface advanced and a total of 14 408 metres was drilled. Mal21A drill hole was completed and a deflection programme produced 10 intersections. At a second drill hole (Mal22), the mother hole was completed and deflection drilling commenced. Drilling of the third borehole, Mal23, commenced in November 2021 and the hole advanced to a depth of 2 845 metres. Drilling continues. The Resource model of Target North will be updated once Mal23 is completed.

Kalgold
Resource extension drilling was carried out for the Windmill Zone. A total of 30 boreholes were drilled (4 745 metres of RC drilling). Drilling returned very encouraging initial results. A Windmill resource model update is planned once all assay results are obtained and verified. Exploration aimed at improving understanding of the potential to develop the Kraaipan Greenstone Belt into a new mineralised province with multiple mining centres.

Pre-feasibility

Savuka and Tau Tona pillar
Study will aim to understand if portions within theshaft pillars can be extracted safely and economically to extend the current life-of-mine.

Mponeng deepening
Study will aim to access ground below current infrastructure for the VCR and CLR reefs economically. This is essential to ensure a life-of-mine beyond the current FY28/29 expectation.

Kalgold expansion
A feasibility study was completed. The study has investigated the building of a new 300 000 tonnes per month plant which would see the current plant stopping production. The project, although positive, requires significant capital. Additional resources are required in order to boost return on investment.

Kerimenge Heap Leach Project
Kerimenge prospect – The Kerimenge prospect is located approximately 8km to the east of the Hidden Valley mine. Review of existing drill data commenced with the aim of developing a new resource estimate. Kerimenge is a historic gold deposit outlined by previous explorers that contains components of refractory and free milling oxide gold mineralisation.

Savuka TSFs
Upgrade tailings reclamation to 300 000 tonnes per month.

Permitting

Papua New Guinea

Wafi-Golpu project
The Wafi-Golpu project is in the permitting phase. The proposal for development underpinning the special mining lease 10 (SML 10) application was submitted to the Papua New Guinea Mineral Resources Authority in August 2016 and was updated in March 2018, when the feasibility study update was completed. This update identified deep-sea tailings placement as the tailings management solution for the project. Informed by the feasibility study update, the environment impact statement (EIS) was submitted to the Conservation and Environment Protection Agency in July 2018. Negotiations with the State Negotiating Team regarding the terms and conditions of the grant of SML 10 and its associated tenements, including the terms and conditions of participation in the project by the State and its nominees, commenced in April 2018. In December 2018, the Wafi-Golpu joint venture participants entered into a memorandum of understanding (MoU) with the State of PNG, establishing a framework for the parties to progress the permitting of the Wafi-Golpu project. In May 2019, the permitting process was injuncted pursuant to a stay order given in an action for judicial review of the MoU brought by the governor of the Morobe Province, which injunction remained in place until February 2020 when the State withdrew from the MoU and the judicial review was dismissed on that basis. In December 2020, the Conservation and Environment Protection Agency concluded its assessment of the Wafi-Golpu project’s environment permit application and granted an environment permit approving deep-sea tailings placement as the project’s tailings management method. In March 2021, the governor of Morobe Province and the Morobe Provincial Government commenced legal proceedings seeking judicial review of the grant of the environment permit, and for interim orders to stay the environment permit and restrain the State of PNG from granting a special mining lease for the Wafi-Golpu project. The legal proceedings are continuing, but do not prevent the conduct of the SML 10 negotiations, which resumed in early 2022 and is ongoing. In the interim, no mining has occurred in the project area.

Major projects

We have identified substantial opportunities in our existing portfolio through exploration and brownfield projects which will extend the life of some of our larger and higher-grade assets, adding lower-risk, higher-margin ounces to Harmony's portfolio. Each project brings multiple benefits to Harmony and exceeds all our minimum criteria for allocating capital. We will continue to focus on ensuring all our mines operate safely and optimally and will continue to invest across all our operations to ensure optimal production.

The salient features of our key projects are:

Papua New Guinea

Hidden Valley brownfield exploration

Kerimenge prospect – The Kerimenge prospect is located approximately 8km to the east of the Hidden Valley mine. Review of existing drill data commenced with the aim of developing a new resource estimate. Kerimenge is a historic gold deposit outlined by previous explorers that contains components of refractory and free milling oxide gold mineralisation.

Webiak prospect – Assay results were returned for drilling at the Webiak prospect, located approximately 7.5km north of Hidden Valley. While no significant gold assays were obtained, results highlighted several zones of coincident anomalous silver-arsenic-antimony-mercury element anomalism consistent with the upper parts of a low sulphidation precious metal system.

Hidden Valley extension

This project in Papua New Guinea will be self-funded and will extend the life-of-mine to 2027. We expect the project to deliver approximately 160 000oz to 200 000oz of gold per annum and 2.1Moz to 3.1Moz of silver per annum at a life-of-mine all-in sustaining cost of US$1 150/oz.

South Africa

Zaaiplaats project

Implementation of the project has commenced in October 2021 and the project progressed with limited detailed design requirements. Development and project construction have commenced in order to support project deliverables on the 101 level area. The project developed 1 164m in FY22 to create the platform for the future decline development to commence in FY23.

The project was integrated into the operations business plan for FY23 and continues to show economic value add as a life-extension project.

Moab Khotsong – Great Noligwa shaft pillar extraction

The GN Pillar continued with project execution phase in FY22. The waste development achieved 1 443m and reef development achieved 404m for FY22. Infrastructure rehabilitation upgrades were conducted on the GN shaft surface and underground access routes. Opening up and rehabilitation were conducted on the required development ends on 70, 71 and 73 levels. The over-stoping of 73 level infrastructure was completed in FY22.

MWS – Kareerand

Mine Waste Solutions (MWS) is a reclamation operation in the Stilfontein/Orkney area treating 2.2 million tonnes per month from historical tailings facilities through the MWS plant. The residue is deposited on the existing Kareerand Tailings Storage Facility (TSF). Kareerand TSF is a cyclone facility on a 560ha footprint and based on the current production plan will reach its authorised height of 80 metres in 2025. The existing Kareerand TSF was sized to receive the reprocessed tailings from the MWS sources. The inclusion of additional sources into the MWS business in 2012 required additional deposition facilities. The study to select the suitable site for the replacement TSF was initiated in 2016. The prefeasibility study investigated 7 options and the outcome was to extend the current footprint by 340ha while increasing the height of the combined complex. The project progressed through feasibility study and detailed design.

Target 1 optimisation

A new sub-level open stope method was adopted in BLK12, which will do away with the NRM de-stressing and the use of backfill. Mining will commence from top to bottom in the western margin of EA1, EA2 and EA3 reefs. The top massive stopes will create a de-stressed window which retreats ahead of the lower massive stopes below.

Doornkop expansion

Exploration drilling is set to continue in the coming financial year. Focus will be on targeting areas with limited geological information and those that are potentially high grade in order to increase the geological confidence and payable ounces.

Renewables

In order to achieve the renewable energy targets as set out in the Harmony Energy Efficiency and Climate Change Strategy document, it became necessary to implement a number of renewable energy technologies, including built PV plants, wheeling of wind renewable energy, syngas (or LNG) generated electricity as well as small scale solar PV plants.

Environment

Environmental management and stewardship

We are committed to championing environmental stewardship through pollution prevention, prudent use of natural resources, maximising circular economy and a transition to a low-carbon future. Our actions aim to minimise, mitigate and remediate the harmful impacts of our operations on the environment.

In South Africa, our activities are primarily regulated by the Mineral and Petroleum Resources Development Act and related environmental laws such as the National Environmental Management Act (together with a suite of supporting Acts and Regulations), the National Water Act and the Carbon Tax Act, which aim to mitigate and manage our impacts and promote a low-carbon economy. Legislation in South Africa continues to be updated or amended, most notably the financial provisioning for mitigation and rehabilitation of environmental damage caused by reconnaissance, prospecting, exploration, mining or production operations due to be implemented in September 2023.

In Papua New Guinea, water extraction and waste discharge by mining projects are regulated by the Environment Act 2000, administered by the Conservation and Environment Protection Authority. Extensive legislative review continues with several policy changes under consideration. Of particular relevance to Harmony is the revised mine closure policy and mine closure guidelines, which include provision for financial assurance as security for mine closure costs, and the proposed introduction of a biodiversity offsets policy.

GRI Standards
Prepared in accordance with 3-3, 308-1 and 308-2.

Related SDGs

Our approach

Harmony's environmental strategy, and related policies and procedures, seek to mitigate the impacts of our mining activities by focusing on:

Emissions reduction through **energy efficiency**	Emissions reduction through **improved energy mix**	**Water** conservation	**Environmental leadership** and disclosure	**Pollution prevention** and resource protection	**Land restoration**	**Value creation**	**Environmental** conservation

Our mining activities transform natural capital while avoiding or mitigating any adverse environmental impacts. We therefore approach environmental management and stewardship intending to preserve our natural capital.

Excellent environmental performance is a pillar of our business strategy. We operate in compliance with legislation as a responsible steward of our shared natural resources. The business benefit of mitigating our environmental impact is reduced operating costs and risk exposure while supporting our endeavours to leave a positive post-mining legacy.

Our environmental management and stewardship policy, outlined in Harmony's sustainable development framework, guides us in fulfilling our commitments to:

- Prevent pollution wherever we operate or minimise, mitigate and remediate our harmful impacts on the environment
- Comply with host country environmental laws and regulations
- Promote active partnerships with governments, communities, labour and NGOs for environmental protection and conservation
- Continually improve environmental management systems with:
  - Targets that promote efficient use of resources and reduce environmental exposure
  - Progress reporting to internal and external stakeholders
  - Responsible management of hazardous substances
- Contribute to biodiversity protection and consider ecological values and land use aspects in investment, operational and closure activities
- Engage in transparent dialogue about environmental matters with our communities
- Disclose our environmental KPIs through GRI assurance processes.

Independent auditors conduct detailed assurance of these material KPIs annually.

Operations are guided by technical and performance standards, incorporated into environmental management systems, and implemented according to ISO 14001 (2015). Environmental management programmes include detailed closure plans for each operation within five years of planned closure to expedite beneficial post-mining land use and activities to ensure sustainable community livelihoods.

Harmony's assets range from development to long-life operational, short-life operational, decommissioned and closed operations. Accordingly, we require that long-life assets with a remaining life of more than five years are ISO-certified, and short-life and decommissioned assets are compliant although not certified. Improvements are noted annually.

In addition, we subscribe to global best practice. Although Harmony is not a member of the World Gold Council, we implement the World Gold Council's Responsible Gold Mining Principles applicable to our business.

In line with best practice, we provide environmental awareness training to new South African and Papua New Guinea employees, reinforced by leadership training courses and monthly initiatives.

Environmental strategy

To enhance our delivery of the SDGs, in alignment with Harmony's strategic priorities, we have outlined our key environmental deliverables with associated measurements and targets.

Capitals affected

Natural capital

SDGs impacted

12 Responsible consumption and production, 13 Climate action, 14 Life below water, 15 Life on land, 17 Partnerships for the goals

Key deliverables

- Secure/maintain licence to operate
- Enhance credibility
- Pollution prevention
- Reduce and/or diversify energy and natural resource consumption
- Environmental footprint reduction.

Responsible stewardship: suppliers and market

Considering environmental impacts in our supply chain

Suppliers

To comply with South Africa's National Environmental Management Act, each supplier must adhere to our environmental management policies and standards. We thus ensure our suppliers observe laws and regulations governing issues like water and air quality, and employ reasonable measures to avoid environmental pollution and degradation.

As our extensive supply chain indirectly contributes to our scope 3 greenhouse gas emissions, we engage with our top 20 suppliers about their carbon and water footprints to reduce their emissions and associated climate change.

Market

Rand Refinery, in which Harmony has a 10% stake, is committed to excellent environmental performance and compliance as well as internationally accepted responsible sourcing (specifically the London Bullion Market Association's responsible gold guidance and OECD due diligence guidance for responsible supply chains of minerals from conflict-affected and high-risk areas).

Rand Refinery smelts, evaluates, refines and fabricates the gold we produce for investment and retail clients. One of our executive directors is also a non-executive director and chair of Rand Refinery's social and ethics committee. Our board therefore oversees and influences Rand Refinery's ESG strategy and performance.

For Harmony, as a company with a cradle-to-grave approach to environmental management, sound practice in our downstream value chain is significant for us to deliver gold ethically and responsibly.

The certified gold chain of custody is independently audited as independent bodies and legislation require.

Setting environmental targets

We finalised new environmental targets to be implemented from FY23 to FY27. Our baseline group environmental performance targets focus on our strategic imperatives and material risks, including energy, water, land and biodiversity. Our five-year baseline target, which ended during this period, will be followed by a new set of five-year targets ending in FY27. These targets are aligned with our adoption of science-based targets to achieve net zero emissions by 2045.

In FY21, data for our newly acquired Mponeng and Mine Waste Solutions assets was recorded over nine months. We recorded a full 12 months for these and other assets in FY22. Therefore, while consumption increased, we saw an improvement in intensities and efficiencies and achieved our targets.

Group environmental targets

KPI	Five-year baseline target (FY18 to FY22) Target	Cumulative actual	Year on year Target	Actual	Achieved
Energy					
Reduce absolute electricity consumption (% MWh)	5	(64)	**1**	**(30)**	×
Electricity intensity (% kWh/tonne treated)	5	41	**1**	**33**	✓
Total carbon emission intensity reduction (% tCO_2/tonne treated)	5	32	**1**	**34**	✓
Diesel intensity (% kl/tonne treated)	2	42	**0.4**	**50**	✓
Petrol intensity (% kl/tonne treated)	2	43	**0.4**	**39**	✓
Energy intensity (% GJ/tonne treated)	5	43	**1**	**34**	✓
Water					
Reduce water used for primary activities (% m^3)	7	(84)	**1.4**	**(54)**	×
Water intensity (% m^3/tonne treated)	7	34	**1.4**	**21**	✓
Water recycling (% increase)	6	116	**1.2**	**38**	✓
Waste					
Non-hazardous waste recycled (% increase)[1]	10	37	**2**	**52**	✓
Land and biodiversity					
Reduce impacted land footprint (%)	3	n/a	**0.6**	**0.03**	×
Environmental fines	—	—	**—**	**—**	✓
Implement biodiversity action plans (%)	100	70	**20**	**70**	✓

[1] *Timber, steel and plastic.*

Consumption KPIs

KPI	Five-year target based on consumption (FY18 to FY22) Target	Actual	Achieved	Year five (FY22) Target	Actual	Achieved
Energy						
Renewable energy (% of total electricity consumption)[1]	10	**3**	×	**2**	**3**	✓
Waste						
Hydrocarbon recycling[2] (% increase of total hydrocarbon consumption)	80	**24**	×	**16**	**3**	×

[1] *Sources that produce electricity for Harmony's consumption. Renewable sources are based on installed capacity.*
[2] *Hydraulic oil and lubricants.*

Mitigating environmental risks

Our environmental risk matrix, included in our corporate risk register, underscores the importance of our natural capital and environmental management strategy. This matrix details the most significant threats to our business, employees and communities over the medium to long term. Related risks could affect future operating costs, infrastructure requirements, operations and operating conditions, host communities and the supply chain.

Material climate-related risks, which could have substantive financial impacts, include safety (due to excessive heat and heavy rainfall), regulatory changes (such as South Africa's Carbon Tax Act and the Climate Change (Management) Act in Papua New Guinea) and major infrastructure incidents such as those caused by flash flooding.

Environmental-related lost production days have a substantial financial impact, equivalent to approximately R10 million per day at a typical Harmony operation. Additionally, we estimate the impact on our business from the carbon tax will be R300 million to R500 million by 2030. There are ongoing conversations with national treasury as it relates to their plans for carbon tax rates beyond 2026.

We are de-risking the business through our ESG-linked financial transactions concluded in FY22. The key performance indicators (KPIs) of this sustainability-linked funding focus on energy and associated greenhouse gas emissions and water. These are two major environmental concerns for Harmony and South Africa.

The KPIs reflect an absolute reduction in greenhouse gas (GHG) emissions, an increase in renewable energy consumption as a percentage of the total energy mix and reduction in absolute potable water consumption. These KPIs also address four of the six material environmental sustainability issues in the metals and mining industry according to the Sustainability Accounting Standards Board (SASB) materiality map. The six material issues identified by the SASB include: GHG emissions, air quality, energy management, water and wastewater management, waste and hazardous materials management, and ecological impacts.

Our environmental risk matrix shows how these KPIs address risks with a high business impact and a medium to high sustainability impact.

Another consideration in our environmental risk matrix is land degradation as a significant contributor to climate change. Land degradation generally means poorer vegetation cover, which impairs the ability of plants to absorb carbon dioxide, increases the likelihood of soil erosion during rain and dust storms (particularly detrimental to high arable land) and impacts biodiversity.

Legislative framework

The legislative frameworks regulating the mining industry in South Africa and Papua New Guinea remain in flux with several new and amended bills and draft policies before the respective parliaments. The pandemic delayed promulgation while regulatory uncertainty continued in both countries, particularly regarding managing and reporting environmental impacts in and around mining operations. The associated implications for our business are outlined below.

South Africa

- **Financial provision regulations**
  The mining industry continues to engage with the Department of Environment, Forestry and Fisheries on the publication of the financial provisioning for mitigation and rehabilitation of environmental damage caused by reconnaissance, prospecting, exploration, mining or production operations. Implementation of these regulations was deferred to September 2023 to allow for draft reviews. We remain concerned that some of the implications for the industry, such as the inclusion of VAT, remain unaddressed. Harmony will present comments to the regulator.

- **Carbon tax**
  In February 2022, the Minister of Finance commented on proposed changes to the Carbon Tax Act. Some of these comments were published in draft regulations that realise a substantial increase in the base rate of the levy on emitted emissions through carbon tax. These costs would increase in phase 1 of carbon tax implementation, which ceases in December 2025, before a stricter new tax regime becomes applicable in 2026. Harmony will engage with National Treasury to motivate a lower tax rate.

Papua New Guinea

Policy changes

While the principal environmental legislation in Papua New Guinea (the Environment Act 2000) remains applicable, several national policy changes are being considered with provisions for imposing additional taxes and levies on resource industries:

- **Mine closure**
  Revised mine closure policy and mine closure guidelines include provision for financial assurance as security for closure costs.

- **Climate change taxes**
  Fees to support the country's Climate Change (Management) Act include taxes on carbon in fuel products and a green fee (departure tax applied to non-residents exiting the country). We are taxed on carbon in fuel through our bulk fuel supplier at a nominal rate per litre.

- **Protected Areas Bill**
  In March 2022, the latest draft of the proposed Protected Areas Bill was tabled in the Papua New Guinea parliament. It aims to:
  - provide for the conservation and replenishment of the environment, biodiversity, the land and its sacred, scenic and historical qualities
  - regulate the management of a protected area network, protected area policies and protected areas.

Concerns about the bill, ongoing since the first draft was released in 2016, are addressed with the regulator by the Papua New Guinea Chamber of Mines and Petroleum working group, comprising industry representatives and their legal teams. Limited progress was made in 2022 on addressing these concerns and future engagement remains critical.
The bill includes the introduction of a biodiversity offsets policy, including a mechanism for associated payments to support national biodiversity incentives. Beyond this, financing for protected areas is unclear and further definition is required on proposed funding mechanisms.

Our response to South Africa's carbon tax requirement

Accounting for our direct and indirect carbon tax liability

In South Africa, the carbon tax is levied on operations that exceed the regulated emissions threshold. Operations that exceed the threshold must also report annual emissions to the Department of Environment, Forestry and Fisheries.

Harmony's currently reported scope 1 GHG emissions liable for the carbon tax are derived from:
- Combustion of diesel and jet fuel by generators
- Fuel combustion by boilers
- Railway diesel combustion
- Wastewater treatment and managed waste disposal sites.

Phased approach to carbon tax and allowances

The carbon tax is being implemented in phases. The current phase 1 is due to end in 2025 when tax-free allowances will remain applicable in calculating the carbon tax liability to ease implementation. Tax-free allowances will then change and fall away over time. Basic tax-free allowances (60%) will be reduced and will likely completely fall away from 2026 to 2030. In phase 2, the carbon offsets allowance is due to increase by 5%, the trade exposure allowance from the current 10% and the carbon budget allowance could fall away. Changes to the tax-free allowances will affect the direct carbon tax liability and therefore the pass-through from Eskom.

Decarbonisation strategy

Our carbon tax considerations align with the successful implementation of our decarbonisation strategy (page 54). This considers the life-of-mine and energy consumption of each operation, based on audited figures, as well as implementation of energy efficiency projects, implementation of solar renewable energy, wheeling and liquefied natural gas (LNG) energy sources The decarbonisation strategy will address carbon taxes and address greenhouse gas emissions, energy security and lower energy costs.

Our focus areas and performance in FY22

We spent R328 million (US$21.6 million) (FY21: R281 million/US$18 million) on our group environmental portfolio in FY22.

Annual expenditure on our environmental portfolio	FY22 Rm	FY22 US$m	FY21 Rm	FY21 US$m	FY20 Rm	FY20 US$m
South Africa						
Implementation of environmental control	**249**	**16**	198	13	64	4
Mine rehabilitation projects	**52**	**4**	49	3	62	4
Total	**301**	**20**	247	16	126	8
Papua New Guinea						
Implementation of environmental control	**27**	**2**	34	2	32	2
Harmony total	**328**	**22**	281	18	158	10

Material used	FY22	FY21	FY20	FY19	FY18
Tonnes treated (000t)	**53 801**	49 253	25 429	25 980	22 441

Compliance and certification

South Africa	Papua New Guinea
Compliance No directives or fines were issued by regulators in FY22. **Certification** • 13 of our South African operations are ISO 14001 compliant (including Mponeng plants and Mine Waste Solutions) • Bambanani and Unisel are not certified as both are in closure • The Central and Saaiplaas plants were certified in FY22 • We expect recertification of the Mponeng shaft in FY23.	**Compliance** While Hidden Valley did not have formal regulatory inspections or audits during the year, the mine hosted two representatives from the Conservation and Environment Protection Authority in September 2021 via a helicopter tour (as per Covid-19 protocols that restricted movement of people to the operation) following an extended absence due to the pandemic. The regulator found the site infrastructure performance and the current monitoring programme within receiving catchments satisfactory. Hidden Valley continues to operate in accordance with the conditions of its environmental permit, last amended in April 2021, and the supporting environmental management plan. **Certification** Hidden Valley's environmental management plan is aligned with the ISO 14001 standard.

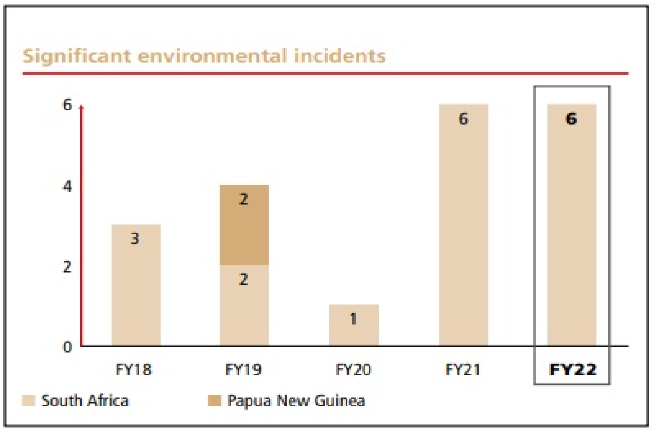
Environmental incidents

Harmony reports environmental incidents in terms of a risk matrix that evaluates the severity of the incident against the financial and reputational implications for the group. It reflects the levels of severity, incident descriptions, financial and legal implications, and aligns with Harmony's enterprise risk matrix.

South Africa experienced more frequent water-related incidents due to exceptionally high rainfall in FY22. All incidents were of a very short duration and have been corrected immediately with limited impact to receiving environments.

Harmony recorded six level 3 (moderate) reportable environmental incidents in South Africa during the year and zero in Papua New Guinea. Appropriate remedial action was taken in all cases.

Severity level	Mitigation costs	Environmental impact	Reputation impact	Legal impact
5	>R10 million	Irreversible damage to habitat or ecosystem	International condemnation	Potential director liability
4	<R10 million	Significant impact on habitat or ecosystem	National and international concern (NGO involved)	Very significant fines or prosecutions
3	<R5 million	Longer-term impacts and ecosystem compromised	Adverse media attention (locally and nationally)	Breach of legislation and likely consequences from the regulator
2	<R1 million	Moderate short-term effects but do not affect ecosystem function	Unresolved local complaints and possible local media attention	Minor breach of legislation
1	<R500 000	Localised affected area of low impact	Local complaints	No major breaches of legislation



Reportable environmental incidents in South Africa are summarised below.

South Africa		
Location	**Incident level and description**	**Environmental impact**
Kalgold	Level 3: Heavy rainfall of 130mm was received in the space of three days in January 2022. The water catchment area was saturated and flowed down the Morokwa stream. Relevant dams were filled to capacity. The stream burst its banks, broke through the river diversion running into the D-Zone Pit, where tailings from the plant is being deposited.	No environmental damage or impact to downstream users was recorded. The breached berm walls for the river diversion have since been repaired.
Mine Waste Solutions	Level 3: Heavy rainfall was received resulting in Bokkamp Dam containment reaching near capacity. The theft of pipelines and electrical cabling that usually pumps water to a different containment facility directing process water worsened the overflow to Bokkamp Dam and subsequently limited flow reached the Vaal River. The overflow incident in February was repeated in April 2022, thus the incident was recorded on two occasions.	Our impact was monitored from a point source where higher sulphate levels and total dissolved solids were detected. However, no detrimental impact could be detected on the receiving environment based on laboratory samples taken. The stolen pipelines have been replaced.
Mine Waste Solutions	Level 3: Heavy rainfall was recorded during this period and process water was contained in the Queen Mary Dam. The containment facility from a separately owned gold plant in the vicinity overflowed, thus resulting in discharge into the Schoon Stream.	The impact was monitored from the point source as well as within the stream. Water quality results indicated higher levels of total dissolved solids within the discharge. Lower sample results indicated no detrimental impacts to downstream users.

Our focus areas in FY23

In South Africa, we are planning for electricity tariff increases due to the carbon tax while implementing our decarbonisation plan. We will also advance water optimisation by increasing recycling to decrease our reliance on external potable water supply. At the same time, our land management systems will focus on ongoing rehabilitation of our tailings storage facilities and implementation of our biodiversity programme.

In Papua New Guinea, we will continue focusing on responsible waste and water management, and pursue involvement in industry working groups supporting legislative reform.

Land rehabilitation and management

We offset the impact of our mining activities by restoring sustainable value to land disturbed by our operations with respect for local ecosystems and people.

Our rehabilitation strategy in South Africa aims to reduce our environmental footprint through concurrent and final rehabilitation. We honour the commitments of our environmental management programme, reduce our environmental liability and mitigate the risk of illegal mining activities by, where feasible, refurbishing infrastructure for alternative use by communities and by demolition and rehabilitation of decommissioned infrastructure.

In Papua New Guinea, most disturbed areas at our Hidden Valley mine remain actively used in support of ongoing operations. Progressive rehabilitation activities are therefore predominantly intended to stabilise exposed areas, prevent ground movement near critical infrastructure and limit off-site sediment transportation.

GRI Standards

Prepared in accordance with 3-3 and 304-3.

Related SDGs

15 LIFE ON LAND

Our approach

The main objectives of our group's rehabilitation strategy include:

- Set aside sufficient funds to cover closure and rehabilitation
- Conduct Closure Cost Assessments on an annual basis and update the Closure and Rehabilitation Plans
- Rehabilitation of decommissioned mine infrastructure to reduce the mine-impacted footprint
- Where possible, liberating land for alternative land uses
- Using land for carbon removal, offsets and biodiversity conservation and ecosystem function, where feasible, and to cultivate crops for food security
- Promoting job creation and environmental skills development among youth and women
- Engaging with the community in closure planning and enabling communities to be involved in greening for the future of their environment
- Focus on biodiversity management and development through rehabilitation.

REHABILITATION STRATEGY

Responsible stewardship

- Responsible environmental impact management is a priority:
  - Demolition and rehabilitation of mining impacts
  - Carbon sink/ offsets
  - Biodiversity offsets
- Enhance socio-economic benefits for host communities through holistic closure planning
- Strive to create and share value through resource inputs (human, financial, natural, manufactured, and social and relationship capitals)
- Responsibility to host communities extends beyond direct employment
- Adoption of SDGs.

Alternative energy mix climate mitigation

- Using rehabilitated mine land for generating alternative energy sources and reducing carbon emissions
- Planting vegetation to create a carbon sink.

Vegetation management

Identifying and mapping sensitive and protected plant species and environments through our environmental impact assessment processes.

Developing site specific Biodiversity Action Plans for all our assets.

Socio-economic benefits

- Developing local host community entrepreneurs in rehabilitation and restoration
- Social licence to operate (corporate citizenship) through job creation
- Assisting with the development of township economies and food security at local level

Socio-economic development focuses on

- Uplifting communities
- Infrastructure
- Agriculture
- Educating, upskilling and enabling youth.

Final land use

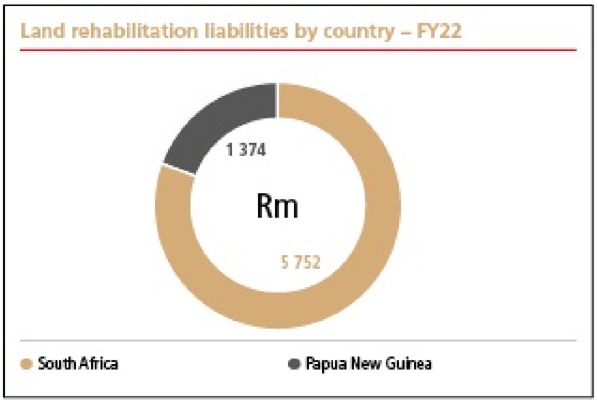
- Link to agri business, agri-processing and food security
- Woodlots for carbon removal
- Conservation and biodiversity protection
- Composting and converting land to agri quality
- Establish modified natural ecosystems in remote mining areas.

Our focus areas and performance in FY22

Our undiscounted value of the land rehabilitation liabilities carried on Harmony's balance sheet, amounted to R7.1 billion (US$438.0 million) in FY22. The increase was due to higher rates, as a result of increases in fuel prices and inflation, and continued mining operations that increase the footprint of our liabilities.

Land rehabilitation liabilities (Rm)	FY22	FY21	FY20	FY19	FY18
South Africa	**5 752**	5 559[1]	3 038	2 884	2 919
Papua New Guinea	**1 374**	1 306	1 228	1 039	1 336
Group	**7 126**	6 865	4 226	3 923	4 255
Total US$m	**438**	438	244	278	308

[1] *Following acquisition of Mponeng and related assets.*



South Africa

The total land under our management is 92 255ha. Of this, 13 925ha is affected by our mining-related infrastructure. In FY22, we rehabilitated 31.8ha of the planned 117ha.

Over more than a decade, Harmony's rehabilitation of decommissioned shafts and hostels has mitigated the impacts of illegal mining, particularly in the Free State.

In FY22, we rehabilitated two plant footprints, and decommissioned and closed shafts as well as one hostel. We also sealed and capped shaft barrels for safety purposes, and to deter illegal mining access. Before rehabilitation work continued, the regulator had to approve various safety-related aspects for deposition into the shaft barrel. In addition we have started the rehabilitation of our decommissioned tailings in the Free State with plans to also expand this initiative to the North West.

To date, we have demolished 46 shafts while rehabilitating broader footprints (former plants and ancillary service infrastructure).

Rehabilitation and socio-economic development in South Africa

Integrating our environmental stewardship and socio-economic development imperatives

We integrate our environmental stewardship and socio-economic development imperatives in rehabilitating and reclaiming land, tailings dams and waste-rock dumps by:

- Seeking opportunities to make unused rock dumps available to entrepreneurs after receiving relevant radiation clearances
- Donating dumps with commercial quantities of recoverable gold to local communities in line with our shared ownership principle
- Conducting extensive due diligence of our community partners and providing protection against criminal groups involved in illegal mining
- Ensuring the success of these small businesses by assisting in building their technical and financial capacity.

It remains incumbent on us to contain our impacted footprint and seek responsible practices for avoiding, mitigating and remediating negative impacts as we aim to create positive benefits for healthy ecosystems and societies. The rehabilitation programme has already created 200 jobs, supported the development of numerous local small businesses and decreased illegal mining activity in the Free State. As a result, safety and security have also improved for employees and communities.

The next phase in the strategy is to use mine-impacted land to support the agribusiness sector for small-scale and commercial production.

Our decarbonisation plan also includes planting of thousands of trees on our tailings facilities. This has been costed and we are preparing to establish a nursery that will employ local people to grow and plant the trees. We will thus rehabilitate land and reduce our emissions by 2045.

Other socio-economic development projects underway on rehabilitated land include:

- The labour-intensive alien and invasive vegetation removal project near Kusasalethu and Doornkop (this project, which began in 2016 at Kusasalethu, is rolling out in phases)
- Establishing commercially viable agricultural projects as well as subsistence agriculture in Gauteng, Carletonville and Matlosana.

Reclamation of waste-rock dumps is progressing well at Kusasalethu, Doornkop, Moab Khotsong and several sites at our Free State operations. Waste rock is considered a resource by the aggregate industry. Additionally, we are attempting to support and assist a junior and local community grouping to participate in this sector. This approach is growing in Welkom and initiatives are being finalised in Klerksdorp.

When a feasibility study showed that the cost of repurposing old mine-site buildings into employee accommodation in the Free State was prohibitively expensive, Harmony began seeking empty or serviced stands within municipal proclaimed land. This investigation is due to be completed at the end of August 2022, focusing on civil and electrical engineering, foundation and architectural designs, and associated development costs, including the cost per unit.

Our focus areas in FY23

The group will be closing the gap in compliance in our biodiversity action plans and implementation of carbon offset program.

In Papua New Guinea, we propose to maintain our rehabilitation program to safeguard infrastructure and advance our understanding and readiness for eventual mine closure.

In South Africa, we continue to rehabilitate, with specific focus being given towards growing rehabilitation of our decommissioned tailings facilities.

Climate change, energy and emissions management

Our decarbonisation strategy is taking us towards a sustainable future by reducing our consumption of fossil fuel-based energy and related costs.

Energy consumption is a significant financial and environmental concern for Harmony.

Mining and extractive processes are highly energy intensive, with a considerable impact on our operating costs:
- Our assets are predominantly deep underground mining operations, which are more energy intensive than surface-level mines, and in FY22 accounted for 97% of the group's total electricity consumption and 19% of operating expenditure.

In South Africa, our dependence on the country's coal-based electricity grid means the energy we consume is mainly generated by fossil fuels, a contributing factor to GHG emissions and climate change, and that carbon tax liabilities and electricity supply security are material risks. As electricity accounts for around 18% of our operating costs, incremental cost increases by Eskom add millions of rand to our operating cost.

In Papua New Guinea, our Hidden Valley Mine sources power from the Ramu grid, while also maintaining backup diesel generators on site to address supply shortfall. The primary generator for the Ramu grid system is the Ramu hydropower plant, which experienced a number of disruptions to output in FY22. Hidden Valley is presently exploring opportunities to enhance the reliability of hydroelectric power supply to the mine via direct connection to the Bauine hydro power station located nearby.

GRI Standards

Prepared in accordance with 3-3, 302-1, 302-2, 302-3, 302-4, 302-5, 305-1, 305-2, 305-3, 305-4, 305-5 and 305-6.

Related SDGs

Our approach

Harmony's policies and strategies acknowledge that climate change will impact the gold mining sector, in terms of physical environmental changes and the socio-economic mobilisation necessary to achieve the United Nations Framework Convention on Climate Change (UNFCCC) objectives, over the coming decades. We are pursuing the Paris Agreement's goal to limit global warming to 1.5°C by the end of the century with science-based targets, approved by our board and verified by the Science Based Targets initiative, and key performance indicators (KPIs) linked to our sustainability performance targets.

The group's policy on energy efficiency and climate change mitigation is responsive to our current context, and is based on the following commitments:
- Optimising electrical energy and carbon resource consumption to enhance efficiency in operations while identifying opportunities to improve the energy mix
- Improving energy efficiency through effective energy management
- Reducing GHG emissions, measuring progress and reporting results
- Developing appropriate responses to climate change through implementation of renewable energy and mitigation
- Encouraging employees to continuously conserve energy at work and home
- Collaborating with government in associated policies and strategies.

Meeting the requirements of our sustainability-linked loan facilities

Demonstrating ESG in action

The energy-related KPIs included in our sustainability-linked facilities (outlined on page 58) are:
- Absolute reduction in scope 1 and 2 GHG emissions from an FY21 baseline of 4 896 000 tonnes to 4 074 000 tonnes carbon dioxide equivalent (CO_2e) by FY25
- Increase in renewable energy consumption as a percentage of the total energy mix from 0% in FY21 to 20% by FY25.

An independent service provider applying the sustainability-linked loan principles, issued by the Loan Market Association, among others, verified the credibility of these targets. Upon meeting the KPIs, Harmony will receive meaningful interest savings. If we miss targets, penalties will be payable.

Climate change reporting

Transparent disclosure of quantitative and qualitative financial and non-financial data on our journey to a low-carbon economy

In line with global best practice, we publish a separate report on our carbon-related performance, and associated risks, concerns and opportunities. Available on our website at **www.har.co.za**, this report aligns with TCFD requirements. We continue to submit annual water performance reports to CDP.

The TCFD, the South African carbon tax and related updates from National Treasury are incorporated into our financial modelling to enhance our understanding of the likely impact of climate change on our business. We also include carbon pricing in our strategic and operational plans.

Decarbonisation strategy

Acknowledging the global shift towards a low-carbon economy, our decarbonisation strategy is an important aspect of our environmental management approach.

Our asset portfolio is characterised by high energy use. We therefore focus on transforming these assets into low-carbon consumers by:

- Advancing our surface reclamation programme to produce ounces at lower energy intensity, and growing our low-carbon metals and minerals portfolio
- Decommissioning energy-intensive and low-margin assets to avoid generating high emissions for low returns
- Driving efficiency programmes
- Enhancing our energy portfolio mix with a strong pipeline of renewable and low-carbon energy sources (page 58).

In the short to medium term, we remain focused on renewable energy sources so that, in addition to our copper and silver output necessary for renewable electrification and transportation, Harmony is well positioned to support the transition to a clean energy future.

Our progress and plans are summarised below.

Decarbonising Harmony

Energy efficiency

2016 – 2022
- Reduction: 1.3TWh
- Investment: R181 million
- Cumulative savings: R1.3 billion and 1.5Mt of CO_2.

2023 – 2026
- Planned reduction: 1.5% per annum
- Estimated investment: R44 million per annum
- Estimated savings: R85 million per annum.

Adaptation

- Carbon removal
- Agriculture and forestation
- Water beneficiation.

Rebalancing our asset portfolio

2008 – 2020
- Closed energy-intensive shafts.

2019 – 2023
- Closed further deep-level and energy-intensive shafts
- Increased portfolio of surface assets
- Papua New Guinea:
  - Hidden Valley secures increased supply of hydropower.

Energy mix

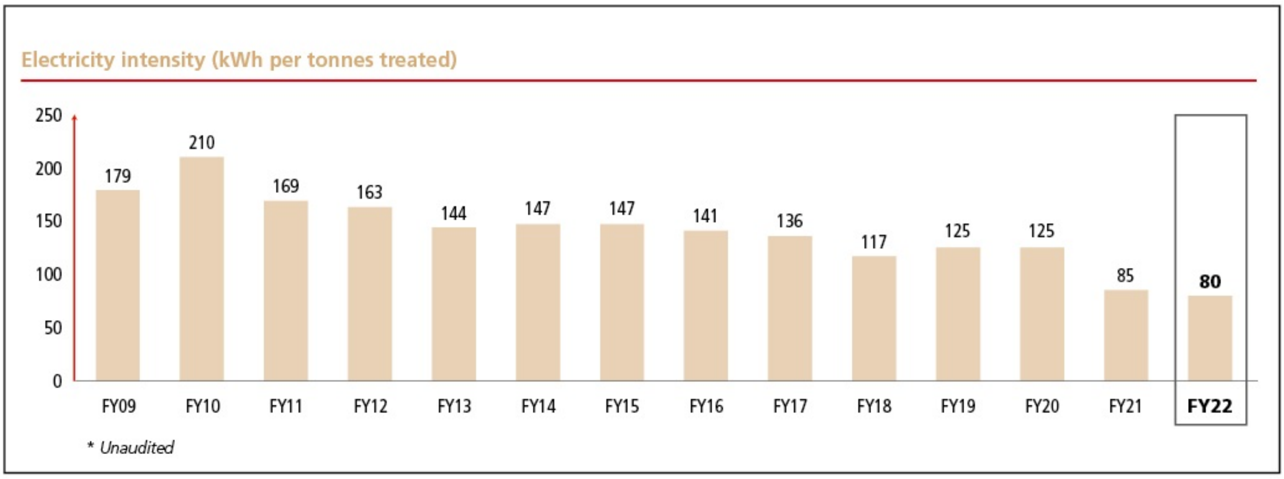
Renewable energy roll-out plan

Harmony is implementing various initiatives to reduce GHG emissions in line with our target to be net zero by 2045. This phased strategy (page 58) includes:
- Solar PV projects
- Wheeling in wind energy and hydropower
- Energy from other sources including, for example, LNG
- Energy efficiency projects.

Our focus areas and performance in FY22

We reduced our electricity intensity by 42% over the past seven years through our commitments to optimising energy efficiency and climate change mitigation. The graph below illustrates the success of our energy management programme, supported by our service provider, ETA Operations. Since 2016, we have generated cumulative savings of around R1.3 billion in energy costs and reduced CO_2 emissions by 1.5 million tonnes.

As illustrated below, the acquisition of Mponeng and related assets significantly positively impacted our performance. While Mponeng is a deep-level mine, Mine Waste Solutions is a high-volume surface tailings retreatment operation, which is less energy intensive and helps to eliminate and process surface sources. The combined result is a decrease in energy intensity per tonne of ore treated.



Improving energy efficiency by reducing consumption

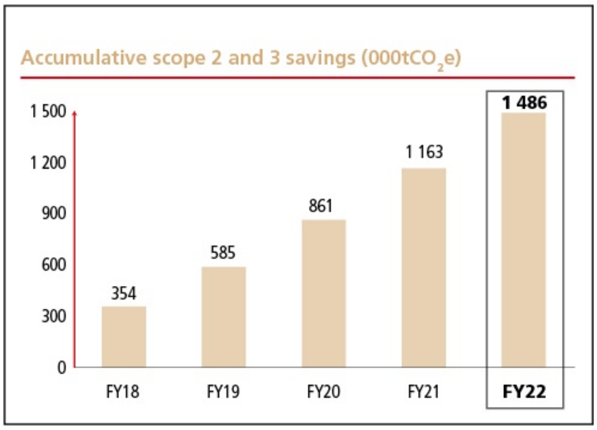
The group improved efficiencies by reducing energy and fuel consumption during the year. Energy consumption increased by 6% due to the acquisitions and recording a 12 month consumption for Mponeng and Mine Waste Solutions while our total carbon emissions intensity increased by 1% primarily due to marginal increases in electricity purchased for Mponeng and Mine Waste Solutions and Hidden Valley's increased diesel consumption.

Energy consumption (000MWh)[1,3]	FY22	FY21	FY20	FY19	FY18
Electricity	**4 253**	4 123	3 171	3 326	2 518
Diesel[4]	**605**	448	462	488	486
Other sources (petrol and heating oil)[2]	**66**	60	5	5	3
Total	**4 924**	4 631	3 638	3 819	3 007
Energy consumption intensity (MWh per tonnes treated)	**0.09**	0.09	0.14	0.15	0.13

[1] *Annual DEFRA conversion factors used for PNG and Technical Guidelines for monitoring, reporting and verification of GHG emissions by industry for SA.*
[2] *Heating oil reported from FY21.*
[3] *Acquisition of Mponeng and Mine Waste Solutions operations from October 2020 (only 9 months reporting in FY21).*
[4] *PNG internal energy consumption is accounted for under diesel.*

Electricity purchased (000MWh)[3]	FY22	FY21	FY20	FY19	FY18
South Africa[1,2]	**4 190**	4 020	3 051	3 209	2 457
Papua New Guinea[4]	**63**	103	120	117	59
Total	**4 253**	4 123	3 171	3 326	2 518
Consumption intensity (MWh per tonnes treated)	**0.08**	0.08	0.12	0.13	0.11

[1] *Increase in energy consumption driven by Harmony's acquisition of Moab Khotsong in FY19.*
[2] *Acquisition of Mponeng and Mine Waste Solutions operations from October 2020 (only 9 months reporting in FY21).*
[3] *Operational excellence programme started May 2016.*
[4] *PNG values updated to only reflect electricity purchase from bulk supplier.*



South Africa

Harmony consumes energy as electricity purchased from the state-owned power utility Eskom and generated by coal-fired power stations in South Africa. From 2005 to 2022, Eskom increased electricity tariffs by 2 213% while inflation over this period increased by 125%.

The tariff increase in FY22 was 9.61%, which translates to around R540 million in additional operating costs. We therefore focus on reducing our electricity consumption and dependence on Eskom's energy.

While we are pursuing renewable energy options to reduce our dependence on fossil fuels and to improve margins (page 58), we are also keenly aware of the need to be far more efficient in consuming energy.

Our energy efficiency initiatives focus on mine cooling, compressed air, water management and ventilation. Total savings from these initiatives were R365 million for FY22 of which R22 million originated from new projects (difference reflects ongoing savings from earlier projects). To date, we have implemented over 200 energy-efficiency initiatives at our operations, generating cumulative savings of around R1.3 billion since 2016.

Energy management projects producing the most significant annual savings include:

South Africa: Energy-saving projects in FY22

Operation	Project description	Description	Annual cost savings
Kusasalethu	Optimise refrigeration and dewatering control	Optimisation of dewatering and refrigeration control and improved utilisation of available dam capacities	R11.6 million
	Optimise compressor control	Optimisation of underground users (leak fixing and OAN valve control)	R4 million
	Deelkraal fan optimisation	Improved ventilation supply through main fan control	R4.8 million
Moab Khotsong	Optimise control of refrigeration units	Improved control and utilisation of Moab refrigeration equipment, extending ice melt through improved dam utilisation	R7.4 million
	IGVs on main fans	IGV control implemented to improve ventilation supply	R7 million
Great Noligwa	IGVs on main fans	IGV control implemented to improve ventilation supply	R1 million
Mponeng	Optimise dewatering control	Implementation of a complete pumping load shift out of Eskom's peak time-of-use periods	R11.4 million
	Optimise refrigeration control	Improved TOU control of surface refrigeration units	R1.7 million
Masimong	Ventilation sealing plan and IGVs on main fans	Sealing off inactive mining areas and control IGVs to accurately match demand requirements.	R1.7 million
	Optimise refrigeration control	Improved TOU control of surface refrigeration units	R1.7 million
Tshepong	Optimise refrigeration and dewatering control	Improved time-of-use control on refrigeration and pumping systems. Load shifts on refrigeration units without influencing service delivery.	R1.3 million
Savuka, Covalent, Eland and Deelkraal	Critical Peak Pricing (CPP) programme	Participated in Eskom's Critical Peak Pricing (CPP) programme.	R6.7 million
All Operations	Power Factor Correction	Improved control and monitoring of power factor correction banks at the operations.	R2.8 million

Papua New Guinea

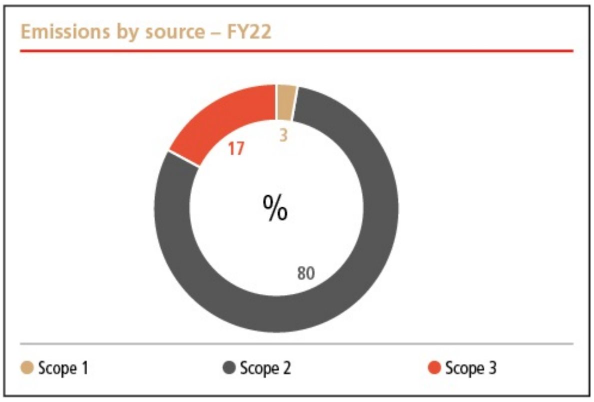
During FY22, we used 52% (FY21: 78%) grid power and 48% (FY21: 22%) site diesel-generated electricity. Overall, total energy consumed was lower than FY21. A contributing factor to this was the failure of the Hidden Valley overland conveyor that interrupted production between January and March 2022.

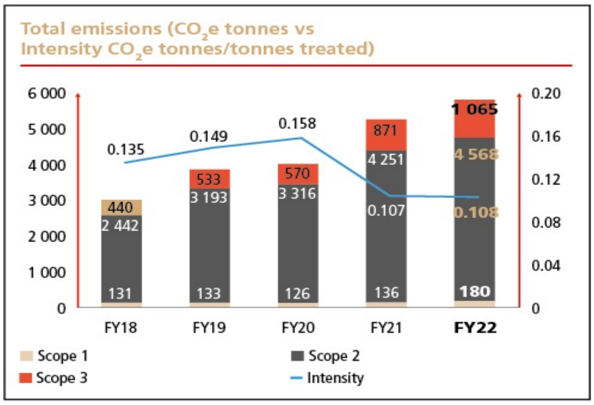
The decreased percentage of grid power supply in FY22 compared to FY21 was primarily due to the reliability of grid supply, which was affected by disruptions at the Ramu hydropower station. This was despite the Yonke Toe-of-Dam project being recommissioned by PNG Power, adding a further 18MW to the Ramu grid. Several other projects are underway to strengthen the Ramu grid system's hydropower capacity and transmission capabilities.

The opportunity of isolating Hidden Valley from the Ramu grid and receiving power directly from the nearby Bauine hydropower station will be harnessed with permission of PNG Power, moving forward to allow for direct feed from the Baiune plant if or when the PNG Power network is down. The upcoming PNG Forestry Products Baime hydropower plant is also set to be commissioned by early 2023. This presents an opportunity for power required by Hidden Valley to be entirely from hydropower sources and further de-risk the current unstable power supply.

Reducing GHG emissions with renewable energy initiatives

Most of our emissions are scope 2 as South Africa uses fossil-fuel-generated electricity (evident in the graphs below).





1 FY21 Scope 3 value restated from 748 016 to 870 851 due to an update in calculation methodology in Chemwes (Mine Waste Solutions) sodium cyanide and caustic soda figures.

Decarbonisation strategy

During May 2022, we secured funding to pursue our phased decarbonisation strategy (outlined below).

Phase 1	Phase 2	Phase 3
• 30MW solar power (in construction) • Cost saving: R340 million over 15 years • Carbon reduction: 62 000tpa • Capital investment: R5 million.	• 137MW solar energy • Estimated NPV over 15 years: R3 billion • Carbon reduction: 444 000tpa • Capital investment: R1.56 billion.	• 56MW solar power (Harmony considering to increase renewable energy through wheeling up to 100MW).
An independent power producer is building three PV plants with total installed capacity of 30MW to deliver more than 68GWh of clean power to our Free State operations and mitigate 65 000 tonnes of CO_2e emissions in the first 12 months. Over 20 years, these plants are expected to produce 1.3TWh of clean energy. Jointly developed by Harmony, Energy Group and BBEnergy, to deliver energy from March 2023, the solar PV plants will be among the largest for private offtake in South Africa to date.	Currently in feasibility stage and awaiting the necessary permits and licences, an additional 137MW of solar energy will be installed at our longer-life mines to deliver over R500 million per annum in electricity cost savings at full production by FY25.	This phase is in planning and progressing as anticipated. We are looking to source an additional 100MW of renewable energy, predominantly wind and solar, to augment the phase 1 and 2 initiatives. We are also exploring opportunities to access gas and hydropower.

Sustainability-linked facilities and the green loan

Our decarbonisation strategy is facilitated by a project finance debt solution from Rand Merchant Bank, supported by African Clean Energy Developments, and equity-funded by African Infrastructure Investment Managers and Mahlako Energy Fund. Absa and Nedbank lead this lending group’s syndicated, multi-tranche, multi-currency loan facilities of R4 billion and US$400 million.

The facilities comprise a R1.5 billion green loan for phase 2 and sustainability-linked R2.5 billion and US$300 million revolving credit facilities as well as a US$100 million term loan.

The green loan closely matches the solar PV project's expected cash flow and the expected energy cost savings for Harmony’s South African mining operations. The sustainability-linked loans align with Harmony’s ESG and sustainable development targets.

Our focus areas in FY23

The group will focus on meeting its FY23 targets for decarbonisation; supported by our energy efficiency programme and the renewable energy mix. We will be evaluating mobilitisation opportunities to further advance our decarbonisation programme.

In South Africa, we will focus on energy efficiency, complete the phase 1 build and phase 2 feasibility study, and begin our offset programme.

In Papua New Guinea, we will focus on reliability improvements and opportunities, and driving energy efficient processes.

Water use

Water availability is critical for developing our assets, the mining process and our growth prospects.

It is a business imperative to manage water consumption and secure water supply. Water is a critical natural resource necessary for our mining and processing activities as well as future growth and development. Potable water is a crucial resource for Harmony's employees and the communities in which the group operates. As such, managing and mitigating the impact on water catchments, by ensuring we do not degrade water quality or reduce the volume of potable water available to surrounding areas, is crucial to maintain our social licence to operate.

Harmony has the twin challenges of South Africa generally being a water-scarce region while our operations in Papua New Guinea experience a positive water balance with over two metres of rainfall every year.

GRI Standards

Prepared in accordance with 3-3, 303-1, 303-2, 303-3, 303-4 and 303-5.

Related SDGs

Our approach

Our water management policy guides the group's approach. However, given that our operations face drastically different climatic conditions, our water management strategies are adapted to the characteristics and requirements of each area in which we operate.

We have an embedded understanding of water management and risks across our operational spectrum. Water security and risks are integrated into managing long-term strategic business objectives and financial planning. Harmony's commitment to responsibly managing water use is driven from executive level, and has evolved from a strategy into practical and relevant actions across the group.

The group's overarching objective is to conserve water by improving our efficiencies through reuse and recycling. Where we return water to the source, we aim to ensure it is treated and discharged responsibly into the receiving environment, complying with relevant legislation in our host countries.

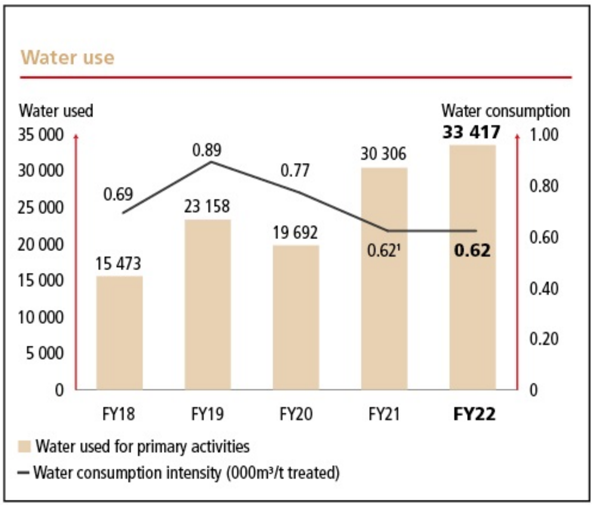
Our focus areas and performance in FY22

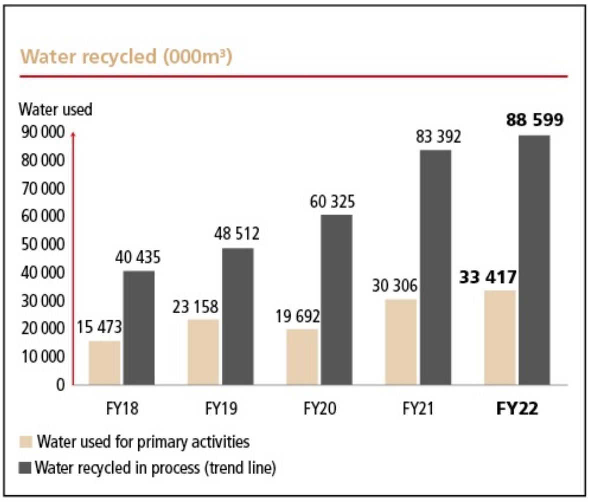
Absolute potable water consumption is one of the KPIs of our sustainability-linked funding agreement (page 58) that was concluded in June 2022. This KPI is material to our core sustainability and business strategy, and addresses a relevant environmental challenge experienced by our industry. Harmony therefore focuses on reducing potable water demand from our mining operations to reduce supply pressure on constrained local water treatment and distribution infrastructure, and increase water available to communities (especially due to droughts and climate-related water availability challenges). We thus also improve local municipal systems' climate change resilience. We have also linked our water management strategy to our social investment strategy to improve our support of WASH programmes.

Our successful water recycling initiatives continue to drive these efforts. Harmony's operations measure volumes of water used and recycled at least monthly. This tracks performance against our target to reduce potable water consumption by 10% from the FY21 baseline by FY26.

We aim to reuse process water while increasing the amount of water recycled. In addition we aim to reduce absolute potable water consumption through water treatment plants and engineering initiatives, including demand and pumping optimisation and leak management. This enables the group to maintain or improve water use intensity.

- The split of water withdrawal from municipal sources is 63% and from surface and groundwater sources is 37%
- Our water discharge increased marginally by 6%. Margaret shaft realised an increase due to high precipitation reporting into the deep aquifer and discharges realised at Target operation
- Water recycled increased by 6%.





[1] *FY21 water intensity has been corrected from 0.59 to 0.62.*

South Africa

Harmony's South African operations largely depend on municipal water, which exposes the group to tariff increases and supply shortages. Water availability is also unpredictable in parts of water-stressed South Africa where it is critical for our current and future operations.

Water-stressed areas are determined by the World Resources Institute, which uses an aqueduct tool to plot water-related risks on a water risk atlas. Baseline water stress measures the ratio of total water withdrawals to available renewable surface and groundwater supplies. Water withdrawals include domestic, industrial, irrigation, and livestock consumptive and non-consumptive uses. Available renewable water supplies impact water availability for upstream consumptive water users and large dams downstream.

Water management strategy

Our water management strategy, committed to climate change mitigation and adaptation, supports water conservation and demand management, including optimisation to secure supply during a protracted drought. It also considers the sustainable development of businesses and host communities.

Our climate change scenario analysis indicates water security is a risk due to extreme storm and drought events, and increased temperatures that could affect the underground environment and food security. Harmony manages this risk through various initiatives and close water use monitoring across our operations.

Water use, treatment and discharge

We reuse process water which increases the amount of water recycled. This enables us to maintain or improve our water use intensity.

At many of our underground operations, three water-treatment plants treat fissure water to quality standards for use in our processes and to liberate fresh water for other users in line with our zero discharge aspiration. These plants deliver dual benefits: reducing potable water consumption and recycling much of our fissure water while saving operating costs. We are therefore undertaking a feasibility study to assess the purpose and volume treatment of plants to be constructed in the North West and Free State provinces where water is particularly scarce. In parallel, Harmony also engaged the Institute for Technology and Society to conduct feasibility studies into innovative agriculture applications using relatively expensive water for economically viable cultivation of high-income crops and fruits.

Other valuable assets in our portfolio are the Covalent and Margaret water companies, which present opportunities to beneficiate and commercialise water. The previous owners established the water companies to manage dewatering from adjacent historical mine voids. Covalent discharges an average of 20Ml per day into the nearby Wonderfonteinspruit. Margaret also pumps an average of 20Ml daily, mostly recycled in the Moab Khotsong and Mine Waste Solutions reticulation circuits. This discharge of high-quality dolomitic water positively impacts the Vaal River by supplying local farmers while improving water quality for downstream users.

We ensure that our water use does not impact upstream and downstream users by continuously engaging with stakeholders through regional water management. As orebodies are contiguous, many mines are in the same catchment area. Combined with water scarcity, this warrants a collaborative, coordinated approach. Harmony participates in several regional catchment management agencies, including the Far West Rand Technical Working Group, KOSH (Klerksdorp, Orkney, Stilfontein and Hartbeesfontein) mine water forum and the Free State government task team. In the western basin, we collaborate with Sibanye-Stillwater in its Cooke shafts closure programme to prevent water ingress into our Doornkop operation.

Target and Kusasalethu are our only local operations currently discharging water. We have plans to ensure Target achieves zero discharge status. Kusasalethu, striving to achieve zero discharge, currently discharges an average of 1.5Ml per day of fissure water.

Water use categorised by water quality (Ml)

		FY22	FY21	FY20	FY19	FY18
Water withdrawal						
Potable water from external sources	Fresh water	**21 190**	19 468	14 576	15 933	12 646
	Other water	**—**	—	—	—	—
Surface water	Fresh water	**2 144**	2 695	2 570	3 252	1 359
	Other water	**612**	89	118	798	673
Groundwater	Fresh water	**9 166**	218	191	337	234
	Other water	**304**	7 836	2 238	2 838	561
Water discharged[2,3]						
Surface source	Fresh water	**892**	912	246	547	655
	Other water	**2 947**	2 706	2 918	2 130	2 350

Water use categorised by water-stressed areas (Ml)[1,4]

		FY22	FY21	FY20	FY19	FY18
Water withdrawal						
Potable water from external sources	Arid and low water use	**—**	—	—	—	—
	Low	**14 553**	13 669	11 289	12 597	284
	Low-medium	**945**	716	601	177	9 826
	High	**5 692**	5 083	2 686	3 159	2 536
Surface water	Arid and low water use	**61**	89	113	207	94
	Low	**2 695**	2 695	2 575	3 843	1 938
	Low-medium	**—**	—	—	—	—
	High	**—**	—	—	—	—
Groundwater	Arid and low water use	**315**	178	194	376	230
	Low	**9 090**	7 789	2 120	2 642	437
	Low-medium	**65**	71	64	89	61
	High	**—**	16	52	68	68
Water discharged[2,3]						
Surface water	Arid and low water use	**—**	—	—	—	—
	Low	**3 087**	3 463	3 008	2 130	2 350
	Low-medium	**—**	—	—	—	—
	High	**752**	156	156	547	655

[1] *Water-stressed areas are classified using the WRI Aqueduct Water Risk Atlas.*

[2] *Due to operational issues and maintenance at Doornkop Reverse Osmosis Plant, water was discharged.*

[3] *A group-wide review of our water discharge streams was done and reporting control measures were updated for all previously presented figures .*

[4] *Harmony's moisture in ore figures is part of our WDP reported figures.*

Water companies' water use (Ml)

		FY22	FY21	FY20	FY19	FY18
Water sold	Covalent	**—**	37	n/a	n/a	n/a
	Margaret[1]	**3 259**	4 020	3 231	3 100	n/a
Water pumped	Covalent[2]	**5 688**	6 948	n/a	n/a	n/a
	Margaret[1]	**6 411**	5 447	4 339	3 684	n/a
Water discharged to surface source	Covalent[2]	**5 688**	6 948	n/a	n/a	n/a
	Margaret[1]	**3 245**	1 072	737	584	n/a

[1] *Harmony has a 66% share in Margaret Water Company.*

[2] *Water pumped and discharged corrected for FY21*

Papua New Guinea

At Hidden Valley, steep topography, high rainfall and low evaporation levels create a year-round positive water balance. This presents significant environmental challenges, particularly in managing water discharge from the mine site into the surrounding environment.

Water management strategy

Our management approach therefore includes:

- Rainfall run-off control to prevent erosion and sediment entering the Watut River system
- Recycling site water to limit water stored in the tailings storage facility and reduce extraction from surface water sources
- Treating wastewater before discharge.

Water use, treatment and discharge

We primarily extract water from Pihema Creek, one of many tributaries draining to the Watut River and prioritise process water recycling to limit volumes extracted as far as practical. Wastewater is treated at a cyanide detoxification plant beside the tailings storage facility before being discharged to the receiving environment at either Pihema Creek or the Upper Watut River. We measure the performance of our discharges and the impact of our operations at a compliance point in Nauti village, 18km downstream of the mine, in accordance with our environmental permit. This compliance monitoring continued to detect low-level exceedances of dissolved (soluble) manganese during FY22. All other metals remain below their respective water quality criteria. Geochemical test work programmes are in progress to understand the properties and behaviour of the elevated manganese source (understood to be waste rock material) and to inform refinements to operational waste management practices and landform designs for closure. Despite these exceedances, an independent review by Australian-based consultants concluded that the overall objectives of the Hidden Valley mine acid and metalliferous drainage management plan and the waste-rock dumping strategy remain appropriate to limit acid and soluble metals discharge from the landforms to the Watut River system. Manganese at current levels detected in the river is unlikely to cause any significant impact on the river system as recorded concentrations remain well below conservative international ecosystem protection guidelines.

We routinely provide updates to the regulator, outlining the ongoing monitoring programme, results and potential remedial actions.

Our focus areas in FY23

As water availability is less predictable, particularly in some regions of South Africa where it is critical for our growth prospects, particularly hydraulic tailings reclamation, we are acutely aware of the impact on our future mineable reserves, especially in water-scarce regions, such as the Free State in South Africa where our two water companies add strategic value by limiting the impact of climate change on our business and our use of water shared with host communities.

In South Africa, to reduce potable water use, we plan to build water-treatment plants at Covalent in FY23, and at Chemwes and Moab Khotsong in FY24, while expanding the facility at Nyala.

As a group, we will commit significant capital to increasing our water recycling ratio and reducing potable water intake by materially adjusting our water sourcing profile in line with good industry practice and local sustainable development objectives.

Tailings and waste management

Our global gold mining industry acknowledges that tailings and waste are harmful to communities and the environment within our sphere of influence, and we understand the imperative to proactively mitigate associated risks.

Part of the mining process results in the deposition of waste material into tailings storage facilities. Harmony manages 85 tailings storage facilities in South Africa and one in Papua New Guinea.

GRI Standards

Prepared in accordance with 3-3, 306-1, 306-2, 306-3, 306-4 and 306-5.

Related SDGs

Our approach

Tailings management approach

Robust and meticulous engineering and dam design, continuous management of risks, layered assurance and oversight ensure sustainable integrity, stability, environmental and legal compliance for our tailings storage facilities. These are all in good standing as verified by:

- International Mining Industry Underwriters (IMIU) annual audits of operating tailings storage facilities
- International Cyanide Management Institute (ICMI) audits every 18 months
- Mine residue deposit updates to the DMRE every two years
- Quarterly reports by accredited consulting engineers in South Africa and Papua New Guinea.

Global tailings management standard

Integrating social, environmental and technical considerations

We implement aspects of the Global Industry Standard on Tailings Management (GISTM) that augment our existing protocols for heightened protection. Harmony will revisit implementation of GISTM when the supporting guidelines are issued.

In the meantime, we continue to enforce exemplary standards in the design, engineering, operation and decommissioning of tailings dams with controls dictated by the terrain.

The GISTM, published in 2020, with an integrated approach to tailings management, aims to prevent catastrophic failure and enhance the safety of our host communities.

Environmental management around our tailings facilities is also conducted in line with ISO 14001:2015 requirements. Similarly, environmental standards and associated proceeds are determined by ISO14001:2015 and IFC standards.

Waste management approach

Responsible and effective waste management is a priority focus area as this reduces our environmental impacts and mitigates associated liabilities. We include guidelines on mineral, non-mineral and hazardous waste materials in operations' environmental management systems.

Waste management begins from generation to handling, storage and transport as well as recycling, re-treatment and/or disposal.

By understanding the actual cost of waste management, we can plan effectively for new projects and mine closure. Pragmatically, we maximise recycling and waste reduction during the life of a mine, and design plans to minimise waste and reclaim mineral waste (such as waste rock from dumps as aggregate) to curtail our total mining footprint.

Cyanide Code

A voluntary industry programme for the safe management of cyanide, and cyanidation of mill tailings and leach solutions

Harmony's plants operate according to the International Cyanide Management Code for the Manufacture, Transport and Use of Cyanide in the Production of Gold (the Cyanide Code).

Seven of our nine operational processing plants are certified against the code following audits by an independent third party.

Our Kalgold and Saaiplaas plants in South Africa, and Hidden Valley in Papua New Guinea, meet the requirements for certification but have not pursued recertification as remaining mine life is limited.

Our focus areas and performance in FY22

Tailings management

Harmony manages 21 operational, 10 re-mining, and 54 dormant and inactive facilities in South Africa – all operational facilities use upstream deposition incorporating day wall and basin deposition or upstream cyclone deposition.

Our Hidden Valley operation uses a tailings storage facility designed and operated in accordance with the Australian National Committee on Large Dams (ANCOLD). The facility comprises two cross-valley embankments (main and saddle dams) constructed using the downstream build methodology. It is the first large facility of this kind to be operated successfully in Papua New Guinea.

Our daily tailings management focus areas

<table>
<tr><th>Overtopping</th><th>Slope failure</th><th>Foundation failure</th><th>Progressive failure</th><th>Liquefaction</th><th>Operational status</th></tr>
<tr><td colspan="2">• Lack of freeboard
• Penstock status
• Basin shape/profile.</td><td></td><td>• Seepage and sloughing
• Erosion.</td><td>• Seismic events
• Pore water
• Pressure.</td><td>• Infrastructure management
• Controlled/ authorised deposition.</td></tr>
</table>

Our interventions include but are not limited to:

- Freeboard control
- Water management
- Maintaining stability and safety, as advised by the engineer of record
- Erosion controls
- Monitoring and control measures implemented to ensure compliance.
- Fallout Dust Management
- Emergency Preparedness and Response Planning.

This includes regular inspections, audits and meetings at various intervals with subsequent actions, minutes and reports ensuring we deliver the desired outcomes. Areas of concern are addressed and resolved by management, the appointed experienced deposition contractor and specialist consulting engineer that assist with the operation, maintenance and management of the facilities to ensure global best practice.

Freeboard (safe operating water levels on top of the tailings storage facility) remains one of the most critical parameters for legal compliance at operational facilities. However, water management and control are important as excessive water should not accumulate on facilities except during the night shift to allow controlled decanting (pour out) during the day shift. We have 24-hour decant at Kareerand in South Africa as this facility holds a specific volume of water. Drone technology is used to support monthly freeboard surveillance. At Hidden Valley, continuous compliance in maintaining sufficient freeboard on our tailings storage facility is an important element of the overall mine site operating conditions, as is the need to minimise free water held on the facility surface. The Hidden Valley tailings storage facility is operated as a "zero-discharge of untreated water" facility, hence water drawn from the tailings dam is either recirculated back to the process plant for re-use or passed through a treatment system prior to controlled discharge.

At re-mined facilities our focus remains on accurate water control through effective management and establishment of containment paddocks in the general and mined our areas. Most of the facilities are re-mined from the top to the bottom of the face to minimise the risk of sloughing and inundation and to maintain a stable slope face by stopping limits on the monitoring gun that controls the angles.

On dormant and inactive facilities, we primarily use containment paddocks in the basins and berms to lower groundwater levels and dry out the tailings dam. In addition, we continually repair side slopes after rains while ensuring safe and proper access routes to the top of the tailings facilities. We also maintain solution trenches around the tailings facilities and monitor return water to the plants.

South Africa

Our internal auditors conducted an audit of tailings dam compliance and found our performance to be satisfactory. Over and above this, Ngubane assures compliance and concluded that 71% of material recommendations have been implemented for heightened control. An independent audit of Harmony's tailings management in 2022 found that our South African operations satisfied the country's legal requirements. In most cases, our standards exceed legal requirements, and the extent of our surveillance and investigative work is comparable with international standards. Remedial action closed out areas of concern identified in the independent inspections:

- St Helena 123: This facility showed signs of historic wet spots along the toe of the facility and resulted in seepage flowing through the legacy tailings material on which the facility was constructed. Phase 1 remedial work included additional toe drains which were installed to improve drainage. This was completed in June 2022. Phase 2 buttressing has commenced
- St Helena 4: Construction work for the re-commissioning of the St Helena 4 facility commenced in June 2021 and was completed in June 2022. This site was commissioned as an alternative deposition site for Harmony One Plant to improve deposition flexibility after stability concerns led to the de-commissioning of the Free State South 8 complex
- Target 1: Phase 2 of the remedial work for improved drainage and the installation of rock buttresses in the affected areas for improved overall stability was completed in February 2022. Remedial work for Phase 3 as a continuation of the remedial work from phase 2 to improve drainage and overall stability in the affected areas will commence towards the end of 2022.

Our tailings storage facilities in South Africa are highly compliant with the tailings facility code of practice.

International Mining Industry Underwriters risk ratings received in 2022 have once again confirmed our performance in managing our assets and business continuity. Our tailings are measured against the most conservative measures to assure industry-leading stability and to align with our company strategy which includes responsible stewardship and operational excellence.

	Tailings management strategy			
Nature of tailings storage facilities	**Operation**	**Inspection**	**Monitoring**	**Periodic review**
Operating (21 locations)	✓	✓	✓	✓
Re-mined (10 locations)	✓	✓		
Dormant (54 locations)		✓		✓

Papua New Guinea

Independent audits of the tailings storage facility at Hidden Valley were interrupted by Covid-19 restrictions affecting international travel, and limiting visitor and contractor access to the Hidden Valley mine in FY22. However, independent construction audits were conducted remotely (desktop reviews and meetings) and via a site visit in June 2022. The desktop construction review concluded that the facility's construction, operations and surveillance were satisfactory in accordance with ANCOLD standards. We await the outcomes of the site visit.

The detailed design for a second tailings storage facility at Hidden Valley, to support the life of the mine, progressed in FY22 although construction did not begin. The proposed site of the facility is the final void of the Hamata open pit, which significantly reduces the disturbance footprint associated with this landform. As with our existing tailings storage facility, the new dam has been designed in compliance with ANCOLD standards and will require a single cross-valley embankment for tailings storage. The early-warning system will similarly safeguard communities downstream of this second facility.

Wafi-Golpu project deep-sea tailings placement

The Wafi-Golpu Joint Venture is confident that DSTP is the safest and most environmentally and socially responsible tailings management solution for this project

For the Wafi-Golpu project the environment permit, secured in 2020, approves construction and operation of a deep-sea tailings placement system, which is the preferred solution after investigations of on-land and submarine options.

Submarine tailings placement is currently employed in six countries and used at three operations in Papua New Guinea. Terrestrial tailings sites examined for the project present significant risks and constraints, given the region's high seismicity and rainfall, topography and soil type. A surface tailings facility would severely impact heritage sites, communities, and productive and ecologically sensitive land.

Instead, tailings could be deposited in the Huon Gulf from an outfall at some 200m depth, mixing with natural sediments from various rivers as they flow down the submarine Markham Canyon and settle on its floor. The tailings will represent only a small percentage (less than 20%) of the total sediment flow in the area. The Markham Canyon does not have clear water suitable for most fish life and lacks biodiversity because of significant volumes of natural sediment.

Wafi-Golpu is expected to place over 360 million tonnes of tailings over its 28-year life-of-mine. After closure of the mine, natural sediment loads will continue and eventually bury the deposited tailings. Tailings placement will occur well below the productive surface layers of the ocean, and is not predicted to affect the coastal environment, biologically productive surface waters, community health or fisheries.

At the boundary of the proposed mixing zone in the Huon Gulf, the tailings discharges will be diluted to levels that meet Papua New Guinea water quality criteria as well as Australian and New Zealand water quality guidelines for marine aquatic ecosystem protection.

Our stakeholder engagement on this project and the deep-sea tailings placement facility continued throughout FY22.

Waste management

Our mining and extractive processes generate **mineral** and **non-mineral** waste. Mineral waste comprises tailings and overburden, often viewed as a resource in waiting. Non-mineral waste is classified as hazardous and non-hazardous, and managed by recycling or reuse, off-site treatment or disposal to on-site landfills.

Mineral waste

Effective mineral waste management reduces aesthetic and land use challenges of mining, particularly during closure, as well as the potential for water and air pollution while maximising the recovery of ore, minerals and metals with significant savings and reduced energy consumption.

Our year-on-year increase in mineral waste is due to waste stripping in cutbacks at Hidden Valley. Waste rock is also generated from our underground operations in South Africa.

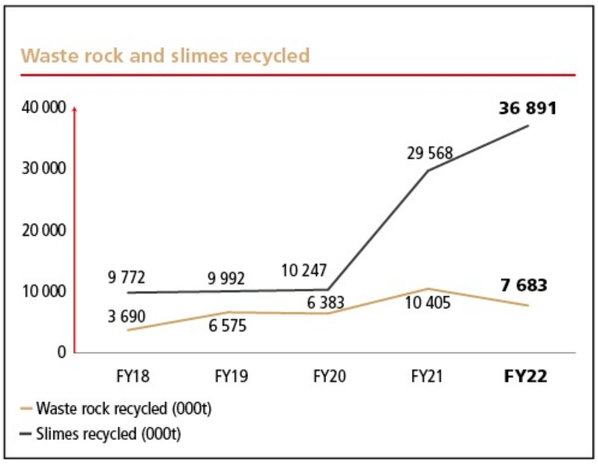
We have a five-year target to reclaim at least 10% of our total available mineral waste footprint. Meeting this target depends on the market as well as provincial infrastructural needs and capacity to support repurposing activities.

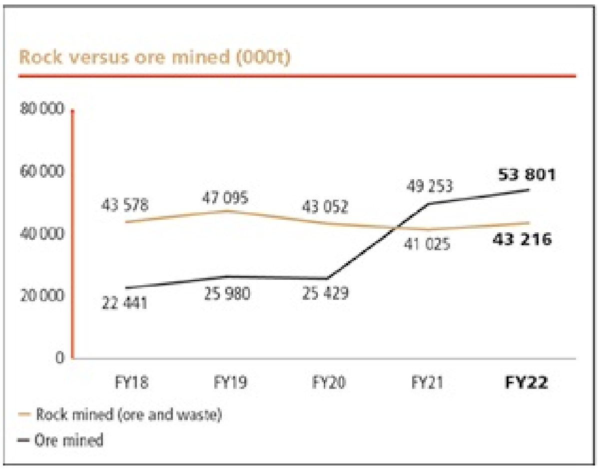
Although waste rock is not valuable as a gold mineral resource, it is useful as plant grinding media and backfill plant feed, and is regarded as a resource by the aggregate industry. Committed to inclusive mining and our social purpose, we ring-fence some of our waste rock for local businesses and entrepreneurs. This supports our relationships with legitimate licensed artisanal and small-scale operators in our South African host communities (as outlined below).

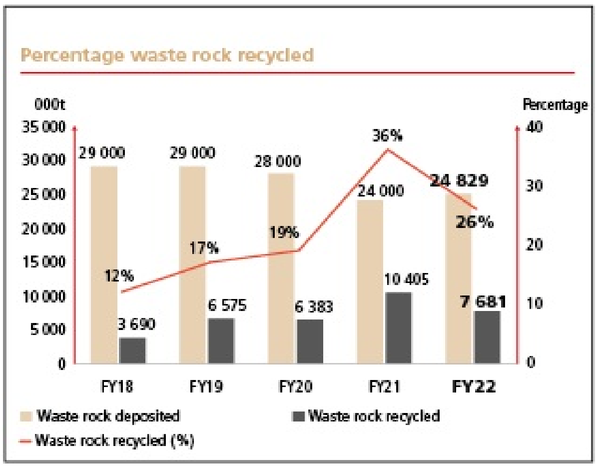
South Africa	
Gauteng and Free State	We are investigating the feasibility of waste rock dumps creating employment through aggregate initiatives. This would enable local participation in economic development and make economical use of a liability. Additionally, the land is available for rehabilitation when the waste-rock dumps are cleared.
North West	We are engaging with host communities in Orkney on the reclamation of the Scott rock dump, which will be donated to the local municipality for the benefit of residents.
Welkom	In a commercially sustainable venture, surplus waste rock has been processed by local aggregate producers for more than a decade. We are exploring opportunities to work with local community representatives from Allanridge and a BEE entrepreneur to establish additional aggregate producers.

In FY22/over the past five years:

- Our waste rock decreased by 26% due to the closure of Koponang Plant previously used to treat waste rock
- Slimes recycled increased by 25% due to Mine Waste Solutions recording a full 12 months of production compared to the previous 9 months
- The rock mined (43Mt) increased by 5%.







Non-mineral waste

We ensure responsible storage, treatment and disposal of non-mineral waste with group environmental standards integrated into existing ISO 14001 systems.

Hydrocarbons are the principal hazardous waste streams at our operations. We aim to minimise waste sent to landfill by sending these waste streams to accredited institutions, such as the Recycling Oil Saves the Environment (ROSE) Foundation, for repurposing while the remaining hydrocarbon waste is sent to appropriate landfill sites.

In regards to effluent management; initiative are in place to reduce, reuse and recycle our effluent from our operation. Mechanisms have similarly in place to monitor and measure effluent and effluent management in effort to prevent pollution or otherwise minimise, mitigate and remediate harmful effects of this exposure. Reporting on effluent issues is being done as required.

Hazardous waste by type

	FY22	FY21	FY20	FY19	FY18
Oils and grease waste generated					
Grease (t)	**524**	552	424	506	426
Lubricating and hydraulic oil (Ml)	**3.0**	3.0	2.5	3.2	2.7
Hydrocarbons recycled (000l)	**698**	527	813	978	n/a
Hazardous waste generated					
Tailings (Mt)	**52**	47	24	24	21
Hazardous waste to landfill (t)	**803**	524	250	399	344

As we actively promote recycling of our waste streams, we have initiated a reclamation programme that harvests underground equipment and infrastructure, which is sent to the salvage yard and repurposed for potential consumption by other operations. In keeping with our transformation objectives, this initiative has helped develop and promote local entrepreneurs in the core mining sector.

Non-hazardous waste generated and recycled (tonnes)

(000t)	**FY22**	FY21[1]	FY20	FY19[2]	FY18
Timber	**2 727**	3 121	1 868	2 377	1 085
Steel	**8 889**	8 739	5 863	7 765	5 699
Plastic	**591**	625	509	479	314
Total	**12 207**	12 485	8 240	10 621	7 098

[1] *Inclusion of Mponeng and related assets.*
[2] *Increase reflects the inclusion of Moab Khotsong.*

Our focus areas in FY23

We will continue to operate safely and responsibly, demonstrating a high degree of compliance and integrity in our tailings storage facilities, managing surface water levels, and reclaiming and recycling as planned.

In addition, we will continue to plan, build and operate our waste management assets at Hidden Valley in a manner that maintains rigorous governance, ongoing compliance and stakeholder support.

In South Africa, we are seeking growth opportunities to expand surface reclamation, rolling out the buttressing programme, building the Kareerand surface dam extension and recommissioning in the Free State.

Air quality

We implement area-specific mitigation measures to reduce atmospheric emissions from our gold plants and tailings facilities.

Primary atmospheric emissions from our gold plants are sulphur oxides (SO_x), nitrous oxides (NO_x) and particulate matter as well as non-greenhouse gas emissions (dust fallout) from our operations (including tailings storage facilities). Preventing or managing air pollution is an essential facet of our environmental strategy and crucial in protecting our surrounding communities and environment.

GRI Standards

Prepared in accordance with 3-3 and 305-7.

Related SDGs

Our approach

We measure our primary atmospheric emissions in terms of atmospheric emissions licences for each plant.

Most of our gold plants meet the thresholds stipulated by government with occasional exceedances in particulate matter. We address these exceedances by purchasing higher-quality carbon from suppliers. With regard to GHG emissions risk management, Harmony identifies and monitors its GHG risks at company and asset level as part of a multi-disciplinary process. GHG risk management processes are similarly multi-dimensional to determine the best approach for mitigating these risks, including developing GHG reduction programmes.

In addition, we monitor and mitigate dust fallout from our operations (including tailings storage facilities), applying the American Standard for Testing and Materials Method (D1739) across the group. In South Africa, we also comply with the National Environmental Management: Air Quality Act national dust control regulations in our collection and analysis of dust fallout.

Monitoring often indicates other fugitive dust sources coupled with tailings facility fallout. When we find exceedances, we record these as non-compliance and take remedial measures where applicable. Other sources include algal growth in wet seasons as well as soil and other organics that may cause results to be recorded as contaminated samples.

Although our remote Hidden Valley operation in Papua New Guinea is far from sensitive receptors, we monitor atmospheric emissions as we do in South Africa where our operations comply with regulations governing air quality standards and dust control.

Our focus areas and performance in FY22

In FY22, Harmony was largely compliant except for sporadic and infrequent exceedances at Doornkop, Kalgold and our Free State operations. Where exceedances were attributed to our mining operations, dust management plans have been developed. At the Doornkop tailings facility, we installed wind breaks as the mitigation measure. At tailings facilities contributing to dust fallout, mitigation focuses on areas where sequential exceedances are prevalent. Over the next three years, we will continue to roll out mitigating measures, including installing barriers (artificial netting or trees), dust suppressants and vegetation through rehabilitation. The success of these measures depends on cooperation by communities in preventing vandalism of installed barriers.

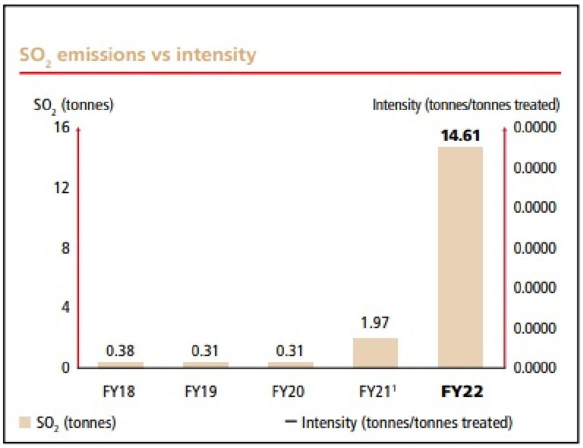
An anomaly for nitrous oxides was registered at Mponeng in FY21. Maintenance at the plant has fixed the error to ensure emissions remain in an appropriate range. Mine Waste Solutions and Mponeng plants will require focused strategies to reduce atmospheric emissions for these emission elements.

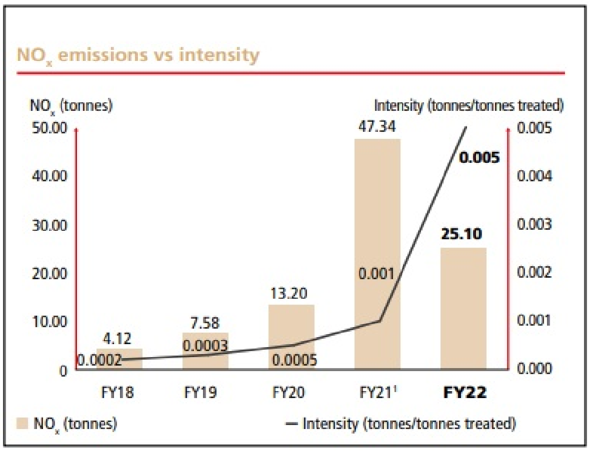
In FY22/over the past five years:

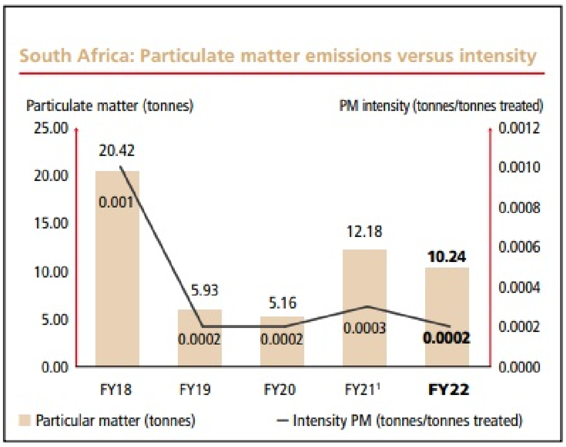
- Particulate Matter (PM) Intensity: Our particulate matter intensity decreased due to improved management practices and understanding of the plant processes. Furthermore, sampling methodologies were refined at identified plants allowing for a truer representation of results.
- Sulphur Dioxide (SO_2) Intensity: SO_2 increased due to an increased amount of SO_2 recorded at Harmony One Plant. Although an increase was recorded, it did not result in Harmony One Plant breaching regulated limits.
- The NO_x intensity increased in FY21 as a result of Harmony's acquisition of Mponeng shaft and Mine Waste Solutions retreatment plant. Since FY21, the NO_x intensity has decreased through improved management practices and understanding the plant processes at Mponeng and Mine Waste Solutions.

All plants that have emissions, applied and received their respective Air Emissions Licences from Department of Forestry, Fisheries and Environmental Affairs. Conditions within these licences dictate whether plants are to sample on an annual basis or on a quarterly basis. There has been no uniform application by our regulators, that determine the frequency of samples for Harmony's South African assets.

The monitoring campaign for those plants monitored annually have had their results allocated according to the financial year they fall within. If a plant is not monitored before the end of the financial year, then it is excluded from the from that financial year's calculations. However, in the following financial reporting year, the emissions data and tonnes treated data will be included in the calculations for the previous financial year. Hence the FY21 calculations have been updated to reflect the data collected.







[1] *Not all sites were sampled in FY21 as some samples were taken later in calendar year 2021. None of the samples in calendar 2021 detected SO_2.*

Our focus areas in FY23

In South Africa, we will increase rehabilitation efforts by planting vegetation to mitigate dust and rehabilitate land to final closure standards.

Biodiversity and conservation

We conduct biodiversity impact assessments and progressive rehabilitation governed by policies on sustainable management of natural resources.

Our operations in South Africa and Papua New Guinea are in vulnerable ecosystems with various endangered and threatened species. Recognising that our mining activities affect the biodiversity and ecology of the surrounding environment, and that these impacts could span the life of mine and beyond, we implement appropriate management systems and processes to limit our footprint and mitigate and offset our impacts.

GRI Standards

Prepared in accordance with 3-3, 304-1, 304-2, 304-3 and 304-4.

Related SDGs

Our approach

In line with our goal of net positive gain on biodiversity in ecologically sensitive environments as stipulated in our biodiversity and rehabilitation statement, our approach focuses on protecting, restoring and promoting sustainable use of terrestrial ecosystems while halting and reversing land degradation. Sensitive and protected species and ecosystems are identified and mapped through our environmental impact assessments. Our approach includes:

- Developing and implementing Biodiversity management and action plans
- Undertaking Invasive alien plant eradication
- Identifying and implementing conservation programmes and offset opportunities.

We consider land degradation in our environmental risk matrix (page 15) as a significant contributor to climate change. Land degradation generally means poorer vegetation cover, which impairs the ability of plants to absorb carbon dioxide, increases the likelihood of soil erosion during rain and dust storms (particularly detrimental to high arable land) and impacts biodiversity.

Our focus areas and performance in FY22

We operate in compliance with the stringent conditions of our environmental authorisations.

South Africa

Implementation of our approach in South Africa is summarised below.

Biodiversity management and action plans	Invasive alien plant eradication	Conservation programme	
• Policy and strategy in place • Gap analysis • Management and action plans to include: – Sensitive habitats (such as riverine systems along the Vaal River) – Wetland delineations – Avoiding operating in World Heritage sites • Participating in biodiversity disclosure projects (such as the Endangered Wildlife Trust).	• Programmes developed and implemented at Kusasalethu, Kalgold and our Free State operations.	**Biodiversity offsets and trade-offs**	**Land rehabilitation**
		• Develop one offset project in each region to ensure net zero impact • Investigate carbon trading.	• Continue demolition and rehabilitation programmes • Land use function determined by land capability • Re-vegetate areas with indigenous grasses or create alternative, economically viable end-use land post-closure.

Biodiversity management and action plans

Our long-life South African sites implement biodiversity management plans through their mine closure plans, environmental management plans or specific biodiversity action plans. Our biodiversity management plans are aligned with biodiversity disclosure projects implemented across our operations to ensure compliance. In addition, biodiversity offsets are planned per region.

In the North West province, our operations are in a critical biodiversity area with endangered, vulnerable ecosystems including endemic vegetation types such as the critically endangered Brachystelma canum and endangered Aloe braamvanwykii. Both plants are endemic to a province that has experienced agricultural expansion in recent decades, resulting in habitat loss. According to the IUCN Red List of Threatened Species, the only critically endangered fauna is the white-backed vulture (Gyps africanus).

Also in North West, Moab Khotsong is beside the Vaal River, the main tributary of South Africa's largest river, the Orange River. The region has differing biodiversity criteria, including sandy and rocky grasslands as well as riverine and valley bottom wetlands.

Our Free State operations are in the Vaal-Vet sandy grassland and the western Free State clay grassland ecosystem. The Vaal-Vet vegetation is considered endangered as it is in a conserved area. No Red Data species are identified although the commonly known threatened sungazer or giant girdled lizard and near-threatened lesser flamingo are in these habitats.

In Gauteng, our operations are near urban areas and not in critically endangered, endangered or vulnerable biodiversity areas but we encounter near-threatened ecosystems or species.

Invasive alien plant eradication

We continue to minimise alien species' growth and infestation, aiming to eradicate these plants. Infested areas are mapped and divided into management units for prioritisation and appropriate planning. Since FY16, these efforts primarily focus on our Kusasalethu operation with some 5 000ha of the surface mining right area cleared of alien vegetation. Once an area is cleared, follow-up monitoring continues for a period.

Conservation programme and offset opportunities

To offset our impact in clearing vegetation for mining activities at our Kalgold operation, we planted another 200 indigenous trees within the mining boundary, including Combetrum erythrophyllum, Olea africana, Rhus lancea and Vachellia erioloba, in partnership with the local community.

In the Free State, we built a breeding site for the lesser flamingo, a near-threatened species commonly found in shallow eutrophic, open saline water bodies (salt pans, estuaries and lagoons). The site is on an island in a pan near Welkom.

Biodiversity management in Papua New Guinea

Home to the third-largest block of unbroken tropical forest and the largest tract of primary forest remaining in the Asia-Pacific region, Papua New Guinea supports over 5% of the world's plant and animal species. Some two-thirds of its flora and fauna are endemic. Hidden Valley in Morobe Province hosts a variety of habitats, and flora and fauna communities. The Huon Peninsula, forming most of the province, has moderate to high species richness with a variety of threatened mammal fauna. Of some 3.3 million hectares, two-thirds are forest, and lowland forests are heavily deforested or degraded.

Human activities have disturbed the area around Hidden Valley over a long period. The area is home to several species of mammals or birds protected under Papua New Guinea's Fauna (Protection and Control) Act 1976, the Red List or the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). Vulnerable or endangered fauna include two species of tree kangaroo (Dendrolagus dorianus and Dendrolagus goodfellowi), the long-snouted or giant echidna (Zaglossus bruijni), the rare nectar bat (Syconycteris hobbit) and the New Guinea harpy eagle (Harpyopsis novaeguineae).

Hidden Valley operations remain within a confined footprint without expansion to new undisturbed areas in FY22 and for many prior years.

At Wafi-Golpu, three ecological subdivisions assess the national conservation status of principal forest types in the area as part of baseline characterisation for the project:

- Floodplain forest vegetation is vulnerable as its extent reduced by more than 30% over the past 50 years due to ongoing commercial logging across Papua New Guinea
- Mixed hill forest (over an estimated 13.3 million hectares across Papua New Guinea) reduction is estimated to be less than 30% over the past 50 years and therefore not considered threatened
- Swamp forest is difficult to safely access for assessment as Papua New Guinea has not experienced broad-scale draining and clearing of swamps for agriculture.

We have recorded seven fauna species of conservation significance. One is classified as critically endangered, three as vulnerable, one as near-threatened and the rest as data-deficient. Two other near-threatened species, Doria's goshawk (Megatriorchis doriae) and forest bittern (Zonerodius heliosylus), are respectively likely or potentially located in the terrestrial ecology study area.

Project design for Wafi-Golpu includes extensive efforts to avoid potential biodiversity impacts, minimise those that cannot be avoided and consider restoration and offset opportunities. These will be explored further as the project advances beyond permitting stage.

Our focus areas in FY23

In the coming year, our focus will be on:

- Planning and designing the biodiversity and climate change offset programmes
- Accelerated rehabilitation and mine closure programmes.

Climate-related Financial Disclosures (TCFD) Report

Introduction

Harmony Gold Mining Company Limited (Harmony, the group or the company) is a leading global gold and copper company. Our embedded commitment to sustainable development drives integrated risk-based decision making, which creates shared value for all our stakeholders. We recognise the importance of our role in contributing towards the transition to a low-carbon economy, in the context of the mining and minerals industry. Responsible stewardship is our first strategic pillar, and decarbonisation principles are fundamental to our strategy, business processes and decision making. As testament to this, Harmony began decarbonising its operations in 2008. We pre-empted regulations and started our journey proactively.

Addressing climate change through our Decarbonisation Strategy is a cornerstone of Harmony's overall Environmental Strategy, which will take operations to net-zero greenhouse gas (GHG) emissions by 2045.

Our journey to bolster our climate change policies and strategy began in 2021 following board approval of our Decarbonisation Strategy. We developed our net-zero emissions (net-zero) strategy as part of our commitments to the Paris Agreement and the developing global landscape. In January 2022 we submitted a science-based target (SBT) to the Science Based Targets Initiative (SBTi) for validation. We set a robust emission reduction target by joining the Business Ambition for 1.5°C campaign.

Harmony supports the climate-change commitments of our host countries, South Africa and Papua New Guinea. We also align with the South African Minerals Council of South Africa's Climate Change Position Statement.

The first step of our net-zero strategy is to reduce GHG emissions through operational efficiency initiatives and, recently, our switch to renewable energy. The next step is to neutralize latent or final or residual or the tail emission reductions that are not feasibly achievable. Our approach is to use land under our control for carbon removals to achieve this neutralisation.

Part of the Harmony strategy is to re-engineer our portfolio through value-accretive acquisitions. Despite recent acquisitions the GHG intensity of our operations is decreasing, on a milling of ore basis. The acquisition of the Moab Khotsong and Mponeng operations in 2018 and 2020 respectively led to the GHG intensity of gold production to increase by approximately 14%. However, the implementation of our Decarbonisation Strategy will facilitate Harmony's net-zero journey while Harmony pursues growth objectives.

Our net-zero journey has a strong pipeline for the deployment of small-scale and large-scale renewable energy projects. We took the strategic decision to invest in small-scale solar projects to expedite our renewable energy drive. These include rooftop solar projects at our offices and all our administrative buildings. To be resilient as a business and maintain our reputation, the low-carbon transition remains a key consideration in strategic decision making over the coming decades.

We initiated Phase 1 of our renewable energy programme in 2016, when we started with planning and design of the various aspects. We intend to reduce energy consumption from electricity procured through the national grid.

To date, we have obtained generation licences for 30MW installed capacity of renewable energy, for which we are in the build phase. This phase of the programme will achieve beneficial operation by the end of March 2023.

On the back of Phase I, Harmony secured a R1.5 billion (US$92 million) green loan for the renewable energy programme's Phase II rollout. Phase II's planned capacity is 137MW on key operational sites. The project is in the feasibility stage, with expected completion by December 2022. It is envisaged that Phase II will reach commercial operation by Q3/Q4 of FY24.

Incentives driving the renewable energy project include cost savings (purchasing less grid electricity), GHG emissions reduction (to meet the 2045 net-zero target) and positioning Harmony as a leader in the global race to decarbonisation.

We give due consideration to capital allocation projects that aid capital towards projects that aid in achieving decarbonisation and address climate change. Our re-engineered portfolio is well placed to transition the company to a low-carbon economy given its gold and copper reserves. The demand for copper and silver will increase as the rollout of global renewable energy and electric vehicles advances.

Governance

Our approach to the governance of our business and operations continued developing over the past year. Historically, we focused on low-cost gold production. However, over the past decade the energy intensity of production has played an important role. This shift in focus allowed us to achieve 28% reduction in GHG intensity (against ore treated) over the past six years. Our strategic focus informs our net-zero commitment and is developing towards zero-emission gold and growing our re-engineered portfolio, including copper and uranium.

The board of directors is **responsible for aligning our business strategy with our climate change objectives.** The board recognises that achieving our target of net-zero GHG emissions by 2045 is mission-critical.	The board social and ethics committee has **strategic oversight regarding climate change** within the group. The committee is primarily guided by our overarching responsibility to mine responsibly. In developing our strategy, the committee is guided by relevant and developing environmental legislation, and our host countries' international climate change commitments. Our strategy also considers internationally peer-reviewed science.	The chief executive officer (CEO) is **responsible for strategy implementation. He takes ownership of Harmony's climate** change policy and strategy. The CEO leadership role includes being responsible for all day-to-day management decisions, and for implementing the group's long and short-term plans.	The CEO is **supported by the senior executive for sustainable development, who is responsible for the climate change policy and Environmental Strategy's execution.** South Africa and Papua New Guinea executives are responsible for this strategy's engineering, operational delivery and project management.	Harmony has integrated the recommendations of the TCFD into the corporate reporting approach. **Transparent reporting on our climate change strategies** and actions informed our approach to repositioning our business as a climate resilient operation.

Risk management

Through an integrated approach to risk-based decision making, we continuously monitor our risks and opportunities. These include climate change risks, at a company and asset level, as part of a multi-disciplinary process.

Energy and climate change risk is reviewed considering our enterprise risks at audit and risk committee meetings. The committee's role in the risk management processes is multi-dimensional. Our risk management in terms of climate change and energy aligns with ISO 14001, ISO 31000 and ISO 50000 standards, which enable the company to identify and manage risks appropriately.

The executive committee and the audit and risk committee meet quarterly to discuss emerging risks and changes in the importance and mitigation of risks. This risk management process reflects Harmony's integrated approach to business and strategic developments.

The social and ethics committee addresses climate change risk. It has oversight of environmental, social, and sustainable development policies, practices, and performance. The investment committee reviews investments in energy efficiency and capital programmes.

We identified several climate-related risks to our operations. Key transitional risks include Harmony's dependency on South Africa's fossil fuel-based electricity grid, and potential carbon tax increases. The South African government plans to change the carbon tax legislation to make Eskom (South Africa's national power utility) liable to pay carbon tax from January 2026 onwards. This will result in a pass-through cost on electricity from January 2026. We are assessing the potential impacts on our operating costs. We are engaging with government on this issue through the Minerals Council of South Africa.

Papua New Guinea faces a key transitional risk relating to the lack of investment in and unreliability of power generation and transmission infrastructure. This is underpinned by factors such as the base-case decision for the Wafi-Golpu project to self-generate using intermediate fuel oil. As the project requires stable power for underground safety, this necessitated method is emissions intensive. We will reconsider alternative power options for Wafi-Golpu in line with Harmony and Newcrest net-zero commitments. Grid capacity and reliability are major factors in selecting a power solution.

We continuously assess physical risks to our operations, supply chains and broader communities.

Harmony conducted a climate change scenario analysis in July 2020, informed by the TCFD recommendations. This enabled the group to plan for potential scenarios caused by climate change. Our approach to the scenario analysis comprised five steps to determine the financial impacts of climate change scenarios on Harmony's business.

The scenario analysis showed that Harmony is well placed to transition to a low-carbon economy given its gold and copper reserves. Gold is typically seen as a hedge against geo-political uncertainty.

Figure 1: The five main steps applied in the climate change scenario analysis

Harmony's operating environment	Select reference scenarios	Identify risks	Determine risk materiality	Risk responses

The scenario analysis identified Harmony's transitional and physical risks. These are presented in figure 2, which identifies climate change risk, intermediate drivers and the financial impact.

Figure 2: Climate change risks identified during the climate change scenario analysis

Climate change risks	Intermediate drivers	Financial impact
Physical • Increased temperatures • Changes in precipitation patterns and extreme variability in weather patterns: overall drier conditions interspersed by heavy rainfall events/extreme weather events. **Transitional** • Regulatory (eg carbon tax) • Markets and technology changes • Reputation • Socio-economic conditions.	**Physical** • Vulnerability of labour force • Vulnerability of migrant labour pool areas • Sensitivity and adaptive capacity of host communities • Reliance of operations on key commodities such as timber • Water reliance of operations. **Transitional** • Consumption of fossil fuels and water • Mining of minerals.	**Physical** • Reduced revenue from decreased production capacity (eg transport difficulties and supply chain interruptions). **Transitional** • Increased operating costs due to carbon tax.

Harmony's operations will likely experience climate variance, resulting in increased risks to water scarcity and intense periods of rainfall leading to floods. Some operations were affected by excessive rainfall in 2022, including:

- Kalgold, which resulted in production stoppages
- Kusasalethu, which caused the return-water dam to overflow, resulting in process water flowing into the local catchment
- Mine Waste Solutions repaired the return-water dam's outlet pipe at the Kareerand tailings storage facility, causing overflow into the Vaal River.

The impact was considered low for all operations. Our response strategy to improve excessive rainfall management included constructing a stormwater dam at the cost of R96 million.

Climate resilience and adaptation are key matters for our host communities. In Papua New Guinea, the country's Climate Change Management Act has a strong focus on building community resilience.

Strategy

Harmony's climate change journey

Harmony has proactively positioned itself to address climate change since 2008. The company has taken significant strides in lowering its emissions and managing energy and water use across its operations. We took a decision to redirect capital towards projects that will progress our objectives of decarbonising and addressing climate change. While much progress was made through to the end of FY21, FY22 was a significant year in the evolution of Harmony's policy and corporate commitments.

In October 2021, we updated our climate change and energy policy and our climate change policy and energy efficiency strategy. Achieving the objectives of the Paris Agreement necessitates physical changes to our environment and societal and economic mobilisation.

Harmony's energy efficiency and climate change policy statement evolved in response to the transitional and physical risks and impacts of climate change. Our strategy aimed to give effect to the policy statement. The strategy focuses on the following key areas:

Our strategy outlines the background to the key performance indicators, which in turn set out the targets and their implementation at an operational level.

We achieve our policy statement and strategy through the following:

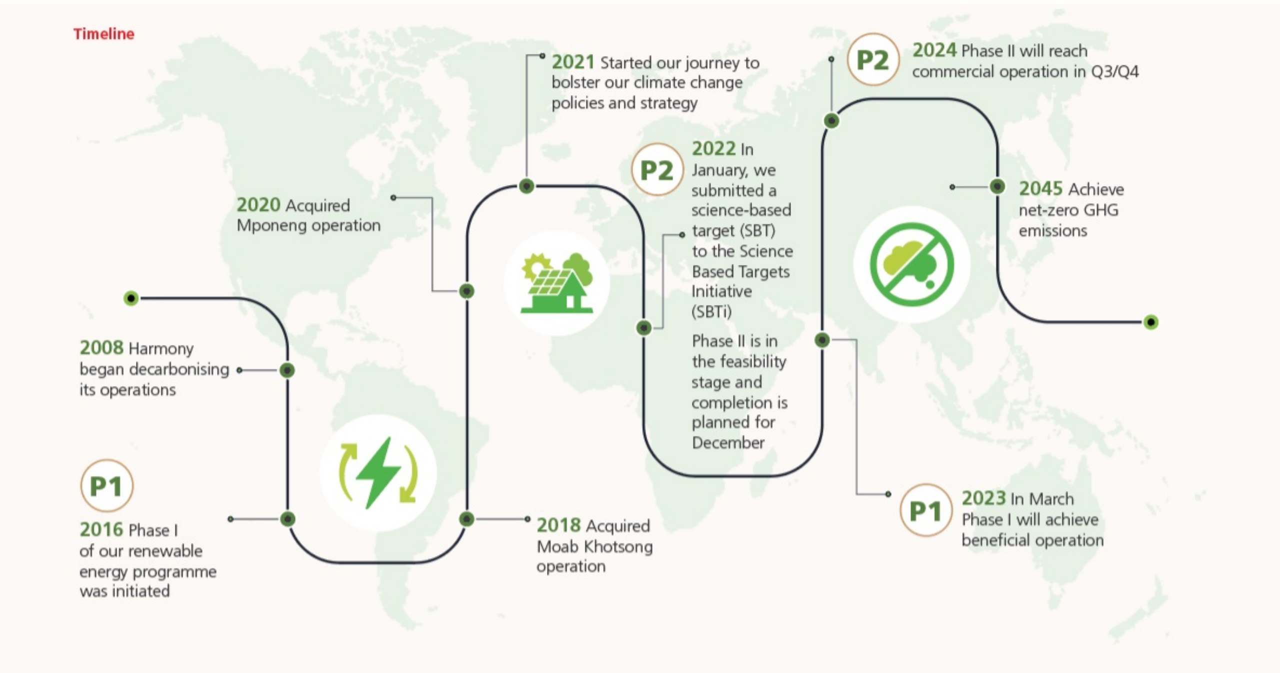
Policy statement and the strategy

1 A top-down business intent to manage and address climate-related risks.

2 Recognition of opportunities related to operational efficiencies and GHG emission reduction.

3 Dedicated climate adaptation programmes including:
- Biogas energy production and agricultural projects in South Africa
- Solar lighting and water, sanitation and hygiene projects in Papua New Guinea.

4 The move towards, and continuous drive of, mining ore using methods with lower energy requirements.



Upon review and in seeking to make continuous improvements against the backdrop of improving technology innovation, Harmony considered the following:

Accomplishments to date

Energy efficiency

Since 2016, Harmony has concentrated on lowering and efficiently using energy. Through its energy efficiency programme, Harmony effected R1.4billion savings; 1.5mtCO_2 and 1.3 terrawatt hours. This would be cumulative to 2022.

Rebalancing our asset portfolio

From FY08 to FY22, we closed some of our energy-intensive shafts that reached geological end of life considering the energy intensity required to continue operating and given the ore reserve depletion focusing more on surface portfolio assets. Our recently acquired assets, Mponeng and Mine Waste Solutions, have higher energy and emission intensities than our historic portfolio. Their influence on our overall performance can be seen in the graphs on page 9. We are exploring opportunities to reduce these emissions intensities. The rebalancing of our portfolio is strengthened by our increased focus on copper and uranium, which can contribute to the global transition to a low-carbon economy.

Forward outlook

Energy mix

Our energy mix portfolio post-FY22 includes grid electricity in South Africa, and energy from independent power producers, which includes solar energy, wind energy, and electricity generated from natural gas. These projects are either under feasibility or in the build stage.

Adaptation

Harmony is investigating climate change adaptation through carbon sinks, agriculture, and water beneficiation. More specifically, Harmony focuses on water resource management as well as biodiversity management action plans and land rehabilitation.

During January 2022, we completed our SBT submission, which is being validated by the SBTi. We secured a green loan of R1.5 billion to fund Phase II of our renewable energy programme, which is linked to our net-zero target of 2045.

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Performance and targets

Harmony's total GHG emissions for FY22 were 5.84 mtCO2e, with the largest portion of emissions attributed to Scope 2 (79%), as shown in figure 3 below. Scope 1 GHG emissions in the figure below relate to increased diesel consumption in back-up diesel generators due to load-shedding in South Africa. We received less than our targeted rates of grid electricity supply in Papua New Guinea on account of third-party generator outages, the impact of El Niño and the use of mobile diesel compressor at Hidden Valley.

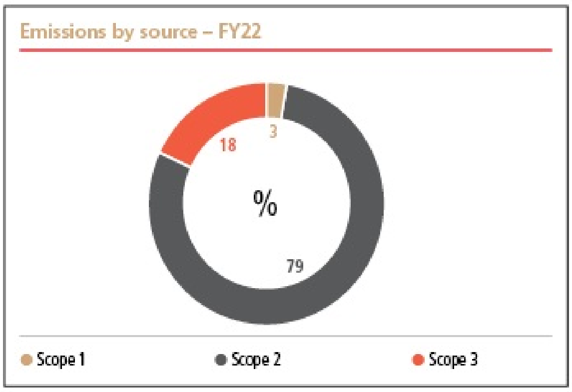


Figure 3: Harmony's total GHG emissions in FY22

In FY16, Harmony set two 10-year GHG emissions intensity targets, through to FY26 using an FY14 base year. The first target relates to tonnes CO2/tonne ore milled and the second to tonnes CO2/kg of gold produced.

As of FY22, Harmony has now also introduced our net zero by 2045 target, which involves net reduction of total emissions by 206ktCO2e/year, against an FY21 base year.

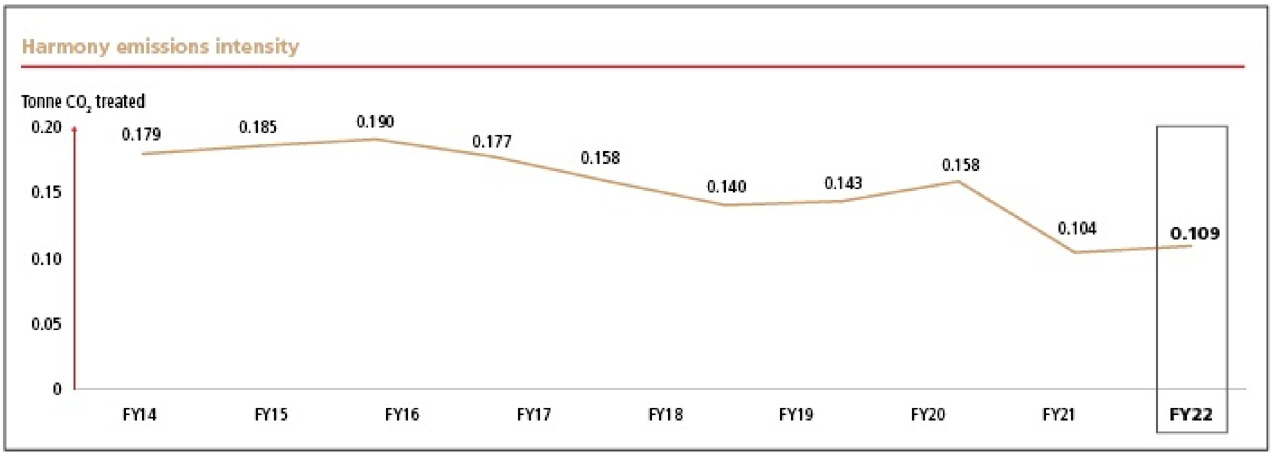


Figure 4: Harmony's GHG emissions intensity for FY22

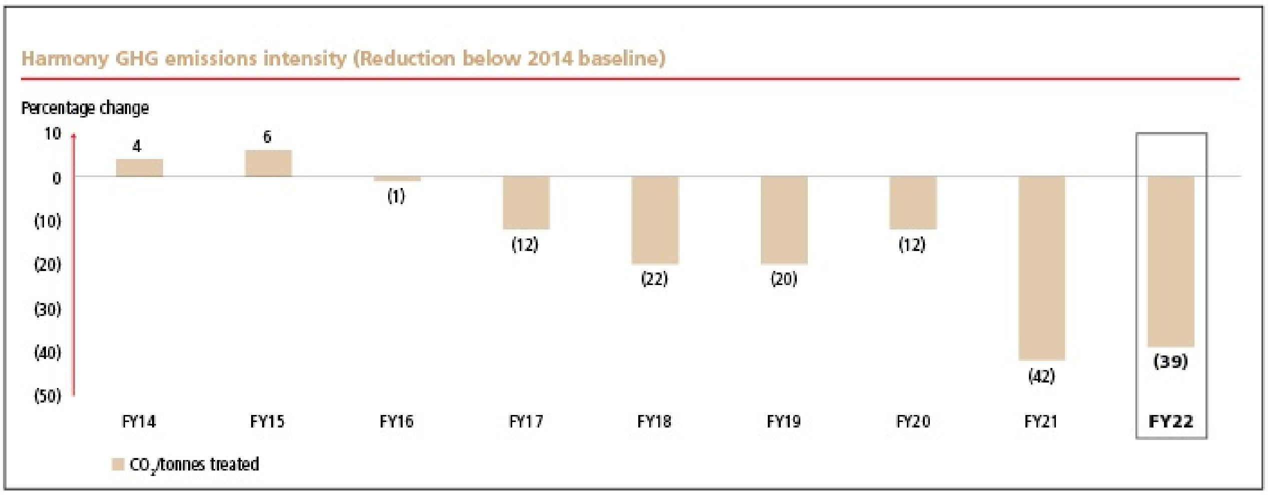


Figure 5: Harmony's GHG emissions intensity percentage change from the FY14 baseline

Progress on our 10-year target to date includes a 39% decrease in emissions intensity per tonne of ore milled against an FY14 baseline. This decrease was largely due to our energy efficiency programme and portfolio rebalancing to focus on fewer energy-intensive resources.

The decrease from 12% below baseline in FY20 was partly due to acquiring Mine Waste Solutions. This operation processes surface materials with low-energy consumption.
FY22 saw an increase to 39% below baseline from 42% below baseline in FY21 owing to the integration of new operations, Mponeng mine and related assets, into Harmony's portfolio from October 2020. Scope 1 and Scope 2 emissions of these assets accounted for 23% of Harmony's total emissions in FY21.

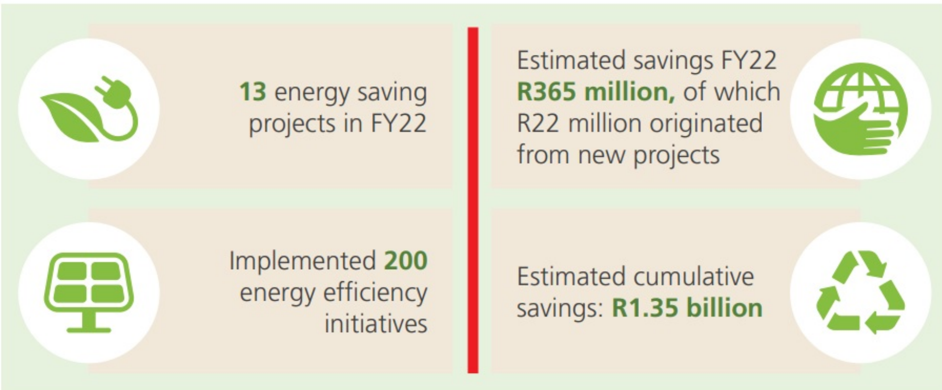
In FY22 our GHG emission intensity per tonne of gold produced increased by 33% against an FY14 baseline. The initiatives above resulted in a reduction of 13% below the baseline in FY19. Mponeng was a recent acquisition and we feel confident that in aligning the operation to the Harmony way, we will realise opportunities to further improve our efficiencies. The intensity increased to above the baseline in FY22 partly due to Mponeng's high energy consumption, and the low grade of the surface materials processed by Mine Waste Solutions.

Noting that our previous targets period was coming to an end in FY22, we have revised our targets with a baseline of FY23 running up to FY27 including:

- 25% renewable energy implemented
- Reduce absolute Harmony group emissions down to 3.9 million tonnes of CO2
- 10% reduction in potable water consumption
- 10% reduction in water intensity (kl/tonnes treated)
- Recycle 50% of Harmony's water consumption.

Energy efficiency

In South Africa, Eskom is Harmony's electricity provider, which mainly relies on coal-fired power stations.



We implemented and maintained multiple energy optimisation projects across 68 operational systems in FY22, which resulted in an estimated energy cost saving of R365 million of which R22 million is savings from FY22. These systems include compressed air, refrigeration, water reticulation and ventilation. The company-wide integration and resilience of our previous Energy Efficiency and Climate Change Strategy (2010) is a testament to our efforts to reduce energy use and GHG emission. Under our updated policy and strategy, we plan to implement various energy efficiency capital projects that aim to increase energy savings.

Our energy efficiency initiatives focus on mine cooling, compressed air, water management and ventilation. These initiatives saved R365 million for FY22, of which R22 million originated from new projects (the difference reflects ongoing savings from earlier projects). To date, we have implemented over 200 energy efficiency initiatives at our operations, with cumulative savings of around R1.35 billion. The energy efficiency programme approach considers the following:

- Energy management teams at South Africa operations
- Infrastructure to enable energy metering and management
- Baseline electricity consumption at all operations
- Exploration, identification and investigation of optimisation opportunities
- Implementation of optimisation strategies and capital projects
- Maintenance of implemented initiatives
- Reporting and management controls
- Awareness programmes to encourage energy conservation.

Hydro-power supply in Papua New Guinea

In Papua New Guinea, most electricity is obtained from the country's Ramu grid. The primary generator for the Ramu grid system is the Ramu hydro-power plant. Grid reliability is low, which led to the Hidden Valley operation utilising back-up diesel generators to address shortfall when grid supply targets were not met. This has been exacerbated by the El Niño droughts, which are anticipated.Papua New Guinea (PNG) has been suffering from drought and frost caused by the El Niño Southern Oscillation (ENSO) phenomenon since mid-2015.

The Hidden Valley operation is proximal to the 9.4MW Upper Bauine hydro-power station, owned by PNG Forest Products Hydro, an independent power producer that supplies the Ramu grid.

In FY22, grid-operator PNG Power, PNG Forest Products Hydro and Harmony's Hidden Valley operation made good progress with commissioning and testing the "Bauine Switch", which will allow the Hidden Valley operation to be isolated from the Ramu grid and receive power from the Upper Bauine hydro-power station. Although limited to 9MW (similar to the percentage received from the grid), supply is expected to be more stable and reliable. Parties anticipate the implementation of this agreement in FY23.

PNG Forestry Products Hydro is constructing the 11.4MW Baime hydro-power station and targeting the station's commissioning by February 2023, which may present further opportunities.

Diversification of energy portfolio mix in South Africa

Harmony is working toward diversifying the energy portfolio mix through small-scale and large-scale projects. We decided to invest in small-scale solar projects to expedite our renewable energy drive. Projects include rooftop solar projects at our offices and administrative buildings across Harmony's footprint. In July 2022 the threshold for exemption from license requirements for self-generation projects was removed. This provides an opportunity for Harmony to reduce our GHG emissions and pursue renewable energy more aggressively in South Africa.

Our solar photovoltaic (PV) energy initiative is planned in three phases. The first two phases are underway, for 30MW and 137MW of installed capacity respectively. Off the back of Phase I of the renewable energy programme, Harmony secured a R1.5 billion green loan for Phase II rollout. Phase II is currently in the feasibility stage. The feasibility study phase's completion is planned for December 2022. Phase II is planned to reach commercial operation by Q3/Q4 2024.

Harmony is exploring options for liquefied natural gas (LNG) or synthesis gas. Although not renewable, we are considering LNG in the mix to lower emissions intensity of our power requirements relative to the predominantly coal-fired South African electricity grid. Table 1 highlights our planned energy diversification pipeline for South Africa, which emphasises renewables and will support our decarbonisation targets.

Energy diversification rollout plan

Parameter	Phase 1 PV	Phase 2 PV1	Phase 3 PV	Wind wheeling	LNG
Size of plant (MW)	30	137	56	100	60
Energy generated per year (GWh)	75	343	139	250	525
Full production year	FY23	FY24	FY25	FY24	FY25

[1] *Additional 20MW for Phase II pending the Doornkop site identification.*

Table 1: Harmony planned energy diversification pipeline (South African operations)

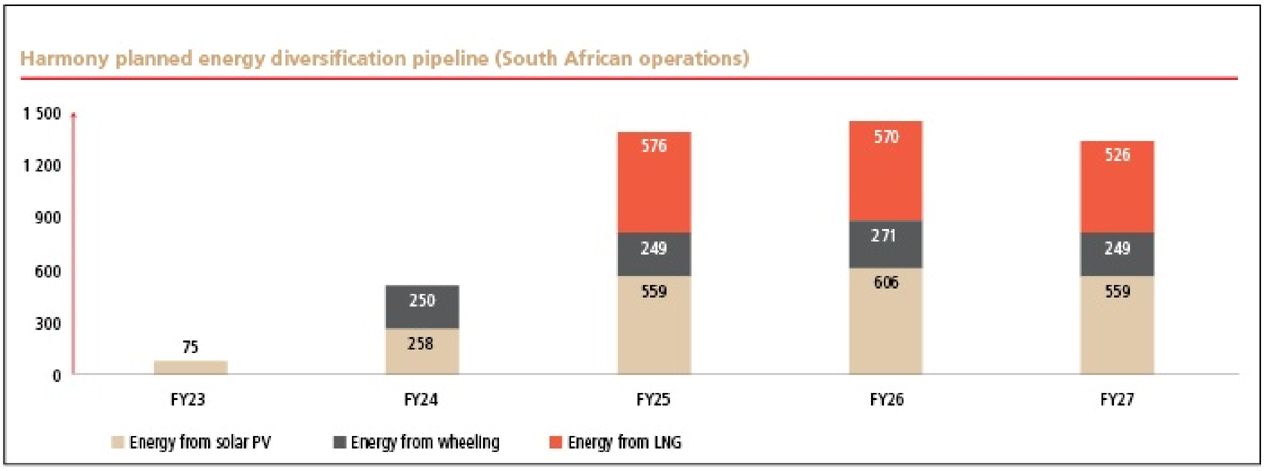


Figure 6: Low-carbon energy generated

Grid decarbonisation

Harmony's emissions mostly comprise Scope 2 emissions, relating to energy purchased from the grid. Scope 2 emissions in our South African operations depend on the grid emission factor. South Africa intends to decarbonise its grid, which will reduce our Scope 2 emissions. The reduction in national grid emissions in the integrated resource plan is primarily due to the retirement of coal-fired power plants. Most of these plants are forecast to be decommissioned by 2042, and only Medupi and Kusile are expected to be operational.

Our net-zero target

In January 2022, we submitted our net-zero target to SBTi for validation. Our target is to decrease Harmony's total emissions by 206ktCO2e annually. This is based on the annual reduction of 4.2% of the base year amount. This is based on the SBTi requirements for a net-zero target aligned with Business Ambition for 1.5°C. This results in the following interim emission targets:

- 2026 – 3.9MtCO2e
- 2031 – 2.8MtCO2e
- 2036 – 1.8MtCO2e.

If the same rate of emission reductions continues beyond 2036, Harmony can achieve net zero in 2045.

Based on emissions forecasts, Harmony is projected to meet the 2026, 2031 and 2036 targets, provided South Africa's grid decarbonises as projected in the integrated resource plan and Harmony implements its planned initiatives. Beyond 2040, a range of challenges will need to be addressed, including consideration of further mitigation outside our value chain to reach net zero. These could include enhancing carbon sinks or carbon sequestration.

Our emissions forecast factors in the Wafi-Golpu project, which is a key driver of emissions beyond 2040. This project has not yet received a special mining lease from the Papua New Guinea Government, nor has development been board approved by its joint venture participants. The Wafi-Golpu project feasibility study was prepared in 2018, and assumes self-generated, fossil-fuel-based power solutions. Prior to any board approval of this project, we will actively investigate options to reduce emissions to align to and support our 2045 net-zero target.

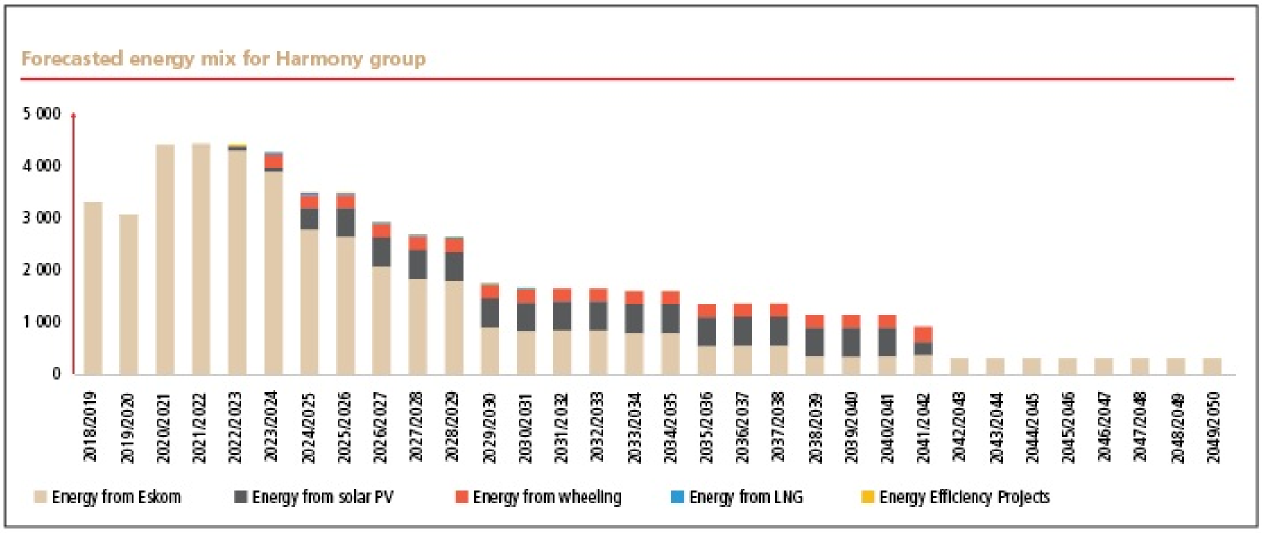


Figure 7: Total annual energy supply for Harmony operations

Water

Reliable water supply is critical for developing our assets, the mining process and realising our growth prospects. We have a thorough understanding of water management and water risks across the operational spectrum. We integrated the management of water security and water-related risks into our long-term business objectives, our business strategy and our financial planning. Harmony's commitment to responsibly managing water usage is driven from an executive level and has evolved from a strategy into practical and relevant actions across the group.

Harmony's water strategy sets out objectives related to water conservation, efficient water use, and the necessities surrounding water supply in the context of its host communities, including:

- Integrating water management and efficiencies
- Acknowledging water-related risks regarding climate change
- Planning for water management at mine closure
- Recognising water as a critical resource for local communities.

Harmony has the opportunity to reduce its operating costs and alleviate water availability pressures experienced by our host communities through reusing and recycling its water. Harmony's water strategy supports the shift towards self-generation and zero discharge of water where it is practical to do so, to encourage the group's water conservation and demand management objectives. Harmony prioritises the conservation of potable water, especially considering the potential worsening drought conditions in the regions in which we operate. Self-generating water will ensure we offset our consumption and allow this to be fed back into host communities.

The figure below shows our progress against our water targets, which ran up to FY22. On a non-normalised basis, potable water consumption increased considerably in FY21 and FY22, driven by the acquisition of Mponeng and related assets.

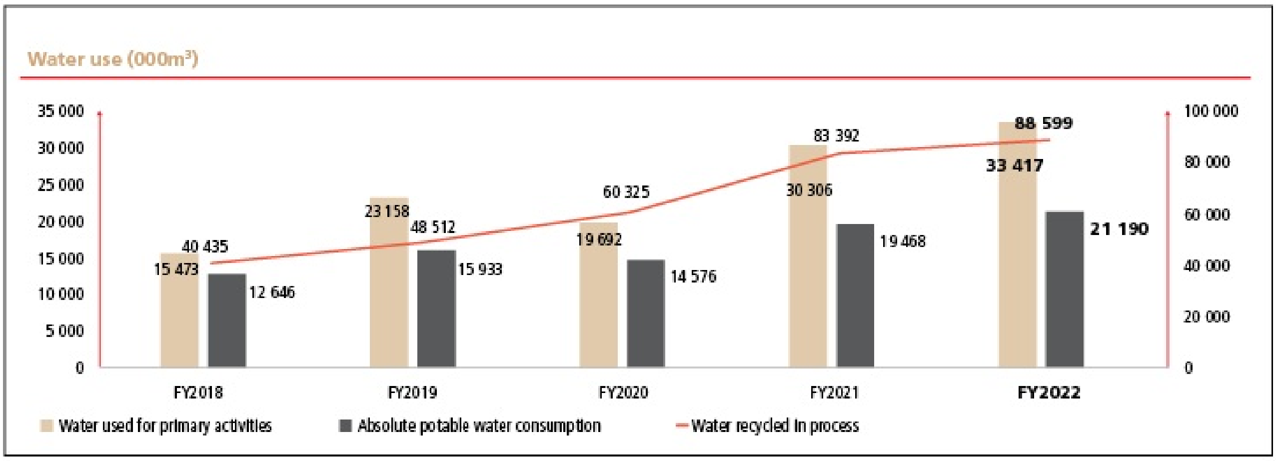


Figure 8: Progress against our water targets

Harmony adopted a group-wide campaign to reuse process water and reduce our dependency on potable water from water utilities. In support of this, we set long-term targets to reduce potable water consumption by 10% and increase water recycled by 50% by FY27. To achieve these targets, Harmony implemented various water conservation initiatives.

Harmony's three water treatment plants in South Africa assist in securing water supply to our operations, while reducing water consumption and assisting with water conservation initiatives. The water treatment plants save Harmony R5.6 million in operating cost per year.

Further to our water treatment plants, Harmony continues to pump water out of our Margaret and Covalent shafts, some of which is used in treatment processes, with the remaining being discharged. This surplus water could provide Harmony with water resources to adapt to future water-stressed conditions. With the physical impacts of climate change posing potential threats to water security in South Africa, water from Covalent and Margaret water became strategic assets for community upliftment and operational growth and development.

In 2018, the Wafi-Golpu joint venture initiated a water, sanitation and hygiene (WaSH) programme to target 19 projects in the proposed special mining lease (SML) and Demakwa access road area, which is home to over 5 000 persons. Projects aim to improve sanitation and support communities' water security. Five projects were completed prior to the Covid-19 pandemic. In FY22 the WaSH programme resumed and we completed two projects in Zimake and Levilivan (Fly Camp) village, benefiting around 350 village residents. The remaining 10 projects are being scoped, and we hope to complete these during FY23 and FY24.

Strategic direction

Harmony is committed to achieving net zero by 2045 including via interim SBTs that are in line with SBTi Business Ambition for 1.5°C. We look forward to the validation of our submission to the SBTi.

FY22 was a significant year in the evolution of Harmony's policy and corporate commitments. The revision of our Energy Efficiency and Climate Change Policy in 2022, and the accompanying body of work, underpinned our net zero by 2045 commitment and established our new corporate targets. The company made tangible strides to and investment in new renewable energy projects. We participate in business and mining industry initiatives that support decarbonisation. In the community development space, we embarked on initiatives to support our host communities' climate resilience.

Outlook

We will continue on our strategic path, and we look forward to the challenges ahead. Our commitment to reporting against the TCFD remains a priority.

Harmony's various strategies will enable meaningful change, and we are confident in our ability to meet our targets. Our commitment to net zero drives our ambitions and enables the transition to a low-carbon economy. Our progress to date and commitment to strategic decision making ensure that we are well placed to continue on our journey.

Social

Principal social imperatives

Creating a **safe working environment** to prevent loss of life	**Human rights** are articulated in our human resource policies, charters and contracts of engagement	**Risk management innovation**: development of a systematic model to embed safety risk management and promote safe behaviours at our operations	**Meaningful and sustainable socio-economic development** to build resilient communities	R34.8 billion (US$2.2 billion) total **economic value distributed** to employees, investors, suppliers, communities and government stakeholders

Capitals affected

Directly

- Human capital
- Social and relationship capital

Indirectly

- Financial capital
- Intellectual capital
- Manufactured capital

Stakeholders affected

- Employees and unions
- Communities, traditional leaders and NGOs
- Governments and regulators
- Suppliers.

Link to strategy

- Responsible stewardship
- Operational excellence

Related risks

- Loss of life/safety
- Not achieving operational plans at our critical operations
- Illegal mining, attacks on plants, theft and legalisation of artisanal mining
- Retaining key skills and experience
- Regulatory changes.

Related opportunities

- Mponeng deepening project
- Drive Wafi-Golpu up the value curve
- Productivity improvement projects
- Exploring value-accretive merger and acquisition opportunities
- Unlocking the full potential of our surface source ounces
- Exploring alternative sources of energy to reduce electricity costs to less than 15% of our production costs and reduce the effect of load curtailment
- Enhancing our ESG commitments by including sustainability metrics in our funding agreements.

Governance and management

Safety and health

The board's **technical committee** approves and monitors compliance with our safety and health policy and legislation although there is oversight by the social and ethics committee as safety and health relates to sustainability and ESG criteria. Our CEO regularly reports safety incidents and achievements to the technical committee and board. At every board meeting, the technical committee chairman provides feedback on safety performance. Management also considers safety a key performance indicator (KPI) in determining remuneration.

In South Africa, our regional COO reports on safety to the group executive committee weekly and quarterly, and quarterly to the technical committee. Demonstrating our inclusive approach, representatives of management, unions, Minerals Council South Africa and government participate in structures emphasising safety and how to eliminate loss of life. Harmony also contributes to external safety initiatives and leading best practice through the Mining Industry Occupational Safety and Health (MOSH) community-of-practice adoption process.

For each aspect of occupational safety and health, nominated champions attend industry meetings and disseminate information to operations. Safety and health committees ensure employees are involved in safety management. In FY22, we had 76 (FY21: 77) full-time safety and health representatives at operations.

In Papua New Guinea, safety managers report at least monthly to the South-east Asia executive committee. Through our regional CEO, this committee reports weekly to Harmony's group executive team and quarterly to the technical committee. In addition, an independent clinical team, executive general managers and business unit managers attend Covid-19 meetings.

Human resources and community engagement

Aligned with the guidelines of the International Labour Organization, our employment policies and practices comply with labour legislation in South Africa and Papua New Guinea. Recruitment initiatives focus on local communities in both countries. We regularly review related procedures and policies, including remuneration and incentive schemes.

Reporting to the social and ethics committee of the board, our human resources function and community engagement managers closely monitor human rights performance at operations.

The **social and ethics committee** oversees socio-economic development, corporate social responsibility and public safety policy and strategies. Our management team and executive responsible for sustainable development implement policies. Guidelines and standards informing site-specific management systems, aligned with our sustainable development framework, support discipline-specific policies.

Social investment governance is formalised with a local economic development strategy, supported by operating procedure and a strategy for investing in mine community development, to ensure processes and systems are entrenched in Harmony. We thus roll out projects responsibly, successfully and sustainably.

Related SDGs

- We implement broad-based agriculture and viable commercial agricultural ventures to promote food security, sustain livelihoods and contribute to alternative sustainable post-mining economic activities.

- Our employees' health and wellness are important for full, productive lives
- We focus on employees' comprehensive wellbeing including occupational health and chronic diseases such as TB and HIV/Aids among other lifestyle-related conditions
- We embedded our proactive safety and health approach during the Covid-19 pandemic.

- Education is a key aspect of our strategy:
  - We support primary schools in Papua New Guinea
  - In secondary schools, we promote mathematics, science and technology
  - In tertiary institutions and communities, we develop entrepreneurial and portable skills, especially in information and communication technology, focusing on mining-related fields (engineering, surveying and environmental science, among others) in Papua New Guinea.

- Gender equality is an essential aspect of our human resources policy
- We have gender diversity targets in South Africa and actively increase the number of women employed at every level, focusing on women in mining in both countries.

- As a responsible employer, providing decent work includes safeguarding employees, ensuring workplaces are safe and preventing harm so that they return home safe every day
- Employees have the right to refuse to work in a workplace considered unsafe
- Training and other support encourage safe behaviour.

- Promoting preferential local procurement as well as enterprise and supplier development uplifts and economically sustains communities
- Infrastructure projects (roads, water and sanitation) enhance community resilience and functionality.

GRI Standards

We list the relevant GRI Standards in each section of this chapter and will include the GRI Sector Standards for Mining when published.

Related material themes and material matters

Material themes
Employee health and safety
• Ensuring employee safety • Protecting employee health and wellbeing.
Supporting our people
• Maintaining sound labour relations • Driving equity, inclusion and diversity • Instilling an enabling culture and empowered workforce.
Partnering for thriving, sustainable communities and our social licence to operate
• Engagement and partnership for sustainable communities • Supply chain transformation and preferential procurement.
Ethical and accountable leadership
• Fair and responsible remuneration.

Safety

Zero loss of life is a core value and therefore a non-negotiable imperative.

Our commitment to complex underground mining in South Africa requires the most stringent safety measures to offset the risks that accompany this complexity.

Applying the same principles in Papua New Guinea, our open-pit gold and silver Hidden Valley operation has an exemplary safety record.

Guiding principles

- Policies and practices aligned with the Mine Health and Safety Act in South Africa and the Mining (Safety) Act in Papua New Guinea
- Critical control management consistent with the International Council on Mining and Metals (ICMM) guidelines and principles
- Contributing to discourse and implementation of leading practices through the Mining Industry Occupational Safety and Health (MOSH) community-of-practice adoption process.

People management

- Executive-driven strategic priorities and safety-focused key performance indicators (KPIs)
- Well trained, full-time safety and health stewards across operations
- Visible felt leadership and behavioural interventions
- Work stoppage when a workplace or action is considered unsafe
- Employees empowered to recognise positive and negative safety behaviour.

Culture and attitude

- Proactive risk assessment as a way of life
- "Learning from incidents" reviews
- Clear communication sharing strong, accessible safety messaging in local languages
- Bi-annual national safety days
- Implementing a company culture transformation model.

Innovation

- Modernisation of safety systems and processes to deliver safety and hazard information before every shift
- Systems to monitor and manage mining-related seismicity with advice on short-term hazard assessments and long-term plans.

GRI Standards

Prepared in accordance with 3-3, 403-1, 403-2, 403-4, 403-5, 403-6, 403-7, 403-8 and 403-9.

Related SDGs

Related material matter

Ensuring employee safety

Our employees are our most important stakeholders and a vital capital resource. Ensuring their safety is a moral and business imperative. Safety is our foremost corporate value – no product is as important as our people who should return home safe and healthy every day.

Our approach

We are embedding safety in everything we do with internal and external stakeholders participating in our multifaceted and cooperative approach aimed at achieving our goal to reduce injuries and eliminate loss of life.

Our employees' safety is among the top strategic risks in our business. We therefore foster a proactive zero harm culture, encouraging employees to stop, assess and manage risks.

Risk management strategy

Our group-wide safety risk management strategy involves identifying, assessing and controlling harmful threats. It is based on real-time data, particularly leading indicators, to support proactive risk management initiatives and safe, profitable production. It also strives for more engaged and proactive behaviour.

We are encouraged by our leading indicators (more reliable indications of preventing harm than lagging indicators, which monitor past events), particularly safe declarations, golden control monitoring and learning from incidents. Automated systems and processes enable continuous assessment of workplace conditions and equipment to avoid risks on surface and underground, and effectively monitor safety-related initiatives at our operations.

We are rolling out this strategy to systematically embed risk management in our operational culture and employees’ behaviour.

Capacitation

In the second phase, from April 2018, we modernised systems, processes and information sharing to facilitate proactive management. Our mining teams therefore require information before entering a workplace so that crews are aware of hazards identified in previous shifts and can ensure the area is safe before entry.

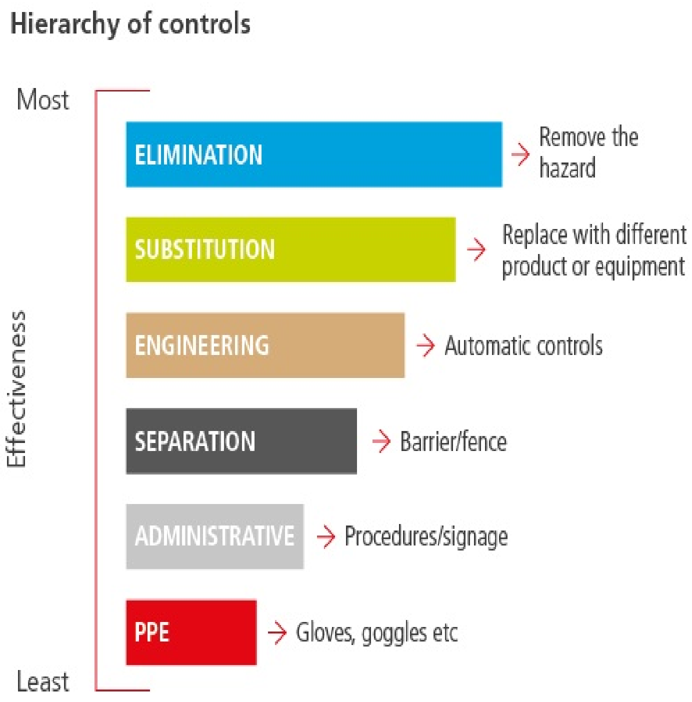
Interventions

Since February 2021, we have been systematically entrenching the ICMM’s critical management plan in the third phase so that we are better equipped to identify significant unwanted events and related mitigating controls.

This phase, which we plan to complete by the end of January 2023, focuses mainly on ensuring appropriate processes are in place at each operation to embed a proactive approach to safety. It includes implementing golden control monitoring and improved responses to golden control failures.

Golden controls are the principal preventive safety measures in our operations such as hazard awareness campaigns, including training, with risk assessment methods such as the new engineering safe operating model (ESOM) that identifies potentially high-risk tasks.

Hierarchy of control



We have introduced a risk manager role to support operations in implementing this proactive approach to create a safety first culture in an environment that enables employees at all levels to live the company’s values and experience high levels of mutual trust, respect and hope. This will manifest in the belief that zero loss of life is possible with an empowered workforce.

Reinforcement

In calendar years 2021 to 2023, Harmony is focusing on the sustainability and integration of our Thibakotsi (Sesotho for "prevent harm") initiative as a humanistic approach to transforming our company culture on a proactive journey to zero harm.

Harmony began the Thibakotsi journey in FY16 to empower employees and contractors to significantly reduce injuries and ultimately eliminate loss of life.

The Thibakotsi journey unpacked

Proactive culture/Live longer (2016-2023)

Leader	Initiative	Business improvement	Optimisation
Develop myself	Visible felt leadership (approach, training, coaching and feedback)	Established visible felt leadership at all operations	Part of our DNA
	Leadership assessments and leadership development programme	Effective and efficient leadership	
Develop others	Engagement and tactics for middle management and supervisors	Engaged and competent middle management and supervisors	
	Risk propensity assessments and training	Improved risk profile of employees at operations	
	Learning from incidents (closing the loop with organisational learning)	Established processes for learning from incidents	
Take people along	Bottom-up interventions (safety transformation with training and impact measurement)	Improved operational safety and productivity indicators	
	Employee engagement tactics	Engaged workforce at all operations	

Change management (stakeholder engagement, communication, evaluation and audit of key actions)

The culture transformation framework has three key company culture change drivers:

- How leaders show up, develop themselves and adopt a collaborative leadership style aligned to the company values
- How leaders empower, develop and engage with middle management and supervisors
- How leaders empower and engage with front line employees to ensure a bottom-up approach to culture change.

Our focus areas and performance in FY22

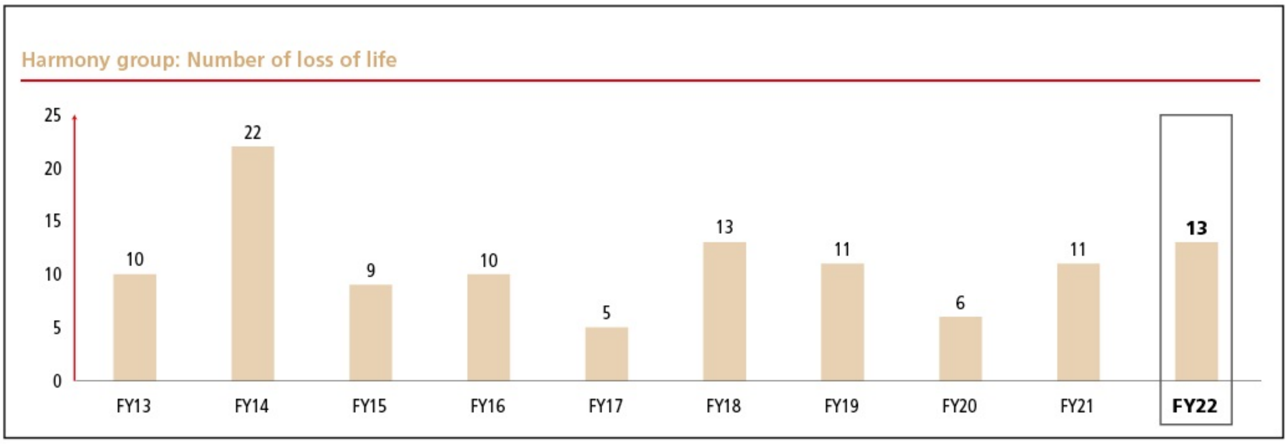
Our safety risk management strategy significantly increased our white flag (accident-free) days in FY22. Our lost-time injury frequency rate (LTIFR) in South Africa improved to 5.90 (FY21: 6.46) per million hours worked and our group LTIFR was 5.65 (FY21: 6.18) per million hours worked at year end.

Despite this progress, we tragically lost 13 (FY21: 11) colleagues at our South African operations while our Hidden Valley operation in Papua New Guinea had no loss of life for the fifth consecutive year.

Team training is crucial in this humanistic transformation process. Our Humanistic Transformation Charter includes Thibakotsi team training as a bottom-up culture change driver. Team training began at one operation in 2016 and was implemented at all operations by April 2021 by four service providers. A multi-disciplinary steering committee governs implementation. Emphasis is on learning from each other through a community of practice forum in which best practice, lessons learnt and feedback are shared. Training is followed by visits to crews when organisational effectiveness improvement officers assess behaviour in the workplace (such as absenteeism and implementation of S300). Training implementation is also monitored and reported monthly. Initially, we focused on management visibility and formalising feedback on issues raised by crews in training. We now analyse employee feedback and measure business impact.

Loss of life

Each loss of life is investigated in detail to ensure that no life was lost in vain and that we learned lessons now embedded in our strategy. In addition, we ramp up business improvement initiatives to identify feasible best practice mitigation measures.



	FY22	FY21	FY20	FY19	FY18
Number of loss of life					
Group	**13**	11	6	11	13
South Africa	**13**	11	6	11	13
Papua New Guinea	**—**	—	—	—	—
Fatal injury frequency rate (per million hours worked)					
Group	**0.13**	0.11	0.08	0.12	0.16
Lost-time injury frequency rate (per million hours worked)					
Group	**[1]5.65**	[2]6.18	[2]6.33	[2]6.16	[2]6.26
South Africa	**5.90**	6.46	6.69	6.48	6.67
Papua New Guinea	**0.17**	—	0.77	0.35	—

[1] *Assured by independent assurance providers in the current year.*
[2] *Assured by independent auditors in prior years.*

In memoriam			**Cause**
15 July 2021	Thembile Simon Mabala	Phakisa rock drill operator	Scraper winch accident
6 August 2021	Pule Jan Mokhatsi	Moab Khotsong stope team member	Gravity-related fall-of-ground
1 September 2021	Richard Mohapi	Mponeng rock drill operator	Seismic-related fall-of-ground
21 October 2021	Thobela Gwangxu	Kusasalethu winch operator	Seismic-related fall-of-ground
	Mbongeni Zulu	Kusasalethu stope team member	
31 October 2021	Sicelo Tshovana	Doornkop artisan	Fall down shaft
10 December 2021	Andile Michael Mafilika	Kusasalethu stope team leader	Scraper winch accident
11 March 2022	Makoae Cosma Makhang	Doornkop tramming team leader	Rail-bound equipment accident
7 May 2022	Sifiso Siphamandla Gumede	Kusasalethu fitter and turner	Settler dam inundation
	Emmanuel Zolile Dhlamini	Kusasalethu engineering assistants	
	Joao Andre Nhanthumbo		
	Lemohang Lerato		
6 June 2022	Linda Mgudzi	Kusasalethu development team member	Conveyance accident

Understanding causes of injury

In FY22, contributors to reportable injuries included slip-and-fall incidents, gravity-induced falls of ground, rolling rock and material handling. Each incident was investigated through a section 11(5) process to determine the causes and contributing factors. Lessons learned are an integral part of our learning from incidents (LFI) process.

Identifying leading indicators, using Harmony's risk management strategy as a basis, enables front line employees to proactively address risks in the workplace, implement mitigating controls and decrease the probability of an incident, accident or injury.

The leading indicators are reported daily in the miner's work note, which provides safety, occupational health and production-related information that informs crews about workplace risks.

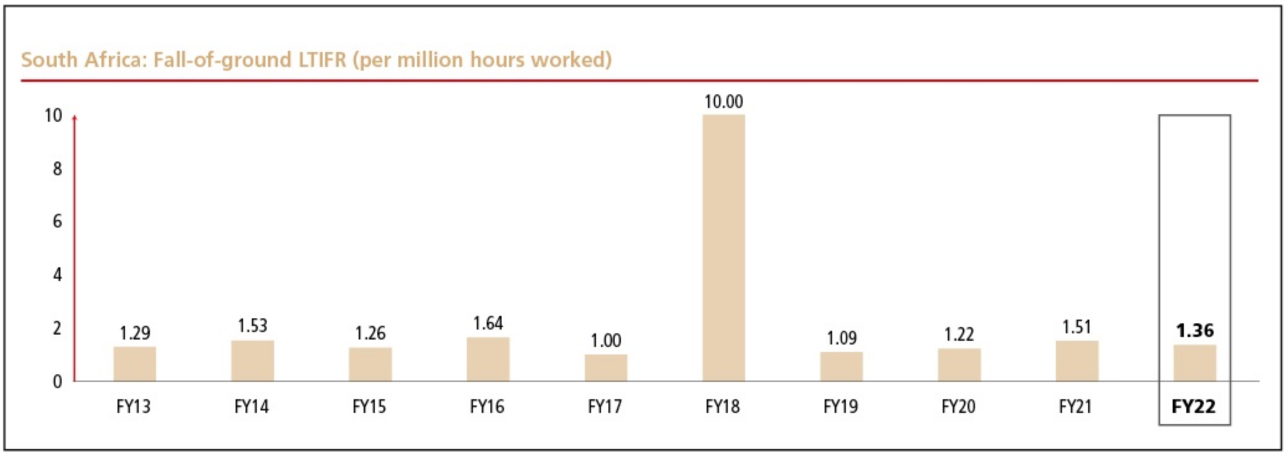
South Africa

We reduced our fall-of-ground LTIFR in South Africa to 1.36 (FY21: 1.51) per million hours worked by increasing risk monitoring with golden controls and addressing inadequate control performance.

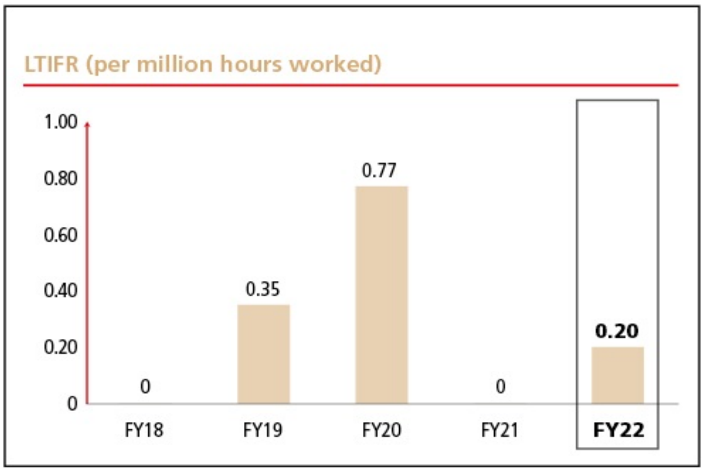
Our critical control monitoring tools included:

- Monthly pre-planning digitisation to ensure mine layout and design support ground conditions
- Analysing data on declaration of safe areas to identify improvement opportunities
- Weekly walkabouts to examine rock engineering and compliance with mining sequence and layout
- Strata control inspections to monitor potential changes in strata.

We addressed inadequate performance by focusing on repeated control deviations to either correct behaviour, the environment or the control.



Papua New Guinea



Hidden Valley maintains a world-class safety record without loss of life since 2015, equating to three million LoLFS as this open-pit operation has fewer risks than our underground operations in South Africa. In addition, the operation implements our safety risk management strategy with critical controls and has a proactive safety culture. Visible felt leadership and regular, focused safety training reinforce positive behaviour.

The operation is also highly mechanised so vehicle interaction is the most significant safety risk, followed by fatigue and uncontrolled release of energy (hydraulic and compressed) in workshops. Monitors on mining vehicles mitigate driver fatigue, prevent collisions, observe driver behaviour and track productivity.

At our Wafi-Golpu project, we similarly ensure proactive safety risk management with critical risk monitoring and visible felt leadership.

Radiation protection

Harmony has 17 certificates of registration (CoRs) from the National Nuclear Regulator (NNR)

The CoRs are managed by eight legally appointed radiation protection officers (RPOs) assisted by two permanently employed radiation protection monitors (RPMs). The RPOs and RPMs report to the group radiation manager.

The NNR requires the following from Harmony as a licence holder:

- Monitoring occupationally exposed employees (OEPs) for all pathways (radon, beta, gama and long-lived alpha) to ensure operations remain within legal dose limits included in our medical surveillance programme
- Monitoring and safeguarding the public visiting radiologically controlled areas
- Screening, sampling and monitoring of scrap waste and repairable items as well as effluent and gas discharges from our operations
- Safeguarding the public by analysing strategic water sampling points (surface and underground)
- Managing and reporting occurrences (surface water dams overflowing, spillages etc), transportation of radioactive materials as per NNR guidelines and decommissioning of redundant operations
- Reporting quarterly, bi-annually and annually on all of the above to the NNR.

No overexposure of OEPs was reported within the Harmony group in FY22.

In compliance with the radiation protection programme, the group conducts quarterly self-inspections, internal radiation audits, and NNR inspections and audits. In FY22, we achieved:

- Average self-inspection compliance: 99%
- Average internal audit compliance: 98%
- NNR compliance: 19 inspections and audits, and 11 non-conformances.

Our focus areas in FY23

We will continue our digitisation programme with ESOM, data integration to provide a holistic view of critical information for proactive decision making, and middle management engagements to support and sustain the Thibakotsi journey while investigating the feasibility of new technologies to improve controls.

A major focus area will be the S300 programme aimed at achieving an average of 300m^2 of zero harm per in-stope team every month.

Health

We safeguard our employees' health and wellbeing with accessible healthcare services.

Harmony is dedicated to employees' health and wellness (occupational healthcare in the workplace) and non-occupational (lifestyle-related) healthcare so that every person can live a fulfilled and productive life.

GRI Standards

Prepared in accordance with 3-3, 403-1, 403-2, 403-3, 403-4, 403-5, 403-6, 403-7, 403-8, 403-9 and 403-10.

Related SDGs

Related material matter

Protecting employee health and wellbeing

The health and wellbeing of employees are important for full, productive lives. A motivated, engaged and productive workforce enables Harmony to deliver on our business strategy and create sustained and shared value for our stakeholders. Our duty of care for employees extends beyond compliance to ensure safe and healthy workplaces, easy access to healthcare and occupational disease related compensation.

Our approach

Our pro-active, risk-based approach aims to ensure employees are fit for work, life and the physiological age appropriate for retirement. Our robust medical surveillance promotes active case finding, early detection and treatment of disease as integral aspects of our healthcare strategy, based on four pillars:

1. Education, awareness and promotion of good health
2. Disease prevention and risk management
3. Clinical intervention (treatment programmes)
4. Continuous risk profiling.

The intention is to have resilient employees who proactively drive their own health and wellbeing.

Strategic focus areas for 2022 to 2026

Valued leaders enabled to deliver value	Digitised and data-driven healthcare	High quality and standards	Resilient, fit-for-work and fit-for-life employees	Leaders in healthcare and wellness	Collaborative ways of work
Develop a health team with the right people, in the right places, who create and deliver value and are valued in the process.	Enable transformation of healthcare system, services and practices through investment in fourth industrial revolution technology and data-driven business intelligence.	Ensure high-quality healthcare practices within Harmony go beyond compliance.	Ensure a holistic and proactive approach to wellbeing for resilient employees who proactively drive their own health and wellbeing.	Lead the healthcare and wellness sector by adopting and advancing best practice while maintaining cost effectiveness.	Ensure a collaborative approach to achieving common goals through strategic and aligned internal and sustainable external partnerships.

In South Africa, medical scheme membership is compulsory for officials and management, and voluntary for category 4 to 8 employees who can use free comprehensive on-site healthcare services. We refer employees to external specialist service providers, and private hospitals for secondary and tertiary healthcare needs.

In Papua New Guinea, employees and contractors also have access to fully equipped medical centres at our operations.

An electronic integrated health management system provides a holistic view of an employee's health status to on-mine medical professionals. The system eliminates inefficient and costly manual processing by incorporating occupational and primary healthcare, injuries on duty and chronic disease cases on the same platform, allowing clinicians to make timeous fitness decisions. It is the foundation of the digital transformation of our health strategy for 2022 to 2026.

In Papua New Guinea, online medical registers track employees' progress from diagnosis to treatment of occupational and unrelated injuries and illnesses. Employees and contractors also receive primary healthcare and occupational health surveillance services in medical centres with full-time doctors and nurses. Privately owned companies supply medication, consumables and clinical advice.

Our focus areas and performance in FY22

Dedicated medical hubs at our operations care for employees' health needs – occupational (health and wellness in the workplace) and non-occupational (lifestyle-related diseases).

We continue to reduce costs at the newest medical hub in our portfolio, Mponeng, by insourcing health services aligned with Harmony's health strategy. This intervention saved more than R60 million during the year by reducing overheads from R2 400 per person to R1 527, which is more than the budgeted R1 633. Optimisation of health programmes will continue in the coming financial year and we expect further cost reductions.

In FY22, we spent R1.1 billion (US$70.8 million) (FY21: R1 billion/US$65.3 million) on health initiatives across South Africa. Of that, R204 million (US$13.3 million) (FY21: R291.6 million/US$18.9 million) funded Covid-19 management in South Africa and R237.8 million (PGK55.0 million) (FY21: R290 million/PGK66.3 million) in Papua New Guinea.

In South Africa, a further R560 million (US$36.4 million) (FY21: R465 million/US$30.2 million) provided free health benefits for 27 707 employees and contractors. The main drivers were inflationary increases in medical goods and services, particularly personal protective equipment (PPE), and a higher hospitalisation rate due to Covid-19-related referrals. The full impact of pandemic-related health costs was evident in the review period. Having brought Mponeng operations medical hub into the portfolio resulted in a higher medical cost base.

Our on-site healthcare hubs conducted 66 862 (FY21: 68 651) medical examinations. The decrease is due to the electronic integrated health management system roll-out, and lifting of Covid-19 restrictions and screening requirements. Medical examinations at the Hidden Valley clinic in Papua New Guinea increased in the third and fourth waves of Covid-19, which also increased health-related absenteeism.

In South Africa, 9 823 (FY21: 9 793) employees participated in medical schemes in FY22. Harmony's monthly subsidy of related costs was R27.2 million (US$1.8 million) (FY21: R25.7 million/US$1.7 million).

We spent R15.6 million (PGK3.6 million) (FY21: R12.68 million/PGK2.9 million) on healthcare in Papua New Guinea in FY22 when our in-house team successfully delivered Covid-19 services, and we replaced former doctors and nurses as well as a supplier of consumables affected by the pandemic.

At PNG medical centre 15 539 (FY21: 11 489) health examinations were conducted in FY22 – 29% (FY21: 31%) were random drug and alcohol tests.

Papua New Guinea: Healthcare expenditure (Rm)	**FY22**	FY21	FY20
Total excluding Covid-19	**16**	13	19
Covid-19-related management	**238**	290	Not reported

Papua New Guinea: Health statistics	**FY22**	FY21	FY20	FY19	FY18
Health examinations conducted	**15 539**	11 489	20 452	17 601	15 198
Employees treated for respiratory ailments	**1 545**	707	1 905	2 191	2 581

Occupational healthcare

Prevention and management of occupational diseases avoid serious health implications for employees, and financial liability and reputational damage to Harmony.

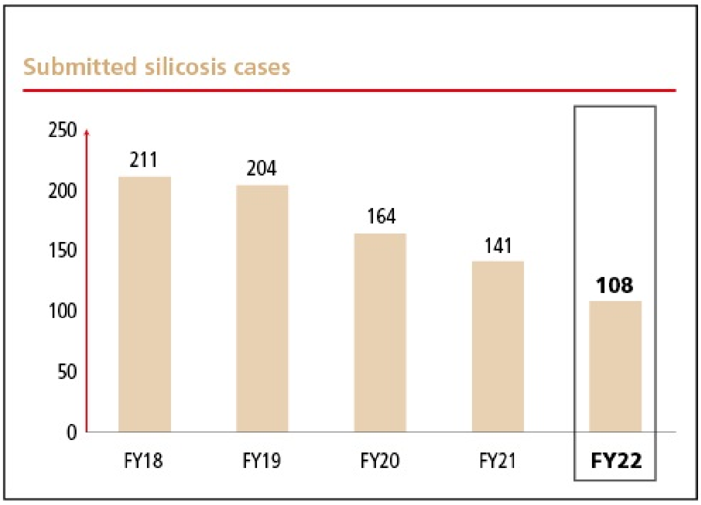
South Africa

Our key concerns are occupational lung diseases, particularly silicosis, noise-induced hearing loss (NIHL) and heat-related illness.

Silicosis
Silicosis is an occupational lung disease caused by inhaling free respirable crystalline silica dust over a long period. Given the severe risk presented by this disease, which can increase susceptibility to tuberculosis (TB), particularly among HIV/Aids patients, Harmony has an integrated silicosis, TB and HIV/Aids policy and programme for proactive prevention and management.

To eliminate silicosis in our South African operations, we aim for the local gold mining industry milestone: 95% of personal silica dust samples must be below 0.05mg/m^3 by 2024. We set annual dust load reduction targets to achieve this goal – our FY22 target was 93% (FY21: 92%). Our milestone achievement in FY22 was 88.2% (FY21: 86.3%) with most metallurgical plants and a third of the mines above the aspirational target of 93%.

In FY22, we submitted 108 (FY21: 141) silicosis cases (20% former Harmony employees) to the Medical Bureau for Occupational Diseases for certification and possible compensation. A total of 184 (FY21: 54) silicosis and silico-TB cases were certified. In FY22, no new cases were noted among previously unexposed individuals who entered the mining industry since 2009. To date, there are two certified cases of silicosis among previously unexposed employees.



As silicosis is caused by inhaling silica dust over time, we aim to eliminate dust discharged during rock breaking at the source, in stoping, development and trackless mining. Engineering controls in our underground operations also minimise employees' exposure to silica dust, based on Mining Industry Occupational Safety and Health (MOSH) leading practice

In FY22, we reduced dust at the following rates with sustainable engineering controls at our operations:
- Main tips – foggers (97.6%), covers (98%) and filters (96.1%)
- Main intake haulages – airway sprays (94.9%), spray cars (92.3%) and footwall treatment (78.5%)
- Stopes – winch covers (98.4%) and in-stope atomisers (99.1%)
- Continuous real-time monitors (95.7%).

Settling occupational lung disease claims
Tshiamiso (Setswana for "to make good" or "to correct") describes our motivation to settle occupational lung disease claims
Harmony continues to assist government's Ku-Riha project addressing challenges in administering occupational lung disease compensation through our ReConnect initiative.

With the mining industry's support, Harmony ReConnect was the driving force in the development of a paperless compensation claims management system (CCMS) to help government's Medical Bureau for Occupational Diseases and Compensation Commissioner for Occupational Diseases, as well as the Tshiamiso Trust, efficiently settle claims and pay unclaimed benefits. The CCMS reduced the average claim processing time from 500 to 90 days.

During FY22, the Compensation Commissioner for Occupational Diseases paid compensation of R5.5 million to 434 current Harmony employees and R36 million to 1 001 former employees. Another 616 current and 20 881 former employees lodged claims with the Tshiamiso Trust, which has already paid benefits of R221 million to 2 605 former Harmony employees.

We were involved in establishing the Tshiamiso Trust after the High Court approved the R5.2 billion settlement of the silicosis and TB class action suit between the Occupational Lung Disease Working Group – representing Harmony, Gold Fields, African Rainbow Minerals, Anglo American South Africa, AngloGold Ashanti and Sibanye-Stillwater – and lawyers for affected mine employees in 2019.

Noise management
We aim to eliminate NIHL by ensuring that no employee's standard threshold shift exceeds 25dB from the baseline when averaged at 2 000Hz, 3 000Hz and 4 000Hz in one or both ears. The standard threshold shift, a sensitivity marker used to identify early deterioration in hearing, guides modification and enhancement of occupational noise controls to prevent progressive hearing loss.

Employees exposed to high noise levels, receive personalised hearing protection devices, which reduce noise levels by 25dB.

In FY22, there was an increase in employees compensated for NIHL – 106 (FY21: 71) cases were compensated. Moab Khotsong, Mponeng, Tshepong and Masimong recorded the most cases.

A notable achievement was adopting the tyre-deflation noise reduction simple leading practice. The MOSH adoption team trained each of our occupational hygienists and equipped them with the knowledge and resources to drive implementation of this practice at our South African operations.

Managing underground temperatures
For employees exposed to excessive heat in the workplace and ventilation in our operations manage temperatures exceeding normal working ranges. In addition, we provide heat tolerance testing, acclimatisation programmes, and adequate hydration and support.

In FY22, we conducted 17 868 (FY21: 15 364) heat tolerance tests and recorded 211 (FY21: 126) cases of heat-related illness. Mponeng, Moab Khotsong and Tshepong accounted for 70% of cases.

Tests are conducted with each mine's risk assessments, allowing less risky occupations to use natural acclimatisation to minimise the threat, including alcohol testing to avoid dehydration. Environmental working conditions are also monitored continuously.

Radiation protection

Monitoring radiation levels and exposure at our South African operations
Our operations comply with the dose limits of 50 millisieverts a year and 100 millisieverts over five years. Controls ensure that elevated monitoring results are investigated and corrected.

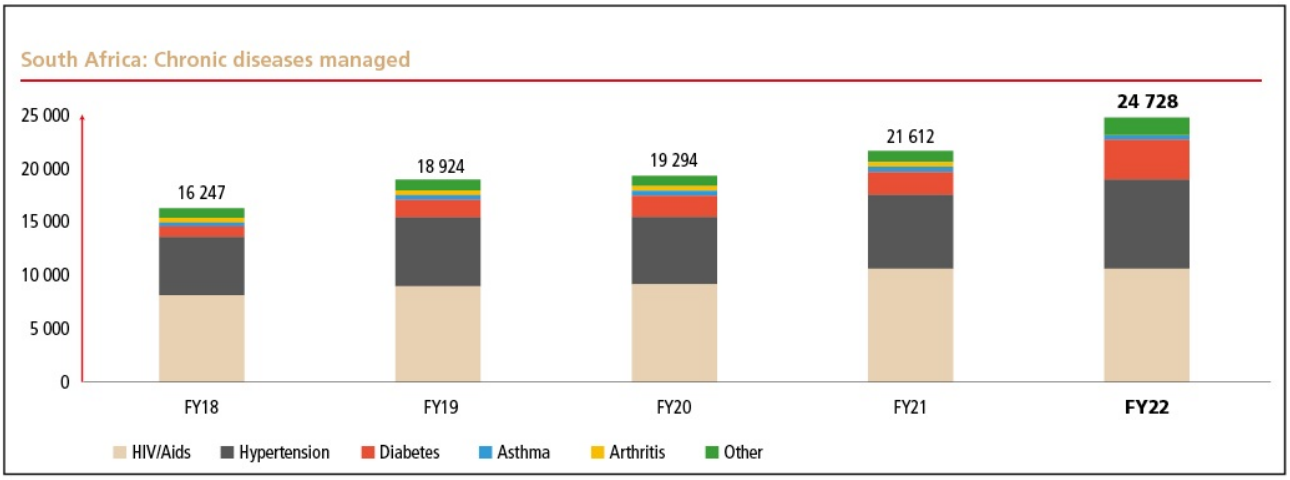
Radiological clearances at decommissioned sites ensure future declassification of these areas.

Papua New Guinea
NIHL is a significant focus area at Hidden Valley as the open-pit operation uses large mining vehicles and earthmoving equipment. Our robust noise monitoring programme addresses this by ensuring employees constantly wear appropriate hearing protection devices.

In FY22, we contracted consultants (GCG) to conduct risk assessments of our NIHL, silicosis and hygiene monitoring programmes, although we did not record any cases.

Non-occupational healthcare
Using our electronic health management system, which enables follow-ups, Harmony's integrated lifestyle programme addresses communicable diseases such as HIV/Aids, TB and Covid-19, and non-communicable lifestyle diseases, including increasing mental-health-related conditions.

In FY22, 2 494 (FY21: 2 006) employees participated in this programme.



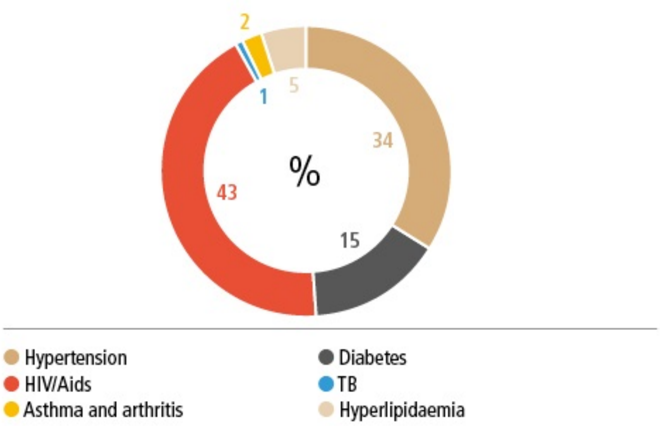
`Note: If an employee has more than one chronic disease, this is counted against each condition.

South Africa

Non-communicable chronic lifestyle diseases, such as hypertension, heart disease and diabetes, remain significant challenges for our employees. At the same time, we manage challenging communicable lifestyle conditions such as HIV/Aids and TB.

The percentages of our employees diagnosed with these conditions are illustrated below.

South Africa: Chronic conditions at 30 June



HIV/Aids

The scourge of HIV/Aids in South Africa continues to impact our employees and their dependants despite progress in raising awareness and prevention as well as the availability of antiretroviral therapy (ART). Harmony is concerned that this disease, and opportunistic infections, including Covid-19, contribute negatively to absenteeism while reducing productivity and our skill set, which translates into heavier economic burdens.

Motivating employees to disclose their HIV status remains challenging, worsened by the stigma and confidentiality. We therefore focus on encouraging positive behaviour.

At our South African operations in FY22, 29% of our permanent workforce was HIV-positive with 9 595 (FY21: 9 328) in the HIV/Aids programme and receiving ART. The estimated national HIV prevalence rate for adults aged between 15 to 49 is 19.5%.

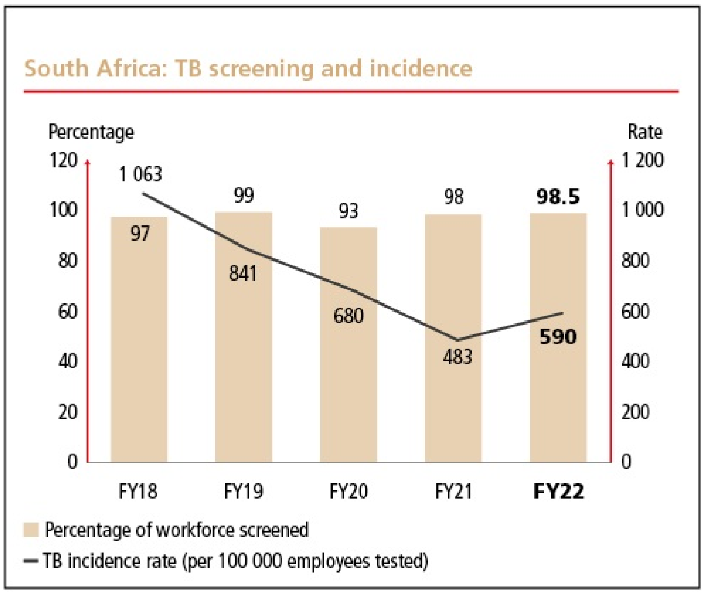
We continue to distribute Dolutegravir, as part of first-line treatment, which accelerated viral suppression conveniently and with fewer side effects for 78% (FY21: 78%) of employees in FY22. This drug supports South Africa's achievement of the United Nations Programme on HIV/Aids (UNAids) 90-90-90 targets (refer to the table below). Harmony's HIV/Aids programme is aligned with this global campaign. Four of our operations achieved the first target and six reached the second during the year.

Target 90%

South Africa: Harmony's HIV status (%)	**FY22**	FY21	FY20
of people living with HIV will know their status	**85**	76	83
of people with diagnosed HIV infection to receive sustained ART	**89**	86	85
of people receiving ART to have viral suppression	**78**	78	71

To meet the UNAids 2030 targets to identify at least 95% of people living with HIV, initiate at least 95% living with HIV onto effective ART and ensure that at least 95% on treatment remain virologically suppressed, Harmony participated in World Aids Day on 1 December 2021 with build-up campaigns from 8 November across our operations. The theme was "Working together to end inequalities, Aids, TB and Covid-19". The campaign ran concurrently with the Covid-19 vaccination programme. We thus raised awareness of the importance of vaccination and HIV status knowledge. During the campaign, 5 970 employees were offered voluntary counselling, and testing and screening for TB – 5 083 were tested for HIV, and 16 new positive cases were identified and began treatment. Five TB suspects were found negative. Another 458 community members were screened for TB and counselled for HIV.

Employees continue to receive pre-test counselling and voluntary testing through ongoing initiatives at our healthcare hubs. In FY22, 67 035 (FY21: 50 949) employees received voluntary counselling and testing, and 61 565 (FY21: 48 308) confirmed their status. We returned to pre-pandemic levels during the year.



Responding to Covid-19 and other virus outbreaks

Despite relaxing national Covid-19 regulations, we remain vigilant in our awareness and precautionary approach. This includes precautionary measures to prevent the spread of Covid-19, promoting education and awareness, and improving hygiene and infection control.

The significant reduction in the number of employees needing isolation or hospitalisation during the year validates the arguments for vaccination, which we provide at shafts in terms of best practice guidance from the WHO, National Institute for Communicable Diseases, South African Department of Health and Minerals Council South Africa. Our protocols are also informed by engagement with union representatives.

We encourage employees at our operations, including 85% who voluntarily received a double Covid-19 vaccination, to receive booster and influenza (flu) injections, particularly high-risk people.

Harmony's seasonal flu vaccination programme began in April 2022 with permission from the Department of Health to administer Covid-19 vaccinations simultaneously. A total of 4 519 employees, 11% (FY21: 23%) of our South African workforce, received the flu vaccination. We attribute the decrease to employees' reluctance to receive both vaccinations, although vulnerable employees received booster vaccinations and we achieved over 84% herd immunity by the final Covid-19 wave of the year.

Of 101 employees infected during the fifth wave of Covid, seven were admitted to hospital with moderate disease symptoms and recovered. There were no related deaths during this wave.

South Africa: Covid-19 management at 11 July 2022

Deaths (including contractors) **79**	Active cases **1**	Recovery rate **98%**
Vaccinations **38 096** (84%)	First dose **87%**	Second dose **84%**
Booster **34%**	Community members vaccinated in partnership with district health departments from 15 March 2022 (aligned to the provincial community mobilisation campaign with capacity to vaccinate 200 000 citizens over the coming 12 months) **West Rand: 2 952 Matlosana: 1 812**	

Since the beginning of May 2022, we are also monitoring the global rise in monkeypox infections, and we are prepared to respond to the disease, guided by the WHO, which recorded two confirmed cases in South Africa during the year.

Mental health
Emerging from Covid-19, we are actively addressing increased mental health and psychosocial wellbeing issues by raising employee awareness, empowering our stakeholders including managers, and providing easy access to psychosocial services. Our social workers reached employees in engagements related mainly to grief, adjustment disorder, stress and relationships during the year.

Harmony's health and wellness team work closely with the South African National Council on Alcoholism and Drug Dependence (SANCA) Sanpark substance abuse clinic providing in-hospital and outpatient services and social worker training. We also offer on-site and telephonic or virtual psychosocial support to employees and their families through our partnership with Reality Wellness Group.

Papua New Guinea
TB and comorbid HIV/Aids receive the full attention of our medical team while Covid-19 continues to impact our planned activities as we replace infected employees who leave the site.

In addition, lifestyle diseases, such as hypertension and diabetes, are increasing in Papua New Guinea as more people adapt to unhealthy developed world habits and diets. These diseases are the main reasons for off-site referral for further checks as well as failed pre-employment medicals.

HIV/Aids and TB
Given the humid climate, upper respiratory tract infections and TB are our main medical concerns in Papua New Guinea. To effectively manage TB, we have digital X-ray, GeneXpert and other medical laboratory equipment to accurately diagnose this chronic disease as well as tropical diseases.

In FY22, we treated 1 545 (FY21: 707) employees for respiratory ailments. Emphasis on hygiene (regular hand washing, sanitising and wearing masks) to address Covid-19 helped decrease these and other infections.

At Hidden Valley, 332 (FY21: 323) employees voluntarily tested for HIV/Aids and received counselling. This 3% increase was due to incentives, such as free shirts, to encourage employees to ignore discrimination in testing for HIV and Covid-19.

Covid-19
Papua New Guinea has one of the lowest Covid-19 vaccination rates in the world. Most off-site families are not vaccinated or have only received the first dose.

We did not reach Harmony's target to vaccinate 85% of mine employees in FY22. We vaccinated 40% of employees and continue to offer vaccinations to employees and contractors on site, although Covid-19 restrictions have lifted. Our clinic also provides booster shots and vulnerable employees are sent off site for active management.

Malaria
Although rampant in Papua New Guinea, malaria does not affect our Hidden Valley operation as it is located at a high altitude. Employees, contractors and communities in lower valleys, and at Wafi-Golpu, are at risk of contracting this disease.

In FY22, our malaria cases decreased by 25% to 306 (FY21: 406). We attribute this to Permethrin foggers and spraying rooms with alcohol to prevent the spread of Covid-19.

Our malaria management programmes for Wafi-Golpu communities include awareness and education campaigns, and distributing mosquito nets to households with young children.

Mental health
Increasing mental health issues are more challenging to assess as most patients do not disclose necessary information. Our on-site medical team addresses this issue with continuous health promotion activities, including a topic of the month and campaigns that encourage regular health checks. As exercise is among the recommended treatments for mental health conditions, we also have a gym and undercover sports facilities for employees at our Hidden Valley operation.

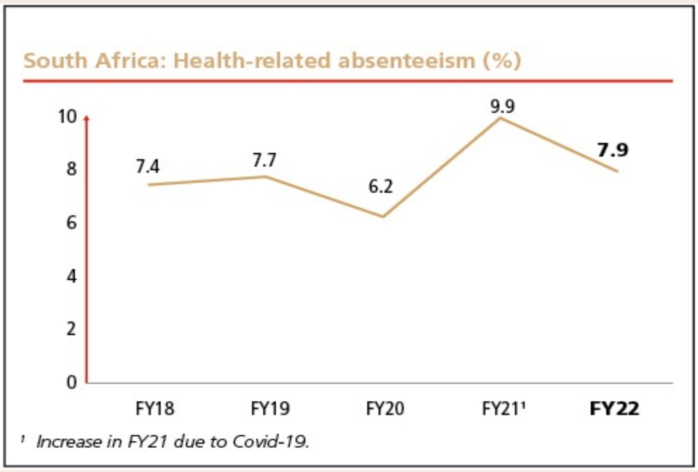
Managing health-related absenteeism

We address health-related absenteeism with early identification and management of chronic illness or debilitating diseases that may render employees medically incapacitated

Our At Work programme continues to identify employees with extended sick leave, monitoring their medical conditions and ensuring appropriate treatment and early return to work with health and productivity as goals.

In South Africa, Covid-19 was not a major contributing factor in the latter part of FY22. It was replaced mainly by respiratory, musculoskeletal and psychological conditions.

In Papua New Guinea, respiratory tract infections commonly caused health-related absenteeism in FY22 at the peak of the Covid-19 pandemic when the virus and cold night-time temperatures at our high altitude aggravated infections. Employees who did not improve within two days of treatment were transported to private hospitals.



Our focus areas in FY23

The group will include Covid-19 protocols in integrated health management as the norm while we continue early detection and treatment of TB-infected employees to minimise its spread (particularly considering the prevalence of Covid-19). In addition, we will invest in health digitisation opportunities that integrate individual risk profiles (personalised care using predictive analysis for safer production), human resource capacity (shift, fitness and productivity information), safety (injuries and hygiene data), occupational health (vision, hearing and physical assessments), disease management (laboratory, X-ray, hospital, primary healthcare and medical incapacity data), psychosocial (safety and health psychology), missing person locator (personal health and environment monitoring) and environmental (Covid-19 screening, physical activity and nutrition) factors.

In Papua New Guinea, we will improve clinical governance systems with Aspen Pharmacare to provide best practice on-site medical services. We will also develop a health and hygiene monitoring programme with standards recommended by consultants (GCG).

Caring for our employees

Employees are our most valuable asset in mining with purpose. Our employee relations are based on mutual respect and trust, reflecting our firm belief that each person is critical to our business strategy.

Duty of care

Our duty of care is our moral and legal obligation to ensure the safety and wellbeing of our people. This starts with our employees and extends to our communities, and aims to go beyond compliance in providing uplifting support and meeting the employment needs of the countries in which we operate.

Legislated targets

In South Africa, we go beyond compliance with the Mining Charter III in creating and maintaining an employee profile that addresses the country's needs. In Papua New Guinea, we are required to deliver local employment in a tiered approach and thus exceed our memorandum of agreement targets, which are evolving with increasing obligations to share the value we create on the people's land we mine.

South Africa	
Human resources development (ring-fenced)	• 5% (percentage of the leviable amount excluding mandatory skills development levy) – Mining Transformation and Development Agency: 2% – Essential skills development: 2% – South African historically black academic institutions: 1% (70% of the budget must be spent in South Africa – half of this budget on research and development at these institutions).
Employment equity	• Historically disadvantaged people (including black women, people with core and critical skills, and disabled people) representation in board and management • Career progression plans aligned with social and labour plans (SLPs).
Housing and living conditions	• Decent housing, home ownership, integrated human settlements and measures to address demand • Affordable, equitable and sustainable healthcare services with proper nutrition.

Papua New Guinea	
Tiers 1 and 2: Local landowners and impacted districts	40%
Tiers 3 and 4: Morobe province and the rest of Papua New Guinea	57%
Tier 5: Expatriates	Less than 3%
Women	16%

GRI Standards

Prepared in accordance with 3-3, 401-1, 401-2, 401-3, 402-1, 404-1, 404-2, 404-3, 405-1, 405-2, 406-1 and 407-1.

Related SDGs

Related material matters

Maintaining sound labour relations
Our South African deep-level gold mines are labour-intensive and unionised. As such, the company must be able to navigate the challenges of multi-stakeholder labour relations to reduce the risk of labour-related stoppages or strike action. We recognise the value organised labour brings to improving our business, our employees and contractors, and respect freedom of association.
Driving equity, inclusion and diversity
The company aims to redress historical imbalances, particularly at managerial levels, experienced by certain population groups and women. In the South African context, we believe our workforce must represent the diversity of South Africa so that we are and remain to be seen as a good corporate citizen, and ensure compliance with the Mining Charter's employment equity targets. In Papua New Guinea, we focus on attracting and retaining locally recruited employees, particularly landowners and citizens, in alignment with the prime minister's aim to increase employment of Papua New Guineans, particularly in the mining sector.
Instilling an enabling culture and empowered workforce
An unmotivated and ineffective workforce could translate to efficiency challenges and affect profitability. We strive to establish a high-performance culture by ensuring an organisational structure that is fit for purpose, and empower employees by equipping them with the necessary skills to deliver on our strategy.
Fair and responsible remuneration
Fair and responsible pay embodies our initiatives to enhance the lives of our employees by enabling them to improve their living conditions, and to have better access to social services, healthcare, education and training. Fair and responsible remuneration ensures we are able to attract and retain key talent.

Our approach

The tenets of our human relations approach include:

- Upholding the principle of fairness and enacting our employment equity policy through personalised development and training to empower individuals to contribute to the company and broader society
- Recognising and capitalising on the rich diversity of our people while ensuring local communities have preferential recruitment opportunities
- Generating benefits through our employee shareholder schemes in South Africa
- Where we are expanding our geographic footprint, ensuring we respect the customs, traditions and needs of local people
- Ensuring freedom of association for employees and recognising the value of organised labour in business improvement.

Employee safety and wellbeing are central to our approach to ensuring positive employee relations. For more information, see Safety and Health.

Our focus areas and performance in FY22

Key metrics	South Africa	Papua New Guinea
Total permanent workforce	35 989	1 555
Historically disadvantaged persons (HDPs)[1] (South Africa)/local (Papua New Guinea)		
Total workforce (%)	73	97
Total management (%)	57	29
Female employees (%)	19	16
Employee remuneration		
Wages and benefits (Rm)	16 144	829
Total training spend (R/US$)	657	4

[1] Includes women.

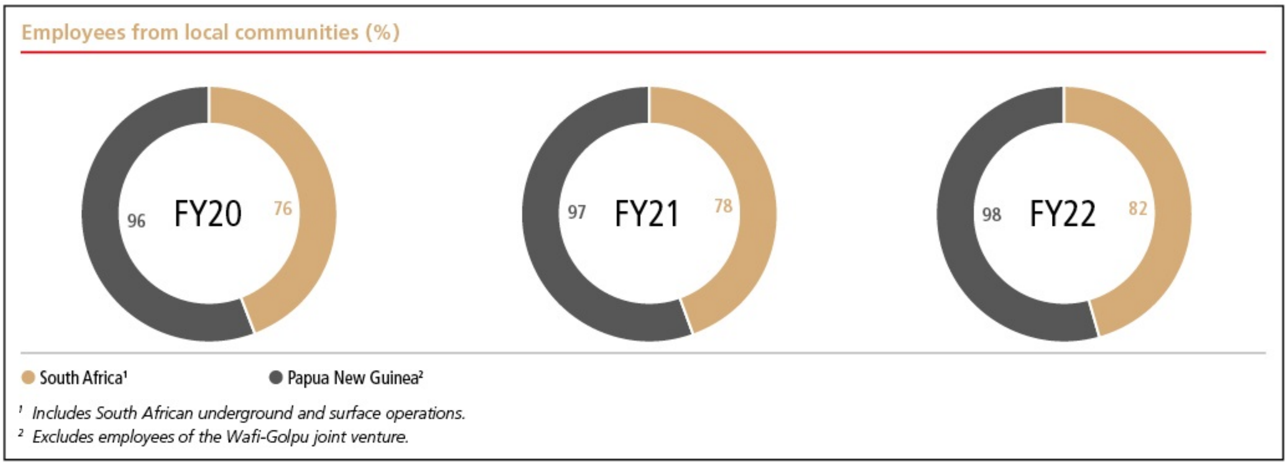
Age profile

Our employee age profile is 57% (FY21: 58%) younger than 45 in South Africa and 74% (FY21: 70%) younger than 45 in Papua New Guinea. We attribute this to recruiting young people who graduate from our South African community training programme, launched in February 2018.

Workforce profile

	Permanent employees			Contractors			Employees from local communities (%)		
Region	**FY22**	FY21	FY20	**FY22**	FY21	FY20	**FY22**	FY21	FY20
South Africa[1]	**35 989**	36 873	31 502	**9 013**	8 860	5 841	**82**	78	76
Papua New Guinea[2]	**1 487**	1 599	1 589	**792**	780	782	**98**	97	96
Harmony total	**37 476**	38 472	33 091	**9 805**	9 640	6 623			

[1] Includes South African underground and surface operations.
[2] Excludes employees of the Wafi-Golpu joint venture.

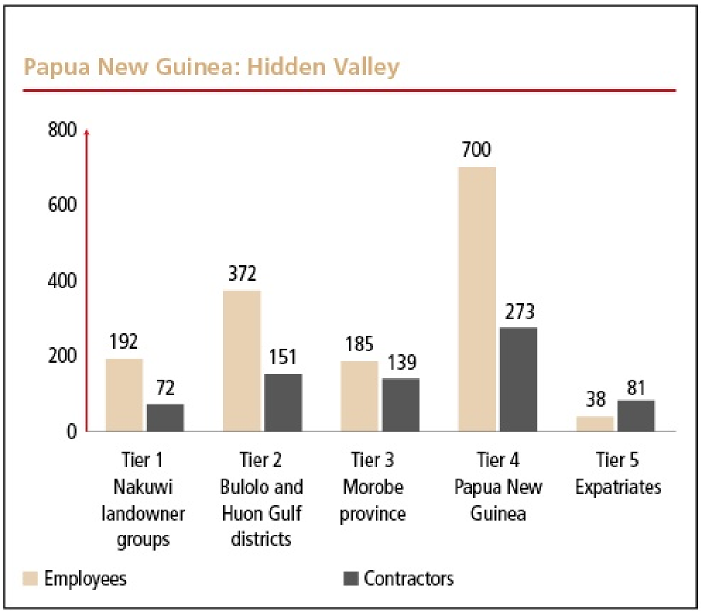


South Africa

South Africa remains our largest labour sourcing area, contributing 29 472 (FY21: 29 950) people to the group's workforce – 81.9% South African nationals, and others from neighbouring countries, primarily Lesotho and Mozambique.

Papua New Guinea

The total number of employees in Papua New Guinea increased to 2 371 (FY21: 2 228) in FY22. Currently, 38.2% at Hidden Valley are local, drawn from host communities, and others are foreign nationals.



Employment equity and gender diversity

Harmony's commitment to gender equality is internationally recognised with our third inclusion in the Bloomberg Gender-Equality Index, which tracks the performance of public companies committed to supporting gender equality through policy development, representation and transparency.

South Africa

Our efforts to create and maintain a workforce that represents the diversity of the South African population place us among exemplary corporate citizens in redressing historical imbalances, particularly at managerial levels, for specific groups and women.

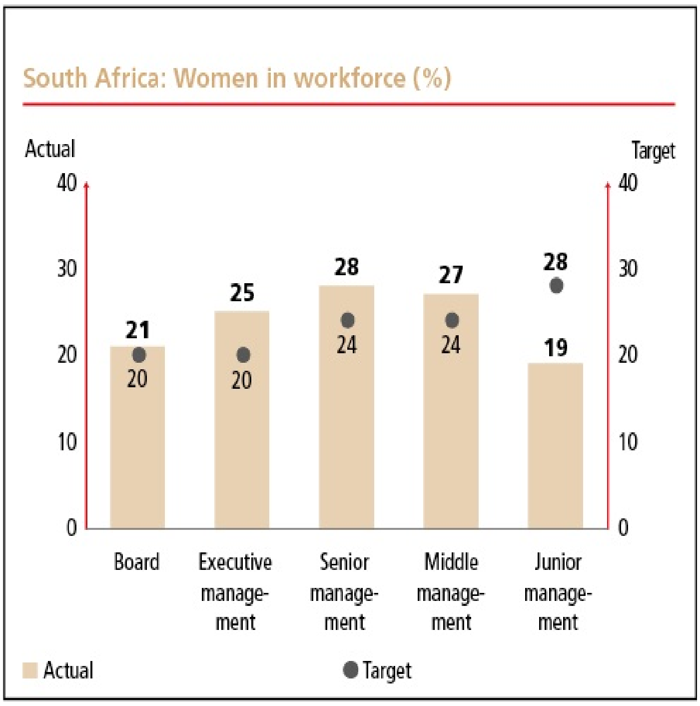
To meet employment equity targets and improve gender diversity in our business, we accelerate the representation of HDPs in managerial positions. In FY22, HDP representation in management increased to 67% (FY21: 65%).

Mining Charter III: Employment equity performance by category at 30 June 2022		HDPs[1]			Female HDPs	
Occupation category	Target %	**Actual FY22**	Actual FY21	Target %	**Actual FY22**	Actual FY21
Board	50	**57**	67	20	**21**	27
Executive management	50	**55**	47	20	**25**	24
Senior management	59	**59**	55	24	**28**	27
Middle management	59	**57**	54	24	**27**	25
Junior management	69	**68**	66	28	**19**	18
Core and critical skills	60	**72**	71	n/a	**n/a**	n/a
Persons with disabilities	1.5	**0.14**	0.3	n/a	**n/a**	n/a

[1] *HDPs include women, and exclude white males and foreign nationals.*

While exceeding HDP managerial targets, we have not yet achieved our gender diversity objectives at junior management level. By the end of FY22, 19%% (FY21: 16%) of our permanent employees, excluding contractors, were women.

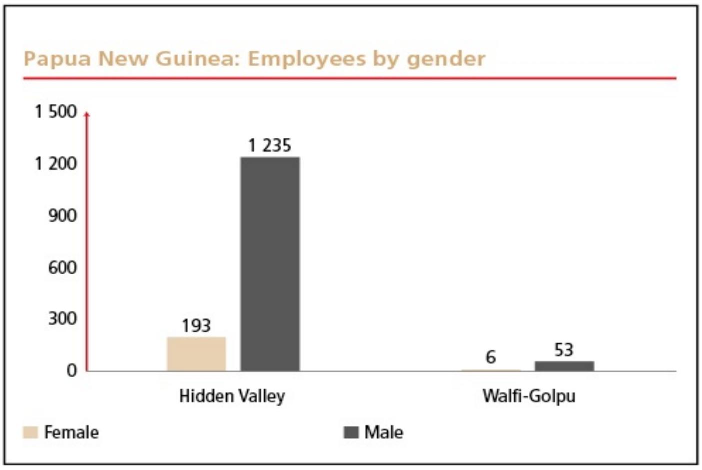
In FY22, employees with disabilities accounted for 0.14% of our workforce versus the 1.5% target. The nature of our operations and the challenging work environments add complexity to achieving this target but it is a focus area of our transformation office.



Papua New Guinea

The proportion of female employees remained steady at 15% (FY21: 14%) in FY22. At management level, 11% are women. To accommodate more female employees, we provide additional, gender-specific accommodation, and run awareness campaigns to promote gender equality and combat gender-based violence.

We aim to employ equal numbers of men and women, encouraged by our progress in increasing the number of female truck operators despite entrenched patriarchy in Papua New Guinean culture. We see signs of incremental change and growing acceptance of female colleagues at Hidden Valley.



Skills development and training

Our skills development, training and talent management initiatives provide opportunities for employees to achieve their full potential. Individual development is a social and business imperative to address dire skills shortages, and the historical inequality in education and training of citizens.

Employee training and skills development programmes align with our strategic and operational needs – designed to enable employees to acquire the skills, resources and motivation needed to ensure optimum performance and productivity.

South Africa

In FY22, 93% (FY21: 94%) of our South African workforce attended training and skills development, totalling R657 million or US$30 million (FY21: R468 million/US$30 million). We attribute this increase in skills development spend to the impact of Covid-19 on initiatives in the previous financial year. This included South African-based research and development in exploration, mining, processing, technology efficiency, beneficiation and environmental conservation. A total of 96 (FY21: 83) employees in critical positions attended 170 training interventions in FY22.

Papua New Guinea

Historical underinvestment in Papua New Guinea's technical training facilities resulted in a shortage of adequate technical skills, particularly in the mining sector. Our workforce training initiatives therefore focus on providing the skills local recruits need for our Hidden Valley operation and career training to advance their skill sets.

Our training initiatives include career path and professional development, production, safety compliance, National Training Accreditation Council compliance, and computer software and supervisor skills.

In FY22, 23 260 (FY21: 14 596) employees attended online training and skills development at a cost of R4 million (US$0.26 million) (FY21: R20 million/US$1.3 million).

Our women empowerment initiatives include training female haul truck operators at Hidden Valley where 28% (FY21: 25%) of employees are women and 20% (FY21: 46%) of small haul truck operators are women.

Addressing employee over-indebtedness

Impact of the pandemic on remuneration

The pandemic has extraordinarily affected our society and economy in South Africa and Papua New Guinea. For the past 18 months, we have faced the challenge of sustaining our business in a severely disrupted environment but remained resolute about being transparent with employees, particularly on remuneration.

Since March 2020, organised labour has negotiated different pay arrangements in South Africa and agreed to by organised labour for the initial lockdown period. At all times, we endeavoured to balance the financial needs of our business with those of our employees.

South Africa

Financial over-indebtedness remains a burden for many employees in South Africa with impacts on mental health and productivity. Our financial literacy programme teaches our semi-skilled and skilled employees how to better manage their finances.

In FY22, 709 (FY21: 1 014) employees completed this programme. This brings the total to 25712 (FY21: 25 003) employees or 73% % (FY21: 68%) of the workforce receiving financial counselling since the programme's inception. Harmony spent around R3.2 million (FY21: R3.5 million) on this programme in FY22.

Employees also benefit from our verification of new emolument attachment (garnishee) orders before payroll processing. In FY22, we assessed 33 (FY21: 225) orders and restructured 127 (FY21: 225) employees' accounts, resulting in monthly instalment reductions of R415 326 (FY21: R211 728). This also helped facilitate R142 817 (FY21: R405 926) worth of prescribed debt write-off by creditors and removed negative listings from credit bureaus, totalling R206 666 (FY21: R102 220). It also improved employees' credit ratings and allowed them to qualify for mortgages and vehicle finance. The total number of employees with garnishee orders declined to 928 (FY21: 1 386) in FY22.

Papua New Guinea

Freedom of association, labour disputes and strikes

Recognising the value of organised labour, our employees and contractors have the right to freedom of association.

We experienced a partial stoppage at Hidden Valley in December 2021 following removal of Covid-19 allowances and return to normal rosters without pre-site Covid-19 isolation and testing.

South Africa

We strive for honest and open communication with a policy framework formalising union recognition rights at each operation in South Africa. A multi-union environment promotes coexistence, inclusion and collaboration.

To mitigate the risk of labour disputes, we frequently engage with unions at mine and management levels in addition to direct engagement with employees. We proactively address employee and union queries through established structures and processes. We hold regional meetings with unions every quarter, encouraging proactive and robust engagement on specific issues. Our general managers and human resources leaders meet daily with full-time stewards who interact at union branch level and with shaft committees. Our regional managers meet regularly with regional union structures.

Harmony recognised five unions in FY22 (listed below).

Recognised unions (%)	FY22	FY21	FY20	FY19	FY18
NUM	**53**	52	58	58	59
AMCU	**28**	28	23	24	24
UASA	**5**	5	5	6	6
Solidarity	**2**	3	3	3	3
NUMSA	**6**	6	5	4	2
No union	**6**	6	6	5	6

Our current three-year wage agreement, in respect of wages and conditions of service, is for the period 1 July 2021 to 30 June 2024, signed by AMCU, the Coalition (NUM, UASA and Solidarity) and NUMSA. It allows for the following:

- Category 4 to 8 employees receive a wage increase of R1 000 for each year of the wage agreement, which translates to an average increase of 8.4% for these employees
- Miners, artisans and officials receive an increase of 6% of their basic wage for each year of the agreement
- The average wage increase negotiated is 7.8% in the first year, 7.4% in the second year and 7.0% in the third year
- 98% of Harmony employees are part of the bargaining unit covered by this wage agreement.

In addition to the basic wage increases above, the parties agreed to the following benefits:

- To promote home ownership, a housing allowance of R2 750 in the first year, increasing incrementally every year to a maximum of R3 240 in the third year, for employees who choose to purchase a residence or have existing bond agreements
- Employees not eligible for the housing allowance can receive a living-out allowance of R2 500 in the first year, which will increase by R100 in the second and third years
- Several non-wage-related and process benefits, including maternity and paternal leave, medical incapacity and medical aid.

Papua New Guinea

Hidden Valley does not have union representation but we continuously engage with employees, contractors and government (national, provincial and local), landowners and regulators.

The employee representative committee oversees industrial relations and engages with employees about wage increases with a joint management forum.

Employee benefits

We have a range of employee benefits in South Africa.

Employee share ownership plan

We launched our third employee share ownership plan (ESOP), Sisonke (isiXhosa for “We are together”), in FY19. It applies to 30 700 non-managerial employees with 6.7 million ordinary shares issued to the Sisonke ESOP Trust and 225 participation units to each eligible employee. The units were converted into shares in FY22, and then sold and paid out to each beneficiary with dividends accumulated since allocation.

Based on Harmony’s fluctuating share price, payouts can vary significantly. In FY22, participating employees received R11 186 each.

Promoting home ownership

We promote home ownership through our housing and living conditions strategy. Employees can buy Harmony-owned properties at prices below market value. In FY22, employees purchased 367 (FY21: 118) company properties and registered 220 (FY21: 73) at the deeds office. Harmony also identified empty stands in proclaimed municipal areas. Of 278 (FY21: 558) empty stands, 66 (FY21: 27) were sold to employees and 212 (FY21: 140) awaited purchase applications. In addition, we participate in the pension-backed home loan scheme negotiated for the mining industry by the Minerals Council – 26 (FY21: 39) employees participated in the scheme in FY22.

Access to adequate housing as a universal human right

Managing Harmony's portfolio of land and properties by reducing running costs and associated liabilities while improving stakeholders' access to adequate, affordable housing and commercial properties

Supporting South Africa's land redistribution, sustainable housing and socio-economic development policies, we sell our land and non-residential properties to black-owned companies at preferential rates. We also donate unused land to the South African government.

In addition, our employee home ownership scheme offers a once-off discount of up to 45%, refurbishment, recognition of long service, and a discount on voluntary termination or retrenchment.

Accommodation and living conditions

Adequate housing and decent living conditions is a constitutional right that upholds human dignity. The Mining Charter also requires mining right holders to improve housing and living conditions for employees, ensuring the accommodation is in line with the industry standard.

None of our employees resides in hostels as we have converted this accommodation into single rooms. In FY22, 8 057 (FY21: 8 547) employees and 33 (FY21: 19) contractors lived in Harmony accommodation while 6 214 (FY21: 6 022) resided in company-owned houses with their families. We paid R745 million (FY21: R669 million) as a living-out allowance to employees who chose alternative accommodation.

Human rights

We uphold the ILO principles with a highly unionised workforce (94.5%) participating in collective bargaining, and our employment policy and established practices prohibit any forms of indirect or direct compulsory, forced or child labour (we do not employ people under the age of 18 years).

In addition, we subscribe to the Minerals Council's membership compact, a mandatory code of ethical business conduct with guiding principles, and we have policies to prevent sexual harassment and workplace bullying.

We will provide human rights training to security personnel, as enshrined in our code of conduct and human rights policy, from FY23.

Our focus areas in FY23

To ensure that we meet regional plans as it relates to housing.

In South Africa, we will establish a joint task team to evaluate future shift systems in terms of the wage agreement.

In Papua New Guinea, we continue to develop our human resources systems and capacity to ensure we deliver employee training and development together with productivity improvement programmes.

Empowering communities

We aim to contribute to the resilience and prosperity of our host communities now and into the future – supporting employees, local businesses, municipalities and other national socio-economic development goals through our programmes and local economic development initiatives.

In South Africa, social and labour plans (SLPs) are attached to our mining rights so that we implement legislated local economic development initiatives. In many instances, Harmony's impact and investment exceed compliance.

In Papua New Guinea, many of our local economic development commitments are set out in our Hidden Valley memorandum of agreement (MoA) between government, landowners and Harmony. For the Wafi-Golpu project, which is in permitting stage, we support a range of voluntary local economic development initiatives, with particular focus on health and agribusiness.

With respect for human rights entrenched in our code of conduct, we acknowledge the constitutions of the countries where we operate and comply with legislation in those territories. In Papua New Guinea, this includes the rights of indigenous people.

GRI Standards

Prepared in accordance with 3-3, 203-1, 203-2, 204-1, 411-1, 413-1, 413-2, 414-1 and 414-2.

Related SDGs

Related material matters

Economically unsustainable, disengaged and discontent communities could challenge our licence to operate, cause disruptions and jeopardise production. As such, we recognise that partnering with communities, local municipalities, small businesses and various levels of government contributes to our sustainable development.
Supply chain transformation and preferential procurement
Strategic procurement facilitates job creation and entrepreneurial development. This supports the sustainable socio-economic development of the communities and the regions where we operate – pillars supporting and maintaining healthy and robust social capital. Positive social capital reinforces a thriving ecosystem in which our business and stakeholders can thrive.

Our approach

We strategically focus our socio-economic development endeavours to align to national imperatives of job creation and poverty alleviation. We promote and support community empowerment, sustainable development initiatives and community resilience.

Our approach aims to:

- Contribute to areas with the most meaningful impact: critical infrastructure, education and skills development, job creation and entrepreneurial development
- Enhance broad-based local and community economic empowerment and enterprise development initiatives
- Facilitate socio-economic development through SLPs in South Africa, the MoA in Papua New Guinea, and other corporate citizenship programmes
- Build relationships of trust through transparent dialogue and delivering on our commitments.

Harmony's community development approach

Group

Delivering on our community development commitments	Preferential/local procurement	Enterprise and supplier development	Corporate citizenship
Keeping our commitments to community development as stipulated in mining agreements (SLPs in South Africa and MoA in Papua New Guinea).	Procurement spend that stimulates economic activity in local and host communities (including women and youth empowerment).	Promoting and developing local enterprises.	Supplementing other socio-economic activities and initiatives for positive impacts and outcomes.

South Africa

To varying degrees, national legislative requirements and needs communicated by host communities influence the implementation of our socio-economic development strategy. It is primarily dictated by compliance with regulation 42 of the Mineral and Petroleum Resources Development Act (MPRDA), which stipulates that a mining right is only granted if an SLP is submitted to the Department of Mineral Resources and Energy.

SLPs are five-year programmes intended to implement local economic development in terms of the Mining Charter, MPRDA and codes of good practice for the minerals industry.

Papua New Guinea

Community development initiatives are delivered through several channels in Papua New Guinea. The principal vehicle for our Hidden Valley operation is our MoA, which sets out a range of socio-economic development undertakings for each of the parties.

Hidden Valley

1. **MoA**
   - **Physical and social infrastructure undertaking**
     Harmony funds education, training, health (including alcohol, drug and HIV/Aids awareness), agriculture, water supply and identified sustainable development programmes and projects every year
   - **Royalty payments**
     Various parties receive royalty payments according to the percentage distribution set out in the MoA:
     – Landowners and local governments
     – Future Generations Trust
     – Settlers Fund
   - **Employment and training plan undertaking**
   - **Business development plan undertaking.**
2. **Hidden Valley Mine Trust**
   A benefit-sharing agreement established the Hidden Valley Mine Trust in return for the Hidden Valley landowners and provincial government forgoing equity interest in the mine as per an entitlement under the MoA. The trust receives quarterly fixed and variable payments for community-initiated and endorsed projects. Harmony is the trustee.
3. **Primary and Secondary School Fees Programme**
   Contribution to school fees for Hidden Valley employees' dependents.
4. **Settlers Fund Project Facilitation**
   Project management of social projects as agreed by State authorities and funded by the Settlers Fund.
5. **Donations**
   Harmony's ad hoc assistance includes, for example, medical emergency transport and food for bereaved families and community events.

Wafi-Golpu

1. **Community development programme**
   Harmony supports local economic development initiatives (agribusiness, health, education, water and sanitation).
2. **Donations**
   Harmony's ad hoc assistance includes, for example, emergency medical transportation, and food for bereaved families and community events.

At such time that a special mining lease is granted, an MoA for the Wafi-Golpu project, and workforce development, supply and procurement plans and related commitments will come into effect.

Our focus areas and performance in FY22

Total group spend on community development commitments, preferential/local procurement, enterprise development and corporate citizenship was R14.1 billion (FY21: R8.0 billion).

South Africa

Delivering on our community development commitments	Preferential/local procurement	Corporate citizenship – Going beyond compliance
• Local economic development projects • Community human resource development initiatives.	Investment in companies which are greater than 25% black owned and that have a BBBEE Level of 4 and above.	Donations and Social trust investment to: • Education • Socio-economic advancement • Healthcare • Arts, culture, sports and recreation.
Spend: **R93 million**	**Spend:** **R11.2 billion**	**Spend:** **R10.5 million**

Total spend: R11.3 billion

Papua New Guinea

Delivering on our community development commitments	Preferential/local procurement and enterprise and supplier development	Corporate citizenship
• Physical and social infrastructure undertaking • Royalty payments • Employment and training plan undertaking • Business development plan undertaking • Hidden Valley Mine Trust.	Localised procurement in Morobe Province and In country consistent with the terms of the MoA.	Activities and donations supporting our social licence to operate.
Spend: **R453 million**	**Spend:** **R2 324 million**	**Spend:** **R1.5 million**

Total spend: R2.78 billion

We comply with laws, and go beyond compliance by establishing partnerships with our suppliers and government for meaningful social upliftment while creating and sharing value with our stakeholders. We thus collaborate in directing transformative funding to projects that address the real needs of communities.

South Africa

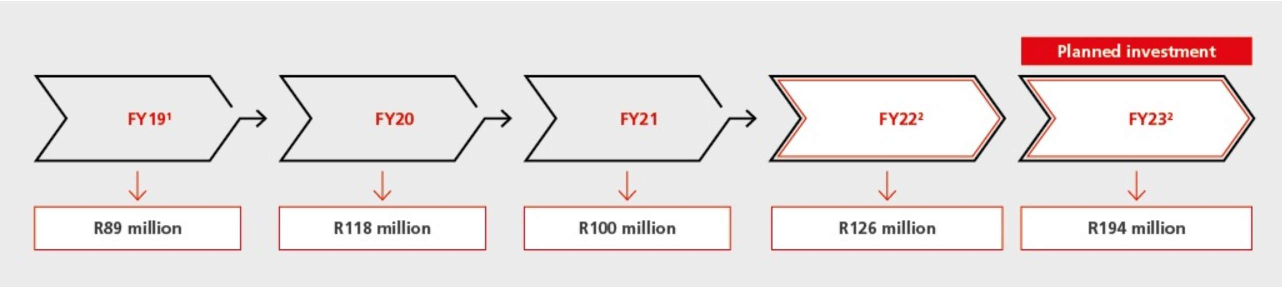
We are approaching the end of our third-generation (FY18 to FY23) SLPs with a total financial spend thus far of R433 million of which a total of R235 million was invested in socio-economic upliftment through our mine community development programmes. Following the acquisition of Mponeng its commitments are reflected in FY21 and FY22 mine community investments. We ought to have spent R309 million to date on mine community development but are running slightly off schedule but are intent on expediting implementation to meet our five year timeline.

The current SLP commitments will run to the end of December 2022, while mine community development runs until June 2023.

We are designing and developing fourth-generation SLPs, which involve public consultation to meet communities' needs.

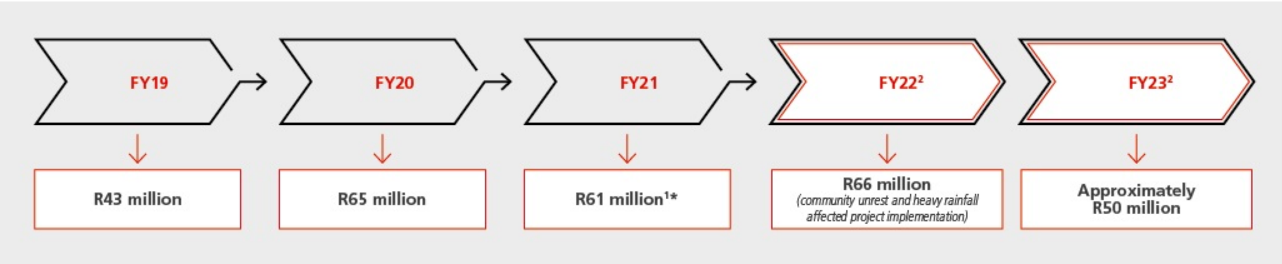
The diagram below summarises annual investment since FY19 and planned investment into the next financial year.

Total actual investment for third-generation SLPs



Our SLPs end on 31 December 2022 except for MCD, which will end on 30 June 2023.

Actual and planned annual investment in mine community development through third generation SLPs



[1] *Includes Mponeng from FY21.*
[2] *Planned investment in FY22 and FY23 is expected to decline as several mines reach the end of their operating lives.*
** Includes Mponeng.*

Mine community development focus areas

The mine community development focused on the areas below, which we believe will lead to our communities' most significant and sustainable social upliftment.

Rationale for third-generation SLP focus areas	Expenditure in FY22
Agriculture For our poorest communities, obtaining fresh, nutritious food is not always possible, particularly from a cost perspective. To help alleviate this hardship, the second pillar of our mine community development strategy focuses on promoting agricultural initiatives (broad-based livelihoods and commercial ventures). This improves access to life-giving food and the sale of excess produce generates income.	**R18.2 million**
Youth and small, medium and micro enterprise (SMME) development We facilitate meaningful, lasting socio-economic development by empowering individuals and communities with the appropriate skills and resources. Upskilling youth and nurturing SMMEs is the priority of our mine community development plan. Initiatives range from incubation hubs, supporting youth and female entrepreneurs, to workshops and commercial spaces where these companies can trade.	**R21 million**
Infrastructure Infrastructure development is essential to uplift communities while generating employment opportunities. We therefore focus on road infrastructure to enable movement of goods and people for economic benefit. Our road improvement projects in the Free State are connecting host communities with larger towns. At the same time, we pay attention to water management as this is a threatened resource in South Africa.	**R21.4 million**
Science, technology, engineering and maths Investment in science, technology, engineering and maths to upskill the youth in our host communities so that they can be equiped with stem capabilities when they finish matric.	**R5.7 million**

Expenditure by province and focus areas

Our socio-economic development projects in over a five year period focused on water infrastructure development for municipalities to improve quality and secure supply, developing economic hubs for youth and advancing township economies. We also ran outreach programmes in our labour-sending areas (Lesotho and the Eastern Cape). This summarises our investment over the five years.

Socio-economic development expenditure	Agriculture	SMME and youth development	Infrastructure	Science, technology, engineering and maths
Free State R133 million	R8 million	R52 million	R65 million	
Gauteng R56 million	R27 million	R24 million	R3 million	R5.7 million
North West R41 million	R20 million	R16 million	R4 million	

Socio-economic closure planning

A key issue in planning for socio-economic development is mitigating the impact of mine closures on our communities, particularly in the Free State where several mines are nearing the end of their operating lives. Many of our initiatives consider establishing alternative economic activities and livelihoods that can be sustained post-mining. This includes stimulating SMME development and portable skills training to collectively empower employees and communities.

We also use our land rehabilitation strategy (refer to the **Environmental management and stewardship** section) to facilitate alternative economic development initiatives. Given the available land under our control, we support food security and poverty alleviation through agricultural and agri-processing initiatives.

Community engagement forums on SLP progress

We believe building trust and maintaining positive relationships with host communities, and other stakeholders, including the South African government is crucial. Our approach is inclusive through SLP update forums in communities where community members can engage directly with a company representative. Representatives of the municipalities, traditional authorities, communities and local business forums are also members of these structures, depending on the dynamics of each location.

These forums share information with communities on progress in project implementation, test their needs and expectations, and manage their perceptions of Harmony's capacity. This positively impacts our community stakeholder engagements and helps to better understand mutual issues and concerns. Since the forums began, this proactive and open communication approach has decreased disruptions and reports of discontent in communities each year.

Papua New Guinea

Every year under our Hidden Valley MoA, Harmony funds a selection of physical and social infrastructure projects. In FY22, these ranged from road, district office and local airport improvements, through to agribusiness support and the distribution of solar lighting kits and biomass stoves to our landowner villages. Through the Hidden Valley Mine Trust, we also supported water supply, road and village facilities improvements and maintenance.

In terms of our Hidden Valley Memorandum of Agreement (MoA), the state of Papua New Guinea undertakes, under the Mining Act 1992 and in line with current sustainable development planning goals, to pay royalties from our operation to the provincial government (42% split 50:50 between the Morobe provincial and Bulolo district governments), affected communities (2.5%), mining lease landowners (39%), immediate impact local level government (14%) and others (2.5%).

Royalty distribution	%	Amount (US$ million)
Morobe provincial government	18.00	0.92
Bulolo district treasury	18.00	0.92
Mumeng LLG	3.00	0.15
Waria LLG	2.00	0.10
Buang LLG	1.00	0.05
Wau/Rural LLG	5.00	0.25
Watut LLG	5.00	0.25
Wau/Bulolo Urban LLG	4.00	0.20
Highway communities	0.50	0.03
River communities	0.50	0.03
Subsidiary landowner communities	1.50	0.08
Settlers Fund	2.00	0.10
Wafi Landowner Association	0.50	0.03
Nakuwi Landowner Association	2.00	0.10
Future Generations Trust	2.00	0.10
Hidden Valley landowners – Winima recipients	8.75	0.45
Hidden Valley landowners – Kuembu recipients	8.75	0.45
Hidden Valley landowners – Nauti recipients	17.50	0.89
Total	100.00	5.10

Preferential/local procurement

Strategic procurement and enterprise development facilitate the creation of sustainable businesses and entrepreneurs while reducing inequalities and supporting job creation for sustainable socio-economic development of communities and regions in which we operate.

Preferential procurement strategy

Approved by the board in 2019, this strategy is implemented with variations (colour-coded below) for each selected supplier.

We use our annual procurement plan to identify development and procurement opportunities for SMEs to participate through our enterprise and supplier (ESD) incubation programme. In addition, we use our extensive SME databases to identify and match SMEs to our supplier value chain and subcontracting opportunities.

Enablement ensures preferential procurement is embedded in procurement processes and procedures – tender committees ensure cost containment while promoting transformation, policy and procedures are implemented, and supplier audits are conducted to confirm Harmony is engaging with compliant, and not merely politically connected, suppliers.

Red flag (one to two-year contract)	**Blue ocean** (two to three-year contract)	**Greenfield** (three to five-year contract)	**Brownfield** (five-year contract)
• Increase black ownership of non-black generic entities • Fewer trusts and more technical black ownership.	• Partnerships with generic large entities • Skills transfer • Value chain integration • Subcontracting.	• Find black-owned qualifying small/exempt micro enterprises (QSE/EME) already in business • Combine QSE/EME to increase black ownership • Capacity and capability • Create new suppliers.	• Shift spend to local QSE/EME • Prioritise shifting to Harmony's current black-owned suppliers.
• High risk • Few benefits • Should be voluntary • Status quo remains.	• Medium to high risk • Force long-term commitments • Target technical skills • Less financial impact on Harmony • Contract-dependent.	• Low to medium risk • Medium to high impact • High inclusive growth.	• Low risk • High impact on localisation • Increased sustainability.

Source: Harmony and Bayajula Services Analysis.

South Africa

Our preferential procurement as well as enterprise and supplier development strategy prioritise on transformation and spending in local and host communities by focusing on:

- Supporting existing non-compliant suppliers to meet the minimum black ownership targets as required by Mining Charter III or to shift procurement spend to compliant suppliers
- Enhancing Harmony's current supply-chain model and ensuring preferential procurement is embedded in the sourcing process
- Promoting partnerships and joint ventures to encourage skills transfer and development of local partners
- Working with generic and original equipment manufacturers to invest in local enterprises, especially local manufacturing units
- Incubation that creates a pipeline of small and medium enterprises to take up procurement opportunities in core mining and engineering services, particularly women and youth.

Harmony supports the South African government's imperative to facilitate sustainable socio-economic development and broader participation in the economy, mainly through procurement and enterprise and supplier development. Full compliance to the Mining Charter III targets is currently challenging for the mining industry largely due to dependency on multinationals and original equipment manufacturers as well as limited availability of registered and approved companies producing locally manufactured goods to the required standard.

In support of the Preferential Procurement and Enterprise and Supplier Development strategy an annual procurement plan is provided to identify procurement opportunities for SME participation. Harmony's extensive SME databases identify and match companies to supply value chains and subcontracting opportunities. New tender committees were established to oversee the process of promoting and embedding inclusive procurement in accordance with the approved policy and procedures. Appropriate measures have been established to ensure that genuine transformation is achieved for host communities and previously disadvantaged groups.

While Covid-19 restrictions and challenges last year disrupted delivery against this strategy, good transformation progress was made in the review period. This includes, inter alia, shifting procurement spend from non-compliant suppliers. Harmony has encouraged large entities and multi-nationals to support SMEs by transferring skills and intellectual property, thereby creating new capabilities in the local communities.

The Preferential Procurement (PP) and Enterprise and Supplier Development (ESD) strategy is being implemented in four phases of which two have been completed. The first phase which was initiated in FY20 and comprised 68 suppliers achieved about 97% compliance to the mining charter requirements. The second phase, comprising of 85 suppliers achieved 84% compliance to the mining charter requirements. Currently phase three of the implementation is underway with a total of 130 suppliers and expected to be completed by the end of 2022.

The programme tracked the implementation impact on an annual basis focusing on the actual and forecast discretionary spend attributed to suppliers that are more than 25% + 1 and more than 50% + 1 black ownership (BO) as shown in the diagram below. By the end of FY21 the spend to suppliers that are more than 25% + 1 BO was 79% of the total discretionary spend and those with 50% + 1 BO the discretionary spend was 54%.

The focus is on ensuring new entrants to our supply chain, particularly black women and youth-owned enterprises, shifting spend, increase geographical reach and entering into longer-term contracts with compliant suppliers.

We have seen a 27% improvement in compliance since implementing this strategy and framework. The PP and ESD strategy also tracked annual spend impact on key categories as shown in the diagram below, for example 50% + 1 BO spend for the Mining Service category increased from 8% of the discretionary spend in 2018 to 50% in 2022.

Although there has been a year-on-year improvement for designated groups, this has been marginal for black women and youth-owned suppliers. Our emphasis in the next two years will be on women and youth-owned businesses. It remains the priority for our ESD programme. In FY22 the total discretionary spend was R14.27 billion of which 23% (FY21: 27%) was spent with black-owned SMMEs and 10% (FY21: 8%) with black women-owned enterprises.

Host community spend

Our preferential procurement strategy aims to accelerate the transformation of our business while facilitating meaningful transformation in our communities and the broader economy. We are morally and ethically obligated to build capacity and capability that supports livelihoods in our host communities. This secures our social licence to operate and develops our social and relationship capital.

We focus on creating opportunities in the supply chain for our host communities. In FY22, this translated into contracts for black-owned host community vendors with a combined value of R7.7 billion (FY21: R7.4 billion).

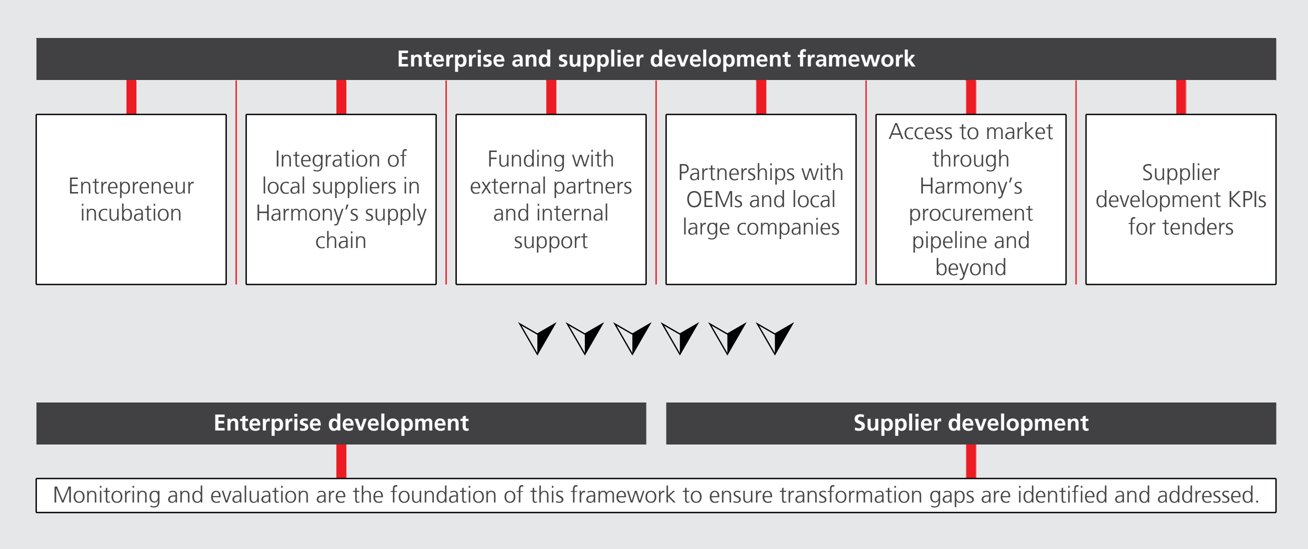
Supplier days

We facilitate supplier days through webinars and forums in our host communities. We use these engagements to introduce our preferential procurement strategy, and enterprise and supplier development framework, to local businesses. The sessions expose SMEs to procurement opportunities and tendering processes. This is also a platform to discuss partnerships, contracting opportunities and, most importantly, how women and youth-owned companies could participate.

Through this initiative, we spent R50 million (FY21: R170 million) on new black-owned and controlled (>51%) enterprises and R26 million (FY21: R38 million) on 45 (FY21: 41) new 100% black-owned SMEs.

Enterprise and supplier development

The enterprise and supplier development framework below supports our preferential procurement strategy.



South Africa

Our development framework focuses on two areas:

- **Enterprise development:** potential suppliers mainly drawn from local communities where we operate with incubation centres in key areas and satellite centres supporting other host communities.
  - 209 enterprises are incubated
  - Over 122 enterprises are assisted with business development
  - Over 187 enterprises are supported through funding and other business support initiatives
- **Supplier development**: procurement opportunities for enterprises graduating from incubation and other qualifying small and medium enterprises. We spent R33 million with small and medium enterprises that registered as new companies on the Harmony vendor database in FY22.
  - Direct procurement opportunities and contracting
  - Partnering with OEMs as subcontractor or strategic partners across the value chain
  - Creating partnerships with funding institutions to support preferential procurement, buying shares in non-compliant companies and creating black industrialists.

Our entrepreneur incubation programme, launched in FY20, aims to assist 100% black, women and youth-owned enterprises to transition to suppliers of key mining and manufacturing commodities and services. Enterprises operating in the following areas are encouraged to apply:

- Mining and related value chain
- Fuel and chemicals
- Metal commodities
- Engineering products and services
- Manufacturers of mining-related products.

At the beginning of the programme, 63 women and youth-owned companies were approved to participate. In addition, we awarded procurement contracts to several enterprises in the incubation programme while others were matched with OEMs for joint ventures and downstream opportunities. As these companies graduate, they are integrated into our supply chain where opportunities arise.

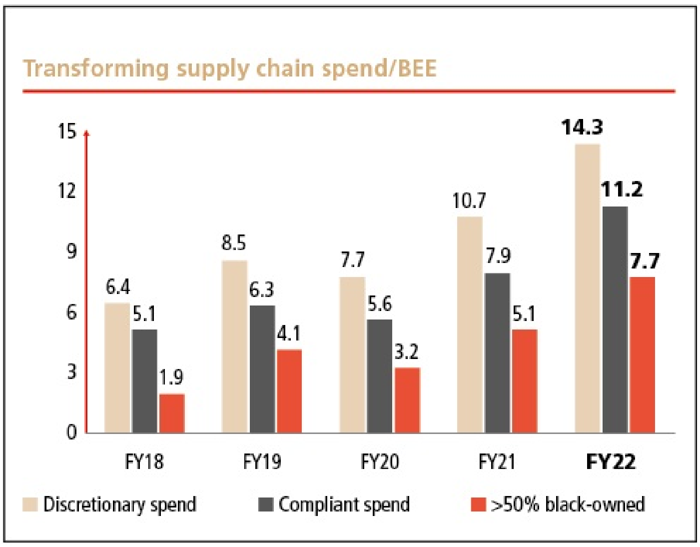
Mining Charter procurement requirements in South Africa
The Mining Charter III emphasises the need to increase inclusion of historically disadvantaged persons (HDPs), women and youth in procurement opportunities in addition to spending on BEE-compliant businesses.

It emphasises the creation of South African manufacturing capability by including local content requirements in procurement targets for mining goods and services. Accordingly, mining companies should purchase mining goods with local content of at least 60% and, after a two-year grace period, goods provided in the mining supply chain should have a local content certificate, issued by accredited service providers or the South African Bureau of Standards. Expenditure on fuel is no longer included in these calculations, which significantly impacts the scores of large mines and opencast operations.

Our performance improved in FY22:
- Of discretionary spend totalling R14.27 billion, 79% was preferential procurement
- Total procurement expenditure with BEE entities was R11.2 billion of which R1.4 billion was spent with black women-owned businesses and R7.7 billion with black-owned businesses
- Compliant spend increased by 42%.

We expect to reach compliance levels for women and youth-owned businesses by 2025.

For details, see **Mining Charter III – compliance scorecard**.



Papua New Guinea
Requirements for the Hidden Valley Operation to maintain business development and procurement and supply plans are embedded in our MoA. We continue to target major contracts and procurement activities that will have a significant effect on communities' involvement, ownership and improved development, and to procure goods from local companies wherever possible.

Procurement expenditure by our Papua New Guinea assets in FY22 totalled R2.3 billion/US$153 million (FY21: R3.9 billion/US$253 million), of which R1.1 billion/US$72 million (FY21: R2.3 billion/US$150 million) was spent in Papua New Guinea. Of this, R582 million/US$38 million (FY21: R493 million/US$32 million) was spent in Morobe Province. Harmony holds contracts with local landowner companies for a range of goods and services including drilling works, earthmoving equipment hire, catering and accommodation, security services, bus transport and labour hire.

Corporate citizenship
Our corporate social investment (CSI) goes beyond compliance. This is an additional commitment we make to uplift and improve the livelihoods of our host communities and labour-sending areas. The following strategic pillars guide our focus areas for social investments in our South Africa and Papua New Guinea operations.
- Education and training
- Health
- Sports recreation, arts and culture
- Social entrepreneurship and farmer development
- Social infrastructure.

In South Africa, to identify initiatives for a financial year, we conduct due diligence on potential projects in consultation with communities and engage with local government. In FY22, we invested R17.9 million/US$1.7 million (FY21: R10.8 million/US$0.8 million) in CSI projects impacting at least 10 000 individuals and families. These included social and welfare donations through the Harmony Community Trust.

Harmony also supports specific strategic initiatives through non-profit organisations totalling R4 million annually:

- Enactus South Africa promotes the development of entrepreneurial skills at tertiary level. This initiative is a constructive way to assist in combating unemployment, poverty and inequality
- Harmony has been the main sponsor of the national Science Olympiad programme of the South African Agency for Science and Technology Advancement (SAASTA) for the last 13 years.

In Papua New Guinea, we have established programmes in place for Wafi-Golpu project host communities. While the majority of our activities at Hidden Valley are delivered under our MoA, we also maintain select additional programmes. For example, in FY22, Harmony agreed with the Papua New Guinea government to facilitate the delivery of a range of social projects predominately funded by the Settlers Fund, which receives royalties under our MoA. State authorities oversee the use of these funds and Harmony provides project management expertise, eg, sourcing and procuring project materials and labour, and overseeing the execution of the works. Harmony funds these projects upfront and State authorities release the project cost back to Harmony after handover.

South Africa

Education and training

- Donations and improvements for basic education programmes and facilities.

Health

- Improvement of centres for people living with disabilities
- Donations and improvements for healthcare and alcohol/drug rehabilitation facilities.

Sports recreation, arts and culture

- Sports, arts, culture and tradition programmes.

Social entrepreneurship and farmer development

- Agri-processing project support
- Support for Enactus international non-profit organisation inspiring students to pursue entrepreneurism
- Promotion of South African Agency for Science and Technology Advancement.

Social infrastructure

- Access to commercial properties (social leases)
- Flood relief donations
- Sponsorship of waste recycling for cash generation.

Papua New Guinea

Hidden Valley

Education and training

- Primary and secondary school education assistance program for dependents of Hidden Valley operation employees.

Supporting local institutions

- Police reservist training programme
- Bulolo police vehicle maintenance (parts) assistance
- Food, toiletries and diesel donations to Wau and Bulolo police
- Justice sector vehicle purchase facilitation
- Wau police station cells maintenance facilitation.

Donations

- Haus Pikinini orphanage support
- Mattress donations to Grace Memorial Secondary School and Baiyune High School
- Diesel donation for various community services
- Haus Krai (mourning house) support
- Christmas food.

Wafi-Golpu

Education and training

- Biodiversity e-library and training for schools.

Health

- Water, sanitation and hygiene (WaSH) project at Zimake and Levilivan (Fly Camp) villages
- Support to distribute supplies from the Morobe Provincial Health Authority to five community clinics including Malahang Health Center, Timini Aid Post, Zindaga Clinic, Wafi Clinic and Wonkins Clinic
- Electricity supply to Wafi Clinic
- Medical emergency transportation for two patients from the Wafi area to Lae.

Social entrepreneurship and farmer development

- Ongoing Cocoa Partnership Programme.

Donations

- Community Christmas sports carnival sports ball donations
- Emergency medical assistance.

Public safety

There were no major incidents or serious concerns raised during the year on road transport and radiation exposure. Together with dust, these are the primary public and community safety risks associated with our operations. We accelerated our plans to contain dust from tailings storage facilities at certain Free State operations after they exceeded permissible limits during the year. We continue to raise awareness in our host communities on potential risks to the public that might emanate from activities.

Our focus areas in FY23

In South Africa, we will revitalise and reposition our CSI programme in line with our corporate affairs strategy, strategically leveraging stakeholder engagements through high-impact community projects. Additionally, work is underway to quantify our initiatives' impact and establish partnerships with major companies in our operating regions to optimise that impact through key partnerships, specifically local and preferential procurement, and SLPs. This will include restarting the health outreach programme for mine-impacted communities in collaboration with our community affairs department.

In Papua New Guinea, our FY2023 programme will continue along established themes. For Hidden Valley, this includes our school fees assistance program for employees' dependents and further support to strengthen local law and order institutions in Wau and Bulolo. For the Wafi-Golpu project, this includes ongoing support for our Cocoa Partnership Programme and completion of water, sanitation and hygiene projects at a further three villages and three schools.

The impacts of illegal mining

Illegal mining significantly impacts the environment, economy, communities and broader society.

Our internal and contracted security services teams are under severe pressure to address increasing illegal mining activities that threaten the sustainability of our business and licence to operate.

Across our operations in South Africa, illegal mining is increasing exponentially with deteriorating socio-economic conditions in the southern African region and the associated breakdown in the rule of law without adequate public enforcement resources.

Statistics show that 70% of illegal miners, known colloquially as "zama zamas" (derived from the Nguni word "ukuzama" meaning "to try"), are undocumented immigrants assisted by local communities, mine employees and contractors who receive lucrative payments in return.

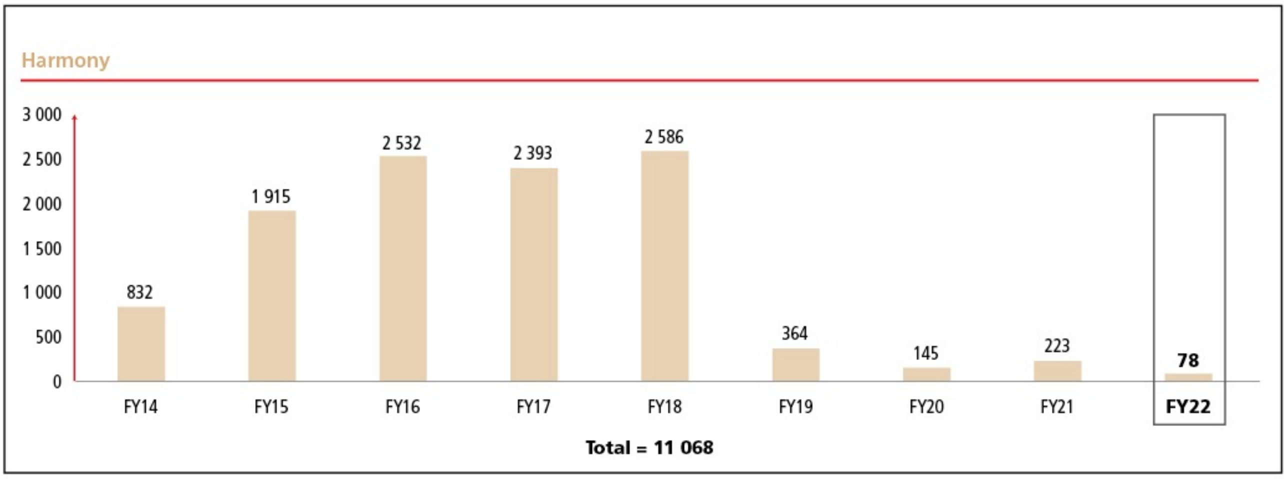
The cost of illegal mining:
- Loss of life and injuries among illegal miners and mine employees
- Production stoppages due to safety incidents and infrastructure damage
- Soil instability and water pollution
- Security expenses
- Waning investor appetite threatening jobs and community development.

Illegal mining is difficult to police as it is highly organised and linked to human trafficking, forced labour, illegal weapons and explosives, tax evasion, money laundering, corruption, gang-related activities, intimidation, murder and other violent crimes.

In response, Harmony invests significantly in protecting employees, communities, the environment and assets by sealing abandoned mines and implementing state-of-the-art security measures.

Supported by the Mineral and Petroleum Resources Development Act prohibiting mining without required statutory authorisation, we work with the South African Police Service and a multi-disciplinary national task team comprising mining houses, the Department of Mineral Resources and Energy, the South African Revenue Service, the Directorate for Priority Crime Investigation, the Department of Home Affairs and the National Prosecuting Authority to combat illegal mining.

In FY22, year on year, our efforts decreased criminal activity by 285% with 78 arrests of illegal miners and 25 colluders. We seized 316 157kg of gold-bearing material worth almost R1.45 million compared to 194 288kg valued at R0.19 million in FY21.



Surface illegal mining

- Mostly illegal immigrants from Lesotho, Zimbabwe and Mozambique trespassing on mine premises for personal gain
- Targets are disused plant and shaft areas
- Identify or sample suitable mining land through James Tables (extracting gold using carpets, water and gravity)
- Illegal miners sell amalgam (liberated by mixing gold ore with mercury) to syndicate boss runners
- Groups from Marashian tribe-controlled areas of Lesotho provide armed protection on surface against other criminal gangs.

Underground illegal mining

- Activities differ at operating and redundant shafts
- Highly organised in the Free State
- Structured and profitable reporting, gold sales, food supply and logistics chain.

Artisanal mining

- Mining companies around the world work alongside artisanal miners
- In Papua New Guinea, government encourages alluvial mining downstream of Harmony's Hidden Valley operation
- Legal artisanal mining outside of formal mining lease areas sustains communities
- Private and public law enforcement on mining leases protects employees and assets
- South African government plans to legalise artisanal mining but this is not viable until illicit gold trading, corruption and territorial battles are addressed.

Respect for human rights

Despite exposure to dangerous criminals, we avoid using force in our encounters with illegal miners. As outlined in our human rights policy at **www.harmony.co.za**, we respect the fundamental and universal human rights and freedoms of everyone.

Harmony's security department and suppliers comply with our code of conduct at **www.harmony.co.za** and we provide annual training reinforcing the Voluntary Principles on Security and Human Rights as well as prevailing legislation.

We also regularly engage with peers, government and civil society about our policies on ethical conduct and human rights in providing security services to local communities.

Governance

Our board of directors, committed to ethical leadership, upholds our duty to be a responsible corporate citizen.

Capitals affected

Directly

- Human capital
- Financial capital
- Manufactured capital

Indirectly

- Intellectual capital
- Natural capital
- Social and relationship capital

Stakeholders affected

- Investors and financiers
- Employees and unions
- Communities, traditional leaders and non-governmental organisations (NGOs)
- Governments and regulators
- Suppliers.

Link to strategy

- Responsible stewardship
- Operational excellence

Related risks

- Loss of life/safety
- Security of electricity/power supply and the impact of higher electricity costs
- Depleting Ore Reserve base
- Geopolitical risks
- Supply chain disruptions (including supply of goods and increasing costs)

Related opportunities

- Mponeng deepening project
- Drive Wafi-Golpu up the value curve
- Productivity improvement projects
- Exploring value-accretive merger and acquisition opportunities
- Unlocking the full potential of our surface source ounces
- Exploring alternative sources of energy to reduce electricity costs to less than 15% of our production costs and reduce the effect of load curtailment.

GRI Standards

We will include the GRI Sector Standards for Mining when published.

Prepared in accordance with 2-9, 2-10, 2-11, 2-12, 2-13, 2-14, 2-15, 2-16, 2-17, 2-18, 2-19, 2-20, 2-21, 2-22, 2-23, 2-24, 2-25, 2-26, 2-27, 2-28, 2-29, 2-30, 3-3, 205-1, 205-2, 205-3, 206-1, 405-1 and 405-2.

Related SDGs

5 GENDER EQUALITY, 6 CLEAN WATER AND SANITATION, 7 AFFORDABLE AND CLEAN ENERGY, 8 DECENT WORK AND ECONOMIC GROWTH, 15 LIFE ON LAND, 16 PEACE, JUSTICE AND STRONG INSTITUTIONS

Related material themes and material matters

Material themes

Ethical and accountable leadership

Governance excellence

Good governance is the core of our performance and reporting. Guided by our policies and codes, we aim to do the right thing and disclose honest, transparent and comparable information to the market. The board's philosophy is to adhere to sound corporate governance principles to enable strong, experienced management teams and promote a culture of shared value for all stakeholders.

Ethical mining

Upholding human rights

As a responsible employer, providing decent work includes respecting human rights*. We adhere to corporate policies, comply with applicable laws and regulations, have regular dialogue and engagement with our stakeholders and contribute, directly or indirectly, to the general wellbeing of communities where we operate.

Ensuring legal, regulatory and compliance excellence

Changing regulatory landscapes in our operating territories create uncertainty, delay key decisions, and may affect investor sentiment towards our group. In South Africa, we face increasing regulatory compliance costs such as carbon tax, uncertainty on land expropriation, rising social demands and an inhibiting regulatory environment. In Papua New Guinea, growing regulatory uncertainty may jeopardise our existing operation and decision to proceed with future projects. As such, we aim to operate beyond compliance, ensuring we deliver on our commitments and retain our licence to operate.

Responsible, ethical governance

The board subscribes to the principles of good corporate governance. Accordingly, it supports the definition of corporate governance as being the exercise of ethical and effective leadership to achieve specific governance outcomes, summarised below:

Ethical culture and responsible corporate citizenship

- Ethical leadership
- Organisational ethics
- Responsible corporate citizenship.

Good performance and value creation

- Strategy and capital allocation
- Reporting
- Political donations
- Executive key performance indicators (KPIs) linked to ESG performance.

Effective control

- Governing structures and processes
- Role of the board
- Board committees
- Appointment and delegation to management.

Functional areas

- Risk governance
- Technology and information governance
- Compliance governance
- Remuneration governance
- Assurance and internal audit.

Legitimacy

- Inclusive stakeholder engagement model and related disclosures.

Underpinned by the principles of King IV

Corporate governance – an overview

The Harmony board's philosophy is to adhere to sound corporate governance principles to enable strong, experienced management teams and promote a culture of shared value for all stakeholders.

The strong foundation of corporate governance principles continues to steer Harmony's board and management. The safety and wellbeing of our employees and communities remains the driving force in our approach.

Strategic risk management

The board has oversight of the group's risk governance process and progress in delivering on its strategy to produce safe, profitable ounces and increase margins. This includes a risk-based and proactive safety culture journey, now in its sixth year, and value-accretive acquisitions including the Hidden Valley reinvestment, Moab Khotsong operations and, most recently, Mponeng and Mine Waste Solutions.

Sustainable development

Harmony's sustainable development framework and associated policies consider the SDGs and the group's role in advancing our communities through preferential procurement, responsible environmental stewardship, employment equity and women-in-mining strategies, among others.

Adding value

The role of the board is key in supporting Harmony's ability to create sustainable value. The interconnected pillars that drive value creation by the board are strategy, stakeholders, sustainability and ethical and responsible corporate citizenship. All four pillars correspond with the principles of King IV. By exercising ethical and effective leadership, oversight of solid risk and performance management practices as well as commitment to good corporate governance, the board drives the efficient use of resources and ensures sustainability. In addition, the diversity of the board supports a stakeholder-inclusive approach to addressing multi-stakeholder interests.

Transformation and broader diversity of the board

The board, through the nomination committee, has embarked on a board representation transitional plan to not only strengthen Harmony's commitment to the four key pillars of King IV for good corporate governance but to further demonstrate its commitment to transformation and the promotion of broader diversity in terms of gender, age, expertise, culture, race, field of knowledge, skills and experience.

The transformation and diversity of the composition of the board is paramount. As such, the board representation transitional plan includes an annual evaluation of key gaps on the board and plans to close and mitigate against those gaps are implemented. The review of the boards succession plans is an ongoing exercise to ensure that the board is consistently creating value for stakeholders through continuity, sustainability and transparency.

Corporate governance continued

The board at a glance

Our duty to be a responsible corporate citizen is supported by our board of directors and their commitment to ethical leadership.

Overarching principle

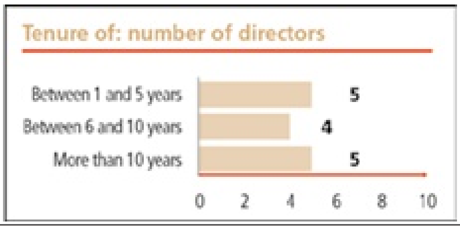
- Responsible corporate citizenship and commitment to ethical leadership.

Board independence, broader diversity and experience (as at 30 June 2022)

Composition and tenure

Members	14
Chairman and lead independent director	✓
Average age (years)	62

Tenure (number of directors)

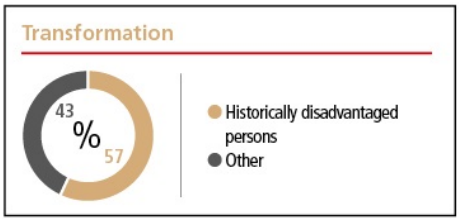


Independence

64% Nine members of the board are independent non-executive directors

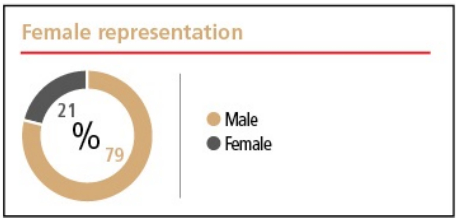
Transformation

57% Eight members are historically disadvantaged persons



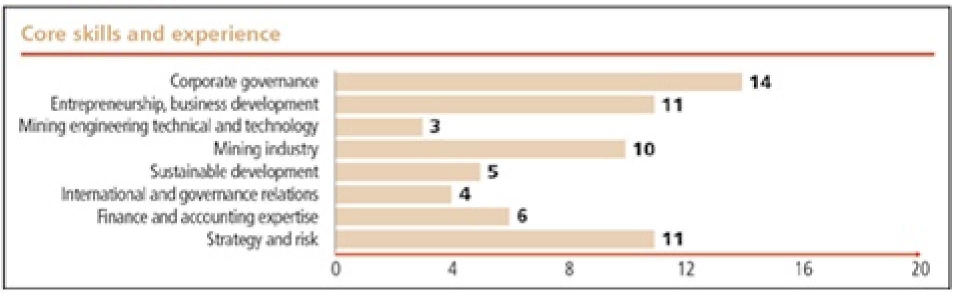
Representation

21% Three members are women



Core skills and experience

Number of directors with skills in the following areas



Governance and compliance policies

- Terms of reference for the board
- Terms of reference for board committees
- Board delegation of authority
- Code of conduct
- Behavioural code
- Corporate governance and compliance policy and framework.
- Internal audit charter
- Disclosure required by section 303A.11 of the NYSE listed company manual
- Public Access to Information Act manual (PAIA)
- Whistleblower policy.

Foundation of corporate governance compliance

- Companies Act, JSE Listings Requirements (primary), New York Stock Exchange requirements, memorandum of incorporation, King IV
- Voluntary compliance with the principles of the United Nations Global Compact, International Council on Mining and Metals, GRI Standards and the International Cyanide Management Code For the Manufacture, Transport and Use of Cyanide in the Production of Gold (Cyanide Code).

Compliance policy and framework

Harmony subscribes to the iCraft framework of ethical leadership as recommended by King IV.

With its long-standing commitment to good corporate governance, the Harmony board is satisfied that appropriate practices are in place to promote the company's reputation as an ethical, reputable and legitimate organisation and a responsible corporate citizen.

In terms of the JSE Listings Requirements, Harmony is required to disclose its application of the principles of King IV. The board, to the best of its knowledge, believes Harmony has satisfactorily applied the principles of King IV.

Annual General Meeting (AGM)

The AGM of the company will be held on Tuesday, 29 November 2022 at 09:00 (SA time), to transact the business as stated in the Notice of AGM.

The issued share capital of Harmony comprises of ordinary and preference shares that entitles the holder to vote on any matter to be decided by the shareholders of the company and to one vote in respect of each ordinary share held.

Ethical culture and responsible corporate citizenship

Ethical leadership

The board leads by example. Each director is therefore expected to continually exhibit the characteristics of integrity, competence, responsibility, accountability, fairness and transparency in their conduct. Collectively, the board's conduct, activities and decisions are characterised by these attributes, which also form part of the regular assessment of the board and individual directors' performance. The board recognises that ethics is one of the pillars of sustainable business practice.

The board charter elaborates on the standard of conduct expected from members. In addition, the board policy on declaration of interests limits the potential for a conflict of interest and ensures that, in cases where conflict cannot be avoided, it is properly disclosed and proactively managed within the boundaries of the law and principles of good governance.

Organisational ethics

The board sets the group's approach to ethics. Oversight and monitoring of organisational ethics is the mandated responsibility of the social and ethics committee on behalf of the board.

During FY19, the Ethics Institute of South Africa conducted an ethics opportunity and risk assessment at Harmony, reporting its findings to the social and ethics committee. Key action items identified included:

- Increase awareness of corruption and adopt zero tolerance
- Actions taken against transgressors
- Promote and emphasise the fair treatment of employees despite their status, age, gender or rank
- Communicate a clear process flow chart indicating how whistleblower concerns are addressed in the organisation, and ensure anonymity when using the whistleblowing line
- Implement additional training opportunities in the organisation on ethical topics
- Develop a process to monitor all disciplinary actions to ensure consistency and fair treatment of employees.

During FY21, the Ethics Institute of South Africa reviewed its findings from FY19 and provided further training and workshops to the social and ethics committee and key ethics champions in Harmony to further strengthen the governance of ethics and ethical leadership towards ethical cultures throughout the organisation. The implementation of the ethics strategy continued in FY22.

Ethics department and ethics management committee

To embed an ethical culture, Harmony has an ethics department that includes a permanent certified ethics officer who ensures the ethics management plan and programme are executed sufficiently and communicated throughout the organisation. Our ethics management committee monitors our ethical culture and integrity, assisted by the ethics officer and the white-collar crime committee. The following noteworthy processes were introduced and developed further in the review period:

- Enhanced declaration-of-interest management and reporting
- Enhanced gift-logging management and reporting
- Enhanced reporting format to the social and ethics committee
- Integrated electronic ethics management system
- Centralisation of all ethics management activities in the group.

The ethics management committee also assesses declarations of interest in terms of the code of conduct and provides feedback to the executive committee, which then reports to the board's social and ethics committee. As a result, ethics are discussed and examined at every level of management in the company. The Ethics Institute of South Africa is currently assisting management and the social and ethics committee to embed the governance of organisational ethics.

Illegal mining remains a challenge in South Africa and for Harmony.

Responsible corporate citizenship

The mining industry introduces a unique duty and opportunity to the group to be a responsible corporate citizen. Although the board sets the tone and direction for the way in which corporate citizenship should be approached and managed, ongoing oversight and monitoring of the group's performance against targets is part of the mandate of the social and ethics committee. Additionally, the social and ethics committee, remuneration committee and audit and risk committee are tasked with specific aspects of ESG oversight roles on behalf of the board to align Harmony's strategy with key ESG considerations.

Extensive detail on the consequences of the group's activities and outputs, which affect its status as a responsible corporate citizen, with relevant measures and targets are provided elsewhere in this report.

Good performance and value creation

Strategy

The board is responsible for approving the group's short-, medium- and long-term strategy as developed by management. In doing so, it focuses on critical aspects of the strategy including the legitimate and reasonable needs, interests and expectations of material stakeholders as well as the impact of the group's activities and output on the various capitals employed in the business process. Risks and opportunities connected to the triple context (economy, society and the environment) in which the group operates are integral to the board's strategic reviews of the business.

Policies and operational plans supporting the approved strategy are submitted regularly by management for review and formal board approval. The board attends an annual strategy session to confirm and review the company's strategy.

Strategy is part of the ongoing conversation in the boardroom. Regular oversight of the implementation of Harmony's strategies and operational plans takes place against agreed performance measures and targets.

Given that the company's reputation as a responsible corporate citizen is an invaluable attribute and asset, the consequences of activities and outputs, in terms of the capitals employed, are continuously assessed by the board through its committees. This will ensure we are able to respond responsibly and limit any negative consequences of our activities, to the extent reasonably possible. In addition, the board continuously monitors the reliance of the group on these capital inputs – our natural capital (including Mineral Resources and Reserves), employees, financial capital, communities and society at large, our mining infrastructure and our intellectual and technological know-how – as well as the solvency, liquidity and going-concern status of Harmony.

Reporting

In protecting and enhancing the legitimacy and reputation of the group, the board ensures comprehensive reporting takes place on different platforms. The FY22 suite of reports appears on the inside front cover.

The board's intention is to meet and exceed legal requirements, as well as the legitimate and reasonable information needs of material stakeholders. The board is satisfied with management's basis for determining the materiality of information to be included in our external reports. The audit and risk committee, assisted by the social and ethics committee, is tasked with reviewing all external reports to verify the integrity of information.

Political donations

Harmony supports the democratic processes in South Africa and Papua New Guinea, and contributes to their political parties. A policy relating to political donations has been adopted by the company. Harmony had donated approximately R1.7 million towards the 2022 local authority elections of Papua New Guinea. The funds were divided proportionally to the support that the political parties had received during the previous national election.

Effective control – governing structures and processes

Role of the board

The board exercises its leadership role by:

- Steering the group and setting its strategic direction
- Approving policy and planning that gives effect to the direction provided
- Overseeing and monitoring implementation and execution by management
- Ensuring accountability for the group's performance by means of reporting and disclosures.

The role and function of the board, including guidelines on its composition and procedures, are detailed in the board charter. This is reviewed annually (and when necessary) to ensure it remains relevant.

There is a protocol in place should any of the board members or committees need to obtain independent, external professional advice at the cost of the company on matters within the scope of their duties. Non-executive directors are also aware of the protocol for requisitioning documentation from, and setting meetings with, management. Board members have direct and unfettered access to the chief audit executive, group company secretary and members of executive management.

Based on its annual work plan, the board is satisfied that it fulfilled its responsibilities in the review period in line with its charter.

Board committees

The board has delegated particular roles and responsibilities to standing committees, based on legal requirements, what is appropriate for the group and to achieve the objectives of delegation. The board recognises that duties and responsibilities can be delegated, but accountability cannot be abdicated. The board therefore remains ultimately accountable.

The following committees have been established:

- Audit and risk
- Social and ethics
- Remuneration
- Nomination
- Investment
- Technical.

Each committee has formal terms of reference, reviewed annually (and when necessary) to ensure the content remains appropriate. The terms of reference address, the requirements of the JSE Listings Requirements, Companies Act, and the recommended items in King IV.

Effective control – functional areas

Risk governance

The board appreciates that risk is integral to the way it makes decisions and executes its duties. Risk governance encompasses both risks and opportunities as well as a consideration of the potential positive and negative effects of any risks on achieving Harmony's objectives. The group's risk appetite and tolerance levels, which support its strategic objectives, are considered annually. The board is supported in this area by the audit and risk committee.

Responsibility for implementing and executing effective risk management is delegated by the board to management. The board acknowledges the need to integrate and embed risk management in the business activities and culture of the group. The audit and risk committee is tasked with ensuring independent assurance on the effectiveness of risk management in the group, when deemed necessary and appropriate.

Technology and information governance

The board, assisted by the audit and risk committee, is responsible for governing technology and information to support the group in setting and achieving its strategic objectives.

A technology and information steering committee has a well-defined charter and is responsible for oversight of technology and information direction, investment and alignment with business strategy and priorities. It is chaired by the financial director and members include the head of information services and group executive committee.

Management adopted the Control Objectives for Information and Related Technologies (COBIT). COBIT provides recommended best practices for governance and control processes of information systems and technology to align IT with business. This high-level framework has been aligned with more detailed IT standards and good practices.

In addition, internal audit provides assurance to management and the audit and risk committee on the effectiveness of the governance of technology and information.

Harmony completed the first phase of the centralised human resource management system to improve human capital management efficiencies in FY21; the second and third phases were initiated in FY22. In addition, the upgrade of the enterprise resource planning (ERP) system was completed, with no material issues or risks realised.

Compliance governance

Being an ethical and responsible corporate citizen requires zero tolerance for any incidents of legislative non-compliance. In addition, compliance with adopted non-binding rules, codes and standards is essential in achieving strategic business objectives.

The foundation of our corporate governance complies with:
- The Companies Act
- Listings Requirements of the JSE, where we have our primary listing
- Listings Requirements of the New York Stock Exchange, where we have our secondary listing
- King IV and related principles and codes of good corporate governance.

Harmony also complies voluntarily with the principles of:
- United Nations Global Compact
- International Council on Mining and Metals
- GRI Standards
- Cyanide Code.

Code of conduct

Our behavioural code and code of conduct commits Harmony, our employees and our contractors to the highest moral standards, free from conflicts of interest. The board reviews the code at least every second year, while its application in Harmony is continually monitored by management. The code of conduct was reviewed and updated in FY21. Our ethics programme is also subject to independent assurance as part of the internal audit coverage plan. The code of conduct addresses critical issues including respect for human rights, anti-corruption, gifts and entertainment and declarations of interests. It encourages employees and other stakeholders to report any suspected irregularities. This can be done anonymously through a 24-hour hotline (managed independently) and other channels. All incidents reported are investigated and monitored by the white-collar crime committee, which comprises managers representing various disciplines in the company and reporting to the management ethics committee.

Whistleblowing policy

Our whistleblowing policy encourages shareholders, employees, service providers, contractors and members of the public to report practices at any of our workplaces that are in conflict with any law, regulation, legal obligation, ethical codes or governance policies. It also provides a mechanism for our stakeholders to report these practices internally, in confidence, independent of line management, and anonymously if they wish. The whistleblowing policy informs whistleblowers of their rights. Harmony is committed to protecting whistleblowers from any reprisals or victimisation.

The identity of any employee or stakeholder who reports non-compliance with the code of conduct and other irregularities is protected. Our anonymous ethics hotline numbers are widely advertised throughout the organisation:
- South Africa: +27 (0) 800 204 256
- Papua New Guinea: +675 (0) 00 478 5280
- Australia: +61 (1) 800 940 949.

Human rights

At Harmony, we conduct our activities in a way that respects human rights as set out in the laws and constitutions of the countries in which we operate in line with the Human Rights Policy adopted in FY22. Our approach to respecting human rights includes adhering to corporate policies, complying with applicable laws and regulations, regular dialogue and engagement with our stakeholders and contributing, directly or indirectly, to the general wellbeing of communities within which we operate.

Legislative compliance

The compliance function ensures compliance with laws, codes, rules and standards applicable to the company. Compliance information and reports on the status of legislative compliance are presented at audit and risk committee meetings.

The Protection of Personal Information Act 4 2013 (POPIA) came into effect on 1 July 2021. Harmony has effected the necessary measures to adhere to the requirements of this act in support of good governance. Implementation of POPIA compliance, including promoting POPIA awareness in the organisation is ongoing.

In line with POPIA, Harmony's appointed information officer is registered at the information regulator. This officer is responsible for managing all personal information and ensures compliance with this act.

Dealing in Harmony shares

During price-sensitive periods, our employees and directors are prohibited from dealing in Harmony shares. Written notice of these restricted periods is communicated to them by the group company secretary. In terms of regulatory and governance standards, directors, prescribed officers and the group company secretary are required to disclose any dealings in Harmony shares in line with the JSE Listings Requirements. The clearance procedure for directors, prescribed officers and the group company secretary to deal in Harmony shares is regulated by the company's policy on trading in shares and insider trading. This policy is reviewed every second year, and was updated in FY21.

Significant fines

Harmony paid no significant fines in any of its areas of operation. No actions were brought against it for anti-competitive behaviour or anti-trust or monopoly practices in FY22.

Foreign private issuers
New York Stock Exchange foreign private issuers, such as Harmony, must highlight any significant ways in which their corporate governance practices differ from those followed by United States domestic companies subject to the listing standards of the New York Stock Exchange.

Remuneration governance
Attracting and retaining the required skills depends largely on the remuneration levels and practices in any business. It is therefore vital to ensure the group remunerates fairly, responsibly and transparently to support the achievement of strategic objectives and positive outcomes in the short, medium and long term. The board is supported in this area by the remuneration committee.

Provision has been made in the notice of the 2022 annual general meeting for a non-binding advisory vote of shareholders on the remuneration policy and remuneration implementation report.

Assurance and internal audit
The audit and risk committee oversees arrangements for assurance services and functions on behalf of the board to ensure these are effective in achieving the objectives of an enabling control environment and supporting the integrity of information for internal decisions and external reporting.

A combined assurance framework effectively covers the group's significant risks and material matters through a combination of internal functions and external service providers.

Despite the output of the combined assurance framework, board members are expected to apply an enquiring mind, form their own opinion on the integrity of information and reports, and the degree to which an effective control environment has been achieved.

Internal audit plays an important part in the overall assurance approach and effectiveness of the assurance framework. The audit and risk committee oversees the internal audit function on behalf of the board.

External independent quality assessment
In FY19, the internal audit function underwent an independent quality review conducted by the Institute of Internal Auditors South Africa. The function was found to generally conform with international standards for the professional practice of internal auditing. No material findings were noted. The external quality assessment is performed every five years.

Legitimacy
Inclusive stakeholder engagement model
The board sets the direction for the group's approach to stakeholder relationships. An inclusive stakeholder engagement approach considers whether the legitimate needs, interests and expectations of all material stakeholders have been adopted.

Group organisational structure

The group is led and directed by a unitary board of directors that is guided by ethical leadership practices, supported by board and committee charters that are reviewed regularly. The group executive management team, headed by the chief executive officer, is responsible for leading implementation and execution of the board-approved strategy, policy and operational planning and governed appropriately in line with a formal delegation of authority framework.

Board of directors

The board exercises its leadership role over the group by:

- Steering its strategic direction
- Approving policy and planning that gives effect to the strategy
- Overseeing and monitoring implementation and execution by management
- Ensuring accountability for performance through reporting and disclosure.

Board committees

The board has delegated particular roles and responsibilities to standing committees, but remains ultimately accountable.

The board committees' primary functions include the consideration, oversight and monitoring of strategies, policies, practices, performance and recommendations to the board for final approval related to:

Audit and risk

- Operating an adequate system of internal control and control processes
- Accurate and appropriate reporting of financial statements
- Governance of information technology
- Risk management and overall risk governance.

Social and ethics

- Occupational health and employee wellbeing, environmental management, corporate social responsibility, human resources, public safety and ethics management
- Compliance with relevant regulations
- Sustainability-related key performance indicators and levels of assurance, including ESG.

Remuneration

- Fair reward of directors and executive management for their contribution to Harmony's performance
- Harmony's compensation policies and practices; administration of its share incentive schemes
- Group remuneration policy.

Nomination

- Formal and transparent procedures on board appointments
- Succession planning for directors and members of executive management
- Board self-assessment process.

Investment

- Potential projects, acquisitions and disposals in line with Harmony's strategy; ensures due-diligence procedures are followed.

Technical

- Safety, strategy and operational performance
- Review of strategic plans
- Technical guidance and support to management.

Group executive committee

Led by the chief executive officer, in charge of executing board approved strategy as well as the day-to-day management of all operations.

Board composition, chairman, independence and meeting attendance

Board broader diversity

Diversity and transformation are key focus areas for the board. Harmony has adopted a promotion of broader diversity policy at board level, specifically focused on promoting the diversity attributes of gender, race, culture, age, field of knowledge, skills and experience.

The board is satisfied that its composition reflects the appropriate mix of knowledge, skills, gender, race, culture, age, experience and independence. In addition, the composition of the board and its leadership structure ensures there is a balance of power in the boardroom and that no one director has unfettered authority of decision making.

Board composition

The board has 14 highly experienced and reputable members: 11 are non-executive directors of whom nine are independent; three are executive directors; three are female and nine are historically disadvantaged persons.

The role and function of the board, including guidelines on its composition and procedures, are detailed in the board charter. This is reviewed regularly to ensure it remains relevant.

Role of chairman

The chairman of the board, Dr Patrice Motsepe is a non-executive director but is not classified as independent. The board is satisfied that, following an assessment that was undertaken during the year under review, that the lead independent director, Dr Mavuso Msimang, meets the requirements for an independent director under the Companies Act, JSE Listings Requirements, King IV, and any other criteria evidencing objectivity and independence established by the board.

The duties of the chairman and lead independent director have been included in the board charter and are based on the recommendations of King IV. The roles of the chief executive officer and chairman are separate. In addition to the chairman and lead independent director, the board also has an independent non-executive deputy chairman, Ms Karabo Nondumo who was appointed on 18 August 2022 following the resignation of Mr Modise Motloba on 27 June 2022.

These appointments are reviewed annually and form part of the board's succession plan for the position of chairman, deputy chairman and lead independent director.

Guidance provided by King IV on the chairman's membership of board committees has been applied. The board chairman is only a member of the nomination committee, which is chaired by the lead independent director.

Assessing independence of directors with tenure of over nine years

The majority of non-executive directors are classified as independent and their independence has been reviewed by the nomination committee. The board appreciates that independence is primarily a state of mind and all board members, despite their categorisation, are expected to act independently and with unfettered discretion at all times. This expectation is confirmed in the board charter.

Following an assessment of Mr Joaquim Chissano who has served on the board for 17 years, Dr Mavuso Msimang (11 years) and Mr John Wetton (11 years) undertaken by the nomination committee during the year under review.

The committee is satisfied that these individuals do not have any relationships that may impair, or appear to impair, their ability to apply independent judgement. In addition, there are no interests, positions, associations or relationships which, from the perspective of a reasonable and informed third party, are likely to influence the members unduly or cause bias in their decision making.

The board thus concluded that the members demonstrated they were independent of mind and judgement, and had objectively fulfilled their roles as independent non-executive directors, despite their tenure on the board. The wealth of experience of these members, in addition to their standing as reputable individuals of integrity and character, makes their ongoing input and contribution an invaluable asset to the board and the group.

In line with the board composition transitional plan, the board (with the assistance of its nomination committee) continued to consider its composition, structure, size and independence, to align with best practice and with the board's broader diversity policy. Two of our longest serving board members, Ms Fikile De Buck and Dr Simo Lushaba, retired by rotation and did not seek re-election (although eligible) as of the conclusion of the 2021 annual general meeting. Mr Modise Motloba, having served on the board for since 2004, resigned effective 27 June 2022.

In addition, Mr Joaquim Chissano and Mr Andre Wilkens, who retire by rotation this year, although eligible, will not be seeking re-election to thee board effective as of the conclusion of the 2022 annual general meeting.

Nomination, election and appointment

The nomination committee is tasked with identifying potential candidates for appointment to the board, while actual appointment is a matter for the board as a whole. The collective knowledge, skills and experience required by the board, as well as broader diversity, are all aspects considered by the board before appropriate candidates are identified for nomination. The nomination committee conducts the necessary independence checks and investigations on potential candidates, as recommended by King IV.

All new board members receive formal letters of appointment. In addition, they participate in an extensive induction programme to enable them to make the maximum contribution in the shortest possible time, and further receive, from Harmony's appointed JSE Sponsor, a formal explanation on the nature of their responsibilities and obligations arising from the JSE Listings Requirements. Ongoing mentorship is provided to members with no or limited governance experience and they are encouraged to undergo appropriate training. Provision has also been made in the board's annual work plan for regular briefings on legal and corporate governance developments, as well as risks and changes in the external environment of the group.

As required by the provisions of Harmony's memorandum of incorporation, a third of the non-executive directors are expected to retire by rotation at each annual general meeting of the company. The board is comfortable in recommending their reappointment to shareholders.

The role and function of the board, including guidelines on its composition and procedures, are detailed in the board charter, which is reviewed regularly to ensure it remains relevant and applicable.

Board performance evaluations

The board fully supports the thinking that an appropriate evaluation of the board and its structures is a strategic value-adding exercise that facilitates continual improvement of its performance and effectiveness. An independent formal self-evaluation process was undertaken in FY22. This included an assessment of the performance of the board, its chairman and individual members as well as committees, chief executive officer and group company secretary.

Overall, the self-evaluation reconfirmed that the board and its committees were considered:

- Highly effective
- Appropriately positioned to discharge their governance responsibilities
- Well supported by its committees
- Working as a cohesive unit and that the highest ethical standards are applied in deliberations and decision making, enabling the board to provide effective leadership from an ethical foundation.

The consensus among board members is that the chief executive officer:

- Communicates consistently and effectively with all Harmony's stakeholders
- Created and implemented an effective strategy, supported by management
- Demonstrates ethical and transparent leadership by living the company's culture and reinforcing its values.

Considering the outcome of the evaluation process, the board is satisfied that the process is improving its performance and effectiveness.

Conflicts of interest

Each member of the board is required to submit a general declaration of financial, economic and other relevant interests and to update these declarations as necessary. In addition, the declaration of interests in any matter on the agenda of a board or committee meeting is a standard item at the start of every meeting. In the event of a potential conflict being declared, the board proactively manages this conflict within the boundaries of the law.

Appointment and delegation to management

The board is responsible for appointing the chief executive officer on recommendation by the nomination committee. Harmony's chief executive officer, Mr Peter Steenkamp, is responsible for leading implementation and execution of the board-approved strategy, policy and operational planning, and serves as a link between the board and management.

He is accountable and reports to the board. He is not a member of the remuneration, audit or nomination committees. He does attend meetings of these committees as required to contribute insights and information.

Succession planning for this position forms part of the executive succession plan that is monitored on behalf of the board by the nomination committee. An emergency succession plan is also in place and reviewed annually.

A formal delegation-of-authority framework is in place and reviewed regularly by the board to ensure its appropriateness to the business. The delegation-of-authority addresses the authority to appoint executives who may serve as ex officio executive members of the board and to make other executive appointments.

Group company secretary

The group company secretary, Ms Shela Mohatla, is a full-time employee of Harmony who was appointed by the board on 14 August 2020. She is a chartered secretary by profession.

The board has direct access to the group company secretary who provides professional and independent guidance to the board as a whole and to members individually on corporate governance and legal duties. She also supports the board in coordinating the effective and efficient functioning of the board and its committees.

The group company secretary has unrestricted access to the board and, at all times, retains an arm's-length relationship to enhance the independence of the position. She is not a member of the board but, being accountable to the board, reports to the board via the chairman on all statutory duties and related functions.

To facilitate and enhance the independence and effectiveness of the group company secretary, the board ensures the office of the group company secretary is empowered and the position carries the necessary authority. The remuneration committee considers and approves the remuneration of the group company secretary on behalf of the board.

Following the assessment of the group company secretary by the board in August 2022, the board is satisfied that the group company secretary has the necessary competence, qualifications, experience, gravitas and objectivity to provide independent guidance and support at the highest level of decision making in the group.

The board is therefore satisfied that arrangements in place for accessing professional corporate governance services are effective.

Discharge of responsibilities

The board is satisfied that the committees properly discharged their responsibilities over the past year.

Furthermore, the board complies, to the best of its knowledge, with the Companies Act and its memorandum of incorporation, monitors such compliance on an ongoing basis and operates in conformity with its memorandum of incorporation.

Board and committee attendance

Name	Age	Appointed director	Independent	Attendance at committee meetings: Audit and risk*	Social and ethics*	Technical*	Investment*	Remuneration*	Nomination	Attendance at board meetings	
Non-executive directors											
Dr Patrice Motsepe (chairman)	60	2003**							3/4	4/4	100%
Ms Karabo Nondumo (deputy chairman)	44	2013		6/6	3/3(b)	6/7	6/7		2/2(c)	4/4	100%
Dr Mavuso Msimang (lead independent)	81	2011	✓		7/7				4/4	4/4	100%
Mr John Wetton	73	2011	✓	6/6	7/7		7/7	4/4		4/4	100%
Mr Vishnu Pillay	65	2013	✓			7/7	7/7	4/4	4/4	4/4	100%
Mr Joaquim Chissano	83	2005	✓		6/7		5/7			4/4	100%
Mr André Wilkens	73	2007				6/7	6/7	4/4		4/4	100%
Ms Given Sibiya	53	2019	✓	6/6	3/3(b)					4/4	100%
Mr Peter Turner	66	2021	✓			7/7	7/7			4/4	100%
Mr Bongani Nqwababa	56	2022	✓	1/1(a)			n/a	n/a		n/a	n/a
Mr Martin Prinsloo	53	2022	✓	1/1(a)		n/a	n/a			n/a	n/a
Ms Fikile De Buck	62	2004	✓	3/3(d)	3/4(d)			2/2(d)	2/2(d)	2/2(d)	100 %
Dr Simo Lushaba	56	2002	✓	3/3(d)	4/4(d)		2/2(d)	2/2(d)		2/2(d)	100 %
Mr Modise Motloba	56	2004			5/7(e)	3/7(e)	4/7(e)		2/2(e)	3/4(e)	75 %
Executive directors											
Mr Peter Steenkamp	62	2016								4/4	100%
Ms Boipelo Lekubo	39	2020								4/4	100%
Mr Harry Mashego	58	2010								4/4	100 %

as at 30 June 2022

* *Includes ad-hoc meetings for the year.*
** *Appointed chairman in 2004.*

a. Appointed as board members and members of audit and risk committee on 18 May 2022.
b. Ms Karabo Nondumo was appointed as chairperson of the social and ethics committee and Ms Given Sibiya was appointed as member of the social and ethics committee from 15 December 2021.
c. Appointed member of the nomination committee on 15 December 2021.
d. On 7 December 2021, Harmony announced the retirement of Dr Simo Lushaba and Ms Fikile De Buck as independent non-executive directors from 7 December 2021.
e. On 28 June 2022, Harmony announced the resignation of Mr Modise Motloba as independent non-executive director from 27 June 2022.

Subsequent to 30 June 2022, Mr Bongani Nqwababa was appointed as chairperson of the investment committee and member of the remuneration committee. Mr Martin Pirnsloo was appointed member of the technical and investment committees.

Board committees

The board has delegated particular roles and responsibilities to standing committees based on relevant legal requirements and what is appropriate for the group to achieve the objectives of delegation. The board recognises that duties and responsibilities can be delegated but accountability cannot be abdicated. The board, therefore, remains ultimately accountable.

The following committees have been established:

- Audit and risk
- Social and ethics
- Remuneration
- Nomination
- Investment
- Technical.

A brief description of each committee, its functions and key activities and actions in FY22 appears on the following pages.

Terms of reference

Formal terms of reference have been adopted for each board committee and are reviewed annually (and when necessary) to ensure the content remains relevant. The terms of reference address, as a minimum, the recommended items in King IV.

Committee membership

In considering committee membership, the board, assisted by the nomination committee, is mindful of the need for effective collaboration through cross-membership between committees, where required. The timing of committee meetings is coordinated to facilitate and enhance the effective functioning and contribution of each committee. Duties and responsibilities are documented to clearly define the specific role and positioning of each committee on topics that may be within the mandate of more than one committee. Committee membership has also been addressed to ensure a balanced distribution of power across committees so that no person has the ability to dominate decision making and no undue reliance is placed on any one person.

The board is satisfied that each committee, as a whole, has the necessary knowledge, skills, experience and capacity to execute its duties effectively and with reasonable care and diligence. Each committee has a minimum of three members. Members of executive and senior management are invited to attend committee meetings as deemed appropriate and necessary for the effective functioning of the committee.

In FY22, the majority of members of all board committees remained independent non-executive directors. All board committees were chaired by an independent non-executive director, except for the technical committee, chaired by André Wilkens, and the investment committee (prior to 27 June 2022), chaired by Modise Motloba, both non-independent and non-executive directors. The board remains confident that their leadership as chairs of the technical and investment committees respectively is in the best interests of the company, based on their extensive knowledge of the specific areas of responsibilities of those committees.

Committee meetings

Any director who is not a member of a specific committee is entitled to attend meetings as an observer, but not entitled to participate without the consent of the committee chairperson. Such directors have no vote in meetings and will not be entitled to fees for attendance, unless specifically agreed by the board and provided for in the board fee structure as approved by shareholders. As part of the board induction process, Mr Bongani Nqwababa and Mr Martin Prinsloo attended various ad hoc committee meetings to further acclimate them to the Harmony board.

The board considers recommendations from its committees in matters requiring its approval, but remains responsible for applying its collective mind to the information, opinions, recommendations, reports and statements presented by the committees.

Audit and risk committee

Member	Committee tenure
J Wetton (chairperson)*	11 years
Karabo Nondumo	9 years
Given Sibiya	3 years
Dr Simo Lushaba**	19 years
Fikile De Buck***	2 years
Bongani Nqwababa^	<1 year
Martin Prinsloo^	<1 year

* *Appointed as chairperson on 15 December 2021.*
** *Retired as member and director on 7 December 2021.*
*** *Retired as chairperson of committee and director on 7 December 2021.*
^ *Appointed as member on 18 May 2022.*

Primary functions

- Monitors operation of an adequate system of internal control and control processes
- Monitors preparation of accurate financial reporting and statements in compliance with all applicable legal and corporate governance requirements and accounting standards
- Monitors risk management, ensures significant risks identified are appropriately addressed and supports the board in overall governance of risk.

Key activities and actions in FY22

Social and ethics committee

Member	Committee tenure
Karabo Nondumo (chairperson)*	<1 year
John Wetton	11 years
Mavuso Msimang	11 years
Joaquim Chissano	16 years
Given Sibiya^	<1 year
Fikile De Buck**	15 years
Dr Simo Lushaba***	3 years
Modise Motloba+	16 years

* *Appointed as chairperson on 15 December 2021.*
** *Retired as member and director on 7 December 2021.*
*** *Retired as chairperson of committee and director on 7 December 2021.*
^ *Appointed as member on 15 December 2021.*
\+ *Resigned as member and director on 27 June 2022.*

Primary functions

- Oversees policy and strategies on occupational health and employee wellbeing, environmental management, corporate social responsibility, human resources, public safety and ethics management
- Monitors implementation of policies and strategies by executives and their management teams for each discipline noted above
- Assesses Harmony's compliance against relevant regulations
- Reviews material issues in each of the above disciplines to evaluate their relevance in the reporting period, and to identify additional material issues that warrant reporting, including sustainability-related key performance indicators and levels of assurance.

Key activities and actions in FY22

- Reviewed and recommended the social and ethics committee report to be included in the integrated annual report
- Reviewed and considered the social, economic, human capital, environmental, health and safety issues affecting the company's business and stakeholders
- Reviewed and considered the effect of the company's operations on the economic, social and environmental wellbeing of communities, as well as significant risks within the ambit of its responsibilities
- Considered its oversight role in terms of ESG and monitored ESG risks and opportunities
- Approved material elements of sustainability reporting and key performance indicators that were externally assured
- Considered and monitored the company's internal and external stakeholder relations
- Considered and approved Harmony's sustainable development framework and policy
- Considered and approved the company's preferential procurement strategy and policy
- Considered and approved the group stakeholder management policy
- Considered and approved its ethics management strategy and plan
- Considered the governance of ethics and ethical leadership
- Reviewed and recommended Harmony's decarbonisation strategy to the board for approval
- Reviewed and recommended the committee's terms of reference to the board for approval
- Considered its oversight role in terms of combatting corruption
- Attended a site visit at Mine Waste Solutions for a detailed update on the Kareerand tailings storage facility – focusing on environmental and social matters.

Remuneration committee

Member	Committee tenure
Vishnu Pillay (chairperson)*	5 years
Fikile De Buck**	11 years
John Wetton	11 years
Dr Simo Lushaba**	16 years
André Wilkens	14 years
Bongani Nqwababa^	<1 year

* *Appointed as chairperson on 11 May 2017.*
** *Retired as member and director on 7 December 2021.*
^ *Appointed as member on 17 August 2022.*

Primary functions

- Ensures directors and executive management are fairly rewarded for their contribution to Harmony's performance
- Assists the board in monitoring, reviewing and approving Harmony's compensation policies and practices, and administration of its share incentive schemes
- Operates as an independent overseer of the group remuneration policy and makes recommendations to the board for final approval.

Key activities and actions in FY22

- Reviewed benefits and remuneration principles for Harmony executive management
- Received and discussed a summary of the suite of Harmony executive management incentive schemes to obtain a holistic view
- Reviewed and recommended the committee's terms of reference to the board for approval
- Reviewed and recommended the company's incentive plan policy to the board for approval
- Reviewed and recommended the non-executive ad hoc fee policy to the board for approval
- Reviewed and recommended the non-executive travel policy to the board for approval
- Reviewed the company's overall retention strategy and policy based on global trends on staff retention
- Considered and recommended the remuneration policy and implementation report to the board for inclusion in the notice of annual general meeting for consideration by shareholders as non-binding advisory resolutions (see **Remuneration Report**)
- Reviewed executive directors and executive management's remuneration benchmarks and recommended their annual salary increases to the board for approval (see **Remuneration report**)
- Reviewed the annual salary increases of the group company secretary and chief audit executive
- Reviewed non-executive director fees with the assistance of an independent service provider
- Considered and recommended the company's total incentive plan balanced scorecard for FY23 for board approval.

Nomination committee

Member	Committee tenure
Mavuso Msimang (chairperson)*	10 years
Dr Patrice Motsepe	19 years
Fikile De Buck**	11 years
Modise Motloba***	12 years
Vishnu Pillay	3 years
Karabo Nondumo^	<1 year

* *Appointed as chairperson on 10 May 2018.*
** *Retired as member and director on 7 December 2021.*
*** *Resigned as member and director on 27 June 2022.*
^ *Appointed as member on 15 December 2021.*

Primary functions

- Ensures procedures governing board appointments are formal and transparent
- Makes recommendations to the board on all new board appointments
- Reviews succession planning for directors and other members of the executive team and oversees the board's self-assessment process.

Key activities and actions in FY22

- Reviewed succession planning for directors and other members of the executive team and oversaw the board's self-assessment process
- Reviewed and recommended for re-election directors who retire by rotation in terms of the company's memorandum of incorporation
- Reviewed and made recommendations on the composition, structure and size of the board and its committees, in line with the board's policy on gender and race diversity
- Considered the positions of the chairman and deputy chairperson of the board and lead independent director and made recommendations to the board
- Reviewed and recommended the independence of non-executive directors (especially independent non-executives serving on the board for longer than nine years)
- Reviewed and recommended immediate and long-term succession plans for the board, chairman of the board, chief executive officer, executive management and the group company secretary
- Considered the programme in place for the professional development of directors and regular briefings on legal and corporate governance developments, risks and changes in the external operating environment of the organisation
- Considered and applied the policy on the promotion of broader diversity at board level, specifically focusing on the promotion attributes of gender, race, culture, age, field of knowledge, skills and experience on the appointment of Bongani Nqwababa and Martin Prinsloo. Their financial and investment expertise in the chemicals, mining and extractives industries, globally and nationally, adds value in executing on Harmony's strategic objectives and make a significant contribution to the development and growth of the company.

Investment committee

Member	Committee tenure
Bongani Nqwababa (chairperson)*	<1 year
Dr Simo Lushaba**	17 years
John Wetton	11 years
Karabo Nondumo	9 years
Modise Motloba***	3 years
Vishnu Pillay	9 years
André Wilkens	15 years
Joaquim Chissano	3 years
Peter Turner	2 years
Martin Prinsloo^	<1 year

*   *Appointed as chairperson on 17 August 2022.*
**   *Retired as member and director on 7 December 2021.*
*** *Resigned as member and director on 27 June 2022.*
^   *Appointed as member on 17 August 2022.*

Primary functions

- Considers projects, acquisitions and disposals in line with Harmony's strategy and ensures due diligence procedures are followed
- Conducts other investment-related functions designated by the board.

Key activities and actions in FY22

- Considered investments, proposals, projects and proposed acquisitions in line with the board's approved strategy and delegation of authority as well as the committee's terms of reference
- Considered the company's exploration expenditure
- Reviewed and recommended the budget and business plans for FY23
- Reviewed and recommended the committee's terms of reference to the board for approval
- Post-investment monitoring of recent acquisitions (Mponeng and Mine Waste Solutions)
- Attended a site visit for a detailed update on the safety interventions in the company
- Attended a site visit for a detailed update on the Target North exploration project.

Technical committee

Member	Committee tenure
André Wilkens (chairperson)*	14 years
Vishnu Pillay	9 years
Peter Turner	2 years
Modise Motloba**	3 years
Karabo Nondumo***	2 years
Martin Prinsloo^	<1 year

*   *Appointed as chairperson on 22 January 2008.*
**   *Resigned as member and director on 27 June 2022.*
*** *Resigned as member on 15 December 2021.*
^   *Appointed as member on 17 August 2022.*

Primary functions

- Provides a platform to discuss strategy, performance against targets, operational results, projects and safety
- Informs the board of key developments, progress against objectives and challenges facing operations
- Reviews strategic plans before recommending to the board for approval
- Provides technical guidance and support to management.

Key activities and actions in FY22

- Monitored safety across all operations
- Monitored exploration and Ore Reserves in South Africa and Papua New Guinea
- Monitored all South African and Papua New Guinean operations
- Considered and approved the company's health and safety policy
- Evaluated and considered Harmony's risks, and measures taken to mitigate those risks
- Reviewed and recommended to the board the company's annual budget and business plans for FY23
- Considered investments, proposals, projects and proposed acquisitions from a technical viewpoint
- Reviewed and recommended the committee's terms of reference to the board for approval
- Attended a site visit for a detailed update on the safety interventions in the company
- Attended a site visit for a detailed update on the Target North exploration project.

Remuneration report

Dear shareholder

It gives me great pleasure to present the 2022 remuneration report on behalf of the remuneration committee (Remco).

Through the Remco, the board continues to make strides in sustaining remuneration policies and practices that are aligned with Harmony's strategic objectives. This is outlined throughout Harmony's integrated reporting suite.

Despite a challenging local and global macro-economic environment, the rising costs of living (driven by post pandemic inflation rates), a volatile gold price as well as the energy crisis created by the conflict in Europe, Harmony remains committed to its growth strategy through appropriate investments to reduce its all-in sustaining costs, increase safe production and ensure operational continuity. To enable this, the appropriate human resource driven by diversity and appropriate pay remains the key focus of this committee. This is further supported by ensuring that Harmony pays a living wage to its workforce.

2022 focus areas

Our remuneration policy was updated to provide for vesting at the original dates, with no prorating for no-fault terminations for deferred shares awarded in terms of the total incentive plan. This was approved by a majority of our shareholders at the December 2021 AGM and implemented during the year.

We continue to monitor the implementation of the multi term wage agreement, as introduced last year.

In the spirit of applying fair and responsible pay principles in FY22, an average increase of 5% in guaranteed remuneration packages for non-bargaining-unit employees was awarded and 7.08% for bargaining-unit employees, in line with collective bargaining agreements.

The Palma Income ratio has been selected to enable the committee to track the income dispersion between high- and low-income earners more efficiently. The Palma Income ratio is calculated by comparing the average income of the top 10% of earners compared to the average of the lowest 40% earners at Harmony (South African operations). Harmony's Palma Income ratio is expected to be 5.02 in 2022 compared to 5.82 in 2021, 5.3 in 2020 and 5.5 in 2019. The latest Palma Income ratio for corporate employers in South Africa is 8.5, as determined by recent analysis of survey data provided by RemChannel.

Growth strategy and performance highlights

Over the past three years, Harmony has added gold ounces by acquiring Moab Khotsong, reinvesting in Hidden Valley (Papua New Guinea), and the FY21 acquisition of Mponeng and related assets. We have demonstrated our ability to successfully integrate our new acquisitions to increase our production profile in South Africa and Papua New Guinea while sustaining communities around our mining operations and preserving jobs. The closure of Unisel and Bambanani allowed for a transfer of employees to other group operations, which enhanced efficiencies without contributing to current unemployment rates in South Africa.

Safety

The remuneration committee acknowledges and mourns the tragic loss of 13 employees at our South African operations in FY22.

The nature of our business places an emphasis on safe production as our number one priority. To that end, we continue to follow an integrated risk management approach, which includes safety training, awareness campaigns, safety days at each operation and equipping our employees with the necessary skills to identify hazards and act safely. Safe production is a responsibility that we take very seriously. Every person has the right to withdraw from an unsafe area and employees are encouraged to report unsafe working conditions. With each accident, a thorough investigation is conducted, and lessons learnt are shared throughout the company.

Harmony recognises that the number of loss-of-life incidents across the group is unacceptable and that every effort is continuously being made to achieve a state of reduced harm. To this end, a comprehensive broad based strategy is being implemented across the organisation that covers medical care and wellness, risk management and individual assessment of risk propensity and a leadership learning and training programme.

It is envisaged that this intervention will take between 5 to 7 years to fully embed and complete. We are currently in year 6 of its implementation. Initial benefits of the programme are beginning to be recorded at individual operations.

Additionally, employees are held accountable for not complying with safety regulations. Initiatives to improve safety cannot, however, focus solely on discipline and training. They also include mining practice and the use of monitoring technology. The desired safety outcomes are therefore pivotal and reinforced in our remuneration policy.

Safety carries a weighting of 15% of the total score on the balanced scorecard. A score of 0% was awarded in the FY22 balanced scorecard for lost-time injury frequency rate (LTIFR) as a final outcome in accordance with the policy regarding loss-of-life incidents. This is applied at the discretion of the remuneration committee after due consideration.

Changes to the Remuneration policy for FY23

Harmony ESOP

Harmony established the Harmony Employee Share Ownership Scheme (also known as the Sisonke share scheme or ESOP) on 15 January 2019 to provide employees with an ownership interest in Harmony and to empower and create potential wealth for employees. The Harmony ESOP had a lock-in three-year period that expired on 15 January 2022.

All permanent employees in Category 4-8, Miners and Artisans, and Officials Bargaining Unit that were in service on 11 February 2019 received a once-off allocation of 225 units (shares), while new appointments from 9 May 2019 received a pro rata allocation based on the number of months these employees participated in the ESOP up to its expiry on 15 January 2022.

A new ESOP is being considered in collaboration with all stakeholders to further create and enhance shared value for all beneficiaries and will be implemented in 2024, subject to shareholder approval.

Key Performance Indicator (KPI) alignment for Balanced Scorecard:

An alignment of the cost measure for the South-east Asia operations (SEA ops) with the South African operations (SA ops) was approved by the board to ensure that the cost metric is not double penalised or rewarded in the case of the SEA ops.

	South African operations	South-east Asia operations
Previous	Total production cost	All-in sustaining cost per ounce (USD)
Current	Total production cost	Total production cost*

** Total production cost consists of:*

- *Operating cost – excluding royalties, Covid-19 related cost, accounting adjustments and by-product credits*
- *Capital expenditure – sustainable capital, deferred stripping cost and leased asset payments*
- *Corporate cost allocation.*

King IV principles

The remuneration committee continues to compare local and global remuneration trends with our remuneration strategy. At the 2021 annual general meeting, the non-binding advisory vote on the remuneration policy was supported by 98.46% of the votes exercised on the resolution. The implementation of the remuneration report was, however, only supported by 76.32%.

Feedback from our shareholders on the implementation report indicated that they did not support the 5% discretionary upwards adjustment to the vesting of the deferred share awards. This was made to reflect the substantial additional efforts of management to address the operational challenges presented by the Covid-19 pandemic. The Remco has noted the opposition of institutional shareholders to such discretionary changes, and this feedback is well noted. No such changes have been effected this year and the outcome of the group scorecard governing the vesting of the total incentive plan awards for the year has been applied without any adjustment.

As required by the Companies Act and King IV, in the event that either the remuneration policy or the implementation report, or both, are voted against by 25% or more, the board will engage with shareholders to understand concerns raised. This engagement may be done by virtual meeting or in writing and will be implemented at a time after the release of the voting results. Where possible and prudent, objections are taken into consideration when formulating any amendments to the company's remuneration policy and implementation report in the following financial year.

The committee is also satisfied that the remuneration policy has achieved its stated objectives for the year.

Use of consultants and their independence

During the year, we employed the services of 21st Century Pay Solutions, RemChannel (Old Mutual) and Bowmans for advice on remuneration matters. The committee is satisfied that their advice was independent and objective.

Statement on effectiveness of policy

We are satisfied that our policy has generally achieved its objectives, although much room exists for improvement of our safe production performance. We remain confident that the total incentive plan will further enhance our company performance, deliver returns to shareholders and support our growth objectives.

In closing

I remain grateful to the board, remuneration committee members and executive management for their support and commitment in FY22. The committee is confident that it has discharged its duties with diligence, ensuring that fair and responsible remuneration practices are executed equitably.

No member of the committee has a personal interest in the outcome of decisions made in the review period, and three of its four members are independent non-executive directors. The chairman of the board is not a member of the committee.

Vishnu Pillay
Chairperson: remuneration committee

25 October 2022

PART 1: REMUNERATION POLICY

Harmony's reward strategy underpins our business strategy of safely producing profitable ounces, increasing our margins and expanding our reserves and resources through organic growth and acquisitions.

To sustain this growth, we rely on experienced, skilled teams who live our values and maintain stakeholder relationships to grow profits safely and support a sustainable company.

Our remuneration policy has been designed with our business strategy in mind – to attract and retain these experienced, skilled teams, and to motivate them to achieve our key business goals. To ensure this happens, we need to be certain that all elements of our remuneration and wider reward offerings are aligned, fair and competitive. In determining remuneration, the remuneration committee considers shareholders' interests as well as the financial health and future of the company.

Gender and race equality

Harmony's remuneration policy is to remunerate based on an individual's ability, skills and knowledge. Men and women, irrespective of their race or any other arbitrary factor, are paid equally for equivalent roles.

Fair and responsible pay

Harmony is committed to the concept of a living wage, which is based on the philosophy of fair and responsible pay. It embodies our initiatives to enhance the lives of our employees by enabling them to improve their living conditions, and to have better access to social services, healthcare, education and training.

Total incentive plan

The total incentive is determined every year on the following basis:

Total incentive (R)	Guaranteed pay (R)	Participation factor (%)	Balanced scorecard result (%)

The balanced scorecard result includes a number of key short- and long-term company performance measures (to be measured over trailing three- and one-year periods). The measures are reviewed and defined annually with appropriate weightings. The scorecard for FY23 is detailed below.

A portion of the total incentive is paid immediately in cash and the balance is settled by means of deferred shares, which will vest at a rate of 20% per annum over the next five years for executive directors and prescribed officers, and 33% per annum over the next three years for management.

In the event of fault termination of employment, including resignation and termination for disciplinary reasons, all unvested deferred shares are forfeited.

A provision for no fault terminations has been approved. This means that the awards of executives who leave the company in good standing, do not vest early, on a time-prorated basis, on termination of employment but will continue in force to vest on the original vesting dates.

Each element of the total incentive plan is described below.

<table>
<tr><th colspan="2">Element</th><th colspan="2">Description</th></tr>
<tr><td colspan="2">Guaranteed pay</td><td colspan="2">Guaranteed pay excludes short- and long-term incentives. To compete effectively for skills in a challenging employment market, we identify the target market to use in benchmarking guaranteed pay. This target market includes organisations or companies that employ similar skills sets to those we require. Comparisons are made predominantly within the South African mining sector to ensure that Harmony remains competitive. The median of the target market is used as the basis of our pay ranges. This same philosophy is applied to our South-east Asia operations.</td></tr>
<tr><td colspan="2" rowspan="3">Participation factor</td><td>Employee</td><td>% guaranteed pay</td></tr>
<tr><td>Chief executive officer</td><td>250%</td></tr>
<tr><td>Financial director, other executive directors and prescribed officers</td><td>230%</td></tr>
<tr><td rowspan="5">Balanced scorecard result</td><td rowspan="4">Cash portion of total incentive (40%)</td><td>A portion of the total incentive is settled in cash immediately when the balanced scorecard results for the financial year have been determined and approved by the board.</td><td></td></tr>
<tr><td>Cash portion (balance settled in deferred shares)</td><td>% of incentive</td></tr>
<tr><td>Chief executive officer</td><td>40%</td></tr>
<tr><td>Financial director, other executive directors and prescribed officers</td><td>40%</td></tr>
<tr><td>Deferred share portion of total incentive (60%)</td><td colspan="2">The balance of the total incentive is settled in deferred shares, vesting at a rate of 20% per annum over the next five years for executive directors and prescribed officers, and 33% per annum over the next three years for management.</td></tr>
</table>

FY23 balanced scorecard

	Scorecard component	Group (%)	South Africa operations (%)	South-east Asia operations (%)
Shareholder value	Total shareholder return (absolute)	8.34	6.67	6.67
	Total shareholder return (relative to SA JSE-listed gold-mining comparators)	8.33	6.67	6.67
	Total shareholder return (relative to FTSE Gold Mines Index)	8.33	6.66	6.66
Financial and operational	Production	20.00	35.00	35.00
	Total production cost	15.00	20.00	20.00
	Free cash flow	10.00	—	—
Growth	Development	—	10.00	10.00
	Additions to Mineral Reserves	10.00	—	—
	Project execution (for future measurement)	—	—	—
Sustainability	Safety performance: Lost-time injury frequency rate (LTIFR)	15.00	15.00	15.00
	Environmental, social and governance (ESG)	5.00	—	—
Total		**100.00**	**100.00**	**100.00**

The balanced scorecard will be applied to eligible employees as follows:
- **Group:** Prescribed officers, executives in the office of the CEO and all off-shaft services operational managers (South Africa)
- **South Africa operations:** Operational executive managers and all on-shaft operational managers
- **South-east Asia operations:** Operational executive managers and all operational managers.

For each of these performance measures, 60% of the maximum weighting is scored for target performance and 100% of the maximum weighting is only reflected for meeting the stretch performance objective for that measure.

Details of the FY22 balanced scorecard for the total incentive and actual performance outcomes are disclosed in the remuneration implementation section (part 2).

Scorecard components

Total shareholder return

Shareholder value is measured as total shareholder return (TSR) over a trailing three-year period (measurements are generally taken at the end of August). It comprises two components:

- Absolute performance over the measurement period, compared to the company's cost of equity (COE), taking into account the growth in the company's share price and the value of dividends paid
- Relative performance of the company versus SA JSE-listed gold-mining comparators and FTSE Gold Mines Index over the measurement period
  - The threshold, target and stretch performance criteria for TSR are set out below:

	Scorecard component	Principle	Threshold 40%	Target 60%	Stretch 100%
Shareholder value	TSR (absolute)	To be measured over a three-year period	COE + 0% per year	COE + 3% per year	COE + 6% per year
	TSR (relative)	To be measured over a three-year period relative to South African JSE-listed gold-mining comparators	On index	Index plus 10%	Index plus 20%
	TSR (relative)	To be measured over a three-year period relative to the FTSE Gold Mines Index	On index	Index plus 10%	Index plus 20%

Financial and operational performance

Financial and operational performance comprises gold production and cost management for the financial year measured against the board-approved business plan.

- Production
  - Total gold production against board-approved business plan for the year
- Total production cost
  - Operating cost – excluding royalties, Covid-19 related cost, accounting adjustments and by-product credits
  - Capital expenditure – sustainable capital, deferred stripping cost and leased asset payments
  - Corporate cost allocation
- Free cash flow
  - Cash flow generated by operations adjusted for exploration capital, dividends and the effect of commodity price and exchange rate changes in excess of 10% (higher or lower).

The threshold, target and stretch performance criteria are set out below:

	Scorecard component	Principle	Threshold 40%	Target 60%	Stretch 100%
Financial and operational	Production	To be measured against board-approved plan	(5)%	Plan	5%
	Total production cost	To be measured against board-approved plan	(5)%	Plan	5%
	Free cash flow	To be measured against board-approved plan	(30)%	Plan	30%

Growth

Growth comprises three areas:

- Development
  - Development is measured against the board-approved business plan of ongoing capital development – the development of reef and waste metres (South Africa) and waste tonnes (South-east Asia) for the financial year.
- Addition to Mineral Reserves
  - Addition to Mineral Reserves through acquisitions and major capital projects is calculated for the financial year.
- Project execution.

The threshold, target and stretch performance criteria are set out below:

	Scorecard component	Principle	Threshold 40%	Target 60%	Stretch 100%
Growth	Development	To be measured against board-approved plan as a leading indicator of medium to long-term sustainability	(5)%	Plan	5%
	Addition to Mineral Reserves	Will measure Ore Reserve addition on a year-on-year pre-depletion basis excluding asset sales	+1Moz	+1.5Moz	+2Moz
	Project execution	For future measurement			

Sustainability
Sustainability comprises two components:
- Safety performance: LTIFR
  - LTIFR will be measured against the board-approved plan
- ESG
  - ESG will be measured on the basis of continued inclusion in the FTSE4Good Index as verified by FTSE Russell.

The threshold, target and stretch performance criteria are set out below:

	Scorecard component	Principle	Threshold 40%	Target 60%	Stretch 100%
Growth	LTIFR	To be measured against board-approved plan	(5)%	Plan	5%
	ESG	To be measured on the basis of continued inclusion in the FTSE4Good Index as verified by FTSE Russell	Yes		No
			5%		N/a

Minimum shareholding requirement
We have encouraged executive directors and prescribed officers to retain performance shares when they vest and a minimum shareholding requirement (MSR) was again confirmed in the new total incentive plan to achieve this. The requirement provides that:
- 50% of the shares that will vest to an executive director or prescribed officer will, immediately prior to the applicable vesting date, be automatically locked up on the terms and in accordance with the MSR
- The lock-up will apply for as long as the relevant target MSR applicable to the executive director or prescribed officer has not been met
- An executive director or prescribed officer may elect to voluntarily lock-up shares that vest in terms of the 2006 share plan to meet their target MSR
- Once the relevant target MSR has been met, any deferred shares that subsequently vest in and are settled to an executive director or prescribed officer will vest and be settled in accordance with the terms of the deferred share plan
- An executive director or prescribed officer may elect to voluntarily lock-up shares that vest in terms of the 2006 share plan or deferred share plan even if it results in locked-up shares exceeding the target MSR – if the locked-up shares exceed the target MSR, the excess shares will remain in lock-up until the next vesting date (in terms of any relevant Harmony share incentive plans applicable at the time) at which point the excess shares will be released from lock-up and settled in accordance with the terms of the deferred share plan.

The minimum shareholding requirement will continue to apply to an executive director or prescribed officer as long as they remain an executive director or prescribed officer.

If an executive director or prescribed officer ceases to be employed by the group for any reason, their locked-up shares will be released from the lock-up on the date of terminating employment.

Target MSR
The target MSR is the relevant target minimum shareholding value (expressed in South African Rand) that is required to be held by an executive director or prescribed officer from time to time pursuant to this MSR being a minimum of 100% of their respective cost to company.

Measurement of target MSR
Each tranche of locked-up shares will be deemed to have a value for the purposes of determining whether the target MSR has been met, equal to the one-day volume-weighted average price (VWAP) of a share in South African Rand (ZAR) at the date of such lock up, multiplied by the number of shares to be locked up in such tranche. This value will be increased yearly by the applicable consumer price index (CPI) rate for the year.

Any locked up shares in terms of the 2006 Harmony share plan MSR will remain locked up and will be taken into account for purposes of determining whether the target MSR has been met.

Trading restriction
Appropriate entries in the relevant registers will be made to record that all the executive director or prescribed officer's shares, which are subject to the lock-up, will be noted by the relevant central securities depository participant in terms of section 39 of the Financial Markets Act and the appropriate flag placed on the relevant securities account.

Voting and dividends
An executive director or prescribed officer will, in respect of vested shares that are subject to the lock-up:
- Exercise all voting rights in respect of such shares
- Receive all distributions payable in respect of such shares.

Application to foreign prescribed officer
The target MSR of the foreign prescribed officer will be determined on the date on which this MSR is adopted or first applies to the foreign prescribed officer (whichever occurs first). In calculating the target MSR of the foreign prescribed officer, the company will use the cost to company (in ZAR) of the chief operating officer: South Africa operations.

The ZAR value of any shares that are to be locked up (in terms of this MSR) will be determined on the applicable vesting date with reference to the share price on that date.

To determine whether the target MSR has been satisfied, the pre-tax value of the locked-up shares will be taken into account.

Deferred share plan limit

The overall limit for deferred shares, issued under the 2018 deferred share plan, is 5% of the shares in issue at the time the plan was approved, amounting to 25 000 000 shares. The individual limit is 0.6%, amounting to 3 000 000 shares.

Harmony ESOP Trust (IT001237/2018(G))

At the special general meeting on 1 February 2018, shareholders approved the issue of 6.7 million authorised but unissued ordinary shares to the new Harmony ESOP Trust, commonly referred to as the Sisonke Trust. The scheme covers all employees in non-managerial categories.

In terms of the allocation criteria in the trust deed, each eligible employee who qualified as an employee beneficiary on the formation of the trust, or within six months afterwards, received 225 ESOP units which are directly attributable to 225 ESOP Trust shares. After that, ESOP units are allocated on a pro rata basis depending on the period such persons join/qualify as eligible employees.

The scheme ended after the three-year lock-in period on 15 January 2022.

The following process was followed:
- All the vested units converted to Harmony shares
- As a default, beneficiaries received a cash payment
- Beneficiaries who wished to exercise the option of keeping their Harmony shares needed to inform the ESOP Trust administrators through Tamela. Six beneficiaries opted to keep their 1 045 shares
- Beneficiaries who did not wish to retain shares automatically received the cash proceeds from the sale of their shares unless they communicated per the above. The Harmony ESOP Trust, through its administrators, sold the shares and the cash payment was made via Harmony payroll during the month of March 2022.

As a precaution, employees were warned to be extra careful of potential fraudulent activities during this time and were advised to report any individual(s) pretending to offer help, fraudulent emails, calls or messages immediately to the Harmony Ethics Hotline on 0800 20 42 56. Furthermore, employees were advised to make use of the financial counselling services existing in the Company.

Payroll payment

The table below depicts a high-level summary of the total payment:

Number of employees	Dividend	Share payment	Total payment
34 898	7 169 756	383 203 652	390 373 408

- Average payment before tax: **R11 186**
- Share price at **R58.22**

The tables below depicts an analysis of payment per Condition of Employment:

Category 4 to 8		Mine & Artisans	
Number of employees	**Total payment**	**Number of employees**	**Total payment**
26 945	303 302 002	3 413	37 629 755

Monthly Paid		Officials	
Number of employees	**Total payment**	**Number of employees**	**Total payment**
450	5 023 194	4 041	44 145 857

Promotion to Management/Good Leaver		Grand total	
Number of employees	**Total payment**	**Number of employees**	**Total payment**
49	273 600	34 898	390 373 408

A few beneficiaries had SARS penalties resulting in negligible net proceeds. This affected about 4 320 employees as depicted below.

	Number of employees	Total sum of SARS penalties
Grand total	4 320	17 163 549

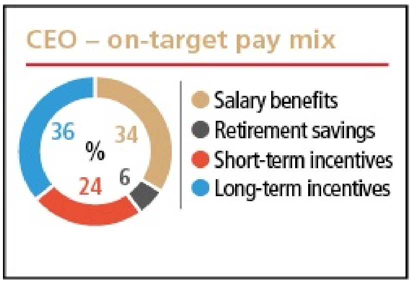
- Average penalty: **R3 973**

Pay mix for prescribed officers

The tables below illustrate the pay mix for prescribed officers, based on achieving minimum, on-target and stretch performance. The composition of total remuneration outcomes for FY22 and FY23 is illustrated below.

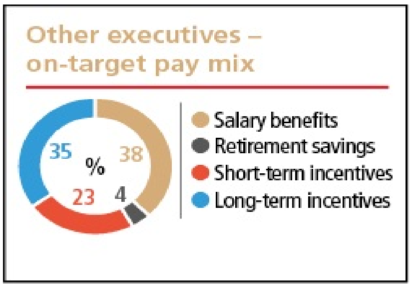
Chief executive officer
FY22 and FY23 pay mix

	Minimum (%)	On-target (%)	Stretch (%)
Salary benefits	85	85	85
Retirement savings and contributions	15	15	15
Guaranteed pay	**100**	**100**	**100**
Short-term incentive	—	60	100
Long-term incentive	—	90	150
Total remuneration	**100**	**250**	**350**



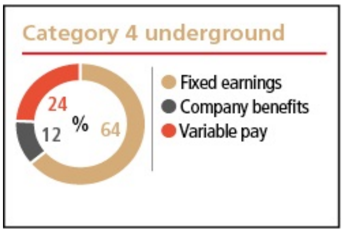
Other executives (financial director, other executive directors and prescribed officers)
FY22 and FY23 pay mix

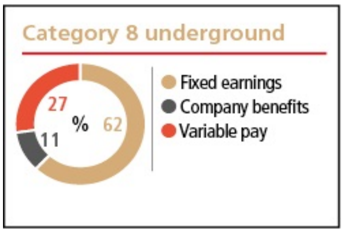
	Minimum (%)	On-target (%)	Stretch (%)
Salary benefits	90	90	90
Retirement savings and contributions	10	10	10
Guaranteed pay	**100**	**100**	**100**
Short-term incentive	—	55	92
Long-term incentive	—	83	138
Total remuneration	**100**	**238**	**330**



Average monthly wages and benefits
FY22 policy

Total remuneration	Category 4 (%)	Category 8 (%)
Fixed earnings	64	62
Company benefits	12	11
Guaranteed pay	**76**	**73**
Variable pay	24	27
Total remuneration	**100**	**100**





Each component includes:

- **Fixed earning:** Basic pay, service increment, 13th cheque, living-out allowance
- **Variable income:** Average overtime, shift allowance, average bonus, meal allowance, unemployment insurance fund/skills development levy, insurance benefit
- **Company benefits:** Employer provident/pension fund and medical aid.

Non-executive director fees

Market comparisons, the fiduciary risks carried by non-executive directors, their workload, time commitments, expertise and preparation expected of each non-executive director role are considered when reviewing our non-executive director fees.

Harmony's philosophy on remunerating non-executive directors is to ensure that they are fairly rewarded for their contribution to the company's governance. Non-executive directors' fees are reviewed annually and compared to the market median of companies of comparable size and complexity to ensure they remain fair and competitive.

The benchmarking exercise in September 2019 indicated that fees for certain roles were significantly below the applicable market median and a three-year process of adjustment to market was initiated. This process was paused in 2020 due to the Covid-19 pandemic and an inflationary increase implemented for all roles, but resumed in 2021 and will continue for the final year in 2022.

An increase of 6% is proposed in FY23 for non-executive director fees that are already in line with the market. This is consistent with executive increases. Additional increases are proposed for roles that are below market to align them with the market median.

In line with the recommendations of King IV, our non-executive directors are paid a retainer for board meetings and attendance fee for every board meeting attended. Non-executive directors also receive a retainer for serving on a committee. In addition, a per-day ad hoc fee is paid for site visits, special meetings or attending to company business. This fee is reduced commensurately to reflect time actually spent in this regard which is shorter than a full day.

Non-executive directors do not receive share options or other incentive awards correlated with the share price or group performance, as these may impair their ability to provide impartial oversight and advice.

Performance of management

The personal performance of employees will not be taken into account in determining the total incentive plan outcome. Harmony follows a team-based balanced scorecard approach in determining incentive awards. All management employees are assessed every year against set key performance indicators which are used to guide the development and promotion of such employees.

Contracts, severance and termination

Executive directors and executive managers have employment contracts with Harmony that include notice periods of up to 90 days. There are no balloon payments on termination, automatic entitlement to bonuses or automatic entitlement to share-based payments other than in terms of the company's approved share incentive plans.

Malus and clawback

Malus is the forfeiture of a variable pay award before it vests or is settled, and clawback refers to a requirement to repay some or all of an award after it has vested or is settled.

The remuneration committee has the discretion to determine that a prescribed officer or executive manager's total share plan award is subject to reduction, forfeiture or clawback (in whole or in part) if:

- There is reasonable evidence of misbehaviour or material error by a prescribed officer or executive manager
- The financial performance of the group, company, employer company or relevant business unit for any financial year, used to determine an award, have subsequently appeared to be materially inaccurate
- The group, company, employer company or relevant business unit suffers a material downturn in its financial performance for which the prescribed officer or executive manager can be seen to have some liability
- The group, company, employer company or relevant business unit suffers a material failure of risk management for which the prescribed officer or executive manager can be seen to have some liability or in any other circumstances if the remuneration committee determines that it is reasonable to subject the awards of one or more prescribed officers or executive managers to reduction or forfeiture.

Procedures to impose any malus or clawback provisions must be initiated within three years of the award. To eliminate doubt, the provisions of this malus and clawback policy do not detract from any other legal rights or measures the company has as recourse for acts of fraud, wrongdoing and/or negligence by its prescribed officers or executive management.

Shareholder feedback

We maintain open communication channels with our shareholders, listen to feedback and take action where this is deemed to be in the best interests of the company.

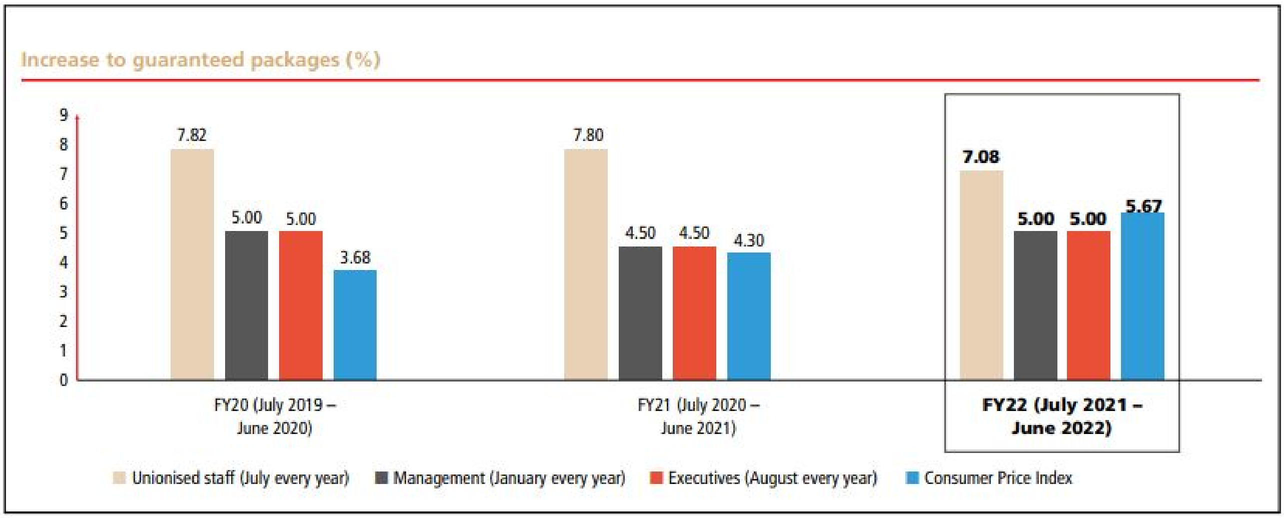
PART 2: REMUNERATION IMPLEMENTATION REPORT ON THE POLICY APPLICABLE IN FY22

This section of the report includes details of the implementation and outcomes of the remuneration policy for FY22. We report on the increase in guaranteed packages and performance outcomes for the total incentive plan.

We have also included disclosure of total single-figure remuneration, the schedule of unvested awards and cash flows for executive directors and prescribed officers in line with the applicable King IV requirements, and with the guidance statement from the Institute of Directors and the South African Reward Association. The remuneration of non-executive directors is disclosed as required by King IV and the Companies Act.

Increases to guaranteed packages during the year

An assessment of executive remuneration was undertaken during the year. Taking into consideration prevailing market conditions, affordability and shareholders' expectations, an average increase of 5% to guaranteed remuneration packages of management was made in FY22. The average percentage increases awarded to executives, management and bargaining-unit employees staff in, FY20, FY21 and FY22 are illustrated below.



Pay fairness and equality

In FY22, an average increase of 5% in guaranteed remuneration packages for management and executives. The bargaining-unit employees received a 7.08% increase as approved in the June 2021 wage agreement. Bargaining-unit employees have received above-inflation increases for the past six years. The average total monthly remuneration of our category 4-8 employees is set out below. We continue to focus on fairly remunerating our employees at this level to address the challenges of inequality and poverty.

Grade	Fixed earnings (R)	Variable income (R)	Company benefits (R)	Total per month (R)
Category 4 underground employee (general worker)	16 420	6 046	3 100	25 566
Category 8 underground employee (team leader)	20 569	8 931	3 672	33 172

Incentive payments attributable to FY22

Total incentive plan

Actual performance outcomes based on the FY22 balanced scorecard for the period 1 July 2021 to 30 June 2022 is as follows:

FY22 scorecard result for the group

Performance drivers	Description	Target	Actual	% Achieved	Qlfy	Weighting	Scorecard line result	Final outcome
Shareholder value	Total shareholder return (TSR)							
	– TSR absolute	56.09 %	(10.45)%	(10.50)%	NO	8.34	0.00 %	0.00 %
	– TSR versus SA JSE-listed gold-mining comparators	10.00 %	(4.27)%	(4.30)%	NO	8.33	0.00 %	0.00 %
	– TSR versus FTSE Gold Mines	10.00 %	19.73 %	19.73 %	YES	8.33	98.90 %	8.24 %
Operational and financial	Kilograms total Harmony	50 103	46 236	92.28 %	NO	20.00	0.00 %	0.00 %
	Total production cost (SA)	35 287	34 677	101.70 %	YES	12.00	73.80 %	8.86 %
	AISC (SEA ops) (US$/oz)	1 337	1 889	58.70 %	NO	3.00	0.00 %	0.00 %
	Net free cash flow	3 009	3 619	120.30 %	YES	10.00	87.00 %	8.70 %
Growth	Reserve addition (Moz)		1.050		YES	10.00	42.00 %	4.20 %
Sustainability	LTIFR total SA ops	6.21	5.90	105.50 %	YES	15.00	99.90 %	14.99 %
	ESG				YES	5.00	100.00 %	5.00 %
						100.00		49.99 %

	FY19	FY20	FY21	Three-year average	FY22	% variation	% of LTIFR awarded
Loss of life incidents versus actual*	11	6	11	9	13	(44.00)%	**0.00%**
					Final LTIFR %		**0.00%**
					Final scorecard result		**35.00%**

** Penalisation on the BSC end results due to the number of loss-of-life incidents during the financial year.*

Discretion to be applied based on the number of loss-of-life incidents in the financial year

The LTIFR award percentage will be adjusted as follows:

- The actual number of lives lost compared to average loss-of-life incidents over the previous three years:
  - Equal to or better than the average – full LTIFR award
  - Up to 20% above the average – 60% of LTIFR award
  - Between 20% and 40% above the average – 40% of LTIFR award
  - More than 40% above the average – 0% of LTIFR award.

FY22 total incentive award calculation

Total incentive (R) **Guaranteed pay (R)** **Participation factor (%)** **Balanced scorecard result (%)**

** Please refer to table on total single-figure remuneration below.*

Executive directors and prescribed officers	Total incentive plan (TIP) FY22 award								
	company *	Participation factor	BSC results	TIP value*	% settled in cash	TIP cash value*	% settled in shares	awarded **	Vesting years
PW Steenkamp	10 823	250 %	35.00 %	9 340	40 %	3 736	60 %	149	5
BP Lekubo	7 132	230 %	35.00 %	5 741	40 %	2 296	60 %	91	5
HE Mashego	5 595	230 %	35.00 %	4 504	40 %	1 801	60 %	71	5
AZ Buthelezi	5 266	230 %	35.00 %	3 914	40 %	1 565	60 %	62	5
M Naidoo-Vermaak	5 266	230 %	35.00 %	4 239	40 %	1 695	60 %	67	5
BB Nel	6 500	230 %	29.73 %	4 444	40 %	1 777	60 %	70	5
MP Van Der Walt	5 266	230 %	35.00 %	3 879	40 %	1 551	60 %	61	5
JJ Van Heerden	8 687	230 %	26.95 %	4 943	40 %	1 977	60 %	78	5

** Figures in R'000.*
*** Figures in '000.*

Remuneration of executive directors and prescribed officers

Total single-figure remuneration

Executive director and prescribed officer remuneration, in terms of total single-figure remuneration, as required by King IV and in line with the guideline note issued by the Institute of Directors South Africa and the South African Reward Association (the guideline note), is detailed below.

Remuneration paid for the year ended 30 June 2022

	Salary and benefits	Retirement savings and contributions	Total incentive cash portion accrued	Total incentive deferred share portion accrued	Total single figure of remuneration	Less: amount accrued not settled in FY22	Plus: amount of previous accruals settled in FY22	Total cash remuneration
Executive directors								
PW Steenkamp	9 199 648	1 589 154	3 736 028	5 604 043	20 128 873	(9 340 071)	6 933 693	17 722 495
BP Lekubo	6 713 098	389 996	2 296 544	3 444 816	12 844 454	(5 741 361)	4 134 667	11 237 760
HE Mashego	4 914 375	744 094	1 801 904	2 702 856	10 163 229	(4 504 760)	3 298 342	8 956 811
Prescribed officers								
AZ Buthelezi[1]	1 569 192	189 690	1 565 812	2 348 719	5 673 413	(3 914 531)	2 735 249	4 494 131
M Naidoo Vermaak[1]	1 560 115	195 665	1 695 910	2 543 864	5 995 554	(4 239 774)	2 809 316	4 565 096
BB Nel	5 530 304	912 050	1 777 854	2 666 781	10 886 989	(4 444 635)	3 391 895	9 834 249
VP Tobias[2]	5 407 721	312 839	—	—	5 720 560	—	3 588 186	9 308 746
MP van der Walt	4 630 796	616 535	1 551 873	2 327 810	9 127 014	(3 879 683)	3 078 807	8 326 138
JJ van Heerden[3]	8 037 000	304 000	1 977 537	2 966 305	13 284 842	(4 943 842)	3 715 000	12 056 000

[1] *Classified as prescribed officer on 23 February 2022.*
[2] *Resigned effective 14 November 2021.*
[3] *Salary is paid in A$ and the Rand equivalent is influenced by the weakening or strengthening of the Rand/A$ exchange rate.*

Subsequent to the departure of Mr Phillip Tobias, the work under his portfolio was split between Mr Beyers Nel and Mr Johannes van Heerden. Mr Nel was allocated South African projects and execution thereof, while Mr van Heerden was allocated the new business portfolio.

Their guaranteed pay was adjusted based on independent benchmarking exercises conducted for South Africa and Australia to test comparators of a similar size to Harmony in terms of total average compa ratio, the cost of living in Australia as well as the increased size and complexity of both roles.

Non-executive directors' fees

On the recommendation of the remuneration committee, the board proposed increases in fees ranging from 5% to 20% for non-executive directors fees, depending on the extent to which the fee for the role was below benchmark, which was approved at the annual general meeting in December 2021. Non-executive director fees paid in FY21 and F22 are set out below:

Director (R000)	Note	2022[1]	2021[1]
Dr Patrice Motsepe		**1 636**	1 440
Karabo Nondumo		**1 183**	923
Dr Mavuso Msimang		**1 076**	968
Joachim Chissano		**724**	636
Fikile De Buck[2]		**637**	1 382
Ken Dicks[3]		**—**	198
Dr Simo Lushaba[2]		**591**	1 160
Grathel Motau[4]		**—**	280
Modise Motloba[5]		**1 494**	1 550
Bongani Nqwababa[6]		**111**	—
Vishnu Pillay		**1 220**	1 130
Martin Prinsloo[6]		**111**	—
Given Sibiya		**820**	676
Max Sisulu[7]		**—**	107
Peter Turner		**977**	329
John Wetton		**1 310**	1 084
Andre Wilkens		**1 028**	986
Total		**12 918**	12 849

Notes

[1] *Directors' remuneration excludes value added tax.*
[2] *Retired as non-executive director effective 7 December 2021.*
[3] *Resigned as non-executive director effective 30 September 2020.*
[4] *Resigned as non-executive director effective 18 December 2020.*
[5] *Resigned as non-executive director effective 27 June 2022.*
[6] *Appointed as non-executive director on the 18 May 2022.*
[7] *Resigned as non-executive director effective 30 September 2020.*

Audit and risk committee: Chairperson's report

Dear shareholder

I am pleased to present the audit and risk committee report for the financial year ended 30 June 2022 (FY22).

This report considers those material matters on which the audit and risk committee (the committee) deliberated during the reporting period. These matters extend beyond statutory compliance and relate to the committee's role in supporting value creation and delivery on Harmony's strategic objectives.

Introduction

This committee is an independent, statutory committee whose members are appointed annually by Harmony's shareholders in compliance with section 94 of the South African Companies Act of 2008, as amended (the Act), and the principles of good governance. In addition to this Act, the committee's duties are guided by the JSE Listings Requirements, the King IV Code on Corporate Governance™* 2016 (King IV) and its terms of reference. Furthermore, the board of directors delegates oversight of specific functions to the committee.

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Terms of reference and discharge of responsibilities

The formal board approved committee terms of reference are reviewed and updated annually (or more frequently if required) by both the committee and the board. The committee is satisfied that, during FY22, it has conducted its affairs and discharged its legal and other responsibilities in accordance with its terms of reference.

Composition and function

Members: J Wetton (Chairperson); K Nondumo; G Sibiya; B Nqwababa; M Prinsloo.

Following the retirement of Ms De Buck and Dr Lushaba at the 7 December 2021 annual general meeting, Mr Bongani Nqwababa and Mr Martin Prinsloo were since appointed as independent non-executive directors and members of this committee effective 18 May 2022. The rest of the members were re-elected by shareholders at the 2021 annual general meeting. All members have the appropriate academic qualifications, financial literacy, business and financial acumen. As at the date of this report, the committee has five members, all of whom are independent non-executive directors.

The chairman of the board is not a member of the committee but may attend meetings by invitation. Board members are entitled to attend committee meetings as observers. However, non-committee members are not entitled to participate without the consent of the chair, do not have a vote and are not entitled to fees for attendance.

The group chief executive officer (CEO) and financial director (FD) – together with members of the executive team and senior managers representing areas relevant to the discussions at the committee, as well as the external auditors, the chief audit executive and assurance providers attend meetings either by standing invitation or as and when required.

The internal and external auditors have unlimited access to the chairperson of the committee. The chief audit executive reports directly to the committee.

Responsibilities

The responsibilities of the committee are set out in the committee terms of reference and include, among others:

- To ensure the integrity of financial statements and related reporting, that they comply with International Financial Reporting Standards (IFRS), the SAICA Financial Reporting Guides and other relevant regulatory bodies stated above and fairly represent the financial position of the group, the company and our operations
- To monitor internal controls, the internal audit function, combined assurance and matters pertaining to the external auditors
- To oversee corporate governance, particularly in relation to legislative and regulatory compliance
- To oversee the management of risk, as well as information technology (IT) governance and cyber security.

The committee believes that it complied with its legal, regulatory and other responsibilities during the past financial year. No major concerns were raised in FY22.

Reporting

The committee reviewed the appropriateness of the following FY22 reports and their related processes:

- Integrated annual report and its related suite of reports
- Mineral Resource and Mineral Reserve statement
- Annual financial statements and accounting practices
- Annual report filed on Form 20-F with the United States Securities and Exchange Commission.

The committee submits that these reports represent a fair view of the group's performance for FY22 and recommended them to the board for approval.

Duties discharged in FY22

- Reviewed the company's quarterly and annual financial results
- Ensured it has access to all the financial information of Harmony to allow the company to effectively prepare and report on its financial statements
- Monitored the internal control environment in Harmony and found it to be effective
- Discussed the appropriateness of accounting principles, critical accounting policies, management's judgements, estimates and impairments, all of which were found to be appropriate
- Executed its responsibility by ensuring that Harmony has established the appropriate financial reporting procedures and these procedures are operating. These procedures, include consideration of all entities included in the consolidated group IFRS financial statements, to ensure that it has access to all the financial information to allow Harmony to effectively prepare and report on its financial statements
- Considered the JSE's latest report on the proactive monitoring of financial statements
- Considered the appointment of the external auditor, PricewaterhouseCoopers Inc. (PwC), as the registered independent auditor for the ensuing year*
- Considered the mandatory audit firm rotation*
- Ensured that the appointment of PwC as the external audit firm for the financial year ending 30 June 2023, and the appointment of Ernst & Young Incorporated (EY), as the external audit firm for the financial year commencing on 1 July 2023, are presented and included as resolutions at the forthcoming annual general meeting*
- Considered the suitability, and satisfied itself, of the external audit partner firm following assessment of the information provided by that firm, in terms of paragraph 3.84(g)(iii) and paragraph 22.15(h) of the JSE Listings Requirements, to determine the suitability of its appointment as the external audit firm and of the designated individual partner
- Ensured that the appointment of the external audit firm is presented and included as a resolution at the annual general meeting
- Satisfied itself that the external audit firm, PwC, was suitable and independent from the company
- Reviewed and approved external audit plans, terms of engagement and fees, as well as the nature and extent of non-audit services rendered by the external auditors
- Evaluated the independence and effectiveness of the internal audit function
- Reviewed and approved internal audit budget, the internal audit charter and risk-based plans
- Evaluated and coordinated the internal audit, external audit and sustainability assurance processes
- Received and considered reports from the external and internal auditors
- Considered the appropriateness, expertise and experience of the FD and the finance function – both were found to be adequate and appropriate
- Evaluated and considered Harmony's risks, and measures taken to mitigate those risks
- Considered whether IT risks are adequately addressed and whether appropriate controls are in place to address these risks. The committee oversees and monitors the governance of IT on behalf of the board, a task it views as a critical aspect of risk management
- Considered and confirmed the company as a going concern
- Considered and approved the company's non-audit services policy
- Reviewed and recommended changes to the committee's terms of reference to the board for approval
- Reviewed the adequacy of the group's insurance coverage
- Reviewed legal matters that could have a significant impact on the company's business.

** Refer to audit firm rotation process in the external auditor section below.*

Key focus areas in FY22

Interim and annual financial statements

The annual financial statements have been prepared in accordance with IFRS, SAICA Financial Reporting Guides, the requirements of the South African Companies Act 71 of 2008, the Listings Requirements of the JSE Limited and the recommendations of King IV.

In terms of paragraph 3.84(k) of the JSE Listings Requirements, the committee reviewed and assessed the process implemented by management to enable the CEO and the FD to pronounce on the annual financial statements and the system of internal control over financial reporting. The results from the process were communicated to the committee. The committee considered any deficiencies as well as the appropriateness of management's response including remediation, reliance on compensating controls and additional review procedures. The committee, on behalf of the board, has noted the final confirmation of the CEO and FD.

External auditor – appointment, independence and tenure

Having considered the external auditor's previous appointments and the extent of other work undertaken for the group, the committee is satisfied that PwC is independent of the group, as per section 94(8) of the Act. The committee also satisfied itself as to the suitability of PwC and the designated audit partner.

A formal procedure has been adopted to govern the process whereby the external auditor may be considered for non-audit services and the extent of these services is closely monitored by the committee. Total fees approved for the external auditor for the year were R52 million, of which R45 million was for audit-related services, R6 million for audit-related services and R1 million for non-audit services.

PwC has been Harmony's external auditor for 72 years. At the 2021 annual general meeting, PwC was reappointed as the independent external auditor and undertook to hold office until the end of the 2022 annual general meeting on 29 November 2022.

Mr S Masondo remained the registered lead audit partner responsible for the audit for the financial year ended 30 June 2022.

As part of Harmony's commitment to transformation, PwC continued to partner on its audit with Ngubane & Co, a level 1 broad-based black economic empowerment company. To facilitate the transfer of skills in the audit of mining companies and registrants on the Securities and Exchange Commission in the United States, Ngubane & Co assisted PwC on the audit of our South African operations. PwC had overall responsibility for the audit and signed off the financial statements.

Audit firm rotation

As audit firm rotation will be mandatory from the financial year beginning on or after 1 April 2023, this will apply from the 2024 financial year for the company.

In compliance with paragraph 3.75 to 3.78 of the JSE Listings Requirements, and in accordance with the mandatory audit firm rotation rule issued by the Independent Regulatory Board for Auditors, shareholders were advised on 1 July 2022 that Harmony intends to appoint EY as the external auditor for the company with effect from the financial year commencing 1 July 2023, being the 2024 financial year. The committee has recommended, and the board endorsed, the proposed appointment following the conclusion of a comprehensive and rigorous tender process. The appointment will be subject to shareholder approval at the forthcoming annual general meeting to be held on 29 November 2022.

PwC will continue to act as external auditors of the company for the 2022 and 2023 financial years, subject to shareholder approval at the 29 November 2022 annual general meeting.

The company, again, thanks PwC for their services over the years and looks forward to beginning a new chapter with EY.

Internal controls and internal audit

Having reviewed the design, implementation and effectiveness of the group's system of internal financial controls, the committee is satisfied that these are effective and form a reliable basis for the preparation of the financial statements. No findings came to the attention of the committee to indicate any material breakdown in internal controls during the past financial year.

In terms of internal audit, the committee is responsible for:

- Ensuring that the group's internal audit function is independent and has the necessary resources, standing and authority within the group to enable it to perform its duties
- Overseeing cooperation between internal audit and the external auditors, and serving as a link between the board of directors and these functions.

In line with King IV and its recommendations, the committee has confirmed the effectiveness of the group chief audit executive, Ms Besky Maluleka-Ngunjiri, and is satisfied that she has the appropriate expertise and experience to meet the responsibilities of this position. The chief audit executive reports quarterly, or as necessary, to the committee on internal audit and has direct access to the committee, primarily through its chairperson.

The committee is satisfied that internal audit follows an approved risk-based internal audit plan and regularly reviews the group's risk profile. Internal audit submits an overall statement on the effectiveness of the group's governance, risk management and control processes.

Combined assurance

The combined assurance framework was refined during the course of the year.

The committee is satisfied that the group has optimised the assurance coverage obtained from management, and internal and external assurance providers. The committee is also satisfied that the various external assurances that are obtained and related systems and procedures are effective in achieving the following objectives:

- Enabling an effective internal control environment
- Supporting the integrity of information used for internal decision-making by management, the board and its committees
- Supporting the integrity of external reports
- Minimising assurance fatigue.

Governance of risk

The committee fulfils a dual function – as an audit committee and as a risk committee. Internal audit conducts regular and full assessments of the risk management function and framework, on which it reports to the committee. The committee is satisfied with the effectiveness of its oversight of risk governance in the group.

In the past year, the committee continued to monitor the newly developed enterprise risk management and resilience policy, risk management guidelines and risk management framework to ensure continued focus on the company's material risks. The board further approves the group's risk appetite and tolerance framework.

Appropriateness and experience of FD and effectiveness of the finance function

The committee confirms that it is satisfied that Ms Boipelo Lekubo, the current FD, possesses the appropriate expertise and experience to meet the responsibilities of this position. The finance function was also considered and the committee found the expertise and experience to be adequate and appropriate.

Oversight of derivative programme

The committee also monitors and reviews the group's derivative and hedging strategy. The derivative programmes currently in place were introduced in FY16. In terms of these programmes, up to 20% of gold production may be hedged while transactions for up to 25% of foreign exchange exposure may be entered into.

Technology and information governance

We recognise the increasing importance of technology as both a source of future opportunities and a means by which we conduct our business and improve organisational efficiencies. Accordingly, this committee monitors the governance of technology and information quarterly.

The committee has delegated responsibility to management for digitising the company, implementing enterprise-wide technology and information management policy, and embedding it into the organisation's day-to-day, medium- and long-term decision-making activities and culture. This ensures operational excellence and delivery on our first strategic pillar.

Given the multiple critical information system changes implemented simultaneously across the organisation, this was a major focus area for the committee during the year. Progress was closely monitored, with management providing detailed quarterly updates on this and on challenges encountered and the steps taken to address such challenges.

In particular, during the past year, as part of the process to digitise the company, the committee oversaw management's implementation of two significant upgrade projects aimed at improving our operating and business efficiencies. The company completed the first phase of the centralised human resource management system (HRMS) focused on core human resource (HR) processes. Furthermore, the second and third phases were initiated to improve human capital management (HCM) efficiencies. In addition, the upgrade of the enterprise resource planning (ERP) system was completed, with no material issues or risks realised.

Due to the nature of ever-changing cybercrime attack vectors, significant effort and focus is required to keep pace and abreast of cyber-related threats. To this end, it is imperative to balance the risks, controls and investment associated with these threats, which is a major focus area for the committee. As a result, effectiveness is closely monitored, with management providing detailed quarterly updates.

Dividend policy and dividends declaration

The board declared an interim ordinary dividend of 40 cents for the year ended 30 June 2022, with R247 million paid on 11 April 2022. And further declared a final ordinary dividend of 22 SA cents for the year ended 30 June 2022, paid on 17 October 2022. In addition, dividend payments were made in 2021 and 2022 to the non-controlling interest holders in Tswelopele Beneficiation Operation of R7 million and R16 million, respectively.

Harmony declared an annual preference share dividend to the Harmony Gold Community Trust (the Trust). The board declared a preference dividend of R9 million and it was paid to the Trust on 11 August 2022 (2021: R9 million on 10 August 2021).

In considering the payment of dividends, the board, with the assistance of the audit and risk committee, took into account the current financial status of the company and the payment of a proposed dividend subject to the successful application of the solvency and liquidity test as set out in section 4 of the Companies Act of 2008.

The company's dividend policy remains to pay a return of 20% on net free cash generated to shareholders, at the discretion of the board of directors.

Going concern

The committee has reviewed a documented assessment, including key assumptions prepared by management, of the going concern status of the group.

Integrated annual report

The committee has overseen the integrated reporting process, reviewed the report and has recommended the 2022 Integrated annual report and consolidated financial statements for approval by the board.

Events post year end

- On 29 August 2022, a final dividend of 22 SA cents per ordinary share was declared, paid on 17 October 2022
- During the budgeting process for the 2023 financial year, a decision was taken to restructure the Tshepong Operations into two separate operations, being the Tshepong North and the Tshepong South operations. This decision was taken to create immediately profitable operations and had the impact of reducing the life-of-mine of Tshepong North from 19 years to seven years. From 1 July 2022, the operations will be reported on separately to the chief operating decision maker and as a result be disclosed as two reportable segments
- On 6 October 2022, Harmony entered into an agreement with Copper Mountain Mining Corporation (Copper Mountain), to acquire its wholly owned Eva Copper Project and its 2 295km^2 exploration land package in Queensland, Australia (collectively the acquired assets) for a total consideration of up to US$230 million.

  Under the terms of the transaction, the acquisition consideration consists of the following:
  - US$170 million in upfront cash payable on closing of the transaction
  - Up to US$30 million in cash, based on a contingent payment arrangement where Harmony will pay Copper Mountain 10% of the incremental revenue generated from the acquired assets which is above revenue based on a US$3.80/lb copper price
  - Up to US$30 million in cash, based on a contingent payment arrangement where Harmony will pay Copper Mountain US$0.03 per pound of contained copper for any SAMREC copper resource discovered and declared on a new deposit within the acquired assets after the closing of the transaction.

  Harmony plans to fund the upfront purchase price using available cash and revolving credit facilities.

The closing of the transaction is subject to certain customary conditions, including approval from the Foreign Investment Review Board in Australia and Copper Mountain bondholder approval. The transaction has received approval from the South African Reserve Bank.

Management will assess the accounting treatment upon the closure of the transaction.

In closing

I wish to thank my fellow committee members for discharging their duties professionally and in accordance with the committee mandate, terms of reference and statutory responsibilities.

John L Wetton
Chairperson: audit and risk committee

25 October 2022

Social and ethics committee: Chairperson's report

Dear stakeholder

Once again, we are pleased to publish our ESG Report 2022, complementing our 2022 suite of annual reports. It is an honour and a privilege to preside over this committee at a time when ESG is so pivotal to our company's purpose and shared value intent. This report will provide further insight on our environmental, social and governance (ESG) performance. Many of the challenges facing the world today, such as climate change, water scarcity, inequality and hunger, can only be resolved by promoting and striving for development that is sustainable in the long term. Harmony understands and supports that our business can have a positive influence in all ESG spheres and in doing so, create shared value for all our stakeholders. Mining with purpose is ingrained in our business strategy, models and processes.

Consequently, the work of the social and ethics committee has become even more significant. Our sustainable development framework and associated policies are evidence of our commitment to responsible stewardship. In compiling our framework, policies and related procedures, we have considered the principles of the International Council on Mining and Metals, the United Nations Global Compact and the Voluntary Principles on Security and Human Rights.

Integrating the six capitals into our organisational strategy enables us to unlock profits while fulfilling our purpose to deliver optimal bottom line results. This while also ensuring we build trust with our employees and stakeholders, as we aim to protect the delicate natural environment for future generations.

At Harmony, good corporate citizenship and tangible acts of moral responsibility have become the way we do business. We have demonstrated our intent of a harmonious coexistence with host communities and working collaboratively with our suppliers, communities and partners to ensure the development of healthy, inclusive communities.

This committee has a unique mandate set out by the Companies Act. It is also responsible for overseeing governance and our performance in terms of our sustainable development activities. These include ESG considerations; ethics management; stakeholder engagement; employee relations (including empowerment, transformation, employee health and wellness); environmental management and stewardship; socio-economic development and upliftment; and public health and safety. The committee also considered the inevitable trade-offs between capitals to ensure Harmony continues to create shared value.

The committee thus complied with its regulatory, legal and other responsibilities mandated by the board. Accordingly, we have applied the principles of King IV with greater emphasis on ethical governance and conduct, as well as responsible corporate citizenship to support the sustainable growth of the company.

Value creation – Key focus areas in FY22

As part of ongoing initiatives to create and share value, this committee continues to assess, review and approve the ethics policy, stakeholder engagement policy, environmental policy, employment equity as well as the preferential procurement policy and strategy.

Although some gaps are still being addressed, we are particularly pleased with the company's progress against short-, medium- and long-term targets.

In the review period, the committee focused on ESG issues and its oversight role. Understanding that our business may have an impact on ecosystems, we ensured that our environmental management programmes are robust and effective.

Harmony's energy transition

Pivotal to our environmental strategy is our climate-change and decarbonisation strategy. Since 2016, we have focused on using less energy as well as being more efficient in the use of that energy. Given that South Africa and Papua New Guinea are members of the 2015 Paris Agreement (a legally binding international treaty on climate change); Harmony, with operations in both countries, recognises its impact on carbon emissions as well as its obligation to combat climate change.

The committee recommended Harmony's decarbonisation strategy for board approval and supported the science based targets for 2026, 2031 and 2036. The committee further endorsed the intent to achieve net zero by 2045.

This is underpinned by an aggressive renewable energy plan and a substantive green loan.

Ethics management

The Ethics Institute of South Africa continued to assist management and the committee to embed and further improve the governance of organisational ethics. While the governance of ethics is mandated to this committee, the board sets the group's approach to ethics and is equally responsible and committed to the highest standards of ethical conduct throughout Harmony.

We understand that implementing sound corporate governance practices to mine ethically cannot be compromised or negotiated – our licence to operate rests on legitimate and ethical leadership. Equally, the principles of sustainable development are fundamental in ensuring sustainability and profitability for our stakeholders.

The negative impact of illegal mining in South Africa remains a challenge for our economy and stakeholders alike. Although Harmony has intensified its partnerships to combat the issue, we remain cognisant that further partnerships and collaborations are required to develop innovative solutions in this regard. The committee continued to monitor and assess key improvement areas to address this challenge in Harmony and the industry at large.

Kareerand tailings storage facility

As part of our commitment to our strategic pillar of responsible stewardship, our responsible tailings management measures at Kareerand limit environmental impact, particularly on the nearby Vaal River which is a crucial water source for South Africa, and neighbouring communities.

The board approved an investment of R2 billion in the Kareerand expansion project. The extension design includes a full geomembrane liner and a comprehensive cut-off drainage system to avoid groundwater and surface impacts by shifting 70% of deposition. As with Kareerand's current siting, the extension will be on stable geology and away from dolomites.

Social responsibility

Harmony continues to support the spirit of the mining charter as it relates to transformation and we are making good progress against the key tenets. As it relates to our social and labour plans, we are making good traction in delivering on our commitments. That said, our mine community development programmes are behind plan for the financial year, however, we are currently expediting delivery and are making good progress.

The committee continued to monitor the company's improved stakeholder engagement to proactively reach all levels of government and host communities in South Africa and Papua New Guinea. This stakeholder-inclusive approach focuses on reactive and proactive engagements, which positions Harmony well with its stakeholders and increases our social and reputational capital.

The successful three-year wage agreement signed in September 2021 with all five organised-labour representatives is testament to our inclusive approach. An agreement of this nature secures a stable labour force with limited business interruptions.

The safety and health of our workforce remains a key focal point of Harmony's sustainability. Safety is an important consideration for the committee in terms of ESG and during board discussions. The technical committee has specific oversight of employee safety, while this committee focuses on employee health and public safety.

The board, through the remuneration committee, ensures the implementation of Harmony's remuneration policies as approved by shareholders. We remunerate fairly and responsibly by ensuring that our remuneration is market-related and in line with the performance of the company. Our safety and ESG outcomes are therefore carefully considered and reinforced in our remuneration policy.

Preferential procurement

The committee continued to monitor the implementation of the company's preferential procurement strategy and enterprise supplier development in South Africa and Papua New Guinea to assess our contribution and impact in local communities. In South Africa, Harmony has made steady progress with its preferential procurement strategy to integrate black-owned businesses into its supply chain. We must ensure that these transformation initiatives include our communities, and Harmony has been resolute about advancing opportunities to entrepreneurs in host communities. We remain challenged on women and youth inclusion and are working hard to close
this gap.

We are grateful to our supply-chain partners who work with us to promote inclusive participation by black-owned, black women-owned and youth-owned companies. Harmony has already achieved its targets for FY25 by spending over 80% of its discretionary expenditure with companies that have more than 25% black ownership, which includes over 50% with companies that have more than 50% black ownership.

TCFD

In FY20, we published our first report in line with recommendations of the TCFD in our suite of annual reports. The purpose of this report was to demonstrate our risk management processes and articulate the likely financial impact of climate change. This report was well received and we have published a similar report this year. For ten years, prior to FY20, we had submitted reports to the CDP Climate Change and CDP Water (formerly the Carbon Disclosure Project). We believe that the TCFD disclosure provides better understanding and context of the implications, financial and otherwise, for Harmony on climate change. It also facilitates the company's evolution to a low-carbon economy.

World Gold Council – responsible gold mining principles

The World Gold Council's (WGC) responsible gold mining principles acknowledge the unique roles of gold and gold mining in many countries and communities. In South Africa especially, the gold mining industry plays a unique role. The 10 principles encapsulate key ESG issues and provide a single, consolidated framework of what constitutes responsible gold mining. This provides comfort to consumers, investors and downstream supply chain that the gold we produce has been responsibly mined and processed.

Harmony champions responsible mining and we believe the WGC framework will reinforce good practices at our operations. We are therefore formally implementing the framework.

United Nations Sustainable Development Goals (SDGs)

As in the previous year, Harmony interrogated the individual SDGs and our contribution to achieving these goals by 2030

In closing

Our intention and commitment remain to continue focusing on: ensuring employee safety and health, contributing to self-sustaining communities and responsible closure planning, mitigating the environmental impacts of our mining activities, ensuring an enabling culture and empowering our workforce and navigating political and regulatory uncertainty.

I wish to thank my fellow committee members, the board and management for their support and contribution to ensuring Harmony's progress towards a sustainable future. I wish to extend a special word of thanks to my predecessor, Dr Simo Lushaba, who stood at the helm as committee chairperson for the first half of FY22. A concerted effort has been placed on creating value for our stakeholders, particularly our employees and the communities within which we operate. The board continues to fully support the committee in this commitment.

Karabo Nondumo
Chairperson: social and ethics committee

25 October 2022

Mining Charter III – Compliance scorecard

We discuss our performance against the mining charter throughout this report. The charter is focused on transformation of the South African mining industry as a whole by promoting equal access to and ownership, expanding business opportunities for historically disadvantaged persons (HDPs), redressing the imbalances of historical injustices and enhancing the social and economic welfare of employees and mine communities.

The mining charter is not a static document – it has been debated and revised a number of times, and is now in its third iteration (effective 2018 and known as Mining Charter III), Harmony will continue to work towards transformation because we believe this supports our social licence to operate.

The table summarises our performance against targets for each pillar for the calendar year to 31 December 2021 (the regulatory reporting period). Harmony considers itself to be subject to the Mining Charter. Harmony's status under the applicable Mining charter is determinative of the applications lodged by Harmony for mining rights. The Broad-Based Black Economic Empowerment Act requires the Department of Trade and Industry to issue the Code of Good Practice on Broad- Based Black Economic Empowerment or sector codes to measure an entities black economic empowerment initiatives. The BBBEE Act and code do not require the DMRE to apply the BBBEE code when determining the qualification criteria for the granting of mining rights or the renewal of existing rights. The codes will only apply to mining companies if they wish to be scored for purposes of contract with organs of state. This means that unless Harmony wishes to be scored for the purpose of contracting with organs of state it is not obliged to obtain a BBBEE certificate.

Mining Charter III scorecard for 2021 (January-December)

	Measure	Target	Progress	Score
1 Reporting				
Has the company reported its level of compliance with the mining charter for the calendar year?	Report annually	Yes	Yes	✓
2 Ownership				
Minimum target for effective ownership by historically disadvantaged South Africans	Meaningful economic participation; full shareholder rights	26%	>30%	✓
3 Employment equity				
Diversification of workplace to reflect the country's demographics and attain competitiveness	Representation of historically disadvantaged persons	Board: 50%	62%	✓
		Executive committee: 50%	50%	✓
		Senior management: 60%	60%	✓
		Middle management: 60%	55%	✗
		Junior management: 70%	67%	✗
		Core and critical skills: 60%	72%	✓
	Representation of women	Board: 20%	23%	✓
		Executive committee: 20%	25%	✓
		Senior management: 25%	29%	✓
		Middle management: 25%	25%	✓
		Junior management: 30%	19%	✗
	Employees with disabilities	1.5%	0.2%	✗
4 Human resource development				
Development of the requisite skills, particularly in exploration, mining, processing, technology efficiency, beneficiation and environmental conservation	Human resource development expenditure as percentage of total annual leviable amount (excluding mandatory skills development levy)	Invest 5% of leviable amount as defined in human resource development element in proportion to applicable demographics (employees and non-employees)	5%	✓
5 Mine community development*				
Meaningful contribution towards mine community development in keeping with the principles of the social licence to operate	Implementation of approved commitments in the social and labour plan	100%	85%	✗

* *Mine community development is reported according to Harmony's financial year, as agreed with DMRE. This report covers mine community development for the period July 2021 to June 2022.*

	Measure	Target	Progress	Score
6 Procurement and enterprise development				
Total procurement budget spend on goods and services	**Mining goods** A minimum of 70% of total mining goods procurement spend must be spent on South Africa-manufactured goods sourced from BEE-compliant manufacturing companies. Excludes spend on utilities (electricity and water), fuels, lubricants and land rates	21% of total mining goods budget must be spent on South African-manufactured goods produced by 50% + 1 vote HDP-owned and controlled companies	45%	✓
		5% of total mining goods budget must be spent on South Africa-manufactured goods produced by 50% + 1 women and/youth-owned and controlled companies	5%	✓
		44% of total mining goods budget must be spent on South Africa-manufactured goods produced by at least level 4 BEE 25% + 1 compliant companies	67%	✓
	Services A minimum of 80% of total spend on services must be sourced from South Africa-based companies	65% of total services budget must be spent on South African companies that are 50% + 1 vote HDP-owned and controlled companies	51%	×
		15% of total services budget must be spent on South African companies that are 50% + 1 vote women-owned and controlled companies	9%	×
		5% of total services budget must be spent on South African companies that are 50% + 1 vote youth-owned and controlled	4%	×
		10% of total services budget must be spent on South African companies that are at least at level 4 BEE + 25% + 1 compliant companies	67%	✓
	Research and development	A minimum of 70% of total research and development budget to be spent on South Africa-based entities	100%	✓
	Sample analysis	Use South Africa-based facilities or companies for analysis of 100% of all mineral samples across mining value chain	100%	✓
7 Housing and living conditions				
	Improve standard of housing and living conditions of mine employees	Implement all commitments in the housing and living conditions standard	100%	✓

Harmony Gold Mining Company Limited

Independent auditor’s report

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of Harmony Gold Mining Company Limited

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying group balance sheets of Harmony Gold Mining Company Limited and its subsidiaries (the “Company”) as of 30 June 2022 and 30 June 2021, and the related group income statements, statements of comprehensive income, statements of changes in shareholders’ equity, and cash flow statements for each of the three years in the period ended 30 June 2022, including the related notes (collectively referred to as the “consolidated financial statements”). We also have audited the Company's internal control over financial reporting as of 30 June 2022, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of 30 June 2022 and 30 June 2021, and the results of its operations and its cash flows for each of the three years in the period ended 30 June 2022 in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of 30 June 2022, based on criteria established in Internal Control - Integrated Framework (2013) issued by the COSO.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Management's Annual Report on Internal Control over Financial Reporting appearing under Item 15B. Our responsibility is to express opinions on the Company’s consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

A company’s internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company’s internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorisations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorised acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Critical Audit Matters

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that (i) relates to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Impairment of property, plant and equipment and goodwill

As described in notes 2.5, 6, 15 and 16 to the consolidated financial statements, property, plant and equipment and goodwill have carrying values of R32 872 million and Rnil, respectively, at 30 June 2022. Goodwill is tested annually for impairment and carried at cost less accumulated impairment losses. Management conducts an impairment test for other non-financial assets whenever events or changes in circumstances indicate that the carrying amount for cash generating units ("CGU") exceeds its recoverable amount. An impairment loss is recognised in the income statement for the amount by which the asset's carrying amount exceeds its recoverable amount. An impairment charge of R4 433 million (of which R4 100 relates to property, plant and equipment and R333 million to goodwill) was recorded for the year ended 30 June 2022. The recoverable amounts for CGUs were determined on a fair value less cost to sell basis utilising real discounted future cash flows (post-tax) or attributable resource values in the case of undeveloped properties and certain resource bases. Key assumptions for the calculations of the CGUs' recoverable amounts are the commodity prices, attributable resource values, marketable discount rates, exchange rates and the annual life-of-mine plans. In determining the commodity prices and resource values to be used, management assesses the views of several institutions on future commodity prices and based on this, derives the future commodity prices and resource values. Due to the short-term volatility in the US$ commodity price and rand against the US$, management differentiated between short-, medium- and long-term assumptions used in the models. The life-of-mine plans are based on proved and probable reserves as included in the Reserve Declaration, which are determined by management in terms of the South African Code for the Reporting of Exploration Results, Mineral Resources and Mineral Reserves (SAMREC), as well as resources where management has high confidence in the orebody and economical recovery of gold, based on historic and similar geological experience.

The principal considerations for our determination that performing procedures relating to the impairment of property, plant and equipment and goodwill is a critical audit matter are (i) the significant judgment applied by management in determining the recoverable amount for each CGU; (ii) a high degree of auditor judgment, subjectivity, and effort in performing procedures to evaluate management's future cash flows and significant assumptions, including commodity prices, resource values, marketable discount rates, exchange rates and the annual life-of-mine plans; and (iii) the audit effort involved the use of professionals with specialised skill and knowledge to assist in performing these procedures and evaluating the audit evidence obtained from these procedures.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to management's impairment calculations, including controls over management's process for developing their estimate of the recoverable amount for each CGU and controls over significant assumptions in the calculation. These procedures also included, among others, testing management's process for calculating the recoverable amount for each CGU, evaluating the appropriateness of the discounted cash flows models and resource values per CGU, testing the completeness, accuracy and relevance of the underlying data used in the discounted cash flows and resource values, and evaluating the significant assumptions used by management. These significant assumptions included commodity prices, resource values, marketable discount rates, exchange rates, and annual life-of-mine plans. Evaluating management's significant assumptions related to life-of-mine plans and resource values involved (i) evaluating the reasonableness of management's commodity price, marketable discount rates, exchange rate and the attributable gold resource value against external market and third party data, (ii) evaluating the reasonableness of the cash flow forecasts used in the life-of-mine plans and resource values (where real discounted future cash flows are applied) by comparing the cash flow forecasts to current and historical operational results, the mineral resources and reserves approved by the Company's Competent Person as part of the Mineral Resources and Reserves declaration, and agreeing these to final approved long-term business plans, (iii) performing a retrospective comparison of forecasted cash flows to actual past performance and previous forecasts, and (iv) evaluating the reasonableness of certain resource base values (where resource multiple valuations are applied) by applying the attributable gold resource value assumption per ounce to the resources included as part of the Mineral Resources and Reserves declaration, as well as resources where management has high confidence in the orebody and economical recovery of gold, based on historic and similar geological experience. Professionals with specialised skill and knowledge were used to assist in the evaluation of management's impairment calculations and certain significant assumptions including commodity prices, resource values, marketable discount rates and exchange rates.

/s/ PricewaterhouseCoopers Inc.
Johannesburg, Republic of South Africa
31 October 2022

We have served as the Company's auditor since 1950, which includes periods before the Company became subject to SEC reporting requirements.

Group income statement

For the year ended 30 June 2022

		SA Rand		
Figures in million	Notes	**2022**	2021	2020
Revenue	5	**42 645**	41 733	29 245
Cost of sales	6	**(41 927)**	(35 489)	(25 908)
Production costs		**(33 099)**	(29 774)	(22 048)
Amortisation and depreciation		**(3 683)**	(3 875)	(3 508)
Impairment of assets		**(4 433)**	(1 124)	—
Other items		**(712)**	(716)	(352)
Gross profit		**718**	6 244	3 337
Corporate, administration and other expenditure	7	**(984)**	(1 068)	(611)
Exploration expenditure		**(214)**	(177)	(205)
Gains/(losses) on derivatives	19	**53**	1 022	(1 678)
Foreign exchange translation gain/(loss)	8	**(327)**	670	(892)
Other operating expenses	9	**(1)**	(241)	(309)
Operating profit/(loss)		**(755)**	6 450	(358)
Gain on bargain purchase	14	**—**	303	—
Acquisition-related costs	14	**—**	(124)	(45)
Share of profits from associate	21	**63**	83	94
Investment income	10	**352**	331	375
Finance costs	11	**(718)**	(661)	(661)
Profit/(loss) before taxation		**(1 058)**	6 382	(595)
Taxation	12	**46**	(1 258)	(255)
Net profit/(loss) for the year		**(1 012)**	5 124	(850)
Attributable to:				
Non-controlling interest		**40**	37	28
Owners of the parent		**(1 052)**	5 087	(878)
Earnings/(loss) per ordinary share (cents)				
Total earnings/(loss)	13	**(172)**	842	(164)
Diluted earnings/(loss) per ordinary share (cents)				
Total earnings/(loss)	13	**(172)**	825	(166)

The accompanying notes are an integral part of these consolidated financial statements.

Group statement of comprehensive income

For the year ended 30 June 2022

		SA Rand		
Figures in million	Notes	**2022**	2021	2020
Net profit/(loss) for the year		**(1 012)**	5 124	(850)
Other comprehensive income for the year, net of income tax		**202**	3 251	(1 958)
Items that may be reclassified subsequently to profit or loss	25	**171**	3 233	(1 998)
Foreign exchange translation gain/(loss)		**742**	(1 234)	1 199
Remeasurement of gold hedging contracts		**(571)**	4 467	(3 197)
Items that will not be reclassified to profit or loss	25	**31**	18	40
Total comprehensive income for the year		**(810)**	8 375	(2 808)
Attributable to:				
Non-controlling interest		**40**	58	12
Owners of the parent		**(850)**	8 317	(2 820)

The accompanying notes are an integral part of these consolidated financial statements.

Group balance sheet

As at 30 June 2022

Figures in million	Notes	SA Rand At 30 June 2022	SA Rand At 30 June 2021
Assets			
Non-current assets			
Property, plant and equipment	15	**32 872**	33 597
Intangible assets	16	**48**	365
Restricted cash and investments	17	**5 555**	5 232
Investments in associates	21	**125**	126
Deferred tax assets	12	**203**	272
Other non-current assets	18	**374**	332
Derivative financial assets	19	**137**	328
Total non-current assets		**39 314**	40 252
Current assets			
Inventories	23	**2 818**	2 542
Restricted cash and investments	17	**27**	67
Trade and other receivables	20	**1 682**	1 652
Derivative financial assets	19	**519**	1 471
Cash and cash equivalents		**2 448**	2 819
Total current assets		**7 494**	8 551
Total assets		**46 808**	48 803
Equity and liabilities			
Share capital and reserves			
Attributable to equity holders of the parent company		**30 039**	31 160
Share capital and premium	24	**32 934**	32 934
Other reserves	25	**6 744**	6 399
Accumulated loss		**(9 639)**	(8 173)
Non-controlling interest		**78**	54
Total equity		**30 117**	31 214
Non-current liabilities			
Deferred tax liabilities	12	**1 586**	2 178
Provision for environmental rehabilitation	26	**5 013**	4 662
Other provisions	27	**932**	926
Borrowings	32	**3 180**	2 974
Contingent consideration liability	29	**356**	417
Other non-current liabilities	30	**268**	178
Derivative financial liabilities	19	**3**	6
Streaming contract liability	31	**378**	695
Total non-current liabilities		**11 716**	12 036
Current liabilities			
Other provisions	27	**139**	175
Borrowings	32	**25**	387
Trade and other payables	33	**4 494**	4 389
Derivative financial liabilities	19	**8**	206
Streaming contract liability	31	**309**	396
Total current liabilities		**4 975**	5 553
Total equity and liabilities		**46 808**	48 803

The accompanying notes are an integral part of these consolidated financial statements.

Group statement of changes in shareholders' equity

For the year ended 30 June 2022

	Number of ordinary shares issued	Share capital and premium	Accumulated loss	Other reserves	Non-controlling interest	Total
Notes	24	24		25		
Figures in million (SA Rand)						
Balance – 30 June 2019	539 841 195	29 551	(11 710)	4 773	—	22 614
Issue of shares						
– Shares issued and fully paid	60 278 260	3 386	—	—	—	3 386
– Exercise of employee share options	3 023 251	—	—	—	—	—
Share-based payments	—	—	—	186	—	186
Recognition of non-controlling interest	—	—	5	—	(5)	—
Net loss for the year	—	—	(878)	—	28	(850)
Other comprehensive income for the year	—	—	—	(1 942)	(16)	(1 958)
Dividends paid	—	—	—	—	(3)	(3)
Balance – 30 June 2020	603 142 706	32 937	(12 583)	3 017	4	23 375
Issue of shares						
– Exercise of employee share options	12 909 491	—	—	—	—	—
Share issue costs	—	(3)	—	—	—	(3)
Share-based payments	—	—	—	156	—	156
Partial purchase of non-controlling interest	—	—	—	(4)	(1)	(5)
Net profit for the year	—	—	5 087	—	37	5 124
Other comprehensive income for the year	—	—	—	3 230	21	3 251
Dividends paid	—	—	(677)	—	(7)	(684)
Balance – 30 June 2021	616 052 197	32 934	(8 173)	6 399	54	31 214
Issue of shares						
– Exercise of employee share options	**473 505**	**—**	**—**	**—**	**—**	**—**
Share-based payments	**—**	**—**	**—**	**143**	**—**	**143**
Net profit/(loss) for the year	**—**	**—**	**(1 052)**	**—**	**40**	**(1 012)**
Other comprehensive income for the year	**—**	**—**	**—**	**202**	**—**	**202**
Dividends paid	**—**	**—**	**(414)**	**—**	**(16)**	**(430)**
Balance – 30 June 2022	**616 525 702**	**32 934**	**(9 639)**	**6 744**	**78**	**30 117**

The accompanying notes are an integral part of these consolidated financial statements.

Group cash flow statement

For the year ended 30 June 2022

		SA Rand		
Figures in million	Notes	**2022**	2021	2020
Cash flow from operating activities				
Cash generated by operations	34	**7 378**	9 741	5 031
Dividends received		**74**	85	—
Interest received		**87**	171	86
Interest paid		**(319)**	(234)	(370)
Income and mining taxes paid		**(296)**	(584)	(24)
Cash generated by operating activities		**6 924**	9 179	4 723
Cash flow from investing activities				
Increase in restricted cash and investments	17	**(128)**	(48)	(21)
Amounts refunded from restricted cash and investments	17	**53**	34	5
Redemption of preference shares from associates	21	**—**	36	59
Acquisition of Mponeng operations and related assets	14	**—**	(3 363)	—
ARM BBEE Trust loan repayment	18	**65**	264	—
ARM BBEE Trust loan advanced	18	**—**	(264)	—
Capital distributions from investments	18	**—**	8	7
Proceeds from disposal of property, plant and equipment		**24**	11	2
Additions to property, plant and equipment		**(6 214)**	(5 142)	(3 610)
Cash utilised by investing activities		**(6 200)**	(8 464)	(3 558)
Cash flow from financing activities				
Borrowings raised	32	**3 057**	—	6 541
Borrowings repaid	32	**(3 601)**	(3 491)	(5 661)
Proceeds from the issue of shares		**—**	—	3 466
Partial repurchase of non-controlling interest		**—**	(5)	—
Dividend paid	13	**(430)**	(684)	(3)
Lease payments	28	**(177)**	(119)	(38)
Cash generated/(utilised) from financing activities		**(1 151)**	(4 299)	4 305
Foreign currency translation adjustments		**56**	46	(106)
Net increase/(decrease) in cash and cash equivalents		**(371)**	(3 538)	5 364
Cash and cash equivalents – beginning of year		**2 819**	6 357	993
Cash and cash equivalents – end of year		**2 448**	2 819	6 357

The accompanying notes are an integral part of these consolidated financial statements.

Notes to the group financial statements

For the year ended 30 June 2022

1 General information

Harmony Gold Mining Company Limited (the company) and its subsidiaries (collectively Harmony or the group) are engaged in gold mining and related activities, including exploration, extraction and processing. Gold bullion, the group's principal product, is currently produced at its operations in South Africa and Papua New Guinea (PNG). Uranium and silver are produced as by-products.

The company is a public company, incorporated and domiciled in South Africa. The address of its registered office is Randfontein Office Park, Corner Main Reef Road and Ward Avenue, Randfontein, 1759.

The consolidated financial statements were authorised for issue by the board of directors on 31 October 2022.

2 Accounting policies

Basis of preparation

The principal accounting policies applied in the preparation of the consolidated financial statements have been consistently applied in all years presented, except for the changes as described under "Recent accounting developments" below.

The consolidated financial statements have been prepared in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board (IASB) and IFRS Interpretations Committee (IFRIC) Interpretations (collectively IFRS).

The consolidated financial statements have been prepared on a going concern basis.

During the year ended 30 June 2022, Mine Waste Solutions (MWS) was identified as a separate reportable segment as a result of it exceeding the quantitative threshold of 10% of total reported profit as set out in IFRS 8 ***Operating Segments***. This resulted in MWS's segment information being disaggregated from the All other surface operations segment. In accordance with the requirements of IFRS, the June 2021 comparative information has been re-presented in the segment report.

Note 37 includes the revised figures for certain prescribed officers' shares held at 30 June 2021.

The consolidated financial statements have been prepared to the nearest million and rounding may cause differences.

Recent accounting developments

New standards, amendments to standards and interpretations to existing standards adopted by the group

During the financial year, the following new standards, amendments to standards and interpretations to existing standards were adopted by the group. No other standards and amendments to standards that became effective during the 2022 year were relevant to the consolidated financial statements.

IFRS 7 *Financial Instrument: Disclosures* and IFRS 9 *Financial Instruments* (Amendment)

The IASB has published 'Interest Rate Benchmark Reform - Phase 2 (Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16) with amendments that address issues that might affect financial reporting during the reform of an interest rate benchmark, including the effects of changes to contractual cash flows or hedging relationships arising from the replacement of an interest rate benchmark with an alternative benchmark rate (replacement issues). The IASB has made amendments to the requirements in IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16 relating to:

- Changes in the basis for determining contractual cash flows of financial assets, financial liabilities and lease liabilities
- Hedge accounting
- Disclosures.

The amendments are effective for annual periods beginning on or after 1 January 2021, with earlier application permitted. After consideration of all areas impacted, Harmony concluded that the amendments did not have a material impact on the group.

New standards, amendments to standards and interpretations to existing standards that are not yet effective and have not been early adopted

At the date of authorisation of these financial statements, the standards, amendments to standards and interpretations listed below were in issue but not yet effective. These new standards and interpretations have not been early adopted by the group and the group plans on adopting these standards, amendments to standards and interpretations on the dates when they become effective.

IFRS 9 *Financial Instruments* (Amendment)

The amendment to IFRS 9 clarifies the fees a company includes when assessing whether the terms of a new or modified financial liability are substantially different from the terms of the original financial liability. This amendment is effective for annual periods beginning on or after 1 January 2022. The amendment is not expected to have a material impact on the group.

2 Accounting policies continued

Recent accounting developments continued

New standards, amendments to standards and interpretations to existing standards that are not yet effective and have not been early adopted continued

IAS 1 *Presentation of Financial Statements* (Amendment)
The IASB issued amendments to IAS 1 *Presentation of Financial Statements* to clarify its requirements for the presentation of liabilities in the statement of financial position. The amendments are effective from annual reporting periods beginning on or after 1 January 2023. The amendments are not expected to have a material impact on the group.

IAS 1 *Presentation of Financial Statements* (Amendment)
The IASB amended paragraphs 117 – 122 of IAS 1 to require entities to disclose their material accounting policy information rather than their significant accounting policies. The amendments are effective from annual reporting periods beginning on or after 1 January 2023. The amendments are not expected to have a material impact on the group.

IAS 8 *Accounting policies, Changes in Accounting Estimates and Errors* (Amendment)
The amendments introduce the definition of accounting estimates and included other amendments to IAS 8 to help entities distinguish changes in accounting policies from changes in accounting estimates. The amendments are effective for annual reporting periods beginning on or after 1 January 2023. The amendments are not expected to have a material impact on the group.

IAS 12 *Income taxes* (Amendment)
The IASB issued *Deferred tax related to Assets and Liabilities arising from a Single Transaction* (Amendment to IAS 12) to narrow the scope of IAS 12 recognition exemption so that it no longer applies to transactions that, on initial recognition, give rise to equal taxable and deductible temporary differences. The amendments are effective for annual reporting periods beginning on or after 1 January 2023. The amendments are not expected to have a material impact on the group.

IAS 16 *Property, Plant and Equipment* (Amendment)
The IASB issued *Property, Plant and Equipment—Proceeds before Intended Use*, which prohibit a company from deducting from the cost of property, plant and equipment amounts received from selling items produced while the company is preparing the asset for its intended use. Instead, a company will recognise such sales proceeds and related costs in profit or loss. This amendment is effective for annual periods beginning on or after 1 January 2022. Management has performed an assessment and, going forward, any major project where incidental gold is mined during the development phase will no longer have a credit to capital expenditure while it is an asset under construction. Cost associated with the extraction and treatment thereof will be included in production costs. This is not expected to impact on the assessment of the production start date. No impact is expected on the current financial year, which will be the comparative year when this amendment becomes effective for Harmony.

IAS 37 *Provisions, Contingent Liabilities and Contingent Assets* (Amendment)
The IASB issued *Onerous Contracts–Cost of Fulfilling a Contract*, which specifies which costs an entity includes in determining the cost of fulfilling a contract for the purpose of assessing whether the contract is onerous. This amendment is effective for annual periods beginning on or after 1 January 2022. The amendment is not expected to have a material impact on the group.

Measurement basis
The financial statements have been prepared under the historical cost convention except for certain financial assets and financial liabilities which are measured at fair value through profit or loss or other comprehensive income – refer to note 39.

Group accounting policies
Accounting policies are included in the relevant notes to the consolidated financial statements and have been highlighted between red lines in the notes to the consolidated financial statements. The accounting policies that follow are applied throughout the financial statements.

2.1 Consolidation
The group recognises that control is the single basis for consolidation for all types of entities in accordance with IFRS 10 *Consolidated Financial Statements*. The consolidated financial information includes the financial statements of the company, its subsidiaries, interest in associates and joint arrangements and structured entities. Where the group has no control over an entity, that entity is not consolidated.

Control
The group, regardless of the nature of its involvement with an entity, shall determine whether it is a parent by assessing whether it controls the investee. The group controls an entity when it is exposed, or has rights, to variable returns from its involvement with the entity and has the ability to affect those returns through its power to direct the activities of the entity.

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2 Accounting policies continued
Group accounting policies continued
2.1 Consolidation continued

(i) Subsidiaries

Subsidiaries are entities over which the group has control. Subsidiaries are fully consolidated from the date on which control is transferred to the group up until when that control ceases. Intercompany transactions, balances and unrealised gains on transactions between group companies are eliminated. Unrealised losses are also eliminated. Accounting policies of subsidiaries have been changed to ensure consistency with the policies adopted by the group.

The group uses the acquisition method of accounting to account for business combinations. The consideration transferred for the acquisition of an acquiree is the fair value of the assets transferred, liabilities incurred and the equity interests issued by the group. The consideration transferred includes the fair value of any asset or liability resulting from a contingent consideration arrangement. Acquisition-related costs are expensed as incurred. Identifiable assets acquired and liabilities and contingent liabilities assumed in a business combination are measured initially at their fair values at the acquisition date. On an acquisition-by-acquisition basis, the group recognises any non-controlling interests in the acquiree either at fair value or at the non-controlling interest's proportionate share of the acquiree's net assets.

The excess of the sum of the consideration transferred, the amount of any non-controlling interest in the acquiree and the acquisition-date fair value of any previously held equity interest in the acquiree over the fair value of the group's share of the identifiable net assets acquired is recorded as goodwill. If this is less than the fair value of the net assets of the subsidiary acquired, in the case of a bargain purchase, the difference is recognised directly in the income statement below operating profit or loss.

(ii) Associates

Associates are entities in which the group has significant influence, but not control, over operational and financial policies. This may be when there is a shareholding of between 20% and 50% of the voting rights or when significant influence can be otherwise demonstrated, for example where the group has the right of representation on the board of directors, or other governing body, of the entity.

Investments in associates are accounted for by using the equity method of accounting, and are initially recognised at cost. The group's investment in associates includes goodwill identified on acquisition. Cumulative post-acquisition movements are adjusted against the carrying amount of the investment. The group's share of the associates' post-acquisition profits or losses is recognised in the income statement, and its share of post-acquisition movement in reserves is recognised in other reserves. When the group's share of losses in an associate equals or exceeds its interest in the associate, the group does not recognise further losses, unless it has incurred obligations or made payments on behalf of the associate. The carrying value of an associate is reviewed on a regular basis and, if impairment in the carrying value has occurred, it is written off in the period in which such impairment is identified.

Accounting policies of associates have been reviewed to ensure consistency with the policies adopted by the group.

(iii) Joint arrangements

Joint arrangements are arrangements of which two or more parties have joint control and are contractually bound. The joint arrangement can either be a joint operation or a joint venture. A joint operation is a joint arrangement whereby the parties that have joint control of the arrangement and have the right to the assets, and obligations for the liabilities, relating to the arrangement. These parties are called joint operators. A joint venture is a joint arrangement where the parties that have joint control of the arrangement have rights to the net assets of the arrangement. Those parties are called joint venturers.

For interest in joint operations, the group includes its share of the joint operations' individual income and expenses, assets and liabilities and cash flows on a line-by-line basis with similar items in the group's financial statements.

Where an additional interest in a joint operation is acquired, the principles of IFRS 3 are applied to account for the transaction.

The group recognises the portion of gains or losses on the sale of assets by the group to the joint operation that is attributable to the other joint operators. The group does not recognise its share of profits or losses from the joint operation that results from the purchase of assets by the group from the joint operation until it resells the assets to an independent party. However, if a loss on the transaction provides evidence of a reduction in the net realisable value of current assets or an impairment loss, the loss is recognised immediately.

The group recognises its interest in a joint venture as an investment and accounts for it using the equity accounting method.

(iv) Structured entities

A structured entity is an entity that has been designed so that voting or similar rights are not the dominant factor in deciding who controls the entity, such as when any voting rights relate to administrative tasks only and the relevant activities are directed by means of contractual arrangements.

The accounting treatment for a structured entity will fall into one of the aforementioned categories (i to iii) depending on whether the group has control over that structured entity.

2 Accounting policies continued

Group accounting policies continued

2.2 Foreign currency translation

(i) Functional and presentation currency

Items included in the financial statements of each of the group's entities are measured using the currency of the primary economic environment in which the entity operates (the functional currency). The consolidated financial statements are presented in South African Rand, which is the group's presentation currency.

References to "A$" refers to Australian currency, "R" to South African currency, "$" or "US$" to United States currency and "PGK" or "Kina" to Papua New Guinean currency.

(ii) Transactions and balances

Foreign exchange gains and losses resulting from the settlement of foreign currency transactions and from the translation to year-end exchange rates of monetary assets and liabilities denominated in foreign currencies are recognised in the income statement. This includes the gains and losses on the translation of the US$-denominated facilities.

(iii) Group companies

The results and financial position of all group entities (none of which has the currency of a hyperinflationary economy) that have a functional currency different from the presentation currency are translated into the presentation currency as follows:

- Assets and liabilities for each balance sheet presented are translated at the closing rate at the date of that balance sheet while equity items are translated at historic rates
- Income and expenses for each income statement are translated at average exchange rates (the rate on the date of the transaction is used if the average is not a reasonable rate for the translation of the transaction)
- All resulting exchange differences are recognised as a separate component of other comprehensive income.

On consolidation, exchange differences arising from the translation of the net investment in foreign operations, and of borrowings and other currency instruments designated as hedges of such investments, are taken to other comprehensive income. When a foreign operation is sold or control is otherwise lost, exchange differences that were recorded in other comprehensive income are recognised in profit or loss in the period of the disposal or change in control. Goodwill and fair value adjustments arising on the acquisition of a foreign operation are treated as assets and liabilities of the foreign entity and translated at the closing rate.

2.3 Derivatives and hedging activities

Derivatives are initially recognised at fair value on the date a derivative contract is entered into and are subsequently remeasured to their fair value at the end of each reporting period. The accounting for subsequent changes in fair value depends on whether the derivative is designated as a hedging instrument, and if so, the nature of the item being hedged.

The difference between the fair value of the derivative at initial recognition and expected forward transaction price is deferred and recognised as a day one gain or loss. The day one gain or loss is amortised over the derivative contract period and recognised in profit or loss in gains/losses on derivatives.

The full fair value of a derivative is classified as a non-current asset or liability when the remaining maturity is more than 12 months; it is classified as a current asset or liability when the remaining maturity is less than 12 months.

(i) Cash flow hedge

The group designates certain derivatives as hedges of a particular risk associated with the cash flows of highly probable forecast transactions (cash flow hedges). At inception of the hedge relationship, the group documents the economic relationship between hedging instruments and hedged items, including whether changes in the cash flows of the hedging instruments are expected to offset changes in the cash flows of hedged items. The group documents its risk management objective and strategy for undertaking its hedge transactions.

The effective portion of changes in the fair value of derivatives that are designated and qualify as cash flow hedges is recognised in other comprehensive income and accumulated in reserves in equity. The gain or loss relating to the ineffective portion is recognised immediately in profit or loss within gains/losses on derivatives.

Amounts accumulated in equity are reclassified to profit or loss in the periods when the forecast sale that is hedged takes place and affects profit or loss. The gain or loss relating to the effective portion of the Rand and US$ gold forward sales contracts is recognised in profit or loss within revenue.

When a hedging instrument expires or is sold or terminated, or when a hedge no longer meets the criteria for hedge accounting, any cumulative gain or loss existing in equity at that time remains in equity and is recognised when the forecast transaction that was hedged is ultimately recognised in profit or loss. When a forecast transaction is no longer expected to occur, the cumulative gain or loss that was reported in equity is immediately reclassified to profit or loss.

2 Accounting policies continued

Group accounting policies continued

2.3 Derivatives and hedging activities continued

(ii) Derivatives not designated for hedge accounting purposes

Certain derivative instruments do not qualify for hedge accounting. Changes in the fair value as well as gains and losses on expiry, disposal or termination of any derivative instrument that does not qualify for hedge accounting are recognised immediately in profit or loss and are included in gains/losses on derivatives.

2.4 Exploration expenditure

The group has elected to expense all exploration and evaluation expenditures until it is concluded that the project is technically feasible and commercially viable, and that future economic benefits are therefore probable. The information used to make that determination depends on the level of exploration as well as the degree of confidence in the ore body as set out below.

Exploration and evaluation expenditure on greenfield sites, being those where the group does not have any mineral deposits which are already being mined or developed, is expensed as incurred until the technical and commercial viability of the project has been demonstrated usually through the completion of a final feasibility study. However, in certain instances, the technical and commercial viability of the deposit may be demonstrated at an earlier stage, for example where an extended feasibility study is conducted and the underlying feasibility study in respect of specific components of the mineral deposit has advanced to such a stage that significant commercially viable reserves has been established, and the other criteria for the recognition of an asset have been met. At this point the expenditure is capitalised as mine development cost to the extent that future economic benefits are expected.

Exploration and evaluation expenditure on brownfield sites, being those adjacent to mineral deposits which are already being mined or developed, is expensed as incurred until the group is able to demonstrate that future economic benefits are probable through the completion of a feasibility study, after which the expenditure is capitalised as mine development cost to the extent that future economic benefits are expected. A "feasibility study" consists of a comprehensive study of the viability of a mineral project that has advanced to a stage where the mining method has been established, and which, if an effective method of mineral processing has been determined, includes a financial analysis based on reasonable assumptions of technical, engineering, operating economic factors and the evaluation of other relevant factors. The feasibility study, when combined with existing knowledge of the mineral property that is adjacent to mineral deposits that are already being mined or developed, allows the group to conclude that the project is technically feasible and commercially viable.

Exploration and evaluation expenditure relating to extensions of mineral deposits which are already being mined or developed, including expenditure on the definition of mineralisation of such mineral deposits, is capitalised as a mine development cost following the completion of an economic evaluation equivalent to a feasibility study. This economic evaluation is distinguished from a feasibility study in that some of the information that would normally be determined in a feasibility study is instead obtained from the existing mine or development. This information, when combined with existing knowledge of the mineral property already being mined or developed, allows the directors to conclude that the project is technically feasible and commercially viable.

2.5 Impairment of non-financial assets

Assets that have an indefinite useful life are not subject to amortisation or depreciation and are tested annually for impairment or when there is an indication of impairment.

Assets that are subject to amortisation are reviewed annually on 30 June for impairment or whenever events or changes in circumstances indicate that the carrying amount may not be recoverable.

An impairment loss is recognised in the income statement for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs to sell and value in use. For the purposes of assessing impairment, assets are grouped at the lowest levels for which there are separately identifiable cash flows (cash generating unit or CGU). Each operating shaft, along with allocated common assets such as plants and administrative offices, is considered to be a cash generating unit as each shaft is largely independent from the cash flows of other shafts and assets belonging to the group.

Fair value less cost to sell is generally determined by using discounted estimated after-tax future cash flows. Future cash flows are estimated based on quantities of recoverable minerals, expected commodity prices (considering current and historical prices, price trends and related factors), production levels and cash costs of production, all based on life-of-mine (LoM) plans. Future cash flows are discounted to their present value using a post-tax discount rate that reflects current market assessments of the time value of money and risk specific to the asset. Refer to note 15 for detail.

The term "recoverable minerals" refers to the estimated amount of gold that will be obtained from reserves and resources and all related exploration stage mineral interests (except for other mine-related exploration potential and greenfields exploration potential discussed separately below) after taking into account losses during ore processing and treatment. Estimates of recoverable minerals from such related exploration stage mineral interests will be risk adjusted based on management's relative confidence in such materials.

2 Accounting policies continued

Group accounting policies continued

2.5 Impairment of non-financial assets continued

In estimating future cash flows, assets are grouped at the lowest level for which there are identifiable cash flows that are largely independent of cash flows from other asset groups. Except for other mine-related exploration potential and greenfields exploration potential, estimates of future undiscounted cash flows are included on an area of interest basis, which generally represents an individual operating mine, even if the mines are included in a larger mine complex.

In the case of mineral interests associated with other mine-related exploration potential and greenfields exploration potential, cash flows and fair values are individually evaluated based primarily on recent exploration results and recent transactions involving sales of similar properties, if any. Assumptions underlying future cash flow estimates are subject to significant risks and uncertainties.

Impairment losses on goodwill are recognised immediately in the income statement and are not reversed. The impairment testing is performed annually on 30 June or when events or changes in circumstances indicate that it may be impaired.

Non-financial assets other than goodwill that suffered an impairment are reviewed annually for possible reversal of the impairment at 30 June. Reversal of impairments is also considered when there is objective evidence to indicate that the asset is no longer impaired. Where an impairment subsequently reverses, the carrying amount of the asset or CGU is increased to the revised estimate of its recoverable amount, but not higher than the carrying value that would have been determined had no impairment been recognised in prior years.

2.6 Operating profit

The group defines operating profit as the profit earned from the normal core mining operations. In reporting operating profit in the income statement, transactions for capital transactions involving subsidiaries, joint arrangements and associates are excluded from operating profit as these are not considered to be part of the mining operations of the Harmony group. Any gains or losses on capital transactions are presented below the operating profit line.

3 Critical accounting estimates and judgements

The preparation of the financial statements in conformity with IFRS requires the group's management to make estimates and assumptions that affect the reported amounts of assets and liabilities as well as disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Key accounting estimates and assumptions applied:

- Estimate of taxation – note 12
- Recognition of deferred tax asset – note 12
- Valuation of cash generating units acquired – note 14
- Fair value of identifiable net assets acquired – note 14
- Streaming contract liability – note 14 and 31
- Estimate of deferred tax rates on acquisition date – note 14
- Gold mineral reserves and resources – note 15
- Production start date – note 15
- Stripping activities – note 15
- Impairment of assets – note 15
- Depreciation of property plant and equipment – note 15
- Exploration and evaluation assets – note 15
- Impairment of goodwill – note 16
- Estimate of exposure and liabilities with regard to rehabilitation costs – note 26
- Estimate of provision for silicosis settlement – note 27
- Valuation of contingent consideration liability – note 29
- Fair value of share-based payments – note 36
- Assessment of contingencies – note 38
- Valuation of derivative financial instruments – note 39.

Other accounting estimates and assumptions applied:

- Valuation of interest in associate – note 21
- Provision for stock obsolescence – note 23
- Estimate of employee benefit liabilities – note 27
- Leases – note 28.

4 Impact of changes in global operating and economic environment

Covid-19

In South Africa, the national lockdown that began on 27 March 2020 to curb the spread of the Coronavirus (Covid-19) came to an end during April 2022. This led to the discontinuance of all Covid-19 regulations which had been put in place. In Papua New Guinea, where the Hidden Valley operation is located, significant decreases in positive cases have been experienced for the first part of the 2022 calendar year. In prior years, the group had been able to carry out its operations in Papua New Guinea during the state of emergency which had been imposed by the government.

The virus will still be prevalent in normal day-to-day living. However, unlike before, a significant percentage of the population has been vaccinated against Covid-19. This puts Harmony in a favourable position to manage Covid-19 as part of normal day-to-day activities and as a result management does not expect any further disruptions.

Cost and inflationary pressures

During the second half of the 2022 financial year, Harmony experienced heightened input costs driven by inflationary pressures related to global supply chain constraints due to the Covid-19 pandemic, which was then further exacerbated by Russia's invasion of Ukraine. The effect has been especially pronounced on certain key items such as oil (directly affecting diesel supply and cost), steel and certain chemical reagents used by the treatment plants. These cost pressures had an impact on, among others, the FY23 budget and life-of-mine planning process, determination of deferred tax rates for the group's mining entities and impairment assessments performed for the group's cash generating units. Refer to notes 12 and 15 respectively for further disclosure.

Discount rates

In recent months, central banks globally have been increasing interest rates as a measure of combating rising inflation. In the current financial year, the US Federal Reserve has increased interest rates by 150 basis points, while the South African Reserve Bank (SARB) has raised the repurchase interest rate by 125 basis points for the same period. This contributed to increased bond yields realised in the market, which resulted in an increased cost of equity, as used for purposes of impairment assessments, and risk-free rates used for discounting of the provision for environmental rehabilitation. Refer to note 15 and 26 respectively for further disclosure.

Commodity prices and exchange rates

Gold traded within a range of US$1 726/oz and US$2 052/oz (2021: US$1 681/oz and US$2 063/oz) during the current financial year, reaffirming its safe haven status with investors during times of global uncertainty and market volatility. These uncertainties have also resulted in increased volatility in the R/US$ and R/A$ exchange rates. The currencies traded in ranges of R14.15/US$1 to R16.30/US$1 (2021: R13.43/US$1 to R17.68/US$1) and R10.43/A$1 to R11.63/A$1 (2021: R10.41/A$1 to R12.66/A$1) respectively during the current financial year. Management believes this volatility could be a reflection of growing concern in market sentiment fears surrounding recessions in key economies and current and/or further geopolitical tensions.

As part of the underlying assumptions used in valuing certain line items, management used a consensus of market analysts' forecasts in determining short-, medium- and long-term commodity prices and exchange rates. These economic assumptions are used in certain fair value calculations. Based on the consensus forecasts used, a marked increase was seen in US$ gold price and R/US$ exchange rate assumptions applied. Refer to note 15 for disclosed assumptions.

ESG and climate change-related financial disclosures

Due to the increased focus on sustainability, Environmental, Social and Governance (ESG) matters and climate change, various regulators have released guidance or proposed regulations for required disclosures during the year. In March 2022, the newly formed International Sustainability Standards Board (ISSB) released exposure drafts on general requirements of sustainability reporting and climate-related disclosures. During March 2022, the Securities and Exchange Commission (SEC) issued proposed rules that are intended to provide more consistent, comparable and reliable information so that investors can better evaluate the impact of climate-related matters on entities. During June 2022, the Johannesburg Stock Exchange (JSE) released its Sustainability and Climate Disclosure guidance.

The comment periods on the SEC and ISSB proposals have closed and the regulators are continuing with their processes. It is expected that the proposals will affect the information reported as "other information" by entities and may include specific requirements on assurance of certain ESG key performance indicators. However, the SEC's proposal included certain disclosures in the financial statements. It is unknown at this stage if these will be retained in the final regulation.

Management will continue to monitor announcements made by the ISSB, SEC and JSE that will affect the reporting by the group.

5 Revenue

Accounting policy
Revenue from metal sales include the sale of gold, silver and uranium. Revenue from metal sales is recognised when the group satisfies its performance obligations under its contract with the customer, by transferring such metals to the customer's control. Transfer of control is generally determined to be when the risk and title to the metals passes to the customer. Revenue is measured based on the consideration specified in the contract with the customer and is driven by the quoted market prices of the metals.

The effective portion of gains or losses on the derivatives designated as cash flow hedging items (forecast sales transactions) are recognised in revenue when the forecast sales transactions occur. See the accounting policy for derivatives and hedging activities in note 2.

	SA Rand		
Figures in million	**2022**	2021	2020
Revenue from contracts with customers	**41 677**	43 632	30 642
Gold (a)	**40 774**	42 597	29 704
Silver (b)	**663**	857	839
Uranium (c)	**240**	178	99
Consideration from streaming contract[1]	**471**	397	—
Hedging gain/(loss)[2]	**497**	(2 296)	(1 397)
Total revenue[3]	**42 645**	41 733	29 245

[1] *Relates to the recognition of non-cash consideration recognised as part of revenue for the streaming arrangement. Refer to note 31 for further information.*
[2] *Relates to the realised effective portion of the hedge-accounted gold derivatives. Refer to note 19 for further information.*
[3] *A geographical analysis of revenue is provided in the segment report. Refer to note 41 for further information.*

Revenue from contracts with customers
The points of transfer of control are as follows:

Gold: South Africa (excluding streaming contract)	Gold is delivered and a certificate of sale is issued.
Gold and silver: Hidden Valley	Metal is collected from Hidden Valley and a confirmation of collection is sent to and accepted by the customer.
Uranium	Confirmation of transfer is issued.
Streaming contract	Gold is delivered and credited into the Franco-Nevada designated gold account.

(a) The decrease in gold revenue during the 2022 financial year is mainly due to the decrease in gold production by 3% to 46 236kg from 47 755kg in 2021. The decrease is a result of mining constraints at Doornkop, Moab Khotsong and Tshepong Operations resulting in lower grade recovered, the seismic issues experienced at Bambanani as well as the geotechnical instability affecting Stage 6 and a conveyor belt failure at Hidden Valley. In addition, the average gold spot price received decreased by 2% from R899 563/kg in the 2021 year to R883 453/kg in 2022. The decrease was partially offset by an increase in production at Mponeng and Mine Waste Solutions as they contributed for the full year compared to nine months in 2021.

The increase in gold revenue during the 2021 financial year is mainly due to the acquisition of the Mponeng operations and related assets and a higher gold price. The acquired operations contributed R7.5 billion in revenue during the period. In addition, the average gold spot price received increased by 17% to R899 563/kg in 2021.

(b) Silver is derived from the Hidden Valley mine in Papua New Guinea. Silver produced decreased by 12% to 59 489kg from 67 295kg in 2021 as a result of operational issues experienced at Hidden Valley, as mentioned above. The average silver price decreased by 10% to R11 293/kg in 2022.

Silver produced decreased by 31% to 67 295kg in 2021 from 97 332kg in 2020, however the average silver price increased by 49% to R12 602/kg in 2021.

(c) Uranium is derived from the Moab Khotsong operation. Uranium produced increased by 11% to 167 696kg from 150 778kg in 2021 and the average uranium price increased by 50% to R1 514/kg in 2022.

Uranium produced increased by 10% to 150 778kg in 2021 from 137 298kg in 2020 and the average uranium price increased by 15% to R1 010/kg in 2021.

5 Revenue continued

Below are the average commodity prices received for the financial years:

	2022	2021	2020
Gold[1]			
– US$ per ounce (US$/oz)	**1 829**	1 719	1 461
– Rand per kilogram (R/kg)	**894 218**	851 045	735 569
Silver			
– US$ per ounce (US$/oz)	**23.09**	25.45	16.85
– Rand per kilogram (R/kg)	**11 293**	12 602	8 485
Uranium			
– US$ per pound (US$/lb)	**45.14**	29.76	25.34
– Rand per kilogram (R/kg)	**1 514**	1 010	875

[1] *The gold price includes the realised effective portion of the hedge-accounted gold derivatives.*

6 Cost of sales

	SA Rand		
Figures in million	**2022**	2021	2020
Production costs (a)	**33 099**	29 774	22 048
Amortisation and depreciation of mining assets (b)	**3 622**	3 777	3 409
Amortisation and depreciation of assets other than mining assets (b)	**61**	98	99
Rehabilitation expenditure (c)	**136**	135	47
Care and maintenance costs of restructured shafts (d)	**273**	144	146
Employment termination and restructuring costs (e)	**218**	332	40
Share-based payments (f)	**143**	114	130
Impairment of assets (g)	**4 433**	1 124	—
Other	**(58)**	(9)	(11)
Total cost of sales	**41 927**	35 489	25 908

(a) Production costs include mine production, transport and refinery costs, applicable general administrative costs, movement in inventories and ore stockpiles, ongoing environmental rehabilitation costs and transfers for stripping activities. Employee termination costs are included, except for employee termination costs associated with major restructuring and shaft closures, which are separately disclosed.

Production costs increased by R3 325 million (11% year on year) during 2022. These costs increased mainly due to the inclusion of the Mponeng operations and related assets for a full financial year, and inflationary pressures on costs including labour, electricity and consumables. This was partially offset by a reduction in the royalty expense in the current year due to lower profits which impacted the rates at which the royalties are calculated.

Production costs increased by R7 726 million (35% year on year) during the 2021 year. These costs increased mainly as a result of the acquisition of the Mponeng operations and related assets, which contributed R5 230 million to the increase. The remaining increase is mainly attributable to higher utilities and labour costs as a result of annual increases. Also contributing is the royalty expense which increased due to increased profitability as a result of the higher gold prices, which also impacted on the rates at which royalties are calculated.

Production costs, analysed by nature, consist of the following:

	SA Rand		
Figures in million	**2022**	2021	2020
Labour costs, including contractors	**19 350**	17 585	13 004
Consumables	**8 581**	7 218	5 441
Water and electricity	**6 009**	5 138	3 664
Change in inventory	**21**	69	(70)
Capitalisation of mine development costs	**(2 576)**	(2 117)	(1 485)
Stripping activities	**(1 096)**	(1 047)	(675)
Royalty expense	**360**	637	327
Other	**2 450**	2 291	1 842
Total production costs	**33 099**	29 774	22 048

6 Cost of sales continued

(b) The decrease for the 2022 year is predominantly as a result of the operational challenges experienced at the Hidden Valley operation, which resulted in lower production and therefore a decrease in depreciation year on year of R651 million. This was partially offset by increased depreciation at the other operations. Notably, Mine Waste Solutions had a year-on-year increase of R227 million, primarily due to new assets being brought into use. Mponeng also recorded an increase, due to the consolidation for the full year for 2022 compared to nine months for 2021, amounting to R54 million. With the closure of Bambanani earlier than initially planned, additional depreciation of R56 million was recorded due to the shortened life of the operation.

The increase for the 2021 year is as a result of the operations running for the entire year with no lockdown while the charge for 2020 was impacted by lower production due to the closure of underground operations as a result of the Covid-19 pandemic. The inclusion of the Mponeng operations and related assets in the asset base also contributes to the increase year on year.

Amortisation and depreciation of assets other than mining assets includes the amortisation of intangible assets.

(c) For the assumptions used to calculate the rehabilitation costs, refer to note 26. This expense includes the change in estimate for the rehabilitation provision where an asset no longer exists as well as costs related to the rehabilitation process. For 2022, R65 million (2021: R15 million) (2020: R47 million) was spent on rehabilitation in South Africa. Refer to note 26.

The acquisition of the Mponeng operations and related assets resulted in Harmony taking on the rehabilitation liability for these operations, resulting in a R80 million increase in the rehabilitation provision expense for the 2021 year, as compared with 2020.

(d) The increase in the 2022 year is mainly due to the Vaal River surface operations and Kopanang gold plant being placed on care and maintenance at the end of the 2021 year, which contributed R117 million to the total.

(e) During 2021, a new programme for voluntary and medical severance packages was offered to employees, partially related to the closure of Unisel. The decrease in 2022 is due to a lower number of employees taking up voluntary severance packages year on year. The employment termination and restructuring expenditure for 2020 relates to the voluntary severance programme in place to reduce labour costs.

(f) Refer to note 36 for details on the share-based payment schemes implemented by the group.

(g) Management performed an assessment for indicators of impairment as well as indicators of reversal of previously recorded impairment losses at 30 June 2022. Due to the net asset value (before any impairments recognised) exceeding the market capitalisation of Harmony as at 30 June 2022, as well as increased operating costs, the recoverable amounts for all cash generating units (CGUs) were calculated. The recoverable amounts for these assets were determined on a fair value less cost to sell basis using assumptions per note 15 in the discounted cash flow models and attributable resource values. These are fair value measurements classified as level 3. Based on the impairment tests performed, impairments were recorded on certain operations for the 2022 year.

Where CGUs had previously been impaired, management considered whether the impairment loss (or the contributors to the previously recognised impairment loss) no longer exists or might have decreased. Management considered general and specific factors for each CGU and concluded that although overall the gold price environment had improved from the time that the impairment losses had been recognised, the specific circumstances that led to the original impairments had not reversed. Furthermore, the service potential of the asset has not increased. Management therefore resolved it to be appropriate for no reversal of previously recognised impairment losses to be recorded for the year ended 30 June 2022. There also was no reversal of impairment for the 2021 or 2020 financial years.

Refer to note 15 for further information.

The impairment of assets consists of the following:

	SA Rand		
Figures in million	**2022**	2021	2020
Tshepong Operations	**3 622**	759	—
Moab Khotsong	**522**	—	—
Kusasalethu	**145**	—	—
Bambanani	**144**	187	—
Target 3	**—**	178	—
Total impairment of assets	**4 433**	1 124	—

Notes to the group financial statements continued

For the year ended 30 June 2022

6 Cost of sales continued

(g) Impairment of assets **continued**

The Tshepong Operations were disaggregated into two separate CGUs being the Tshepong North CGU and the Tshepong South (also known as the Phakisa section) CGU, for impairment testing at 30 June 2022. This is due to the decision taken during the FY23 budget process in June 2022, to reinvest in the two individual operations to maximise individual profitability following the change to Tshepong North's life-of-mine with the sub-75 decline project being halted. Based on the forward-looking nature of the impairment assessment, a separate impairment calculation was prepared for each of the CGUs. The disaggregation of CGUs did not have an impact on reportable segments in terms of IFRS 8 *Operating Segments* as disclosed in the segment report, since information reported to the chief operating decision maker for the 2022 financial year was still for the combined Tshepong Operations. Going forward, however, Tshepong North and Tshepong South will be disclosed as separate reportable segments.

The recoverable amounts of the CGUs where impairments were recognised as at 30 June 2022 are as follows:

	SA Rand Recoverable amount		
Figures in million	Life-of-mine plan	Resource base	Total
Tshepong Operations			
For Tshepong South, the individual life-of-mine plan included additional capital to address flexibility constraints at the operation. Costs also increased significantly as a result of inflationary pressures. These changes along with a higher post-tax discount rate of 11.67% (2021: 10.11% for Tshepong Operations), negatively affected the discounted cash flows used to determine the recoverable amount of the operation.	**1 645**	**—**	**1 645**
The impairment of Tshepong North was as a result of increased cost of both production and capital expenditure and an increased post-tax discount rate of 11.67% (2021: 10.11% for Tshepong Operations). The recoverable amount was also affected by the reclassification of production for the sub-75 level from reserves in the life-of-mine plan to the resource base, which is subject to a higher discount rate of 13.72% (2021: 12.02%).	**1 088**	**850**	**1 938**
Moab Khotsong			
The updated life-of-mine plan included an increase in working and capital costs as a result of inflationary pressures. The updated life-of-mine plan also includes additional capital expenditure which relates to the Zaaiplaats project after finalisation of its detailed design plan during the current financial year. This impacted the discounted cash flows used to determine the recoverable amount of the operation. The recoverable amount was further impacted by an increased post-tax discount rate of 10.44% (2021: 9.35%).	**3 748**	**—**	**3 748**
Kusasalethu			
A decrease in tonnes combined with a decrease in grade over the remainder of the life-of-mine of the operation lead to a decrease in gold production. The reduction is due to an updated plan to mitigate safety risks that exist at the operation.	**806**	**—**	**806**
Bambanani			
The life-of-mine plan of the operation was revised in the period ended 31 December 2021, bringing the closure of the operation forward from June 2024 to June 2022. This was as a result of the increased seismicity and related risk increasing as pillars were mined out. At 31 December 2021, the post-tax recoverable amount was derived from expected cash flows as per the life-of-mine plans and amounted to R36 million. The recoverable amount is now Rnil, as the operation was closed down during June 2022. The assumptions used in the December impairment assessment included a gold price of US$1 782/oz, an exchange rate of R15.36/US$1, a final gold price of R880 000/kg and a post-tax real discount rate of 12.59%. This resulted in a post-tax recoverable amount of R36 million at 31 December 2021.	**—**	**—**	**—**

6 Cost of sales continued

(g) Impairment of assets continued

The recoverable amounts of the CGUs where impairments were recognised as at 30 June 2021 are as follows:

	SA Rand		
	Recoverable amount		
Figures in million	Life-of-mine plan	Resource base	Total
Tshepong Operations			
The updated life-of-mine plan included a reduction in planned gold resulting from lower grade. There was also a change in the mining profile in the revised life-of-mine plan, which impacted on the timing of cash flows, which were then later than in comparison to the prior-year plan. These changes affected the discounted cash flows used to determine the recoverable amount of the operation.	**4 847**	**936**	**5 783**
Bambanani			
The impairment of goodwill on Bambanani was mainly as a result of a reduction in grade over the remainder of the operation's life. The reduction in grade is due to unexpected changes in the orebody and a lower mine call factor.	**341**	**—**	**341**
Target 3			
Previous plans to explore the sale of the operation have been abandoned and further development is not a viable option at this stage. Therefore management has determined a recoverable amount of Rnil.	**—**	**—**	**—**

During the financial year ended 30 June 2020 no impairments were recognised.

7 Corporate, administration and other expenditure

	SA Rand		
Figures in million	**2022**	2021	2020
Professional and legal fees	**61**	52	45
Compliance and assurance costs	**62**	51	39
Corporate business development (a)	**39**	221	19
Corporate office expenditure (b)	**797**	707	486
Other corporate and administration expenses	**25**	37	22
Total corporate, administration and other expenditure	**984**	1 068	611

(a) The decrease in corporate business development in 2022 is largely attributable to integration costs incurred in 2021 of R205 million (2020: R4 million) which were incurred in relation to the acquisition of Mponeng operations and related assets. These expenses were not incurred in the 2022 financial year. Refer to note 14 for further detail.

(b) The increase in corporate office expenditure in 2021 is mainly due to the increase in remuneration costs and employee incentive payments from a reduced base in the 2020 year following group-wide pay cuts in response to the Covid-19 pandemic.

8 Foreign exchange translation gain/(loss)

	SA Rand		
Figures in million	**2022**	2021	2020
Borrowings (a)	**(411)**	894	(970)
Other items (b)	**84**	(224)	78
Total foreign exchange translation gain/(loss)	**(327)**	670	(892)

(a) The loss in 2022 is predominantly caused by unfavourable translations on US dollar loan balances. The unfavourable translations on US dollar loans are attributable to the Rand weakening against the US dollar, evidenced by a closing exchange rate of R16.27/US$1 (2021: R14.27/US$1) (2020: R17.32/US$1). However, the average exchange rate improved marginally from the prior financial year to R15.21/US$1 (2021: R15.40/US$1) (2020: R15.66/US$1).

(b) This relates mainly to the translation of metal trade receivables and cash from a foreign currency to the functional currencies of the operating entities.

9 Other operating expenses

	SA Rand		
Figures in million	**2022**	2021	2020
Social investment expenditure	**145**	126	143
Loss on scrapping of property, plant and equipment (a)	**7**	161	62
Silicosis settlement provision (b)	**23**	80	36
Loss allowance	**22**	47	63
Remeasurement of contingent consideration (c)	**(61)**	(127)	—
Income from third-party toll treatment fee (d)	**(25)**	—	—
Other (income)/expense – net (e)	**(110)**	(46)	5
Total other operating expenses	**1**	241	309

(a) These losses arise from the derecognition of property, plant and equipment that is no longer in use. No future economic benefits are expected from the use or disposal of these assets. Refer to note 15 for further detail on the accounting policy as well as the amounts per asset category.

(b) Refer to note 27 for details on the movement in the silicosis settlement provision.

(c) Refer to note 29 for details on the remeasurement of the contingent consideration

(d) The amount relates to fees received from a third party for the treatment of ore at the Doornkop plant.

(e) The increase for the 2022 year is mainly attributable to insurance claim proceeds of R83 million and profit on the sale of property, plant and equipment of R24 million.

10 Investment income

Accounting policy

Interest income is recognised on the effective interest method, taking into account the principal outstanding and the effective rate over the period to maturity, when it is determined that such income will accrue to the group. Dividend income is recognised when the shareholder's right to receive payment is established. This is recognised at the last date of registration.

Cash flows from interest and dividends received are classified under operating activities in the cash flow statement.

	SA Rand		
Figures in million	**2022**	2021	2020
Interest income from financial assets at amortised cost	**276**	265	257
Dividend income[1]	**24**	23	—
Net gain on financial instruments[2]	**52**	43	118
Total investment income	**352**	331	375

[1] *Comprises R10 million (2021: R18 million) received from Rand Mutual Assurance and R14 million (2021: R5 million) received from equity investments held by environmental trusts (refer to note 17).*
[2] *Primarily relates to the environmental trust funds (refer to note 17) and the ARM BBEE Trust loan (refer to note 18). In 2021 the gains were offset by a day one expense of R87 million on the refinancing of the ARM BBEE Trust loan.*

11 Finance costs

Accounting policy

Borrowing costs are capitalised to the extent that they are directly attributable to the acquisition and construction of qualifying assets. Qualifying assets are assets that take a substantial time to get ready for their intended use. These costs are capitalised until the asset moves into the production phase. Other borrowing costs are expensed. The foreign exchange translation loss is included in the borrowing cost calculation to the extent that it is considered to be a part of interest. In a year where a foreign exchange gain is recognised on the borrowings' translation, the potential impact thereof on the rate as well as the borrowing costs is disregarded.

Notes to the group financial statements continued

For the year ended 30 June 2022

11 Finance costs continued

	SA Rand		
Figures in million	**2022**	2021	2020
Financial liabilities			
Borrowings	**238**	228	424
Other creditors and liabilities	**22**	14	9
Total finance costs from financial liabilities	**260**	242	433
Non-financial liabilities			
Time value of money for other provisions	**79**	74	88
Streaming arrangements	**67**	71	—
Time value of money and inflation component of rehabilitation costs	**377**	296	194
Total finance costs from non-financial liabilities	**523**	441	282
Total finance costs before interest capitalised	**783**	683	715
Interest capitalised (a)	**(65)**	(22)	(54)
Total finance costs	**718**	661	661

(a) The capitalisation rate used to determine capitalised borrowing costs is:

	Percent (%)		
	2022	2021	2020
Capitalisation rate	**6.8**	3.8	9.4

The capitalisation rate for 2022 and 2020 includes the impact of the foreign exchange loss for the year where the Rand equivalent rate is used. The decrease in the capitalisation rate for 2021 is due to the exclusion of the foreign exchange gain for the year.

12 Taxation

Accounting policy

Taxation is made up of current and deferred taxation. The current income tax charge is calculated on the basis of the tax laws enacted or substantively enacted at the balance sheet date in the countries where the group operates and generates taxable income. Management periodically evaluates positions taken in tax returns with respect to situations in which applicable tax regulations are subject to interpretation and establishes provisions, where appropriate, on the basis of amounts expected to be paid to the tax authorities.

Deferred taxation is recognised on temporary differences existing at each reporting date between the tax base of all assets and liabilities and their carrying amounts. Substantively enacted tax rates are used to determine future anticipated effective tax rates which in turn are used in the determination of deferred taxation, except to the extent that deferred tax arises from the initial recognition of an asset or liability in a transaction that is not a business combination and does not affect the accounting or taxable profit or loss at the time of the transaction. Deferred tax is charged to profit or loss, except where the tax relates to items recognised in other comprehensive income or directly in equity, in which case the tax is also recognised in other comprehensive income or directly in equity. The effect on deferred tax of any changes in tax rates is recognised in the income statement, except to the extent that it relates to items previously charged or credited directly to equity.

The principal temporary differences arise from amortisation and depreciation on property, plant and equipment, provisions, unutilised tax losses, unutilised capital allowances carried forward and unrealised gains and losses on the gold forward sale contracts. Deferred tax assets relating to the carry forward of unutilised tax losses and unutilised capital allowances are recognised to the extent that it is probable that future taxable profit will be available against which the unutilised tax losses and unutilised capital allowances can be utilised. The recoverability of these assets is reviewed at each reporting date and adjusted if recovery is no longer probable.

Deferred income tax is provided on temporary differences arising from investments in subsidiaries, joint ventures and associates, except where the timing of the reversal of the temporary difference is controlled by the group and it is probable that the temporary difference will not reverse in the foreseeable future.

Deferred income tax assets and liabilities are offset when there is a legally enforceable right to offset current tax assets against current tax liabilities and when the deferred income tax assets and liabilities relate to income taxes levied by the same taxation authority on either the taxable entity or different taxable entities where there is an intention to settle the balances on a net basis.

Critical accounting estimates and judgements

The group is subject to income tax in several jurisdictions. Significant judgement is required in determining the worldwide provision for income taxes due to the complexity of legislation. There are many transactions and calculations for which the ultimate tax determination is uncertain during the ordinary course of business. Where the final tax outcome is different from the amounts that were initially recorded, such differences will impact the income tax and deferred tax provisions in the period in which such determination is made.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply to the period when the asset is realised or the liability is settled. When different tax rates apply to different levels of taxable income, deferred tax assets and liabilities are measured using the average tax rates that are expected to apply to the taxable profit (tax loss) of the periods in which the temporary differences are expected to reverse. At the group’s South African operations, such average tax rates are directly impacted by the profitability of the relevant mine. The deferred tax rate is therefore based on the current estimate of future profitability of an operation when temporary differences will reverse, based on tax rates and tax laws that have been enacted at the balance sheet date. The future profitability of each mine, in turn, is determined by reference to the life-of-mine (LoM) plan for that operation. The LoM plan is influenced by factors as disclosed in note 15, which may differ from one year to the next and normally result in the deferred tax rate changing from one year to the next.

Management has to exercise judgement with regard to deferred tax assets. Where it is not probable that future taxable income may flow against which these assets can be offset, the deferred tax assets are not recognised.

12 Taxation continued

The taxation (expense)/credit for the year is as follows:

	SA Rand		
Figures in million	**2022**	2021	2020
SA taxation			
Mining tax (a)	**(182)**	(464)	(56)
– current year	**(194)**	(467)	(61)
– prior year	**12**	3	5
Non-mining tax (b)	**(125)**	(80)	(2)
– current year	**(121)**	(81)	(2)
– prior year	**(4)**	1	—
Deferred tax (c)	**353**	(714)	(197)
– current year	**353**	(714)	(197)
Total taxation (expense)/credit	**46**	(1 258)	(255)

(a) Mining tax on gold mining taxable income in South Africa is determined according to a formula, based on the taxable income from mining operations. 5% of total revenue is exempt from taxation, while the remainder is taxable at a higher rate (up to a maximum of 34%) than non-mining income (28%) as a result of applying the gold mining formula. Mining and non-mining income of Australian and PNG entities are taxed at a standard rate of 30%.

All qualifying mining capital expenditure is deducted from taxable mining income to the extent that it does not result in an assessed loss. Accounting depreciation is eliminated when calculating the South African mining taxable income. Excess capital expenditure is carried forward as unredeemed capital to be claimed from future mining taxable income. The group has several tax paying entities in South Africa. In terms of the mining ring-fencing application, each ring-fenced mine is treated separately and deductions can normally only be utilised against mining income generated from the relevant ring-fenced mine.

The movement in foreign exchange translation from gains in the 2021 year to losses in 2022 and a decline in mining taxable income resulted in the decrease in the current tax expense during the 2022 year. The movement in foreign exchange translation from losses in the 2020 year to gains in 2021, as well as higher mining taxable income due to the increase of revenue, resulted in the increase in the current tax expense during the 2021 year. This was also impacted by certain companies within the group using their unredeemed capital allowances as well as assessed losses during 2021.

(b) Non-mining taxable income of mining companies and the taxable income for non-mining companies are taxed at the statutory corporate rate of 28%.The expense for the 2022 and 2021 financial years relates to non-mining tax arising from derivative gains (realised and unrealised) recognised on the foreign currency derivatives as well as the realised gains on the commodity forward sale contracts. During 2020, the losses on the derivative contracts resulted in non-mining tax losses. Refer to note 19 for details on the group's derivative gains and losses recorded.

(c) The deferred tax rate used to calculate deferred tax is based on the current estimate of future profitability when temporary differences will reverse based on tax rates and tax laws that have been enacted at the balance sheet date. Depending on the profitability of the operations, the deferred tax rate can consequently be significantly different from year to year.

Following the completion of the annual life-of-mine plans, management revised the weighted average deferred tax rates for all the South African operations. As part of the determination of the deferred tax rates, consideration was given to the amended corporate income tax rate of 27% from 28% as well as the change in the mining tax rate from 34% to 33% for the 2023 financial year. The annual limitation of assessed loss utilisation to 80% of taxable income was incorporated in the calculation. The changes were considered to be substantively enacted at 30 June 2022 and would affect forecast tax estimations or cash flows. They were also taken into account in the determination of recoverable amounts for impairment purposes. Refer to note 15.

Changes to the deferred income tax rates were significant for the following entities:

	Percent (%)		
	2022	2021	2020
Harmony	**25.1**	27.4	29.8
Freegold (Harmony) (Proprietary) Limited	**7.0**	12.1	11.4
Randfontein Estates Limited (Randfontein)	**8.7**	5.1	10.1
Harmony Moab Khotsong Operations (Proprietary) Limited (Moab)	**14.7**	17.6	17.3
Golden Core Trade and Invest (Proprietary) Limited (Mponeng)	**12.8**	11.3	n/a

12 Taxation continued

(c) Deferred tax **continued**

These changes, together with changes in the temporary differences, had the following impacts:

- The change in rates, with majority decreasing year on year at the individual company level (other than hedge accounted derivatives), resulted in a decrease in the deferred tax expense and liability to the amount of R386 million (2021: R55 million increase)
- The impact of impairments at the individual CGU level resulted in a decrease in the deferred tax expense and liability of R312 million
- Unwinding of temporary differences related to unredeemed capital expenditure balances resulted in an increase of R86 million in the deferred tax expense (2021: R301 million)
- The Rand weakened during the 2022 year and the number of outstanding Rand gold contracts at 30 June 2022 decreased, resulting in a negative impact on the valuation of the Rand gold derivatives at year end. Refer to notes 19 and 39 for detail. The temporary differences related to the Rand gold derivatives therefore also decreased, resulting in a R170 million decrease in the deferred tax liability and deferred tax expense (2021: R782 million increase). Management assessed the rates at which the temporary differences are expected to reverse and revised the rate for the vast majority of the companies from the previous non-mining tax rate of 28% rate to the non-mining tax rate of 27% which will be applicable from 2023 onwards.

Income and mining tax rates

The tax rate remained unchanged for the 2020, 2021 and 2022 years.

Major items causing the group's income tax provision to differ from the South African mining statutory tax rate of 34% were:

	SA Rand		
Figures in million	**2022**	2021	2020
Tax (expense)/credit on net profit/loss at the mining statutory tax rate	**360**	(2 170)	202
Non-allowable deductions and non-taxable items	**(328)**	(153)	(221)
Equity-settled share-based payments	**(49)**	(49)	(62)
Gain on bargain purchase	**—**	102	—
Acquisition- and integration-related costs	**—**	(75)	—
Impairment of goodwill	**(114)**	(64)	—
Exploration expenditure	**(79)**	(15)	(55)
Finance costs	**(52)**	(50)	(76)
Other	**(34)**	(2)	(28)
Movement in temporary differences related to property, plant and equipment[1]	**(1 447)**	378	(355)
Movements in temporary differences related to other assets and liabilities	**(174)**	(465)	(452)
Difference between effective mining tax rate and statutory mining rate on mining income	**125**	145	10
Difference between non-mining tax rate and statutory mining rate on non-mining income	**26**	17	—
Effect on temporary differences due to changes in effective tax rates[2]	**386**	(55)	(469)
Prior-year adjustment	**10**	(4)	5
Capital allowances[3]	**973**	860	766
Deferred tax asset not recognised[4]	**115**	189	34
Deferred tax asset previously not recognised now recorded[5]	**—**	—	225
Income and mining taxation (expense)/credit	**46**	(1 258)	(255)
Effective income and mining tax rate (%)	**4**	20	(43)

[1] *The change in 2022 is mainly as a result of the decrease in the net carrying value of Freegold and Moab's assets due to the impairment recognised (refer to note 6) as well as an increase in the unredeemed capital expenditure balance of Avgold.*

[2] *Refer to (c) above for detail of the deferred tax rate changes.*

[3] *This relates to the additional capital allowance that may be deducted from taxable income from mining operations in South Africa. A significant portion relates to Avgold Limited (Avgold) which has a 0% effective tax rate.*

[4] *This relates to tax losses and deductible temporary differences for which future taxable profits are uncertain and are not considered probable.*

[5] *In 2020, the assessment on whether there would be future profits for Harmony Company as well as taxable temporary differences, which the deductible temporary differences can be reversed against, was performed. Management concluded that there would be and therefore the deferred tax asset not recognised in the 2019 year was recognised at 30 June 2020.*

Notes to the group financial statements continued

For the year ended 30 June 2022

12 Taxation continued

Deferred tax

The analysis of deferred tax assets and liabilities is as follows:

	SA Rand	
Figures in million	**2022**	2021
Deferred tax assets	**(1 183)**	(1 202)
Deferred tax asset to be recovered after more than 12 months	**(1 091)**	(522)
Deferred tax asset to be recovered within 12 months	**(92)**	(680)
Deferred tax liabilities	**2 566**	3 108
Deferred tax liability to be recovered after more than 12 months	**2 192**	2 713
Deferred tax liability to be recovered within 12 months	**374**	395
Net deferred tax liability	**1 383**	1 906

Deferred tax liabilities and assets on the balance sheet as of 30 June 2022 and 30 June 2021 relate to the following:

	SA Rand	
Figures in million	**2022**	2021
Gross deferred tax liabilities	**2 566**	3 108
Amortisation and depreciation[1]	**2 375**	2 807
Derivative financial instruments	**143**	276
Other	**48**	25
Gross deferred tax assets	**(1 183)**	(1 202)
Unredeemed capital expenditure[2]	**(3 863)**	(3 540)
Provisions, including non-current provisions	**(1 133)**	(1 157)
Contingent consideration liability	**(39)**	(47)
Streaming contract liability	**(86)**	(140)
Other	**(3)**	—
Tax losses[3]	**(1 524)**	(1 151)
Deferred tax asset not recognised[4]	**5 465**	4 833
Net deferred tax liability	**1 383**	1 906

[1] *The decrease in amortisation and depreciation year on year is mainly as a result of the impairments recognised during 2022.*
[2] *Unredeemed capital expenditure mainly consists of Hidden Valley R3 521 million (2021: R3 157 million) and Mponeng R125 million (2021: R146 million).*
[3] *The majority of the amount relates to Hidden Valley's tax losses of R1 417 million (2021: R1 089 million).*
[4] *The deferred tax asset not recognised relates to Harmony's PNG operations.*

Movement in the net deferred tax liability recognised in the balance sheet is as follows:

	SA Rand	
Figures in million	**2022**	2021
Balance at beginning of year	**1 906**	465
Expense/(credit) per income statement	**(353)**	714
Acquisition of Mponeng operations and related assets	**—**	(55)
Tax directly charged to other comprehensive income	**(170)**	782
Balance at end of year	**1 383**	1 906
Deferred tax assets per balance sheet	**(203)**	(272)
Deferred tax liabilities per balance sheet	**1 586**	2 178

A deferred tax asset continues to be recognised for both Harmony Gold Mining Company Limited (Harmony Company) and Chemwes (Proprietary) Limited (Chemwes Company) at 30 June 2022. The net deferred tax asset balance of Harmony company has increased to R179 million (2021: R175 million), while Chemwes Company’s net deferred tax asset has decreased to R24 million (2021: R97 million). At 30 June 2022, it is considered probable that sufficient future taxable profits will be available against which the remaining deductible temporary differences existing at the reporting date can be utilised.

12 Taxation continued

Deferred tax continued

	SA Rand	
Figures in million	**2022**	2021
As at 30 June, the group had the following potential future tax deductions:		
Unredeemed capital expenditure available for utilisation against future mining taxable income[1]	**45 408**	41 184
Tax losses carried forward utilisable against mining taxable income[2]	**7 445**	5 746
Capital gains tax (CGT) losses available to be utilised against future CGT gains[4]	**583**	570
As at 30 June, the group has not recognised the following deferred tax asset amounts relating to the above:	**15 978**	13 820
The unrecognised temporary differences are:		
Unredeemed capital expenditure[3]	**42 859**	37 667
Tax losses[2]	**6 471**	4 832
CGT losses[4]	**583**	570

[1] *Includes Avgold R27 133 million (2021: R24 161 million), Randfontein R502 million (2021: R1 268 million), Freegold R557 million (2021: R42 million), Mponeng R978 million (2021: R1 296 million), Chemwes R260 million (2021: R419 million) and Hidden Valley R15 725 million (2021: R13 506 million). These have an unlimited carry-forward period.*
[2] *Relates mainly to Hidden Valley R4 718 million (2021: R3 629 million), Randfontein R708 million (2021: R796 million), and Avgold R1 761 million (2021: R1 184 million). These have an unlimited carry-forward period.*
[3] *Relates to Avgold and Hidden Valley.*
[4] *The CGT losses relate to the gross CGT losses available to be utilised against future CGT gains.*

Dividend tax (DT)

The withholding tax on dividends remained unchanged at 20%.

13 Earnings/(loss) per share

Basic earnings/(loss) per share

Basic earnings/(loss) per share is calculated by dividing the net income attributable to shareholders by the weighted number of ordinary shares in issue during the year.

	2022	2021	2020
Ordinary shares in issue (000)	**616 526**	616 052	603 143
Adjustment for weighted number of ordinary shares in issue (000)	**(121)**	(5 582)	(61 306)
Weighted number of ordinary shares in issue (000)	**616 405**	610 470	541 837
Adjustment for weighted number of treasury shares (000)[1]	**(3 950)**	(6 184)	(6 501)
Basic weighted average number of ordinary shares in issue (000)	**612 455**	604 286	535 336

	SA Rand		
	2022	2021	2020
Total net profit/(loss) attributable to shareholders (million)	**(1 052)**	5 087	(878)
Total basic earnings/(loss) per share (cents)	**(172)**	842	(164)

[1] *These are the weighted number of treasury shares for the years presented. Refer to note 24 for the actual number of treasury shares that are in issue.*

13 Earnings/(loss) per share continued

Diluted earnings/(loss) per share

For diluted earnings/(loss) per share, the weighted average number of ordinary shares in issue is adjusted to assume conversion of all potential dilutive ordinary shares as a result of share options granted to employees under the share option schemes in issue. A calculation is performed to determine the number of shares that could have been acquired at fair value, determined as the average annual market share price of the company's shares, based on the monetary value of the subscription rights attached to the outstanding share options. The number of shares calculated as above is compared with the number of shares that would have been issued assuming the exercise of the share options.

	2022	2021	2020
Weighted average number of ordinary shares in issue (000)	**612 455**	604 286	535 336
Potential ordinary shares (000)[1]	**2 159**	12 099	11 858
Weighted average number of ordinary shares for diluted earnings per share (000)[1]	**614 614**	616 385	547 194

	SA Rand		
	2022	2021	2020
Total diluted earnings/(loss) per share (cents)[2]	**(172)**	825	(166)

[1] Due to net loss attributable to the shareholders in 2022 and 2020, the inclusion of the share options as potential ordinary shares had an anti-dilutive effect on the loss, therefore the diluted loss per share was set at the basic loss per share for these years. The issue price and the exercise of share options issued to the employees include the fair value of any services to be supplied to the entity in the future under the share option or other share-based payment arrangements.

[2] The dilution in 2020 is as a result of the potential reduction in earnings attributable to equity holders of the parent company as a result of the exercise of the Tswelopele Beneficiation Operation (TBO) option. TBO contributed a profit and therefore the reduction in earnings attributable to Harmony would increase the loss and loss per share. Following the vesting of the option in December 2019, there has been no further impact.

Dividends

Accounting policy

Dividends declared are recognised in the period in which they are approved by the board of directors. Dividends are payable in South African Rand.

Cash flows from dividends paid are classified under financing activities in the cash flow statement.

- The board declared an interim ordinary dividend of 40 SA cents for the year ended 30 June 2022 (2021:110 SA cents). R247 million was paid on 11 April 2022 (2021: R677 million was paid on 19 April 2021). A final dividend of 27 SA cents for the 2021 year was declared by the board, amounting to R167 million which was paid on 18 October 2021. No dividends were paid on ordinary shares by Harmony during 2020.
- The board declared a final ordinary dividend of 22 SA cents for the year ended 30 June 2022, paid on 17 October 2022.
- Harmony declares an annual preference share dividend to the Harmony Gold Community Trust (the Trust). The board declared a preference dividend of R9 million and was paid to the Trust on 11 August 2022 (2021 and 2020: R9 million on 10 August 2021 and 6 August 2020 respectively).
- During 2022, dividend payments of R16 million were made to the non-controlling interest holders in Tswelopele Beneficiation Operation (2021: R7 million) (2020: R3 million).

	SA Rand		
	2022	2021	2020
Dividends declared (millions)	**414**	677	—
Dividend per share (cents)	**67**	110	—

14 Acquisitions and business combinations

Acquisition of AngloGold Ashanti's remaining South African operations

On 12 February 2020, Harmony announced that it had reached an agreement with AngloGold Ashanti Limited (AGA) to purchase the Mponeng operations and related assets. Harmony's primary goal with the acquisition was to improve the group's overall recovered grade and increase cash flow margins. The transaction included the following assets and liabilities:

- The Mponeng, Tau Tona and Savuka mines and associated rock-dump and tailings storage facility reclamation sites, mine rehabilitation and closure activities located in the West Wits region and their associated assets and liabilities
- Certain rock-dump reclamation, mine rehabilitation and closure activities located in the Vaal River region and their associated assets and liabilities (the VR Remaining assets)
- 100% of the share capital of First Uranium (Proprietary) Limited which owns Mine Waste Solutions (Proprietary) Limited and Chemwes (Proprietary) Limited as well as associated tailings assets and liabilities (the FUSA Group)
- 100% of the share capital of Covalent Water Company (Proprietary) Limited (CWC), AGA Security Services (Proprietary) Limited and Masakhisane Investments (Proprietary) Limited.

The last condition precedent for the acquisition was fulfilled during September 2020, resulting in an acquisition date of 1 October 2020.

Cash generating units identified

Based on management's assessment, the transaction met the definition of a business combination as defined by IFRS 3. The following cash generating units (CGUs) were identified in the acquisition:

- The Mponeng business, consisting of the Mponeng, Tau Tona and Savuka mines, forming a single complex, and their associated assets and liabilities, including CWC
- The West Wits closure business, consisting of the Savuka plant and associated rock-dump and tailings storage facility reclamation sites, mine rehabilitation and closure activities located in the West Wits region and the associated assets and liabilities
- Mine Waste Solutions
- The Vaal River closure business, consisting of certain rock-dump reclamation, mine rehabilitation and closure activities located in the Vaal River region and their associated assets and liabilities.

Consideration transferred

Consideration for the transaction amounted to a cash payment of R3.4 billion (US$200 million), paid on 30 September 2020, and contingent consideration subject to the following criteria:

- US$260 per ounce payable on all underground production from the Mponeng, Savuka and Tau Tona mines in excess of 250 000 ounces per year for six years commencing 1 January 2021
- US$20 per ounce payable on underground production from the Mponeng, Savuka and Tau Tona mines sourced from levels developed in the future below the current infrastructure.

As at 1 October 2020, the contingent consideration was valued at R544 million by using the discounted cash flows valuation method, discounted at a post-tax real rate of 10.6%. The fair value calculated for the contingent consideration is level 3 in the fair value hierarchy due to the use of unobservable inputs. The contingent consideration attributable to the below infrastructure ounces of gold was valued at Rnil at 1 October 2020. Refer to note 29 for subsequent measurement disclosure.

Acquisition and integration costs

The total of R124 million (2020: R45 million) for acquisition costs for the year ended 30 June 2021 relates to various costs directly attributable to the acquisition process. These costs include attorney and advisory fees. There were also costs incurred for the integration of the acquired assets into Harmony's existing structures and systems. These costs include project management and consultancy fees and software licensing costs required to interface with the Harmony systems. These costs amounted to R205 million (2020: R4 million) for the 2021 year and were included in Corporate, administration and other expenditure.

14 Acquisitions and business combinations continued

Acquisition of AngloGold Ashanti's remaining South African operations continued

Identifiable assets acquired and liabilities assumed

Critical accounting estimates and judgements

Key assumptions for the valuation of the respective CGUs are the gold prices, market discount rates, exchange rates and life-of-mine plans. Due to the volatility associated with the potential upside driven by the higher gold prices in the short to medium term, management opted to adopt conservative gold price assumptions in order to accommodate for this, which is still in line with a market participant's view. Management has considered the impact of the Covid-19 pandemic on the valuations performed and made adjustments to the production and cost estimates for the respective CGUs.

The fair value of the identifiable net assets acquired was determined on the expected discounted cash flows based on the life-of-mine plans of the Mponeng business (Mponeng), West Wits closure business (WW), Mine Waste Solutions (MWS) and the Vaal River closure business (VR). The post-tax real discount rates used ranged from 8.5% to 11.6%, real exchange rates ranged between R14.41/US$1 and R16.75/US$1, while real gold prices ranged between US$1 308/oz and US$1 784/oz over the valuation period. The valuation was performed as at 1 October 2020.

As part of determining the fair value of the provision for environmental rehabilitation the pre-tax risk-free rates used for discounting ranged between 5.1% and 11.5%, while inflation of 5.0% was used for cost escalation.

The fair value of the unfavourable contract liability, which forms part of the streaming arrangement with Franco-Nevada, was measured at the difference between a market analyst consensus of gold prices and the fixed cash consideration to be received for gold delivered. A post-tax real rate of 11.6% was used to discount the liability over the expected period of delivery to settle the contract.

The deferred tax rates used to calculate deferred tax is based on the current estimate of future profitability when temporary differences will reverse based on tax rates and tax laws that have been enacted at acquisition date. The calculated deferred tax rates as at 1 October 2020 were 15.0% for Mponeng and WW, 20.8% for VR and 18.4% for MWS.

Fair value determination of acquired operations

Management considers the purchase price allocation to be final and the accounting for the acquisition to be concluded as at 30 June 2021. The final amounts for the identifiable assets acquired and liabilities assumed have been included below.

The fair values as at the acquisition date are as follows:

	SA Rand
Figures in million	2021
Non-current assets	
Property, plant and equipment	6 024
Restricted cash and investments	1 268
Deferred tax assets	222
Current assets	
Inventories	454
Trade and other receivables[1]	47
Cash and cash equivalents	3
Non-current liabilities	
Deferred tax liabilities	(167)
Provision for environmental rehabilitation	(1 856)
Other non-current liabilities	(41)
Streaming contract liability	(938)
Current liabilities	
Trade and other payables	(324)
Streaming contract liability	(479)
Fair value of net identifiable assets acquired at 1 October 2020	4 213

[1] *The gross contractual amounts receivable is equal to the fair value of the receivables at acquisition date*

14 Acquisitions and business combinations continued

Acquisition of AngloGold Ashanti's remaining South African operations continued

Fair value determination of acquired operations continued

Groundwater pollution liability

During an assessment of the environmental liabilities associated with the acquisition, a risk related to the potential decant and pollution of groundwater from the tailings storage facilities was identified. Harmony performed an initial assessment and plans on using physo-remediation to assist in mitigating the risk.

A contingent liability acquired in a business combination is recognised in the acquisition accounting if it is a present obligation and its fair value can be measured reliably. Based on Harmony's assessment, a liability of R230 million was raised as part of the provision for environmental rehabilitation assumed in the business combination.

Gain on bargain purchase

The gain on bargain purchase was calculated as follows:

	SA Rand
Figures in million	2021
Consideration paid	
– Cash consideration	3 366
– Contingent consideration	544
Fair value of net identifiable assets acquired	(4 213)
Gain on bargain purchase	(303)

The gain on bargain purchase realised can be attributed to the higher gold prices and R/US$ exchange rate assumptions that were used in the business valuations performed as at 1 October 2020 when compared to the assumptions used when the transaction was negotiated. The gold price and exchange rate assumptions were impacted by the market uncertainty surrounding the Covid-19 pandemic, which has had a significant impact on the short- and medium-term assumptions that were included in the valuations.

Gain on bargain purchase has been included as a separate line item in the income statement.

15 Property, plant and equipment

	SA Rand	
Figures in million	**2022**	2021
Mining assets	**25 320**	26 487
Mining assets under construction	**3 132**	2 732
Undeveloped properties	**4 004**	3 988
Other non-mining assets	**416**	390
Total property, plant and equipment	**32 872**	33 597

Mining assets

Accounting policy

Mining assets, including mine development costs and mine plant facilities, are initially recorded at cost, whereafter they are measured at cost less accumulated depreciation and impairment. Costs include expenditure that is directly attributable to the acquisition of the items. Subsequent costs are included in the asset's carrying amount or recognised as a separate asset, as appropriate, only when it is probable that future economic benefits associated with the item will flow to the group and the cost of the item can be measured reliably.

The net assets of operations placed on care and maintenance are impaired to their recoverable amount. Expenditure on the care and maintenance of these operations is charged against income, as incurred. Mineral and surface use rights represent mineral and surface use rights for parcels of land, both owned and not owned by the group.

Mineral and surface rights include acquired mineral use rights in production, development and exploration phase properties. The amount capitalised related to a mineral and surface right, either as an individual asset purchase or as part of a business combination, is the fair value at acquisition.

The group's mineral use rights are enforceable regardless of whether proved or probable reserves have been established. In certain limited situations, the nature of use changes from an exploration right to a mining right upon the establishment of proved and probable reserves. The group has the ability and intent to renew mineral use rights where the existing term is not sufficient to recover all identified and valued proved and probable reserves and/or undeveloped mineral interests.

Depreciation

Depreciation of mining assets is computed principally by the units-of-production method over life-of-mine based on estimated quantities of economically recoverable proved and probable reserves, which can be recovered in future from known mineral deposits.

In most instances, proved and probable reserves provide the best indication of the useful life of the group's mines (and related assets). However, in some instances, proved and probable reserves may not provide a realistic indication of the useful life of the mine (and related assets). This may be the case, for example, where management is confident that further inferred resources will be converted into measured and indicated resources and if they are economically recoverable, they can also be classified as proved and probable reserves. Management is approaching economic decisions affecting the mine on this basis, but has chosen to delay the work required to designate them formally as reserves.

In assessing which resources to include so as to best reflect the useful life of the mine, management considers resources that have been included in the life-of-mine plan. To be included in the life-of-mine plan, resources need to be above the cut-off grade set by management, which means that the resource can be economically mined and is therefore commercially viable. This consistent systematic method for inclusion in the life-of-mine plan takes management's view of the gold price, exchange rates as well as cost inflation into account.

In declaring the resource, management would have had to obtain a specified level of confidence of the existence of the resource through drilling as required by the South African Code for Reporting Exploration Results, Mineral Resources and Mineral Reserves (SAMREC).

Additional confidence in the existence, commercial viability and economical recovery of such resources may be based on historical experience and available geological information, such as geological information obtained from other operations that are contiguous to the group's operations, as well as where the group mines continuations of these other operations' orebodies and reefs. This is in addition to the drilling results obtained by the group and management's knowledge of the geological setting of the surrounding areas, which would enable simulations and extrapolations to be done with a reasonable degree of accuracy.

15 Property, plant and equipment continued

Mining assets continued

Accounting policy continued

In instances where management is able to demonstrate the economic recovery of such resources with a high level of confidence, such additional resources, which may also include certain, but not all, of the inferred resources, as well as the associated future development costs of accessing those resources, are included in the calculation of depreciation. The future development costs are those costs that need to be incurred to access these inferred resources, for example the costs to complete a decline or level, which may include infrastructure and equipping costs. These amounts have been extracted from the cash flow projections for the life-of-mine plans.

Mineral rights associated with production phase mineral interests are amortised over the life-of-mine using the units-of-production method in order to match the amortisation with the expected underlying future cash flows.

Impairment

Testing for impairment is done in terms of the group policy as discussed in note 2.5.

Scrapping of assets

Where significant adverse changes have taken place relating to the useful life of an asset, that asset is tested for impairment in terms of the group policy as discussed in note 2.5. Whether or not an impairment is recognised, it is then necessary to review the useful lives and residual values of the assets within the CGU – this is reviewed at least annually. Where necessary, the useful lives and residual values of the individual assets are revised.

Where the useful life of an asset is nil as a result of no future economic benefit expected from the use or disposal of that asset, it is necessary to derecognise the asset. The loss arising from the derecognition is included in profit or loss in the period in which the asset was derecognised.

Stripping activities

The removal of overburden and other mine waste materials is often necessary during the initial development of an opencast mine site, in order to access the mineral ore deposit. The directly attributable cost of this activity is capitalised in full within mining assets under construction, until the point at which the mine is considered to be capable of commercial production. The removal of waste material after the point at which a mine is capable of commercial production is referred to as production stripping.

When the waste removal activity improves access to ore extracted in the current period, the costs of production stripping are charged to the income statement as operating costs in accordance with the principles of IAS 2 ***Inventories***.

Where production stripping activity both produces inventory and improves access to ore in future periods the associated costs of waste removal are allocated between the two elements. The portion which benefits future ore extraction is capitalised within stripping and development capital expenditure. If the amount to be capitalised cannot be specifically identified, it is determined based on the volume of waste extracted compared to expected volume for the identified component of the orebody. Components are specific volumes of a mine's orebody that are determined by reference to the life-of-mine plan.

In certain instances significant levels of waste removal may occur during the production phase with little or no associated production. The cost of this waste removal is capitalised in full.

All amounts capitalised in respect of waste removal are depreciated using the units-of-production method based on proved and probable ore reserves of the component of the orebody to which they relate.

The effects of changes to the life-of-mine plan on the expected cost of waste removal or remaining reserves for a component are accounted for prospectively as a change in estimate.

15 Property, plant and equipment continued

Mining assets continued

Critical accounting estimates and judgements – Gold Mineral Reserves and Resources

Gold mineral reserves and resources are estimates of the amount of ounces that can be economically and legally extracted from the group's properties. In order to calculate the gold mineral reserves and resources, estimates and assumptions are required about a range of geological, technical and economic factors, including quantities, grades, production techniques, recovery rates, production costs, commodity prices and exchange rates. Estimating the quantities and/or grade of the reserves and resources requires the size, shape and depth of the orebodies to be determined by analysing geological data such as the logging and assaying of drill samples. This process may require complex and difficult geological judgements and calculations to interpret the data.

Because the economic assumptions used to estimate the gold mineral reserves and resources change from year to year, and because additional geological data is generated during the course of operations, estimates of the mineral reserves and resources may change from year to year. Changes in the reserves and resources may affect the group's financial results and financial position in a number of ways, including:

- Asset carrying values may be affected due to changes in estimated cash flows
- Scrapping of assets to be recorded in the income statement following the derecognition of assets as no future economic benefit expected
- Depreciation and amortisation charged in the income statement may change as they are calculated on the units-of-production method
- Environmental provisions may change as the timing and/or cost of these activities may be affected by the change in mineral reserves
- Useful life and residual values may be affected by the change in mineral reserves.

At the end of each financial year, the estimate of proved and probable gold mineral reserves and resources is updated. Depreciation of mining assets is prospectively adjusted, based on these changes.

Critical accounting estimates and judgements – production start date

Various relevant criteria are considered in order to assess when the mine is substantially complete and ready for its intended use and moves into the production phase. Some of the criteria would include but are not limited to the following:

- The level of capital expenditure compared to the total project cost estimates
- The ability to produce gold in a saleable form (where more than an insignificant amount of gold has been produced)
- The ability to sustain the ongoing production of gold.

Critical accounting estimates and judgements – stripping activities

The determination of the volume of waste extracted and the expected volume for the identified component of the orebody is dependent on an individual mine's design and life-of-mine plan and therefore changes to the design or life-of-mine plan will result in changes to these estimates. Identification of the components of a mine's orebody is made by reference to the life-of-mine plan. The assessment depends on a range of factors including each mine's specific operational features and materiality.

Critical accounting estimates and judgements – impairment of assets

The recoverable amount of mining assets is generally determined utilising real discounted future cash flows (post tax). Management also considers such factors as the quality of the individual orebody, market risk, asset-specific risks and country risk in determining the fair value.

Key assumptions for the calculations of the mining assets' recoverable amounts are the commodity prices, resource values, market discount rates, costs to sell, exchange rates and the annual life-of-mine plans. In determining the commodity prices and resource values to be used, management assesses the long-term views of several reputable institutions on commodity prices and based on this, derives the commodity prices and resource values.

The life-of-mine plans are based on the proved and probable reserves as included in the Reserve Declaration, which are determined in terms of SAMREC, as well as resources where management has high confidence in the orebody and economical recovery of gold, based on historic and similar geological experience.

15 Property, plant and equipment continued

Mining assets continued

Critical accounting estimates and judgements – impairment of assets continued

During the year under review, the group calculated the recoverable amounts (generally fair value less costs to sell) based on updated life-of-mine plans and the following gold price, silver price, copper price and exchange rates assumptions:

	2022	2021	2020
US$ gold price per ounce			
– Year 1	**1 861**	1 805	1 610
– Year 2	**1 744**	1 673	1 558
– Year 3	**1 664**	1 582	1 469
– Long term (Year 4 onwards)	**1 546**	1 500	1 350
US$ silver price per ounce			
– Year 1	**23.85**	25.72	17.00
– Year 2	**22.42**	23.22	17.00
– Year 3	**21.46**	21.70	17.00
– Long term (Year 4 onwards)	**19.38**	20.70	17.00
US$ copper price per pound	**3.30**	3.00	3.00
Exchange rate (R/US$)			
– Year 1	**15.55**	14.54	16.72
– Year 2	**15.34**	14.36	15.47
– Year 3	**15.26**	14.44	15.29
– Long term (Year 4 onwards)	**15.35**	14.51	14.51
Exchange rate (PGK/US$)	**3.50**	3.50	3.45
Rand gold price (R/kg)			
– Year 1	**931 000**	843 000	865 000
– Year 2	**860 000**	772 000	775 000
– Year 3	**816 000**	735 000	722 000
– Long term (Year 4 onwards)	**763 000**	700 000	630 000

The following are the attributable gold resource value assumptions:

	South Africa			**Hidden Valley**		
US dollar per ounce	**2022**	2021	2020	**2022**	2021	2020
Underground resources						
Measured	**16.50**	16.50	25.00	**n/a**	n/a	n/a
Indicated	**9.00**	9.00	8.00	**n/a**	n/a	n/a
Inferred	**3.60**	3.60	2.80	**n/a**	n/a	n/a
Surface resources						
Measured	**30.00**	30.00	n/a	**n/a**	n/a	n/a
Indicated	**17.50**	17.50	n/a	**9.00**	9.00	8.00
Inferred	**8.00**	8.00	n/a	**n/a**	n/a	n/a

The recoverable amount of mining assets is determined utilising real discounted future cash flows or resource multiples in the case of undeveloped properties and certain resource bases. The underground resource value has been applied to Target North, Doornkop's Kimberly Reef and the Wafi-Golpu Project (refer to note 22). The surface resource values have been applied to the Mispah Tailings resource, Vaal River and West Wits surface sources.

One of the most significant assumptions that influence the group's operations' life-of-mine plans, and therefore the impairment assessment, is the expected commodity prices. Management continues to differentiate between short-, medium- and long-term assumptions used in the models. The long-term price was determined as part of the annual budgeting process and is used in the life-of-mine plans and is also the cut-off price for calculating reserves included in the declaration of reserves and resources in terms of SAMREC.

15 Property, plant and equipment continued

Mining assets continued

Critical accounting estimates and judgements – impairment of assets continued

The resource multiple values have remained consistent with the prior year, as no new market transactions have taken place in the South African gold mining industry that would provide more recent information compared with prior-year information. In 2021, the resource multiple values were updated based on the recent transaction between AGA and Harmony for the purchase of the Mponeng operations and related assets. The resource multiple was further updated to differentiate between underground operations and surface source operations due to the new information and applied to the relevant resource bases. Please refer to note 14 for further information on the acquisition.

Due to the volatilities experienced in the markets and the uncertainty in forecasting future cash flows as a result of the impact of the Covid-19 pandemic, management has used various probability scenarios in determining the recoverable amounts for the CGUs at 30 June 2021 and 2020. As discussed in note 4, the uncertainty that existed in prior years surrounding the potential impact of Covid-19 has dissipated and therefore management believes that it is no longer appropriate to apply Covid-adjusted probability scenarios in determining recoverable amounts for the CGUs at 30 June 2022.

The factors considered in the scenarios for 2020 and 2021 were:
- Infection rates and the timing of the expected peaks in the areas that Harmony's operations are situated in
- Expected disruptions to production together with the mitigation strategies management had in place
- Expectation of the completion date of the vaccination programme at Harmony and a governmental level
- Potential duration of the impact of the virus (prior and post vaccination) and the related restrictions in operations.

Estimates of the staffing costs for screening and monitoring employees at work and in quarantine, together with the cost of the vaccination programme, were included, while the scenarios used by management included further potential costs if vaccinations were required in the future at various intervals.

In preparing the various scenarios, management considered and varied:
- The potential impact on production and therefore on the revenue cash flows, based on historical trends that have been extrapolated to account for varying disruption levels
- The duration of potential disruptions to production, ranging from 12 months to 24 months
- The infection rates and associated costs as well as vaccination costs. This included impacts on production as well as considerations of the potential requirement to re-vaccinate in coming years.

The calculated cash flows were then weighted based on management's expectation of each of the scenarios occurring. The resulting amounts were discounted using the specific discount rate for each operation in order to determine the recoverable amount.

The post-tax real discount rate for Hidden Valley was 11.42% (2021: 10.30%) (2020: 9.02%) and the post-tax real discount rates for the South African operations ranged between 10.20% and 13.10% (2021: 9.40% and 12.00%) (2020: 9.62% and 11.53%), depending on the asset, were used to determine the recoverable amounts. Cash flows used in the impairment calculations are based on life-of-mine plans which exceed five years for the majority of the mines. Cash flows from potential projects, life-of-mine extensions and residual ounces can also be included in the impairment assessment where deemed appropriate. An additional risk premium is added to the post-tax real discount rates in these instances.

Refer to note 6 for details of impairment testing performed and impairments recorded.

Should management’s estimate of the future not reflect actual events, further impairments may be identified.

Factors affecting the estimates include:
- Changes to proved and probable ore reserves
- Economical recovery of resources
- The grade of the ore reserves may vary significantly from time to time
- Review of strategy
- Unforeseen operational issues at the mines
- Differences between actual commodity prices and commodity price assumptions
- Changes in the discount rate and foreign exchange rates
- Changes in capital, operating mining, processing and reclamation costs
- Mines' ability to convert resources into reserves
- Potential production stoppages for indefinite periods
- The impact of the Covid-19 pandemic
- Carbon tax.

15 Property, plant and equipment continued
Mining assets continued

Sensitivity analysis – impairment of assets

One of the most significant assumptions that influence the life-of-mine plans and therefore impairment assessments is the expected commodity prices. Management determined a reasonably possible long-term change of 10% in gold prices based on the standard deviation of both Harmony's long-term gold price assumption over the past five financial years and market analysts' forecasted long-term gold price assumptions. A 10% increase/decrease (pre-impairment and -scrapping recognition) in the gold price and resource values used, with the resultant adjustment to mining royalties (with all other variables held constant and not taking any actions, such as stopping capital projects, into account) would have resulted in the following post-tax impairment being recorded (including the impairments recorded in the current period) as at 30 June 2022:

	SA Rand	
Figures in million	**2022**	2021
-10% decrease		
Tshepong North[1]	**4 074**	n/a
Moab Khotsong[2]	**3 869**	1 916
Tshepong South[1]	**2 339**	n/a
Doornkop	**1 690**	1 914
Mponeng	**1 443**	2 249
Target 1	**1 121**	1 267
Joel	**762**	359
Kusasalethu	**689**	821
Mine Waste Solutions	**493**	96
Kalgold	**304**	390
Other assets	**208**	101
Hidden Valley	**96**	—
Central Plant Reclamation	**32**	—
West Wits	**—**	35
Tshepong Operations[1]	**n/a**	5 325
Bambanani[2]	**n/a**	413
Target 3	**n/a**	178
+10% increase		
Tshepong South[1]	**224**	n/a
Target 3	**n/a**	178

[1] *The Tshepong Operations have been tested separately for impairment at 30 June 2022. Refer to note 6 for details.*
[2] *The carrying amounts of these CGUs include goodwill and any impairment losses are allocated first to goodwill and then to the identifiable assets.*

At all other operations, a 10% increase in the gold price would have resulted in no impairments being recorded.

As a result of the significant increase in discount rates experienced during the current financial year, management opted to assess the sensitivity of a reasonably possible change in discount rates on impairments of assets for all CGUs. Management assessed an increase/decrease of 50 basis points to be a reasonably possible change, based on the standard deviation of the group's base weighted average cost of capital rate over the past five financial years. This change was factored into the individual CGUs' discount rates and did not result in a material impact on the impairment that would have been recognised for any CGUs.

15 Property, plant and equipment continued

Mining assets continued

The movement in the mining assets is as follows:

	SA Rand	
Figures in million	**2022**	2021
Cost		
Balance at beginning of year	**64 980**	59 736
Fully depreciated assets no longer in use derecognised	**(110)**	(989)
Additions (a)	**5 307**	4 518
Acquisitions (b)	**—**	5 887
Scrapping of assets (c)	**(1 752)**	(1 221)
Adjustment to rehabilitation asset (d)	**(248)**	(774)
Transfers and other movements (e)	**511**	545
Translation	**1 900**	(2 722)
Balance at end of year	**70 588**	64 980
Accumulated depreciation and impairments		
Balance at beginning of year	**38 493**	37 562
Fully depreciated assets no longer in use derecognised	**(110)**	(989)
Impairment of assets (f)	**3 429**	937
Scrapping of assets (c)	**(1 745)**	(1 060)
Depreciation	**3 627**	3 936
Translation	**1 574**	(1 893)
Balance at end of year	**45 268**	38 493
Net carrying value	**25 320**	26 487

(a) Included in additions for 2022 is an amount of R137 million (2021: R159 million) for capitalised depreciation associated with stripping activities at the Hidden Valley operations.

(b) Refer to note 14 for details on the fair value of assets acquired.

(c) Refer to note 9 for the total loss on scrapping recognised.

(d) Refer to note 26 for details on the adjustment to the rehabilitation asset.

(e) Transfer of assets mainly relates to assets under construction transferred to mining assets. During the 2022 year an amount of R513 million (2021: R541 million) was transferred to mining assets at Hidden Valley. This related to ongoing mining development costs.

(f) Refer to note 6 for details on the impairments recognised.

Stripping activities

Included in the balance for mining assets is an amount of R174 million (2021: R176 million) relating to Kalgold and R922 million (2021: R871 million) relating to Hidden Valley. Depreciation of R26 million (2021: R16 million) and R482 million (2021: R934 million) was recorded for Kalgold and Hidden Valley respectively.

15 Property, plant and equipment continued

Mining assets under construction

Accounting policy

At the group's surface mines, when it has been determined that a mineral property can be economically developed as a result of establishing proved and probable reserves, costs incurred to develop the property are capitalised as incurred until the mine is considered to have moved into the production phase. These costs include costs to further delineate the orebody and remove overburden to initially expose the orebody.

At the group's underground mines, all costs incurred to develop the property, including costs to access specific ore blocks or other areas of the underground mine, are capitalised to the extent that such costs will provide future economic benefits. These costs include the cost of shaft sinking and access, the costs of building access ways, lateral development, drift development, ramps, box cuts and other infrastructure development.

Where a depreciable asset is used in the construction or extension of a mine, the depreciation is capitalised against the mine's cost.

Exploration properties acquired are recognised in the balance sheet within development cost and are shown at cost less provisions for impairment determined in accordance with the group's accounting policy on impairment of non-financial assets.

Mineral interests associated with development and exploration phase mineral interests are not amortised until such time as the underlying property is converted to the production stage.

Capitalisation of pre-production costs ceases when commercial levels of production are reached. Commercial levels of production are discussed under "production start date" above.

Critical accounting estimates and judgements – exploration and evaluation assets

The recoverability of exploration and evaluation expenditure is assessed at the end of each reporting period. Significant judgement is required as to whether an area of activity is to be carried forward on the balance sheet, or written off through the identification of areas of activity which have not yet reached a stage that permits a reasonable assessment of the existence of economically recoverable reserves, where there is no continuing significant activity plan in relation to the area.

The movement in the mining assets under construction is as follows:

	SA Rand	
Figures in million	**2022**	2021
Cost		
Balance at beginning of year	**2 732**	2 714
Additions[1]	**1 278**	924
Depreciation capitalised[2]	**4**	4
Finance costs capitalised[3]	**65**	22
Transfers and other movements	**(513)**	(541)
Translation	**236**	(391)
Balance at end of year	**3 802**	2 732
Accumulated impairments		
Balance at beginning of year	**—**	—
Impairment[2]	**670**	—
Balance at end of year	**670**	—
Net carrying value	**3 132**	2 732

[1] *Mainly relates to Great Noligwa Shaft Pillar project of R192 million (2021: R159 million), Zaaiplaats project of R184 million (2021: R27 million) and Tshepong Operations' Sub 75 Decline project of R170 million (2021: R91 million).*
[2] *Relates to Tshepong Operations.*
[3] *Refer to note 11 for further detail on the capitalisation rate applied.*

Wafi-Golpu development

Capitalisation of certain project expenses on Wafi-Golpu was halted from 1 July 2019 following delays in the permitting of the project (refer to note 22). All ongoing expenses since were for holding purposes and did not result in future economic benefit. These have been included in exploration expenditure in the income statement and amounted to R58 million (2021: R51 million) for the year.

15 Property, plant and equipment continued

Undeveloped properties

Accounting policy

Undeveloped properties are initially recognised at cost, which is generally based on the fair value of resources obtained through acquisitions. The carrying values of these properties are tested annually for impairment. Once development commences, these properties are transferred to mining assets and accounted for in accordance with the related accounting policy.

The movement in the undeveloped properties is as follows:

	SA Rand	
Figures in million	**2022**	2021
Cost		
Balance at beginning of year	**5 461**	5 499
Translation	**17**	(38)
Balance at end of year	**5 478**	5 461
Accumulated depreciation and impairments		
Balance at beginning of year	**1 473**	1 475
Translation	**1**	(2)
Balance at end of year	**1 474**	1 473
Net carrying value	**4 004**	3 988

Other non-mining assets

Accounting policy

Land is shown at cost and not depreciated. Other non-mining fixed assets are shown at cost less accumulated depreciation and accumulated impairment losses. Other non-mining fixed assets are depreciated on a straight-line basis over their estimated useful lives as follows:

- Vehicles at 20% per year
- Computer equipment at 33.3% per year
- Furniture and equipment at 16.67% per year.

The assets' residual values and useful lives are reviewed, and adjusted if appropriate, at each balance sheet date.

The movement in the non-mining assets is as follows:

	SA Rand	
Figures in million	**2022**	2021
Cost		
Balance at beginning of year	**821**	703
Fully depreciated assets no longer in use derecognised	**—**	(49)
Acquisitions	**—**	135
Additions	**74**	34
Translation	**—**	(2)
Balance at end of year	**895**	821

	SA Rand	
Figures in million	**2022**	2021
Accumulated depreciation and impairments		
Balance at beginning of year	**431**	429
Fully depreciated assets no longer in use derecognised	**—**	(49)
Depreciation	**47**	52
Impairment	**1**	—
Translation	**—**	(1)
Balance at end of year	**479**	431
Net carrying value	**416**	390

16 Intangible assets

Accounting policy

Intangible assets consist of all identifiable non-monetary assets without physical substance. They are stated at cost less accumulated amortisation and accumulated impairment losses, if any. The following are the main categories of intangible assets:

Goodwill

Goodwill is an intangible asset with an indefinite useful life which is not amortised but tested for impairment on an annual basis, or when there is an indication of impairment. The excess of consideration transferred over the amount of any non-controlling interest in the acquiree and the acquisition-date fair value of any previously held equity interest in the acquiree over the fair value of the group's share of the identifiable net assets acquired is recorded as goodwill. Goodwill on acquisition of subsidiaries, joint operations and businesses is included in intangible assets. Goodwill on acquisition of associates is included in investments in associates and tested for impairment as part of the overall balance.

Goodwill is tested annually for impairment and carried at cost less accumulated impairment losses. Goodwill is allocated to cash generating units for the purpose of impairment testing. The allocation is made to those cash generating units or groups of cash generating units that are expected to benefit from the business combination in which the goodwill arose. If the composition of one or more cash generating units to which goodwill has been allocated changes due to a re-organisation, the goodwill is re-allocated to the units affected.

The gain or loss on disposal of an entity includes the carrying amount of goodwill relating to the entity sold.

Technology-based assets

Acquired computer software licences that require further internal development are capitalised on the basis of costs incurred to acquire and bring to use the specific software. These technology-based assets are classified as intangible assets with a finite useful life. These assets are amortised on a straight-line basis over their estimated useful lives, which are reviewed annually, as follows:

- Computer software at 20% per year.

Critical accounting estimates and judgements – impairment of goodwill

Due to the wasting nature of mining assets and the finite life of a mine's reserves, the allocation of goodwill to a mine or cash generating unit will eventually result in an impairment charge for the goodwill. The group tests annually whether separately identifiable goodwill has suffered any impairment in accordance with the accounting policy stated in note 2.5. These calculations use estimates as per note 15.

	SA Rand	
Figures in million	**2022**	2021
Goodwill	**—**	333
Technology-based assets	**48**	32
Total intangible assets	**48**	365

Goodwill

The movement in goodwill is as follows:

	SA Rand	
Figures in million	**2022**	2021
Cost		
Balance at beginning and end of year	**2 675**	2 675
Accumulated amortisation and impairments		
Balance at beginning of year	**2 342**	2 155
Impairment[1]	**333**	187
Balance at end of year	**2 675**	2 342
Net carrying value	**—**	333
The net carrying value of goodwill has been allocated to the following cash generating units:		
Bambanani	**—**	31
Moab Khotsong	**—**	302
Net carrying value	**—**	333

[1] *In 2022 the goodwill for the Bambanani and Moab Khotsong operations was impaired in full as the carrying value exceeded the recoverable amount of the related cash generating units. In 2021 the impairment related to Bambanani. Refer to note 6 for further details on the impairment assessment.*

Accounting policy – financial assets (applicable to notes 17, 18, 19 and 20)

Financial assets are initially recognised when the group becomes a party to their contractual arrangements. On initial recognition, a financial asset is classified as measured at:

- Amortised cost
- Fair value through other comprehensive income (FVTOCI) or
- Fair value through profit or loss (FVTPL).

A financial asset is classified as measured at amortised cost if it is held within the business model whose objective is to hold assets to collect contractual cash flows and its contractual terms give rise, on specified dates, to cash flows that are solely payments of principal and interest on the principal amount outstanding.

The group measures a financial asset initially at its fair value plus, in the case of a financial asset not at FVTPL, transaction costs that are directly attributable to the acquisition of the financial asset. Transaction costs of financial assets carried at FVTPL are expensed. The subsequent measurement of financial assets is discussed below.

Financial asset category	Description
Debt instruments at amortised cost	Financial assets at amortised cost consist of restricted cash, restricted investments, loans, trade receivables and cash and cash equivalents. Interest income from these financial assets is included in investment income using the effective interest rate method. Any gain or loss arising on derecognition is recognised directly in profit or loss. Impairment losses are presented in other operating expenses in the income statement.
Debt instruments at fair value through profit or loss	Equity-linked investments which are held to meet rehabilitation liabilities are classified as FVTPL. Debt instruments where the contractual cash flows fail to meet the solely payments of principal and interest (SPPI) criteria are also classified as FVTPL. A gain or loss on a debt investment that is subsequently measured at FVTPL is recognised in profit or loss and presented net within investment income in the period in which it arises. On derecognition of a financial asset, the difference between the proceeds received or receivable and the carrying amount of the asset is included in profit or loss.
Equity instruments designated at fair value through OCI	The group's equity investments are designated as FVTOCI. The group subsequently measures all equity investments at fair value. Where the group's management has elected to present fair value gains and losses on equity investments in OCI, there is no subsequent reclassification of fair value gains and losses to profit or loss following the derecognition of the investment. Dividends from such investments are recognised when the group's right to receive payments is established either in profit or loss as other income or as a deduction against the asset if the dividend clearly represents a recovery of part of the cost of the investment. Residual values in OCI are reclassified to retained earnings on derecognition of the related FVTOCI instruments.

Impairment losses on financial assets at amortised cost are assessed using the forward-looking expected credit loss (ECL) approach. ECLs are a probability-weighted estimate of credit losses. Credit losses are measured as the present value of all cash shortfalls (ie the difference between the cash flows due to the entity in accordance with the contract and the cash flows that the group expects to receive). At each reporting date, the group assesses whether financial assets carried at amortised cost are credit impaired. A financial asset is ''credit impaired'' when one or more events that have a detrimental impact on the estimated future cash flows of the financial asset have occurred. Trade receivable loss allowances are measured at an amount equal to lifetime ECLs. Loss allowances are deducted from the gross carrying amount of the assets.

Financial assets and liabilities are offset and the net amount reported in the balance sheet when there is a legally enforceable right to offset the recognised amounts and there is an intention to settle on a net basis, or realise the asset and settle the liability simultaneously.

17 Restricted cash and investments

	SA Rand	
Figures in million	**2022**	2021
Restricted cash	**319**	216
Restricted investments	**5 263**	5 083
Total restricted cash and investments	**5 582**	5 299
Current portion of restricted cash and investments	**27**	67
Non-current portion of restricted cash and investments	**5 555**	5 232

Restricted cash

	SA Rand	
Figures in million	**2022**	2021
Non-current	**292**	149
Current	**27**	67
Total restricted cash	**319**	216

The restricted cash consist of funds set aside for:

	SA Rand	
Figures in million	**2022**	2021
Environmental guarantees and rehabilitation (a)	**152**	161
Guarantee - Tshiamiso Trust (b)	**116**	—
PNG operations (c)	**29**	33
Other	**22**	22
Total restricted cash	**319**	216

(a) The amount primarily relates to funds set aside to serve as collateral against guarantees made to the Department of Mineral Resources and Energy (DMRE) in South Africa for environmental and rehabilitation obligations. Refer to note 26. The funds are invested in short-term money market funds and call accounts, which require third-party approval for release.

(b) Refer to note 27 for details on the silicosis settlement and the arrangement with the trust.

(c) Relates to monies set aside for affected communities in the group's PNG operations.

Restricted investments

	SA Rand	
Figures in million	**2022**	2021
Investments held by environmental trust funds	**5 244**	5 064
Investments held by the Social Trust Fund	**19**	19
Total restricted investments (non-current)	**5 263**	5 083

Environmental trust funds

Accounting policy

Contributions are made to the group's environmental trust funds, created in accordance with statutory requirements, to fund the estimated cost of pollution control, rehabilitation and mine closure at the end of the life of the group's mines. The trusts are consolidated into the group as the group exercises control of the trusts. The measurement of the investments held by the trust funds is dependent on their classification under financial assets. Income received and gains are treated in accordance with these classifications. The equity-linked notes and investment in unit trusts are classified and measured at fair value through profit or loss, while the equity investments are classified and measured at fair value through other comprehensive income. Interest-bearing short-term investments as well as investment in government bonds are classified and measured as debt instruments at amortised cost.

17 Restricted cash and investments continued

Restricted investments continued

Environmental trust funds continued

The environmental trust funds are irrevocable trusts under the group's control. Contributions to the trusts are invested in various instruments which include the following: listed equity securities, unit trusts, government bonds, interest-bearing short-term and medium-term cash investments and medium-term equity-linked notes. The equity-linked notes are issued by commercial banks that provide guaranteed interest and additional interest or growth linked to the growth of the Top 40 index of the JSE. These investments provide for the estimated cost of rehabilitation at the end of the life of the group's mines. Income earned on the investments is retained in the funds and reinvested.

The environmental trust funds consist of:

	SA Rand	
Figures in million	**2022**	2021
Fixed deposits	**3 056**	3 091
Cash and cash equivalents	**528**	124
Equity-linked deposits	**1 094**	1 325
Government bonds	**225**	225
Equity investments	**292**	252
Collective investment scheme (unit trusts)	**49**	47
Total environmental trust funds	**5 244**	5 064

Reconciliation of the movement in the investments held by environmental trust funds:

	SA Rand	
Figures in million	**2022**	2021
Balance at beginning of year	**5 064**	3 513
Acquisition	**—**	1 268
Interest income	**185**	174
Fair value gain through profit and loss	**18**	116
Fair value gain through other comprehensive income	**15**	22
Dividend received	**14**	5
Equity-linked deposits acquired/(matured)	**(260)**	400
(Maturity)/acquisition of fixed deposits	**(21)**	(428)
Net transfer of cash and cash equivalents	**281**	28
Withdrawal of funds for rehabilitation work performed	**(52)**	(34)
Balance at end of year	**5 244**	5 064

The Social Trust Fund

The Social Trust Fund is an irrevocable trust under the group's control. The purpose of the trust is to fund the social plan to reduce the negative effects of restructuring on the group's workforce, to put measures in place to ensure that the technical and life skills of the group's workforce are developed and to develop the group's workforce in such a manner as to avoid or minimise the effect of job losses and a decline in employment through turnaround or redeployment strategies.

The Social Trust Fund investment comprises a unit trust portfolio that is exposed to the fair value changes in the equity market and is classified as a fair value through profit or loss investment.

18 Other non-current assets

	SA Rand	
Figures in million	**2022**	2021
Debt instruments	**163**	193
Loans to associates (a)	**116**	116
Loan to ARM BBEE Trust (b)	**148**	177
Other loans	**15**	16
Loss allowance (a)	**(116)**	(116)
Equity instruments	**75**	74
Rand Mutual Assurance (c)	**67**	65
Other investments	**8**	9
Inventories	**136**	65
Non-current portion of gold in lock-up (d)	**136**	65
Total other non-current assets	**374**	332

(a) A loan of R116 million (2021: R116 million) owed by Pamodzi Gold Limited (Pamodzi) which was placed into liquidation during 2009, was provided for in full. Harmony is a concurrent creditor in the Pamodzi Orkney liquidation.

(b) During 2016, Harmony advanced R200 million to the ARM Broad-Based Economic Empowerment Trust (the ARM BBEE Trust), a shareholder of African Rainbow Minerals Limited (ARM). The trust is controlled and consolidated by ARM, who holds 12.12% of Harmony's shares at 30 June 2022. Harmony is a trustee of the ARM BBEE Trust. The loan was subordinated and unsecured. The interest on the loan was market-related (3 months JIBAR + 4.25%) and was receivable on the maturity of the loan on 31 December 2022. In the 2021 financial year, the loan to the ARM BBEE Trust was refinanced to allow a sufficient and sustainable repayment structure. Following the restructuring, Harmony advanced R264 million to the ARM BBEE Trust, which the Trust used for the repayment of the outstanding balance under the previous loan agreement. The loan under the revised loan agreement is interest-free and is receivable on the maturity of the loan on 30 June 2035. The loan is unsubordinated and unsecured.

Neither of the loans meet the requirements for amortised cost measurement as it fails the solely payments of principal and interest test and were therefore classified as fair value through profit and loss (refer to the fair value determination section in note 39 for detail). The group determined that the contractual terms include exposure to risk and volatility that is inconsistent with a basic lending arrangement. In making this assessment the group considered contingent events that would change the amount and timing of cash flows and potential limits on the group's claim to cash flows from specified assets (eg non-recourse asset arrangements).

The movement in the ARM BBEE Trust loan is as follows:

	SA Rand	
Figures in million	**2022**	2021
Balance at beginning of year	**177**	306
Fair value gain[1]	**36**	10
Repayment of interest	**—**	(52)
Repayment of loan	**(65)**	—
Settlement of original loan	**—**	(264)
Refinanced loan advanced	**—**	264
Day one expense[1, 2]	**—**	(87)
Balance at end of year	**148**	177

[1] *Included in net gain on financial instruments (refer to note 10).*
[2] *Relates to the refinancing of the loan.*

(c) On 5 August 2020, the group received a dividend of R8 million relating to the second and final tranche of the contingent consideration for the sale of shares in one of Rand Mutual Assurance's subsidiaries. The dividend was seen as a recovery of capital as it reduced Harmony's effective share in the investment. Refer to note 39 for the fair value valuation technique used to measure the investment. Refer to note 10 for details of additional dividends received.

(d) Refer to note 23 for further details on inventories.

Notes to the group financial statements continued

For the year ended 30 June 2022

19 Derivative financial instruments

The group has the following derivative financial instruments:

Figures in million (SA Rand)	Rand gold hedging contracts (a)	US$ gold hedging contracts (b)	US$ silver contracts (b)	Foreign exchange contracts (c)	Total
At 30 June 2022					
Derivative financial assets	**523**	**44**	**77**	**12**	**656**
Non-current	113	18	6	—	137
Current	410	26	71	12	519
Derivative financial liabilities	**—**	**(11)**	**—**	**—**	**(11)**
Non-current	—	(3)	—	—	(3)
Current	—	(8)	—	—	(8)
Net derivative financial instruments	**523**	**33**	**77**	**12**	**645**
Unrealised gains included in other reserves, net of tax	441	39	—	—	480
Movements for the year ended 30 June 2022					
Realised gains/(losses) included in revenue	602	(105)	—	—	497
Unrealised gains/(losses) on gold contracts recognised in other comprehensive income	(292)	50	—	—	(242)
Gains/(losses) on derivatives	—	—	114	(16)	98
Day one loss amortisation	(39)	(6)	—	—	(45)
Total gains/(losses) on derivatives	**(39)**	**(6)**	**114**	**(16)**	**53**
Hedge effectiveness					
Changes in the fair value of the hedging instrument used as the basis for recognising hedge ineffectiveness	(292)	50	—	—	(242)
Changes in the fair value of the hedged item used as the basis for recognising hedge ineffectiveness	292	(50)	—	—	242

19 Derivative financial instruments continued

Figures in million (SA Rand)	Rand gold hedging contracts (a)	US$ gold hedging contracts (b)	US$ silver contracts (b)	Foreign exchange contracts (c)	Rand gold derivative contracts (a)	Total
At 30 June 2021						
Derivative financial assets	1 358	48	10	383	—	1 799
Non-current	279	40	9	—	—	328
Current	1 079	8	1	383	—	1 471
Derivative financial liabilities	(41)	(73)	(98)	—	—	(212)
Non-current	—	—	(6)	—	—	(6)
Current	(41)	(73)	(92)	—	—	(206)
Net derivative financial instruments	1 317	(25)	(88)	383	—	1 587
Unrealised gains/(losses) included in other reserves, net of tax	1 069	(18)	—	—	—	1 051
Movements for the year ended 30 June 2021						
Realised losses included in revenue	(2 023)	(273)	—	—	—	(2 296)
Unrealised gains/(losses) on gold contracts recognised in other comprehensive income	2 999	(7)	—	—	—	2 992
Gains/(losses) on derivatives	—	—	(256)	1 217	111	1 072
Day one loss amortisation	(42)	(8)	—	—	—	(50)
Total gains/(losses) on derivatives	(42)	(8)	(256)	1 217	111	1 022
Hedge effectiveness						
Changes in the fair value of the hedging instrument used as the basis for recognising hedge ineffectiveness	2 999	(7)	—	—	—	2 992
Changes in the fair value of the hedged item used as the basis for recognising hedge ineffectiveness	(2 999)	7	—	—	—	(2 992)

Figures in million (SA Rand)	Rand gold hedging contracts (a)	US$ gold hedging contracts (b)	US$ silver contracts (b)	Foreign exchange contracts (c)	Rand gold derivative contracts (a)	Total
Movements for the year ended 30 June 2020						
Realised losses included in revenue	(1 263)	(134)	—	—	—	(1 397)
Unrealised losses on gold contracts recognised in other comprehensive income	(4 820)	(391)	—	—	—	(5 211)
Gains/(losses) on derivatives	—	—	6	(1 235)	(174)	(1 403)
Unrealised losses reclassified to profit or loss as a result of discontinuance of hedge accounting	(235)	—	—	—	—	(235)
Day one loss amortisation	(34)	(6)	—	—	—	(40)
Total gains/(losses) on derivatives	(269)	(6)	6	(1 235)	(174)	(1 678)

19 Derivative financial instruments continued

Hedge accounting

Harmony has entered into gold forward sale derivative contracts to hedge the risk of lower gold prices. Cash flow hedge accounting is applied to the majority of these contracts, resulting in the effective portion of the unrealised gains and losses being recorded in other comprehensive income (other reserves – refer to note 25). Refer to note 39 for a summary of the risk management strategy applied and the balances relating to designated hedging instruments as at reporting date.

Hedge effectiveness is determined at the inception of the hedge relationship and through periodic prospective effectiveness assessments. The group enters into gold forward contracts that have similar terms as the hedged item, such as notional amount, maturity date and reference gold spot price thereby ensuring that an economic relationship exists between the hedging instrument and the hedged item and resulting in a hedge ratio of 1:1. Potential sources of hedge ineffectiveness include counterparty and own credit risk, day one gains and losses, a mismatch in the timing of the derivative and underlying gold sale maturities, location differential and the refining margin. Hedge ineffectiveness is measured by comparing the change in the expected cash flows from a forward sale contract versus the sale of an equivalent quantity of gold in the open market. Ineffectiveness results when the changes in the fair values in the hedging instruments exceed the fair value changes in the hedged item. A negligible amount of hedge ineffectiveness was experienced in the years presented.

The gains and losses from derivative contracts to which hedge accounting is not applied is included in gains/(losses) on derivatives in profit or loss.

(a) Rand gold contracts

All Rand gold forward contracts entered into after 1 October 2020 were apportioned to the South African operations which included Mponeng and Mine Waste Solutions operation.

Discontinuance of hedge accounting

As a result of the original 21-day lockdown announced in South Africa, effective 27 March 2020, aimed to slow the spread of Covid-19, Harmony placed all deep-level underground mines in South Africa on care and maintenance. As a result, a significant volume of the underlying exposure that was originally intended to be hedged was delayed.

A total of 63 400 ounces of gold forwards were originally set to mature in the months of April and May 2020. After assessing forecasts of gold production at 1 April 2020, the hedged items, being the sales of gold, relating to 30 500 ounces of gold forwards were assessed to no longer be probable. The hedged items relating to the remaining balance of gold forwards were still considered to be highly probable.

Due to the fact that the occurrence of the forecast transactions/hedged items were no longer considered probable, there was no longer an effective hedging relationship and therefore hedge accounting for these hedges was discontinued. Unrealised losses relating to the hedges amounting to R48 million and R187 million of restructured contracts discussed below, previously recognised in other comprehensive income, were immediately reclassified to profit or loss as gains/losses on derivatives.

Restructuring of contracts

In response to the gold forwards' hedged items no longer being probable and in order to better match the cash flows relating to the underlying exposure, certain of the Rand gold forwards with maturities between 15 April 2020 and 31 May 2020 were effectively extended to mature between the periods July 2020 and March 2021.

The restructured gold forwards retained the pricing of the original forwards. They were not designated as hedging instruments as the difference in the costing structure would have required a different effectiveness assessment than currently used by management. Unrealised losses relating to the hedges amounting to R187 million, previously recognised in other comprehensive income, were immediately reclassified to profit or loss as gains/losses on derivatives. All subsequent gains and losses on the restructured hedges were recognised in profit or loss.

As at 30 June 2021, all the restructured gold forwards had matured.

(b) US$ commodity contracts

Harmony maintains a derivative programme for Hidden Valley by entering into commodity derivative contracts. The contracts comprise US$ gold forward sale contracts as well as silver zero cost collars which establish a minimum (floor) and maximum (cap) silver sales price. Hedge accounting is applied to all US$ gold forward sale contracts and these are shown separately from the silver zero cost collars that are not hedge accounted.

(c) Foreign exchange contracts

Harmony maintains a foreign exchange derivative programme in the form of zero cost collars, which sets a floor and cap Rand/US$ exchange rate at which to convert US dollars to Rands, and foreign exchange forward contracts. Hedge accounting is not applied to these contracts.

Notes to the group financial statements continued

For the year ended 30 June 2022

19 Derivative financial instruments continued

The following table shows the open position at the reporting date:

	2023				2024			TOTAL
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	
Foreign exchange contracts								
Zero cost collars								
US$m	42	18	—	—	—	—	—	60
Average floor – R/US$	15.90	16.18	—	—	—	—	—	15.98
Average cap – R/US$	17.90	18.18	—	—	—	—	—	17.98
Forward contracts								
US$m	6	—	—	—	—	—	—	6
Average forward rate – R/US$	16.84	—	—	—	—	—	—	16.84
R/gold								
000 oz – cash flow hedge	72	72	72	70	44	32	16	378
Average R000/kg	1033	999	1 019	1 039	1 061	1 082	1107	1035
US$/gold								
000 oz – cash flow hedge	9	9	9	9	9	8	4	57
Average US$/oz	1 911	1 867	1 826	1 836	1 860	1 926	2 009	1 880
Total gold								
000 oz	81	81	81	79	53	40	20	435
US$/silver								
000 oz	285	270	210	105	30	30	20	950
Average floor - US$/oz	24.39	25.97	25.62	25.49	25.14	25.41	25.68	25.31
Average cap - US$/oz	27.02	29.00	28.81	28.58	28.14	28.41	28.68	28.27

Refer to note 39 for the details on the fair value measurements.

20 Trade and other receivables

	SA Rand	
Figures in million	2022	2021
Financial assets		
Trade receivables (metals)	571	738
Other trade receivables	343	292
Loss allowance	(204)	(179)
Trade receivables - net	710	851
Interest and other receivables	213	111
Employee receivables	15	17
Non-financial assets		
Prepayments	160	131
Value added tax and general sales tax	545	505
Income and mining taxes	39	37
Total trade and other receivables	1 682	1 652

The movement in the loss allowance for trade and other receivables during the year was as follows (refer to note 39 for details):

	SA Rand	
Figures in million	2022	2021
Balance at beginning of year	179	135
Increase in loss allowance recognised during the year	80	64
Reversal of loss allowance during the year	(55)	(20)
Balance at end of year	204	179

The loss allowance for 2022 includes R67 million (2021: R80 million) relating to a mining company who is in financial difficulties. The remaining movement relates to various other individually immaterial debtors.

20 Trade and other receivables continued

The loss allowance for trade and other receivables stratified according to the ageing profile at the reporting date is as follows:

	SA Rand	
Figures in million	Gross	Loss allowance
30 June 2022		
Not past due[1]	**689**	**20**
Past due by 1 to 30 days	**26**	**11**
Past due by 31 to 60 days	**26**	**9**
Past due by 61 to 90 days	**8**	**5**
Past due by more than 90 days	**72**	**66**
Past due by more than 361 days	**93**	**93**
Total	**914**	**204**
30 June 2021		
Not past due[1]	828	26
Past due by 1 to 30 days	26	9
Past due by 31 to 60 days	13	5
Past due by 61 to 90 days	14	6
Past due by more than 90 days	68	62
Past due by more than 361 days	81	71
Total	1 030	179

[1] *The gross amount includes the full trade receivables (metals) balance, which has no attributable loss allowance.*

During 2021 and 2022 there was no renegotiation of the terms of any of the receivables. As at 30 June 2022 and 30 June 2021, there was no collateral pledged or held for any of the receivables.

21 Investments in associates

Critical accounting estimates and judgements

The investments in associates are evaluated for impairment by comparing the entire carrying value of the investment (including loans to associates and preference shares) to the recoverable amount, which is the higher of value in use or fair value less costs to sell. Discounted cash flow models are used to calculate the net present value of the investments. The cash flows in the models include expected interest and capital payments on loans, dividends, redemption amounts and proceeds on disposal.

(a) Harmony acquired a 32.40% interest in Pamodzi on 27 February 2008, initially valued at R345 million. Pamodzi was listed on the JSE and had interests in operating gold mines in South Africa. Pamodzi was placed in liquidation in March 2009. As at 30 June 2022, to the best of our knowledge, the liquidation process has not been concluded. Refer to note 18(a) for details of the loan and provision of impairment of the loan.

(b) Rand Refinery provides precious metal smelting and refining services in South Africa. Harmony holds a 10.38% share in Rand Refinery. This investment is a strategic investment for the group as Rand Refinery is the only company that provides such services in South Africa. Although the group holds less than 20% of the equity shares of Rand Refinery, the group is able to exercise significant influence by virtue of having a right to appoint a director on the board. Through the 10.38% shareholding and the right to appoint a director on the board, the investment has been accounted for as an associate.

In December 2014, Rand Refinery drew down on a shareholder's loan of which Harmony's portion thereof was R120 million. Following an amended loan agreement signed in June 2017, the loan was converted into cumulative redeemable preference shares of no par value. The preference shares have been fully redeemed in the 2021 financial year.

Rand Refinery has a 31 August financial year-end.
The movement in the investments in associates during the year is as follows:

	SA Rand	
Figures in million	**2022**	2021
Balance at beginning of year	**126**	146
Redemption of preference shares	**—**	(36)
Dividend received	**(64)**	(67)
Share of profit in associate	**63**	83
Balance at end of year	**125**	126

22 Investment in joint operations

The group has a 50% interest in certain mining and exploration assets located in the Morobe province, PNG. Newcrest Mining Limited owns the remaining 50% interest in these assets. The asset in the joint arrangement is the Wafi-Golpu project. The joint arrangement is accounted for as a joint operation.

State participation

Under the conditions of the Wafi-Golpu exploration tenements, the PNG government (the State) has reserved the right prior to the commencement of mining to take up an equity interest of up to 30% of any mineral discovery within the Wafi-Golpu tenements. The right is exercisable by the State once at any time prior to the commencement of mining. If the State exercises this right, the exercise price is a pro-rata share of the accumulated exploration expenditure. Once the right is exercised, the State is responsible for its proportionate share of ongoing exploration and project development costs. The State has indicated its intention to exercise its option in full, however, as at 30 June 2022, this option has not been exercised.

Permitting

Special Mining Lease

In August 2016, application was made to the Mineral Resources Authority for a Special Mining Lease (SML) under the PNG Mining Act 1992. The application was subsequently updated and amended in March 2018.

Notwithstanding that the Prime Minister has publicly stated the Wafi-Golpu project is of national importance and therefore the State's objective is to permit the project as soon as possible, there have been considerable delays in the permitting process. These include a judicial review instituted in 2019 by the Governor and Government of Morobe Province. This related to a memorandum of agreement entered into between the State of PNG and the project proponents in connection with the progress towards and terms of a Mining Development Contract (MDC) to be entered into under the PNG Mining Act, which review stayed the conduct of negotiations. The memorandum of agreement was subsequently withdrawn, however, meaningful negotiations with the PNG State Negotiating Team only recommenced in the second half of this financial year.

During the last quarter of the year, senior Harmony executives met with the Prime Minister, Hon James Marape MP. Harmony confirmed its continued commitment to invest and grow in PNG. At the request of the Prime Minister, a follow-up meeting took place during May 2022 between the project proponents, the Prime Minister, various members of the National Negotiating Team, the Minerals Policy Institute and the Mineral Resources Authority, and other senior bureaucrats.

Following the PNG national general election that ended in August 2022, Hon James Marape MP was reappointed for a further term of office and, in meetings with the project proponents, has indicated that it is the government's intention to permit the project by July 2023. It is envisaged that meaningful SML permitting negotiations will resume during the second quarter of the 2023 financial year.

Environment Permit

In July 2018, application was made to the Conservation and Environment Protection Authority for an Environment Permit under the PNG Environment Act 2000, by the submission under the Act of an Environmental Impact Statement. The Environment Permit was granted in December 2020.

During March 2021, the Governor and Government of the Morobe Province instituted a judicial review in the Lae National Court against the grant by the Minister for the Environment of the Environment Permit, pending the resolution of which review the grant of an SML was stayed. Following an appeal to the Supreme Court, the National Court stay order was itself stayed, and the Supreme Court will now set directions for a substantive hearing of the appeal. The project proponents are not parties to this proceeding.

Pursuant to the PNG national general election, a new Governor of the Morobe Province has been appointed, and he has publicly declared his intention to withdraw the legal proceedings instituted by his predecessor.

Carrying amount and impairment considerations

The carrying amount of the project amounts to R2.7 billion (2021: R2.4 billion). The change year on year relates to foreign exchange translation. Due to the group-wide trigger for impairment (refer to note 6), the recoverable amount of the Wafi-Golpu project was determined and an impairment assessment was performed in terms of IFRS 6. No impairment (2021: Rnil) has been recognised at 30 June 2022

The recoverable amount for the project was determined on a resource multiple valuation approach using the same values as those for South African underground resources. Refer to note 15 for the assumptions used in the valuation. This is a level 3 fair value measurement.

23 Inventories

Accounting policy

Inventories, which include bullion on hand, gold-in-process, gold in lock-up, ore stockpiles and consumables, are measured at the lower of cost and net realisable value. Net realisable value is assessed at each reporting date and is determined with reference to relevant market prices.

The cost of bullion, gold-in-process and gold in lock-up is determined by reference to production cost, including amortisation and depreciation at the relevant stage of production. Ore stockpiles are valued at average production cost. Stockpiles and gold in lock-up are classified as non-current assets where the stockpile's volume exceeds current processing capacity and where a portion of static gold in lock-up is expected to be recovered more than 12 months after balance sheet date.

Gold-in-process inventories represent materials that are currently in the process of being converted to a saleable product. In-process material is measured based on assays of the material fed to process and the projected recoveries at the respective plants. In-process inventories are valued at the average cost of the material fed to process attributable to the source material coming from the mine or stockpile plus the in-process conversion costs, including the applicable depreciation relating to the process facility, incurred to that point in the process. Gold-in-process includes gold in lock-up, which is generally measured from the plants onwards. Gold in lock-up is expected to be extracted when plants are demolished at the end of their useful lives, which is largely dependent on the estimated useful life of the operations feeding the plants.

At the group's open pit operations, gold-in-process represents production in broken ore form.

Consumables are valued at weighted average cost value after appropriate allowances for slow-moving and redundant items.

Critical accounting estimates and judgements

Judgement is applied in estimating the provision for stock obsolescence. The provision is recognised on items not considered critical as a percentage of the value of the inventory, depending on the period elapsed since the inventory was purchased or issued. Inventory held for longer than five years is written down to zero unless there is sufficient evidence of a recoverable amount.

	SA Rand	
Figures in million	**2022**	2021
Gold in lock-up (a)	**136**	65
Gold-in-process, ore stockpiles and bullion on hand	**1 054**	1 039
Consumables at weighted average cost (net of provision) (b)	**1 764**	1 503
Total inventories	**2 954**	2 607
Non-current portion of gold in lock-up and gold-in-process included in Other non-current assets	**(136)**	(65)
Total current portion of inventories	**2 818**	2 542
Included in the balance above is:		
Inventory valued at net realisable value	**136**	65

(a) The reduction of the life-of-mine of the Tshepong Operations (refer to note 6) and the increased gold price assumptions used (refer to note 15) impacted the discounting of the net realisable value. This led to an increased valuation at 30 June 2022.

(b) The increase year on year is mainly due to the impact of supply chain constraints on prices (refer to note 4). Increases above inflation have been seen in a number of key components of the operations such as steel, diesel, chemicals and reagentsl.

During the year, an increase of R115 million (2021: R39 million decrease) to the provision for slow-moving and redundant stock was made. The total provision at 30 June 2022 was R407 million (2021: R292 million).

24 Share capital

Accounting policy

Ordinary shares are classified as equity, incremental costs directly attributable to the issue of new shares or options are shown in equity as a deduction, net of tax, from the proceeds.

The cost of treasury shares is eliminated against the share capital balance.

Authorised

1 200 000 000 (2021: 1 200 000 000) ordinary shares with no par value.
4 400 000 (2021: 4 400 000) convertible preference shares with no par value.

Issued

616 525 702 (2021: 616 052 197) ordinary shares with no par value. All issued shares are fully paid.
4 400 000 (2021: 4 400 000) convertible preference shares with no par value.

Share issues

Share issues relating to employee share options

An additional 473 505 (2021: 12 909 491) shares were issued to settle the exercise of share options by employees relating to Harmony's management share option schemes. Note 36 sets out the details in respect of the share option schemes.

Treasury shares

Included in the total of issued shares are the following treasury shares:

Number of shares	2022	2021
Ordinary shares		
Lydenburg Exploration Limited[1]	**335**	335
Kalgold Share Trust[2]	**47 046**	47 046
Harmony ESOP Trust[2 4]	**—**	5 894 081
Convertible preference shares		
Harmony Gold Community Trust[3]	**4 400 000**	4 400 000

[1] *A wholly-owned subsidiary.*
[2] *Trust controlled by the group.*
[3] *The issue of the convertible preference shares did not impact the group's consolidated financial statements as the Harmony Gold Community Trust is controlled by the group.*
[4] *On 15 January 2022, the lock-in period expired for the Harmony ESOP Trust (Sisonke Scheme). Settlements and share distributions were made and the shares are no longer classified as treasury shares.*

25 Other reserves

	SA Rand	
Figures in million	2022	2021
Foreign exchange translation reserve (a)	**3 097**	2 355
Hedge reserve (b)	**480**	1 051
Share-based payments (c)	**3 249**	3 106
Post-retirement benefit actuarial gain/(loss) (d)	**(5)**	(18)
Acquisition of non-controlling interest in subsidiary (e)	**(381)**	(381)
Equity component of convertible bond (f)	**277**	277
Repurchase of equity interest (g)	**(98)**	(98)
Equity instruments designated at fair value through other comprehensive income (h)	**153**	135
Other	**(28)**	(28)
Total other reserves	**6 744**	6 399

(a) The balance of the foreign exchange translation reserve movement represents the cumulative translation effect of the group's off-shore operations.

25 Other reserves continued

(b) Harmony has entered into gold hedging contracts. Cash flow hedge accounting is applied to these contracts, resulting in the effective portion of the unrealised gains and losses being recorded in other comprehensive income (other reserves). Refer to note 19 for further information.

The reconciliation of the hedge reserve is as follows:

	SA Rand	
Figures in million	**2022**	2021
Balance at beginning of year	**1 051**	(3 395)
Remeasurement of gold hedging contracts	**(571)**	4 467
Unrealised gain/(loss) on gold hedging contracts	**(242)**	2 992
Released to revenue on maturity of the gold hedging contracts	**(497)**	2 296
Foreign exchange translation	**(2)**	(39)
Deferred taxation thereon	**170**	(782)
Attributable to non-controlling interest	**—**	(21)
Balance at end of year	**480**	1 051
Attributable to:		
Rand gold hedging contracts	**441**	1 069
US dollar gold hedging contracts	**39**	(18)

(c) The reconciliation of the movement in the share-based payments is as follows:

	SA Rand	
Figures in million	**2022**	2021
Balance at beginning of year	**3 106**	2 950
Share-based payments expensed (i)	**143**	156
Balance at end of year	**3 249**	3 106

(i) The group issues equity-settled instruments to certain qualifying employees under an employee share option scheme and employee share ownership plan (ESOP) to award shares from the company's authorised but unissued ordinary shares. Equity share-based payments are measured at the fair value of the equity instruments at the grant date and are expensed over the vesting period, based on the group's estimate of the shares that are expected to vest. Refer to note 36 for more details.

(d) The actuarial gains or losses related to the post-retirement benefit obligation will not be reclassified to the income statement Refer to note 27.

(e) On 15 March 2004, Harmony announced that it had made an off-market cash offer to acquire all the ordinary shares, listed and unlisted options of Abelle Limited, held by non-controlling interests. The excess of the purchase price of R579 million over the carrying amount of non-controlling interest acquired, amounting to R381 million, has been accounted for under other reserves.

(f) On 24 May 2004, the group issued a convertible bond. The amount representing the value of the equity conversion component is included in other reserves, net of deferred income taxes. The equity conversion component is determined on the issue of the bonds and is not changed in subsequent periods. The convertible bonds were repaid in 2009.

(g) On 19 March 2010, Harmony Gold Mining Company Limited concluded an agreement with African Vanguard Resources (Proprietary) Limited (AVRD), for the purchase of its 26% share of the mining titles of the Doornkop South Reef. The original sale of the 26% share in the mining titles was accounted for as an in-substance call option by AVRD over the 26% mineral right. The agreement to purchase AVRD's 26% interest during the 2010 financial year was therefore considered to be a repurchase of the option (equity interest). The 26% interest was transferred from AVRD to Harmony in exchange for Harmony repaying the AVRD Nedbank loan and the issue of 2 162 359 Harmony shares. The difference between the value of the shares issued of R152 million, the liability to the AVRD and transaction costs, have been taken directly to equity.

(h) Includes R112 million (2021: R110 million) related to the cumulative fair value movement of Harmony's interest in Rand Mutual Assurance. Refer to note 18.

Accounting policy – provisions (applicable to notes 26, 27, and 30)
Provisions are recognised when the group has a present legal or constructive obligation as a result of past events where it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation, and a reliable estimate of the amount of the obligation can be made.

The amount recognised as a provision is the net present value of the best estimate of the expenditure required to settle the present obligation at balance sheet date. It is calculated using a pre-tax rate that reflects the current market assessment of the time value of money and the risks specific to the obligation. The estimate takes into account the associated risks and uncertainties. The increase in the provision due to the passage of time is recognised as interest expense.

Provisions are reviewed at each balance sheet date and adjusted to reflect the current best estimate. If it is no longer probable that an outflow of economic benefits will be required, the provision is reversed.

26 Provision for environmental rehabilitation

Accounting policy
Estimated long-term environmental obligations, comprising pollution control, rehabilitation and mine closure, are based on the group's environmental management plans in compliance with current technological, environmental and regulatory requirements.

Based on disturbances to date, the net present value of expected rehabilitation cost estimates is recognised and provided for in full in the financial statements. The estimates are reviewed annually and are discounted using a pre-tax risk-free rate that is adjusted to reflect the current market assessments of the time value of money and the risks specific to the obligation.

Annual changes in the provision consist of finance costs relating to the change in the present value of the provision and inflationary increases in the provision estimate, as well as changes in estimates. The present value of environmental disturbances created is capitalised to mining assets against an increase in the rehabilitation provision. If a decrease in the liability exceeds the carrying amount of the asset, the excess is recognised immediately in the income statement. If the asset value is increased and there is an indication that the revised carrying value is not recoverable, impairment is assessed in accordance with the accounting policy dealing with impairments of non-financial assets (refer to note 2.5). Rehabilitation projects undertaken included in the estimates are charged to the provision as incurred. The cost of ongoing current programmes to prevent and control pollution is charged against income as incurred. Over time, the liability is increased to reflect an interest element, and the capitalised cost is depreciated over the life of the related asset.

Critical accounting estimates and judgements
Significant judgement is applied in estimating the ultimate rehabilitation cost that will be required in future to rehabilitate the group's mines, related surface infrastructure and tailings dams. Ultimate cost may significantly differ from current estimates. The following rates were used in the calculation of the provision:

%	2022	2021	2020
South African operations			
Inflation rate			
– short term (Year 1)	**6.55**	5.11	4.50
– short term (Year 2)	**5.20**	4.99	4.50
– long term (Year 3 onwards)	**5.50**	5.25	5.00
Discount rates			
– 12 months	**5.50**	4.90	3.90
– one to five years	**8.30**	7.30	5.55
– six to nine years	**9.90**	9.00	8.20
– ten years or more	**10.90**	10.30	10.95
PNG operations			
Inflation rate	**5.33**	4.45	6.28
Discount rate	**8.45**	6.20	5.50

The group's mining and exploration activities are subject to extensive environmental laws and regulations. The group has made, and expects to make in the future, expenditures to comply with such laws and regulations, but cannot predict the full amount of such future expenditures. Estimated future reclamation costs are based principally on legal and regulatory requirements.

26 Provision for environmental rehabilitation continued

The following is a reconciliation of the total provision for environmental rehabilitation:

	SA Rand	
Figures in million	**2022**	2021
Balance at beginning of year	**4 662**	3 408
Change in estimate – Balance sheet[1]	**(248)**	(774)
Change in estimate – Income statement[1]	**136**	135
Utilisation of provision	**(65)**	(15)
Time value of money and inflation component of rehabilitation costs	**377**	296
Acquisitions[2]	**—**	1 856
Translation	**151**	(244)
Balance at end of year	**5 013**	4 662

[1] *Changes to life-of-mine plans for certain operations in 2021 and 2022 impacted the discounting of the cash flows. Also contributing to the movement in 2021 are the changes applied to the assumptions for Mponeng and the VR and WW closure businesses following the acquisition.*
[2] *This relates to the acquisition of Mponeng operations and related assets.*

The environmental provision for PNG amounts to R1 185 million (2021: R1 084 million) and is unfunded due to regulations in the operating country.

While the ultimate amount of rehabilitation costs to be incurred in the future is uncertain, the group has estimated that, based on current environmental and regulatory requirements, the total undiscounted cost for the operations, in current monetary terms, is as follows:

	SA Rand	
Figures in million	**2022**	2021
Future net undiscounted obligation		
Ultimate estimated rehabilitation cost	**7 126**	6 959
Amounts invested in environmental trust funds (refer to note 17)	**(5 244)**	(5 064)
Total future net undiscounted obligation	**1 882**	1 895

The group's South African mines are required to comply with the National Environmental Act's (NEMA) financial provision requirements. They are also required to substantively review and align their financial provision in accordance with these regulations during the relevant transitional period, which has now been extended to 19 September 2023. The group intends to finance the ultimate rehabilitation costs from the money invested in environmental trust funds as well as the proceeds on the sale of assets and gold from plant clean-up at the time of mine closure. The group has guarantees in place, some cash-backed, relating to some of the environmental liabilities. Refer to notes 17 and 38.

27 Other provisions

	SA Rand	
Figures in million	**2022**	2021
Provision for silicosis settlement (a)	**820**	854
Retirement benefit obligation (b)	**251**	247
Total other provisions	**1 071**	1 101
Current portion of other provisions	**139**	175
Non-current portion of other provisions	**932**	926

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(a) Provision for silicosis settlement

Critical accounting estimates and judgements

Significant judgement is applied in estimating the cost that will be required in future to settle any claims against certain of the group's mines. The ultimate cost may differ from current estimates.

The provision amount was based on estimates of the number of potential claimants, levels of disease progression and take-up rates. These estimates were informed by historic information, published academic research and professional opinion. The key assumptions that were made in the determination of the provision amount include:

- Silicosis prevalence rates
- Estimated settlement per claimant
- Benefit take-up rates
- Disease progression rates
- Timing of cash flows.

A discount rate of 6.5% (2021: 6.2%) (2020: 7.6%) was used, based on South African government bonds with similar terms to the obligation.

There is uncertainty with regard to the rate at which potential claims would be reported as well as the benefit take-up rates. Refer to sensitivity analysis on the key assumptions below.

Harmony and certain of its subsidiaries (Harmony group), together with other mining companies, were named in a class action suit for silicosis and tuberculosis which was certified by the Johannesburg High Court in May 2016. On 26 July 2019, the Johannesburg High Court approved the settlement of the silicosis and tuberculosis class action suit between the Occupational Lung Disease Gold Working Group (the Working Group) – representing Gold Fields, African Rainbow Minerals, Anglo American SA, AngloGold Ashanti, Harmony and Sibanye Stillwater – and lawyers representing affected mineworkers (settlement agreement). The mandatory three-month period, during which potential beneficiaries could opt out of the settlement agreement and the audit thereof was completed in December 2019. The Tshiamiso Trust will oversee the tracking and tracing of class members, process all submitted claims, including the undertaking of benefit medical examinations, and pay benefits to eligible claimants. A jointly controlled Special Purpose Vehicle has been set up to act as an agent for the Working Group in relation to certain matters set out in the settlement agreement and trust deed.

During the 2021 financial year, the Working Group paid the legal costs of the claimants' attorneys and other initial amounts as set out in the settlement agreement. On 31 January 2020, the Working Group commenced the payment of their quarterly administration and benefit contributions to the Tshiamiso Trust to enable the trustees to settle benefits of eligible claimants. Those payments are revisited as necessary annually, based on activities and claims.

Harmony has provided for the estimated cost of the settlement based on actuarial assessments. A portion of the provision has been transferred to current liabilities. The nominal amount for Harmony group is R993 million.

The following is a reconciliation of the total provision for the silicosis settlement:

	SA Rand	
Figures in million	**2022**	2021
Balance at beginning of year	**854**	892
Change in estimate	**23**	80
Time value of money and inflation component	**52**	52
Payments[1, 2]	**(109)**	(170)
Balance at end of year	**820**	854
Current portion of silicosis settlement provision	**139**	175
Non-current portion of silicosis settlement provision	**681**	679

[1] *These payments comprise mainly the administration and benefit contributions to the Tshiamiso Trust.*
[2] *The amount for 2021 includes the legal costs for the claimants' attorneys.*

27 Other provisions continued

(a) Provision for silicosis settlement continued

Sensitivity analysis

Management has considered the information available regarding key assumptions, as well as the uncertainties and term of the projections, and determined variances for a reasonable (possible) range to apply to the key assumptions. Information considered included medical data and evidence from the silicosis claim process, which has not changed significantly since the liability was recognised. Management also considered the guidance provided by the actuarial specialists as to what could be a reasonably possible change for each item. The impact of these reasonable possible changes on the assumptions would increase or decrease the provision amount by the following amounts:

	SA Rand	
Figures in million	**2022**	2021
Effect of an increase in the assumption:		
Change in benefit take-up rate[1]	**91**	85
Change in silicosis prevalence[2]	**91**	85
Change in disease progression rates[3]	**49**	42
Effect of a decrease in the assumption:		
Change in benefit take-up rate[1]	**(91)**	(85)
Change in silicosis prevalence[2]	**(91)**	(85)
Change in disease progression rates[3]	**(49)**	(42)

[1] *Change in benefit take-up rate: the take-up rate does not significantly affect the administration fees, but a 10% change results in a proportionate change in the base compensation values.*

[2] *Change in the silicosis prevalence: the assumptions that will result in a change in the estimated number of cases are either a 10% change in the assumed labour numbers or a 10% change in the disease risk.*

[3] *Change in disease progression rates: a 10% shorter/longer disease progression period was used, which results in more advanced silicosis cases. This assumption is not applicable to the dependant or TB classes.*

The above sensitivity analysis is based on a change in an assumption while holding all other assumptions constant. In practice, this is unlikely to occur, and changes in some of the assumptions may be correlated. A change in the settlement claim amount would result in a change in the provision amount on a Rand for Rand basis.

The ultimate outcome of this matter remains uncertain, with the number of eligible potential claimants successfully submitting claims and receiving compensation being uncertain. The provision recorded in the financial statements is consequently subject to adjustment or reversal in the future.

(b) Retirement benefit obligation

Accounting policy

The group provides medical cover to current employees and certain retirees through certain funds. The medical accounting costs for the defined benefit plan are assessed using the projected unit credit method. The healthcare obligation is measured at the present value of the estimated future cash outflows using government bond interest rates consistent with the terms and risks of the obligation. Actuarial gains and losses as a result of these valuations are recognised in other comprehensive income (OCI) at revaluation date. Actuarial gains and losses recognised in OCI will not be recycled to profit or loss. The future liability for current and retired employees and their dependants is accrued in full based on actuarial valuations obtained annually.

Critical accounting estimates and judgements

An updated actuarial valuation is carried out at the end of each financial year. Assumptions used to determine the liability include a discount rate of 12.3%, no increases in employer subsidies (in terms of the agreement), mortality rates according to the SA 1956/62 mortality table (SA "a mf" tables) (retirement age of 60) and a medical inflation rate of 9.0% (2021: discount rate of 11.2%, retirement age of 60 and 8.5% inflation rate) (2020: discount rate of 11.2%, retirement age of 60 and 8.5% inflation rate). Management determined the discount rate by assessing South African government bonds with similar terms to the liability. The changes to the discount rate and medical inflation rate are similar to changes in interest and inflation rates in South Africa.

27 Other provisions continued

(b) Retirement benefit obligation continued

Pension and provident funds

The group contributes to several pension and provident funds governed by the Pension Funds Act, 1956 for the employees of its South African subsidiaries. The pension funds are multi-employer defined contribution industry plans. The group's liability is therefore limited to its monthly determined contributions. The provident funds are funded on a "monetary accumulative basis" with the member's and employer's contributions having been fixed in the constitution of the funds. The Australian group companies make contributions to each employee's superannuation (pension) funds in accordance with the Superannuation Guarantee Scheme (SGS). The SGS is a Federal Government initiative enforced by law which compels employers to make regular payments to regulated funds providing for each employee on their retirement. The SGS was set at a minimum of 10.0% of gross salary and wages for the 2022 year (2021: 9.5%). The fund is a defined contribution plan. The PNG Superannuation Act 2002 requires a compulsory employer contribution of 8.4% (2021: 8.4%) into an approved superannuation (pension) fund if an employee is appointed for a period of three months or more. The approved superannuation funds are defined contribution plans.

Substantially all the group's employees are covered by the above mentioned retirement benefit plans. Funds contributed by the group for the 2022 financial year amounted to R1 125 million (2021: R929 million).

Post-retirement benefits other than pensions

Harmony inherited post-retirement medical benefit obligations with the Freegold acquisition in 2002, the Moab Khotsong acquisition in 2018 and the Mponeng acquisition in 2021. Except for the above mentioned employees, Harmony has no other post-retirement benefit obligation for the other group employees.

The group's obligation is to pay a subsidy of 2% for every completed year of employment up to a maximum of 50% of total medical aid contributions, commencing on date of retirement. Should the employee die, either in service or after retirement, this benefit will transfer to his/her dependants. The medical aid tariffs are based on the Bestmed medical scheme (Bestmed) options.

The principal actuarial assumptions used to determine the present value of unfunded obligations are discussed above. In addition, the following was also considered:

- It is assumed that all Continuation and Widow Members (CAWMs) will remain on the current benefit option and income band. For employed members, post-employment contributions were assumed to be equal to the average payable for the current CAWMs membership
- It is assumed that not all employed members will remain employed until retirement therefore estimated resignation and ill-health retirement rates are also taken into account
- It is assumed that 90% of employed members will be married at retirement or earlier death and that wives are four years younger than their husbands.

Through the post-employment medical plan, the group is exposed to a number of risks, the most significant of which are discussed below:

- Change in bond yields: A decrease in the bond yields will increase the plan liability
- Inflation risk: The obligation is linked to inflation and higher inflation will lead to a higher liability
- Life expectancy: The obligation is to provide benefits for the life of the member, so increases in life expectancy will result in an increase in the plan's liabilities.

The liability is unfunded and will be settled out of cash and cash equivalents when it becomes due. The liability is based on an actuarial valuation conducted during the year ended 30 June 2022, using the projected unit credit method. The next actuarial valuation will be performed on 30 June 2023.

	SA Rand	
Figures in million	**2022**	2021
Present value of all unfunded obligations	**251**	247
Current employees	**99**	99
Retired employees	**152**	148
The movement in the retirement benefit obligation is as follows:		
Balance at beginning of year	**247**	193
Acquisition of Mponeng operations and related assets	**—**	27
Contributions paid	**(13)**	(12)
Other expenses included in staff costs/current service cost	**4**	1
Finance costs	**27**	22
Net actuarial (gain)/loss recognised in other comprehensive income during the year	**(14)**	16
Balance at end of year (non-current)	**251**	247

27 Other provisions continued

(b) Retirement benefit obligation continued

Post-retirement benefits other than pensions continued

The net actuarial gain for 2022 is due to the results of the higher real rate of discount assumed and used (2021: The net actuarial loss mainly resulted from the shortfall related to the take-on of the Mponeng operation medical benefit obligation).

	SA Rand	
Figures in million	**2022**	2021
The net liability of the defined benefit plan is as follows:		
Present value of defined benefit obligation	**251**	247
Fair value of plan assets	**—**	—
Net liability of defined benefit plan	**251**	247

Management considered whether a reasonably possible change in any of the key assumptions would have a material impact on the obligation, service cost or finance costs. It was determined that changes would result in an immaterial increase or decrease.

The group expects to contribute approximately R14 million to the benefit plan in 2023. The weighted average duration of the defined benefit obligation is 11 years.

28 Leases

Accounting policy

The group assesses the presence of a lease in a contract as at the commencement date of the agreement. Having determined that a contract contains a lease asset (and respective contractual cash obligations), Harmony recognises a right-of-use asset and lease liability. The group discloses expensed amounts for contracts assessed as variable leases, low value asset leases and short-term leases. The disclosed value of these expensed leases is either determined on a straight-line basis over the duration of the lease or on a systematic basis that fairly indicates the consumption of the lease contract. All expensed lease contracts are recognised in production costs, corporate, administration and other expenditure in the income statement.

The group applies the following practical expedients when assessing lease contracts:
- The low value lease exemption – the group has elected to take the low value exemption with a value of R50 000 for the individual leased asset value and also applied its accounting policy on capitalisation of assets based on IAS 1 materiality assessment
- The short-term lease exemption – leases with a duration of less than a year will be expensed in the income statement on a straight-line basis
- Non-lease components – the group has applied the practical expedient not to separate non-lease components from lease components, and instead account for each lease component and any associated non-lease components as a single lease component for the classes of the underlying asset where it is appropriate to do so.

The lease liability is initially measured at the present value of the lease payments that are not paid at the commencement date, discounted by using the rate implicit in the lease. If this rate cannot be readily determined, the group uses its incremental borrowing rate. The group has applied the IFRS 16 portfolio approach in determining the discount rate for leases. As such, a single discount rate has been used for contracts that share similar characteristics. The group has determined that a portfolio of contracts that are denominated in the same currency may use a single discount rate. This rate has been determined using various factors including in-country borrowings as well as other sources of finance. The nature of the right-of-use assets was also considered.

Lease payments included in the measurement of the lease liability comprise:
- Fixed lease payments (including in-substance fixed payments), less any lease incentives
- Variable lease payments that depend on an index or rate, initially measured using the index or rate at the commencement date
- The amount expected to be payable by the lessee under residual value guarantees
- The exercise price of purchase options, if the lessee is reasonably certain to exercise the options
- Payments of penalties for terminating the lease, if the lease term reflects the exercise of an option to terminate the lease.

The non-current and current portions of the lease liability is included in other non-current liabilities and trade and other payables in the balance sheet respectively.

28 Leases continued

Accounting policy continued

The lease liability is subsequently measured by increasing the carrying amount to reflect interest on the lease liability (using the effective interest method) and by reducing the carrying amount to reflect the lease payments made. The group remeasures the lease liability (and makes a corresponding adjustment to the related right-of-use asset) whenever:

- The lease term has changed or there is a change in the assessment of exercise of a purchase option, in which case the lease liability is remeasured by discounting the revised lease payments using a revised discount rate
- The lease payments change due to changes in an index or rate or a change in expected payment under a guaranteed residual value, in which cases the lease liability is remeasured by discounting the revised lease payments using the initial discount rate (unless the lease payments change is due to a change in a floating interest rate, in which case a revised discount rate is used)
- A lease contract is modified and the lease modification is not accounted for as a separate lease, in which case the lease liability is remeasured by discounting the revised lease payments using a revised discount rate.

The right-of-use assets comprise the initial measurement of the corresponding lease liability, lease payments made at or before the commencement day, any initial direct costs and restoration costs as described below. They are subsequently measured at cost less accumulated depreciation and impairment losses.

The lease term shall be determined as the non-cancellable period of a lease, together with:

- Periods covered by an option to extend the lease if management is reasonably certain to make use of that option and/or
- Periods covered by an option to terminate the lease, if management is reasonably certain not to make use of that option.

Whenever the group incurs an obligation for costs to dismantle and remove a leased asset, restore the site on which it is located or restore the underlying asset to the condition required by the terms and conditions of the lease, a provision is recognised and measured under IAS 37 ***Provisions, Contingent Liabilities and Contingent Assets***. The costs are included in the related right-of-use asset, unless those costs are incurred to produce inventories.

Right-of-use assets are depreciated over the shorter period of lease term and useful life of the underlying asset. If a lease transfers ownership of the underlying asset or the cost of the right-of-use asset reflects that the group expects to exercise a purchase option, the related right-of-use asset is depreciated over the useful life of the underlying asset. The depreciation starts at the commencement date of the lease.

The right-of-use assets are presented in the property, plant and equipment line in the balance sheet. The group applies its existing accounting policy on impairment of non-financial assets to determine whether a right-of-use asset is impaired and accounts for any identified impairment loss accordingly.

Critical accounting estimates and judgements

Key judgements applied in determining the right-of-use assets and lease liability were:

- Assessing whether an arrangement contains a lease: various factors are considered, including whether a service contract includes the implicit right to the majority of the economic benefit from assets used in providing the service
- Determining the lease term: management considers all facts and circumstances that create an economic incentive to exercise an extension option, or not exercise a termination option. Extension options (or periods after termination options) are only included in the lease term if the lease is reasonably certain to be extended (or not terminated). The assessment is reviewed if a significant event or a significant change in circumstances occurs which affects this assessment and that is within the control of the lessee. The company applies the considerations for short-term leases where leases are modified to extend the period by 12 months or less on expiry and these modifications are assessed on a standalone basis
- Determining the discount rate: in determining the incremental borrowing rates, management considers the term of the lease, the nature of the asset being leased, in country borrowings as well as other sources of finance.

The movement in the right-of-use assets is as follows:

	SA Rand	
Figures in million	**2022**	2021
Balance at beginning of year	**262**	151
Acquisition of Mponeng operations and related assets[1]	**—**	11
Additions	**353**	174
Modifications	**(2)**	35
Depreciation	**(166)**	(80)
Terminations	**—**	(1)
Translation	**33**	(28)
Balance at end of year	**480**	262

[1] *Refer to note 14 for further information on the acquisition.*

28 Leases continued

The non-current and current portions of the lease liability is included in other non-current liabilities and trade and other payables in the balance sheet respectively.

The movement in the lease liabilities is as follows:

	SA Rand	
Figures in million	**2022**	2021
Balance at beginning of year	**261**	141
Acquisition of Mponeng operations and related assets[1]	**—**	40
Additions	**315**	135
Modifications	**(2)**	35
Interest expense on lease liabilities	**19**	13
Lease payments made	**(177)**	(80)
Terminations	**—**	(1)
Translation	**26**	(22)
Balance at end of year	**442**	261
Current portion of lease liabilities	**197**	107
Non-current portion of lease liabilities	**245**	154

[1] *Refer to note 14 for further information on the acquisition.*

The maturity of the group's undiscounted lease payments is as follows:

	SA Rand	
Figures in million	**2022**	2021
Less than and including one year	**206**	112
Between one and five years	**205**	225
Five years and more	**133**	—
Total	**544**	337

The amounts included in the income statement relating to leases:

	SA Rand	
Figures in million	**2022**	2021
Depreciation of right-of-use assets[1]	**166**	80
Interest expense on lease liabilities[2]	**19**	13
Short-term leases expensed[3]	**134**	187
Leases of low value assets expensed[3]	**21**	15
Variable lease payments expensed[3, 4]	**1 050**	883

[1] *Included in depreciation and amortisation.*
[2] *Included in finance costs.*
[3] *Included in production costs and corporate, administration and other expenditure.*
[4] *These payments relate mostly to mining and drilling contracts. Variable lease payments comprise 76% of the total lease payments made during the period. The majority of the variable lease payments made relate to the contracting of specialists for mining operations at Harmony's open-pit mines and are determined on a per tonne or square metre basis.*

The total cash outflows for leases are:

	SA Rand	
Figures in million	**2022**	2021
Lease payments made for lease liabilities	**177**	80
Short-term lease payments	**134**	187
Lease payments of low value assets leased	**21**	15
Variable lease payments	**1 050**	883
Total cash outflows for leases	**1 382**	1 165

During 2022, Harmony reached financial close on power purchase agreements for the procurement of electricity from 30 MW photovoltaic generation facilities. These agreements constitute variable lease contracts that Harmony is committed to but which have not yet commenced as at 30 June 2022. The variable lease payments from these contracts are to be determined with reference to the quantity of megawatt hours (MWh) generated by the facilities.

29 Contingent consideration

Accounting policy

The contingent consideration liability was initially recognised at fair value on 1 October 2020 in accordance with IFRS 3. The liability was included as part of the consideration transferred for the acquisition of the Mponeng operations and related assets (refer to note 14). Changes in the fair value of the liability subsequent to initial recognition are included in other operating expenses.

Critical accounting estimates and judgements

The contingent consideration liability was initially valued using the discounted cash flow valuation method, discounted at a post-tax real rate of 10.6%.Other assumptions are the forecast Rand/US dollar exchange rate and life-of-mine plans. Refer to note 14 for details. Subsequent to initial recognition, the assumptions applied for the valuation of the liability were updated. As at 30 June 2022, the contingent consideration was valued using a post-tax real discount rate of 10.2% (2021: 10.3%). Refer to note 15 for exchange rate assumptions and other estimates used in the life-of-mine plans. The fair value calculated for the contingent consideration is level 3 in the fair value hierarchy due to the use of unobservable inputs. As at 1 October 2020, and the financial years ended 30 June 2021 and 30 June 2022, the contingent consideration attributable to the below infrastructure ounces of gold was valued at Rnil, as no ounces from below infrastructure sections of the orebody have been included in the life-of-mine plan of Mponeng.

The movement in the contingent consideration liability is as follows:

	SA Rand	
Figures in million	**2022**	2021
Balance at beginning of year	**417**	—
Initial recognition as at 1 October 2020	**—**	544
Remeasurement of contingent consideration[1]	**(61)**	(127)
Balance at end of year	**356**	417

[1] *The remeasurement of the liability relates primarily to a change in the production profile, which is based on Harmony's life-of-mine plan for the Mponeng operation.*

30 Other non-current liabilities

	SA Rand	
Figures in million	**2022**	2021
Sibanye Beatrix ground swap royalty[1]	**18**	19
Lease liability – non-current[2]	**245**	154
Provision for Harmony Education Benefit Fund	**5**	5
Total non-current liabilities	**268**	178

[1] *The decrease is mainly due to the estimated gold allocation decreasing from 2 068kg to 1 820kg based on approved life-of-mine plans.*
[2] *Refer to note 28 for an analysis of the lease liability.*

31 Streaming arrangements

Accounting policy

The streaming contract was assessed and has been accounted for as an own-use customer contract. At acquisition, the streaming contract was initially recognised at a fair value (refer to note 14) of R1.4 billion in accordance with IFRS 3. The fair value of the contract took into consideration the existing unfavourable gold price terms at acquisition, in relation to the comparative market gold price.

The obligation to deliver the contractually stipulated ounces over the remaining term of the agreement results in a significant financing component. The interest accrues on the contract liability over the remaining contractual term. As the performance obligation to deliver gold is met, the contract liability unwinds into revenue classified as "consideration from streaming contract" in note 5.

The current portion of the liability is determined with reference to the current production profile of the operation for the next 12 months.

Critical accounting estimates and judgements

Refer to note 14 for the critical estimates and judgements relating to the initial recognition of the streaming contract liability. Changes in the production plan will affect the subsequent measurement prospectively. This is the only input that is considered for subsequent measurement. Harmony's cost of debt of 7.7% was used to impute the finance cost for the significant financing component recognised on the streaming contract liability.

31 Streaming arrangements continued

Streaming arrangement with Franco-Nevada Barbados

Harmony's subsidiary, Chemwes, which owns the Mine Waste Solutions operation (MWS), has a contract with Franco-Nevada Barbados (Franco-Nevada). Franco-Nevada is entitled to receive 25% of all the gold produced through MWS. As part of the acquisition of MWS (refer to note 14), Harmony assumed the obligations enforced by the Franco-Nevada contract.

The contract is a streaming agreement that commenced on 17 December 2008 for which Franco-Nevada paid US$125 million upfront for the right to purchase 25% of the gold production through MWS for a fixed amount of consideration until the balance of gold cap is delivered. As at 1 October 2020, the US$125 million upfront payment has been settled. The gold cap is a provision included in the contract, which stipulates the maximum quantity of gold to be sold to Franco-Nevada over the term of the agreement. The consideration is determined as the lower of the quoted spot gold price as per the London Metals Exchange or US$400 per ounce, adjusted with an annual escalation adjustment.

Contract liability and gold delivered

Reconciliation of the ounces owed to Franco-Nevada:

Figures in ounces (oz)	**2022**	2021
Balance at beginning of year	**84 429**	—
Initial recognition as at 1 October 2020	**—**	100 686
Delivered	**(23 272)**	(16 257)
Balance at end of year	**61 157**	84 429

The contract price receivable in US$/oz for each ounce of gold delivered is as follows:

- 1 October 2020 – 16 December 2020: US$433/oz
- 17 December 2020 – 16 December 2021: US$437/oz
- 17 December 2021 – 30 June 2022: US$442/oz.

Reconciliation of the streaming contract liability:

	SA Rand	
Figures in million	**2022**	2021
Balance at beginning of year	**1 091**	—
Initial recognition as at 1 October 2020	**—**	1 417
Finance costs related to significant financing component	**67**	71
Non-cash consideration for delivery of gold ounces (included in Revenue)	**(471)**	(397)
Balance at end of year	**687**	1 091
Current portion of streaming contract liability	**309**	396
Non-current portion of streaming contract liability	**378**	695

Accounting policy – financial liabilities (applicable to notes 32 and 33)

Financial liabilities are initially measured at fair value when the group becomes a party to their contractual arrangements. Transaction costs are included in the initial measurement of financial liabilities, except for financial liabilities classified at fair value through profit or loss. The subsequent measurement of financial liabilities is discussed below. A financial liability is derecognised when the obligation under the liability is discharged, cancelled or expires. The group classifies financial liabilities as follows:

- Borrowings are initially recognised at fair value net of transaction costs incurred and subsequently measured at amortised cost, comprising original debt less principal payments and amortisation, using the effective yield method. Any difference between proceeds (net of transaction cost) and the redemption value is recognised in the income statement over the period of the borrowing using the effective interest rate method. Extension options of borrowings facilities are treated as loan commitments.

  Fees paid on the establishment of the loan facilities are capitalised as a pre-payment and amortised over the period of the facility to which it relates, to the extent it is probable that some or all of the facility will be drawn down. To the extent there is no evidence that it is probable that some or all of the facility will be drawn down, the fee is expensed.

  Borrowings are classified as current liabilities unless the group has an unconditional right to defer settlement of the liability for at least 12 months after the balance sheet date.

- Trade and other payables are recognised initially at fair value and subsequently measured at amortised cost using the effective interest method. Payables are classified as current liabilities if payment is due within a year or less. If not, they are presented as non-current liabilities.

32 Borrowings

Summary of facilities' terms

	Commenced	Tenor (years)	Matures	Secured	Security	Interest payment basis	Interest charge	Repayment term	Repaid
Existing									
R2.5 billion revolving credit facility – sustainability linked	May 2022	Three years	May 2025[2]	Yes	Unsecured	Variable	JIBAR + 2.40%	On maturity	n/a
US$400 million facility – sustainability linked	May 2022	Three years	May 2025[2]	Yes	Unsecured	Variable		On maturity	n/a
- US$100 million term facility							SOFR + 2.85%[4]		
- US$300 million revolving credit facility							SOFR + 2.70%[4]		
R1.5 billion facility (green term loan)[1]	May 2022	Six years, six months	November 2028	Yes	Unsecured	Variable	JIBAR + 2.65%	Bi-annual[3]	n/a
US$24 million Westpac loan	July 2018	Four	July 2022	Yes	Cession and pledge of vehicles and machinery	Variable	LIBOR + 3.20%	Quarterly instalments	n/a

[1] *This facility can only be drawn down from November 2022.*
[2] *Does not take into account the two extension options of 12 months each.*
[3] *Ten equal bi-annual instalments starting from May 2024 with the final instalment on maturity.*
[4] *Secured Overnight Financing Rate. The SOFR is a secured interbank overnight interest rate that has been established as an alternative to LIBOR. Please refer to note 39 for more detail.*

Borrowings continued

Summary of facilities' terms continued

	Commenced	Tenor (years)	Matures	Secured	Security	Interest payment basis	Interest charge	Repayment term	Repaid
Matured									
R2 billion facility	November 2018	Four years	November 2022	Yes	Cession and pledge of operating subsidiaries' shares and claims	Variable			May 2022
- R600 million term loan							JIBAR + 2.9%	Eight equal quarterly instalments starting from February 2021 with the final instalment on maturity	
- R1.4 billion revolving credit facility							JIBAR + 2.8%	On maturity	
US$400 million facility	September 2019	Three years	September 2023[5]	Yes	Cession and pledge of operating subsidiaries' shares and claims	Variable		On maturity	May 2022
- US$200 million revolving credit facility		Extendable by one year					LIBOR + 2.9%		
- US$200 million term loan							LIBOR + 3.1%		

[5] *The syndicate of lenders for the US$400 million facility agreed to the one-year extension during July 2020, extending the maturity date to September 2023.*

32 Borrowings continued

Refinancing of facilities

During May 2022, Harmony refinanced its facilities, replacing its existing R2 billion and US$400 million facility with the following facilities held with a syndicate of local and international lenders:

- R2.5 billion revolving credit facility (Rand RCF)
- US$100 million term facility (US$ term loan)
- US$300 million revolving credit facility (US$ RCF)
- R1.5 billion green term loan (Green loan)

The Green loan can only be used for eligible renewable energy projects as defined in the agreement.

The Rand RCF, US$ RCF and US$ term loans are linked to certain sustainability-linked key performance indicators (ESG KPIs), which will be measured annually for the next three financial years and will result in changes to interest rate margins. The adjustments to interest rate margins for each financial year's ESG performance would impact the following financial year. The respective ESG KPIs are as follows:

KPI	Unit of measurement	Scope	Sustainability performance targets		
			FY23	FY24	FY25
Greenhouse gas emissions	000 tonnes of Scope 1 and Scope 2 CO_2e emissions	All operations	4 485	4 279	4 074
Renewable energy	Renewable energy consumption as % of total electricity consumed	SA operations	2%	8%	20%
Water consumption	Potable water consumed (Mℓ)	SA operations	20 453	19 833	19 436

Depending on Harmony's performance in relation to these ESG KPIs, the potential change in interest rate margin is as follows:

Cumulative benefit/penalty for each financial year (basis points)	FY23	FY24	FY25
KPI			
Greenhouse gas emissions	1	2	3
Renewable energy	1	2	3
Water consumption	1	2	3

Debt covenants

The debt covenant tests for both the Rand and US dollar facilities are as follows:

- The group's interest cover ratio shall be more than five times (EBITDA[1]/ Total interest paid)
- Leverage[2] shall not be more than 2.5 times.

[1] *Earnings before interest, taxes, depreciation and amortisation (EBITDA), as defined in the agreement, excludes unusual items such as impairment and restructuring cost.*
[2] *Leverage is defined as total net debt to EBITDA.*

During the refinancing process, the tangible net worth to total net debt ratio that was relevant to the previous facilities has been removed as a debt covenant, while the interest cover and leverage ratios remained unchanged.

Loan covenants tests were performed for both the old and new loan facilities for the 2022 and 2021 financial years and no breaches were noted. For the 2022 financial year, the group's interest cover ratio was 43.4 times (2021: 42.8 times), while the group's leverage was 0.1 (2021: 0.1). As mentioned above, the tangible net worth to total net debt ratio was removed as a loan covenant during the current financial year (2021: 57.8). Management believes that it is very likely that the covenant requirements will be met in the foreseeable future given the current earnings and debt levels.

The cash flows from the refinancing process were directed by Harmony and are therefore reflected in the cash flow statement. The transaction costs of R172 million are included as part of the interest paid line in the cash flow statement.

32 Borrowings continued

Interest-bearing borrowings

	SA Rand	
Figures in million	**2022**	2021
Non-current borrowings		
R2 billion facility	—	153
Balance at beginning of year	**153**	1 351
Repayments	**(450)**	(1 050)
Transferred (to)/from current liabilities	**300**	(150)
Amortisation of issue cost	**(3)**	2
Westpac fleet loan	—	22
Balance at beginning of year	**22**	132
Repayments	**(94)**	(96)
Transferred from current liabilities	**62**	18
Translation	**10**	(32)
R2.5 billion facility – sustainability linked	—	—
Balance at beginning of year	—	—
Issue costs	**(26)**	—
Reclassification to prepayments (Trade receivables)	**26**	—
R1.5 billion term facility (Green loan)	—	—
Balance at beginning of year	—	—
Issue costs	**(15)**	—
Reclassification to prepayments (Trade receivables)	**15**	—
US$400 million facility – sustainability linked	**3 180**	—
Balance at beginning of year	—	—
Draw down	**3 057**	—
Issue cost	**(76)**	—
Amortisation of issue costs	**1**	—
Translation	**198**	—
US$400 million facility	—	2 799
Balance at beginning of year	**2 799**	5 980
Issue cost	—	(11)
Repayments	**(3 057)**	(2 347)
Amortisation of issue costs	**55**	39
Translation	**203**	(862)
Total non-current borrowings	**3 180**	2 974

	SA Rand	
Figures in million	**2022**	2021
Current borrowings		
R2 billion facility	—	300
Balance at beginning of year	**300**	150
Transferred (to)/from non-current liabilities	**(300)**	150
Westpac fleet loan	**25**	87
Balance at beginning of year	**87**	105
Transferred to non-current liabilities	**(62)**	(18)
Total current borrowings	**25**	387
Total interest-bearing borrowings	**3 205**	3 361

Notes to the group financial statements continued

For the year ended 30 June 2022

32 Borrowings continued

Interest-bearing borrowings continued

	SA Rand	
Figures in million	**2022**	2021
The maturity of borrowings is as follows:		
Current	**25**	387
Between one to two years	**—**	175
Between two to three years	**3 180**	2 799
	3 205	3 361

	SA Rand	
Figures in million	**2022**	2021
Undrawn committed borrowing facilities		
Expiring within one year	**—**	—
Expiring after one year	**7 254**	4 254
	7 254	4 254

	2022	2021
Effective interest rates (%)		
R2 billion facility	**6.7**	6.6
Westpac fleet loan	**3.4**	3.4
US$400 million facility	**3.4**	4.0
US$400 million – sustainability linked	**4.3**	—

33 Trade and other payables

Accounting policy

The group accrues for the cost of the leave days granted to employees during the period in which the leave days accumulate.

	SA Rand	
Figures in million	**2022**	2021
Financial liabilities		
Trade payables	**1 266**	1 269
Lease liability – current[1]	**197**	107
Other liabilities	**328**	129
Non-financial liabilities		
Payroll accruals	**832**	847
Leave liabilities (a)	**770**	731
Shaft-related liabilities	**841**	928
Other accruals	**92**	211
Value added tax	**156**	163
Income and mining tax	**12**	4
Total trade and other payables	**4 494**	4 389

[1] *Refer to note 28 for an analysis of the lease liability.*

33 Trade and other payables continued

(a) Employee entitlements to annual leave are recognised on an ongoing basis. An accrual is made for the estimated liability for annual leave as a result of services rendered by employees up to the balance sheet date. The movement in the liability recognised in the balance sheet is as follows:

	SA Rand	
Figures in million	**2022**	2021
Balance at beginning of year	**731**	537
Benefits paid	**(762)**	(583)
Total expense per income statement	**787**	630
Translation (gain)/loss	**14**	(25)
Acquisitions[1]	**—**	172
Balance at end of year	**770**	731

[1] *Acquisition of the Mponeng operations and related assets. Refer to note 14 for detail.*

34 Cash generated by operations

	SA Rand		
Figures in million	**2022**	2021	2020
Reconciliation of profit/(loss) before taxation to cash generated by operations			
Profit/(loss) before taxation	**(1 058)**	6 382	(595)
Adjustments for:			
Amortisation and depreciation	**3 683**	3 877	3 508
Impairment of assets	**4 433**	1 124	—
Share-based payments	**145**	160	180
Net decrease in provision for post-retirement benefits	**(14)**	(13)	(12)
Net increase in provision for environmental rehabilitation	**71**	135	—
Profit on sale of property, plant and equipment	**(24)**	(11)	(2)
Loss on scrapping of property, plant and equipment	**7**	161	62
Profit from associates	**(63)**	(83)	(94)
Investment income	**(352)**	(244)	(375)
ARM BBEE day one expense	**—**	(87)	—
Finance costs	**718**	661	661
Inventory revaluation adjustments	**21**	69	(70)
Foreign exchange translation difference	**338**	(810)	989
Non-cash portion of (gains)/losses on derivatives	**252**	(1 204)	1 382
Day one loss amortisation	**(49)**	(47)	40
Streaming contract revenue	**(471)**	(397)	—
Silicosis settlement provision – net	**(86)**	(90)	(119)
Gain on bargain purchase	**—**	(303)	—
Contingent consideration remeasurement	**(61)**	(127)	—
Provision for obsolete stock	**82**	10	7
Increase in gold in lock-up	**(71)**	(17)	(4)
Loss allowance	**22**	47	63
Other non-cash adjustments	**14**	(43)	(42)
Effect of changes in operating working capital items			
(Increase)/decrease in Receivables	**21**	(339)	(349)
Increase in Inventories	**(232)**	(37)	(150)
Increase/(decrease) in Payables	**52**	967	(49)
Cash generated by operations	**7 378**	9 741	5 031

34 Cash generated by operations continued

Additional cash flow information

The income and mining taxes paid in the statement of cash flow represents actual cash paid less refunds received. Investment income from restricted investments is considered non-cash for the purposes of the cash flow statement. Included in investment income is interest earned from restricted investments of R185 million (2021: R174 million) (2020: R163 million).

At 30 June 2022, R7 254 million (2021: R4 254 million) (2020: R1 336 million) of borrowing facilities had not been drawn and are therefore available for future operational activities and future capital commitments. Refer to note 32.

(a) Principal non-cash transactions

Share-based payments (refer to note 36).

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35 Employee benefits

Accounting policy

- Pension, provident and medical benefit plans are funded through monthly contributions. The group pays fixed contributions into a separate entity in terms of the defined contribution pension, provident and medical plans which are charged to the income statement in the year to which they relate. The group's liability is limited to its monthly determined contributions and it has no further liability, legal or constructive, if the fund does not hold sufficient assets to pay all employees the benefits relating to employee service in the current and prior periods. Refer to note 27 for details of the post-retirement medical benefit plan.
- Termination benefits are payable when employment is terminated before the normal retirement date, or whenever an employee accepts voluntary redundancy in exchange for these benefits. The group recognises termination benefits at the earlier of the following dates: (a) when the group can no longer withdraw the offer of those benefits; and (b) when the entity recognises costs for a restructuring that is within the scope of IAS 37 ***Provisions, Contingent Liabilities and Contingent Assets***, and involves the payment of termination benefits. In the case of an offer made to encourage voluntary redundancy, the termination benefits are measured based on the number of employees expected to accept the offer. Benefits falling due more than 12 months after balance sheet date are discounted to present value.

	2022	2021
Number of permanent employees as at 30 June:		
South African operations	**35 989**	36 860
International operations[1]	**1 620**	1 599
Total number of permanent employees	**37 609**	38 459

	SA Rand	
Figures in million	**2022**	2021
Aggregate earnings		
The aggregate earnings of employees including executive directors were:		
Salaries and wages and other benefits (excluding share-based payments)	**15 485**	14 079
Retirement benefit costs	**1 125**	929
Medical aid contributions	**363**	316
Total aggregated earnings[2]	**16 973**	15 324

[1] The Wafi-Golpu joint operation's employees included in the total is 56 (2021: 59).
[2] These amounts have been included in cost of sales, corporate expenditure and capital expenditure.

The increase during the 2022 financial year is mainly due to the inclusion of employee costs for the Mponeng operations and related assets as they contributed for the full year compared to nine months in 2021. Annual inflationary increases also impact on the total.

During the 2022 financial year, R227 million (2021: R371 million) was included in the payroll costs for termination costs. Termination costs include the cost relating to the voluntary retrenchment and restructuring process as well as retrenchments due to shaft closures.

36 Share-based payments

Accounting policy

The group operates the following employee share incentive plans where the group granted share options to certain employees in exchange for services received:

- The 2006 equity-settled share-based payments plan (2006 share plan)
- The equity-settled Sisonke Employee Share Ownership Plan (Sisonke ESOP) initially awarded in 2019
- The equity-settled Management Deferred Share Plan (DSP) initially awarded in 2020.

Equity-settled share-based payments are measured at fair value that includes market performance conditions but excludes the impact of any service and non-market performance conditions of the equity instruments at the date of the grant. The share-based payments are expensed over the vesting period, based on the group's estimate of the shares that are expected to eventually vest. The group used an appropriate option pricing model in determining the fair value of the options granted. Non-market vesting conditions are included in assumptions about the number of options that are expected to vest. At each balance sheet date, the estimates of the number of options that are expected to become exercisable are revised.

The impact of the revision of original estimates, if any, is recognised in the income statement, with a corresponding adjustment to equity. The proceeds received (if any) net of any directly attributable transaction costs are credited to share capital and premium when the options are exercised.

Critical accounting estimates and judgements

The fair value of options granted under the 2006 plan was determined using a Monte Carlo valuation model. The significant inputs into the model are: vesting period, risk-free interest rate, volatility, price on date of grant and dividend yield. There were no options granted under the 2006 plan in the current financial period.

The fair value of the options granted under the Sisonke ESOP was based on the Harmony spot share price of R28.29 at grant date as there were no market conditions attached to the grant.

The fair value of options granted under the DSP:

	Fair value
18 September 2019 - First issue	**R45.89 - R56.87**
18 September 2020 - Second issue	**R74.90**
20 September 2021 - Third issue	**R45.58 - R57.93**

The fair value of the first and second issue of options granted under the DSP was based on the Harmony spot share price at each grant date, as there were no market conditions attached to the grant. The fair value of the third issue of options granted under the DSP was determined using a Monte Carlo valuation model. The significant inputs into the model are:

	DSP
20 September 2021 - Third issue	
Risk-free interest rate	**5.71% - 6.93%**
Expected volatility	**59.59% - 62.51%**
Expected dividend yield	**2.02% - 3.41%**
Spot price on grant date	**R54.06 - R62.43**
Vesting period (from grant date)[1]	**3/5 years**

[1] *Please refer to Vesting under Options granted under the Management Deferred Share Plan below.*

Employee share-based payments

The objective of these schemes is to recognise the contributions of employees to the group's financial position and performance and to retain key employees.

Executive management is encouraged to retain shares when they vest and a minimum shareholding requirement has been introduced to achieve this. This shareholding is meant to align shareholder and executive objectives to grow total shareholder return.

36 Share-based payments continued

Employee share-based payments continued

The total cost relating to employee share-based payments is made up as follows:

	SA Rand	
Figures in million	**2022**	2021
2006 share plan	—	26
Sisonke ESOP	**109**	61
Management DSP	**91**	69
Total employee share-based payments	**200**	156

The directors are authorised to issue up to 60 011 669 ordinary shares to participants who have received awards in accordance with Harmony's employee share incentive schemes. Subsequent to the annual general meeting held on 1 December 2010, 53 482 588 shares have been issued in terms of the various share schemes. At 30 June 2021, no share option awards are outstanding for the 2006 share plan. At 30 June 2022, no share option awards are outstanding for the Sisonke ESOP Plan.

In December 2018, the board approved the new Total Incentive Plan for management which includes deferred shares. The first allocations under the new plan occurred in October 2019, the second and third allocation occurring in October 2020 and 2021, respectively. Our shareholders have authorised up to 25 000 000 shares of the issued share capital to be used for this plan.

The 2006 share plan consists of share appreciation rights (SARs), performance shares (PS) and restricted shares (RS). The share plan is equity-settled.

Award	Vesting	Performance criteria
SARs	SARs will vest in equal thirds in year three (33.33%), four (33.33%) and five (33.33%), subject to the performance conditions having been satisfied. The SARs will have an expiry date of six years from the grant date and the offer price equals the closing market prices of the underlying shares on the trading date immediately preceding the grant.	*2014 allocation:* The group's headline earnings per share must have grown since the allocation date by more than the South African Consumer Price Index (CPI).
PS	The PS will vest after three years from the grant date, if and to the extent that the performance conditions have been satisfied.	*2017 allocation:* • 50% of the number of rights awarded are linked to the total shareholder return of the group on an absolute basis. • 50% of the number of rights awarded are linked to the total shareholder return of the group as compared to that of the South African gold index.
RS	The RS will vest after three years from grant date.	The participant is still employed within the group.

Termination of employees' participation in the share plan is based on "no fault" and "fault" definitions:

- Fault — All unvested and unexercised SARs and all PS and RS not yet vested are lapsed and cancelled
- No fault — Accelerated vesting occurs and all unvested and unexercised share options are settled in accordance with the rules of the plan.

Activity on share options

	SARs		PS
Activity on options and rights granted but not yet exercised	Number of options and rights	Weighted average option price (SA Rand)	Number of rights
For the year ended 30 June 2021			
Balance at beginning of year	377 333	18.41	12 415 024
Options exercised	(371 008)	18.41	(11 928 241)
Options forfeited and lapsed	(6 325)	18.41	(486 783)
Balance at end of year	—	—	—

There were no SARS, RS and PS balances during the 2022 financial year and no RS balances during the 2021 financial year.

	SA Rand	
Figures in million	**2022**	2021
Gain realised by participants on options and rights traded during the year	—	807
Fair value of options and rights exercised during the year	—	807

36 Share-based payments continued

Options granted under the Sisonke ESOP

In December 2017, Harmony approved the establishment of the Sisonke ESOP with the aim to facilitate beneficial interest and ownership by non-managerial employees in South Africa (the beneficiaries) of Harmony shares in order to:

- Facilitate economic empowerment of Harmony's employees
- Incentivise Harmony's employees, so as to promote the shared interests of employees and shareholders in the value growth of Harmony
- Further align the interests of the Harmony shareholders and those of the employees of Harmony.

The shares were issued to the Harmony ESOP Trust (the Trust) on 15 January 2019, which is also the date on which the required service period of three years commenced. Each beneficiary under the scheme was awarded 225 Participation Units (PU). The Sisonke ESOP is equity-settled.

Award	Vesting	Performance criteria
PU*	The PU will vest after three years from the date on which the service period commenced.	The participant is still employed within the group.

** The term Participation Units means the vested rights of a beneficiary to an equal number of Harmony shares held by the Trust.*

Termination of employees' participation in the share scheme is based on "no fault" and "fault" definitions:

- Fault — All unvested and unexercised PU not yet vested are lapsed and cancelled
- No fault — Accelerated vesting occurs and all unvested and unexercised PU are settled in accordance with the rules of the plan.

Activity on share options

	Number of PU	
Activity on PU granted but not exercised	**2022**	2021
Balance at beginning of year	**6 311 667**	6 768 562
Options granted	**40 064**	106 994
Options exercised	**(6 254 608)**	(441 548)
Options forfeited and lapsed	**(97 123)**	(122 341)
Balance at end of year	**—**	6 311 667

	2022	2021
Gain realised by participants on options exercised during the year (R million)	**397**	31
Weighted average share price at the date of exercise (SA Rand)	**58.20**	70.90
Remaining life (years)	**—**	0.5

Options granted under the Management Deferred Share Plan

Harmony implemented the Total Incentive Plan, comprising a long-term Deferred Share Plan (DSP) and a short-term annual cash payment with effect from 1 July 2019. The total incentive for each management-level employee is determined every year through a balanced scorecard calculation.

The balanced scorecard result includes a number of key short- and long-term company performance measures (to be measured over trailing three- and one-year periods). The measures are reviewed and defined annually with appropriate weightings. A portion of the total incentive is paid immediately in cash and the balance is settled by means of deferred shares.

Award	Vesting	Performance criteria
DS*	The awards will vest at a rate of 20% per annum over the following five years for executive directors and prescribed officers, and one-third per annum over the following three years for qualifying management.	The participant is still employed within the group.

** Deferred shares.*

During December 2021 shareholders approved the introduction of "no fault" termination effective 7 December 2021.

Termination of employees' participation in the share scheme is based on "no fault" and "fault" definitions:

- Fault — All unvested and unexercised DS not yet vested are lapsed and cancelled
- No fault — All unvested and unexercised DS will continue in force to vest on the original vesting dates in accordance with the rules of the plan.

The update of "no fault" termination will ensure that executives who leave the company in good standing, for example due to retirement, will continue to be exposed to the company share price for the remainder of the vesting periods of unvested awards. It will encourage and reward their focus on sustainability and succession during their tenure.

36 Share-based payments continued

Employee share-based payments continued

Options granted under the Management Deferred Share Plan continued

	2022	2021
18 September 2019 – 3 years		
Gain realised by participants on options exercised during the year (R million)	**13**	28
Weighted average share price at the date of exercise (SA Rand)	**47.24**	87.86
Remaining life (years)	**0.2**	1.2
18 September 2019 – 5 years		
Gain realised by participants on options exercised during the year (R million)	**2**	2
Weighted average share price at the date of exercise (SA Rand)	**51.74**	87.86
Remaining life (years)	**2.2**	3.2
18 September 2020 – 3 years		
Gain realised by participants on options exercised during the year (R million)	**13**	—
Weighted average share price at the date of exercise (SA Rand)	**47.24**	—
Remaining life (years)	**1.2**	—
18 September 2020 – 5 years		
Gain realised by participants on options exercised during the year (R million)	**2**	—
Weighted average share price at the date of exercise (SA Rand)	**49.55**	—
Remaining life (years)	**3.2**	—

Activity on share options

	Number of DS	
Activity on DS granted but not exercised	**2022**	2021
Balance at beginning of year	**2 102 523**	1 162 152
Options granted	**3 298 489**	1 356 715
Options exercised	**(641 562)**	(331 466)
Options forfeited and lapsed	**(310 159)**	(84 878)
Balance at end of year	**4 449 291**	2 102 523

List of options granted but not yet exercised (listed by grant date)	**Number of options**	**Remaining life (years)**
As at 30 June 2022		
Deferred shares		
18 September 2019 – 3 years	**284 525**	**0.2**
18 September 2019 – 5 years	**172 243**	**2.2**
18 September 2020 – 3 years	**570 777**	**1.2**
18 September 2020 – 5 years	**268 395**	**3.2**
20 September 2021 – 3 years	**2 369 559**	**2.2**
20 September 2021 – 5 years	**783 792**	**4.2**
Total options granted but not yet exercised	**4 449 291**	

37 Related parties

None of the directors or major shareholders of Harmony or, to the knowledge of Harmony, their families, had an interest, directly or indirectly, in any transaction from 1 July 2019 or in any proposed transaction that has affected or will materially affect Harmony or its subsidiaries, other than as stated below.

Directors and other key management

Key management personnel are those persons having authority and responsibility for planning, directing and controlling the activities of the group, directly or indirectly, including any director (whether executive or otherwise) of the group.

Notes to the group financial statements continued

For the year ended 30 June 2022

37 Related parties continued

Directors and other key management continued

The directors' remuneration is as follows:

	SA Rand	
Figures in million	Executive directors	Non-executive directors
2022		
Salaries	**21**	**—**
Retirement contributions	**3**	**—**
Bonuses	**14**	**—**
Exercise/settlement of share options	**2**	**—**
Directors' fees	**—**	**13**
Total	**40**	**13**
2021		
Salaries	24	—
Retirement contributions	3	—
Bonuses	16	—
Exercise/settlement of share options	105	—
Directors' fees	—	13
Total	148	13

On 7 December 2021, Harmony announced the retirement of Ms Fikile De Buck and Dr Simo Lushaba as independent non-executive directors with effect from 7 December 2021.

On 21 February 2022, Ms Melanie Naidoo-Vermaak and Mr Anton Buthelezi were appointed as senior executive: Sustainable Development and senior executive: Human Capital respectively and have been classified as prescribed officers.

On 19 May 2022, Harmony announced the appointment of Mr Bongani Nqwababa and Mr Martin Prinsloo to the board of directors of Harmony as independent non-executive directors with effect from 18 May 2022.

On 28 June 2022, Harmony announced the resignation of Mr Modise Motloba as a non-independent non-executive director with effect from 27 June 2022.

The following directors and prescribed officers owned shares in Harmony at year-end:

	Number of shares	
Name of director/prescribed officer	**2022**	2021*
Directors		
Peter Steenkamp[1]	**772 589**	746 085
Boipelo Lekubo[1]	**15 988**	3 581
Andre Wilkens	**101 301**	101 301
Harry 'Mashego' Mashego[1]	**14 875**	3 319
Prescribed officers		
Beyers Nel[1,4]	**110 207**	198 622
Philip Tobias[1,2,4]	**n/a**	321 084
Marian van der Walt[1,4]	**100 000**	159 438
Melanie Naidoo-Vermaak[1,3]	**7 966**	n/a
Johannes van Heerden[1,4]	**30 734**	6 156

** Certain figures have been revised. Refer to footnote 4 below.*

[1] The balance of shares held is attributable to shares held privately and in terms of the minimum shareholding requirement as set out in our remuneration policy.

[2] Philip Tobias resigned effective 14 November 2021.

[3] Melanie Naidoo-Vermaak classified as a prescribed officer effective 21 February 2022.

[4] During the year, a misstatement was identified in the balance of the shares owned by certain prescribed officers for the year ended 30 June 2021. The previously disclosed balance at 30 June 2021 did not consider shares traded in the prescribed officers' personal capacity, and as a result were misstated. These figures have been revised. Shares held at 30 June 2021 were previously disclosed as: Beyers Nel, 216 175 shares, Marian van der Walt, 139 356 shares, Philip Tobias, 347 462 shares and Johannes van Heerden, 166 156 shares.

37 Related parties continued

Modise Motloba, Harmony's former deputy chairman (refer above), is a director of Tysys (Proprietary) Limited (Tysys). Tysys entered into a contract with the group during the 2017 financial year to provide services relating to the group's small and medium enterprise development projects. The contract has a value of up to R5 million per annum. Approximately R5 million (2021: R5 million) was paid during the 2022 financial year relating to services rendered in the current and prior financial years. The contract has a 30-day notice period.

There were no other changes to the directors' interest between the reporting date and the date of the approval of the financial statements other than indicated above.

Other related parties

All the production of the group's South African operations is sent to Rand Refinery in which Harmony holds a 10.38% interest. Refer to note 21.

	SA Rand	
Figures in million	**2022**	2021
Sales and services rendered to related parties		
Joint operations	**4**	3
Total	**4**	3

	SA Rand	
Figures in million	**2022**	2021
Purchases and services acquired from related parties		
Directors	**5**	5
Associates	**51**	55
Total	**56**	60

38 Commitments and contingencies

Commitments and guarantees

	SA Rand	
Figures in million	**2022**	2021
Capital expenditure commitments		
Contracts for capital expenditure[1]	**1 839**	341
Share of joint operation's contracts for capital expenditure	**105**	32
Authorised by the directors but not contracted for	**6 300**	7 425
Total capital commitments	**8 244**	7 798

[1] *The increase year on year relates predominantly to the Kareerand Expansion project at MWS, for which regulatory approvals were obtained during June 2022.*

This expenditure will be financed from existing resources and, where appropriate, borrowings.

Contractual obligations in respect of mineral tenement leases amount to R16 million (2021: R17 million). This relates to the Wafi-Golpu joint operation.

	SA Rand	
Figures in million	**2022**	2021
Guarantees		
Guarantees and suretyships	**500**	481
Environmental guarantees[1]	**479**	479
Total guarantees	**979**	960

[1] *At 30 June 2022 R150 million (2021: R146 million) has been pledged as collateral for environmental guarantees in favour of certain financial institutions. Refer to note 17.*

38 Commitments and contingencies continued

Commitments and guarantees continued

Contingent liabilities

Critical accounting estimates and judgements

Contingencies will only realise when one or more future events occur or fail to occur. The exercise of significant judgement and estimates of the outcome of future events are required during the assessment of the impact of such contingencies.

Litigation and other judicial proceedings as a rule raise difficult and complex legal issues and are subject to uncertainties and complexities including, but not limited to, the facts and circumstances of each particular case, issues regarding the jurisdiction in which the suit is brought and differences in applicable law. Upon resolution of any pending legal matter, the group may be forced to incur charges in excess of the presently established provisions and related insurance coverage. It is possible that the financial position, results of operations or cash flows of the group could be materially affected by the outcome of the litigation.

The following contingent liabilities have been identified:

(a) On 1 December 2008, Harmony issued 3 364 675 Harmony shares to Rio Tinto Limited (Rio Tinto) for the purchase of Rio Tinto's rights to the royalty agreement entered into prior to our acquisition of the Wafi deposits in PNG. The shares were valued at R242 million on the transaction date. An additional US$10 million in cash will be payable when the decision to mine is made. Of this amount, Harmony is responsible for paying the first US$6 million, with the balance of US$4 million being borne equally by the joint operators.

(b) The group may have a potential exposure to rehabilitate groundwater and radiation that may exist where the group has and/or continues to operate. The group has initiated analytical assessments to identify, quantify and mitigate impacts if and when (or as and where) they arise. Numerous scientific, technical and legal studies are underway to assist in determining the magnitude of the contamination and to find sustainable remediation solutions. The group has instituted processes to reduce future potential seepage and it has been demonstrated that Monitored Natural Attenuation (MNA) by the existing environment will contribute to improvement in some instances. Water treatment facilities were successfully implemented at Doornkop, Tshepong Operations and Kusasalethu. These facilities are now assisting in reducing our dependency on state-supplied potable water and will be key in managing any post closure decant should it arise.

In terms of Free State operations, Harmony has taken the initiative to develop a comprehensive regional closure plan in addition to updating the regional water balance, which will ensure that there is sufficient water for our organic growth initiatives. The geohydrological studies confirm that there is no risk of decant in Welkom.

Should the studies result in different solutions than the ones initially proposed, or the regulators do not approve the proposed plans, which then results in the group being required to record and account for the contingencies as liabilities, it could then have a material impact on the financial statements of the group.

(c) Due to the interconnected nature of mining operations in South Africa, any proposed solution for potential flooding and potential decant risk posed by deep groundwater needs to be a combined one, supported by all the mines located in these goldfields. As a result, the Department of Mineral Resources and Energy and affected mining companies require the development of a regional mine closure strategy.

Harmony operations have conducted a number of specialist studies and the risk of surface decant due to rising groundwater levels has been obviated at the entire Free State region and Kalgold. Additional studies have been commissioned at Doornkop and Kusasalethu. Studies that have been conducted indicate that there is no risk of decant from Doornkop and Kusasalethu, but it is recommended that confirmatory studies be completed. In addition, the decant from the KOSH groundwater system tied with our Moab Khotsong operation has been managed through an appropriate groundwater closure plan and sufficient provision has been set aside for this. Therefore, there is no contingency arising from these operations.

Preliminary studies have also been completed to manage and mitigate the seepage from tailings facilities acquired as part of the Mponeng operations and related assets. Seepage is evident at these facilities and desktop studies have been completed to mitigate the seepage. An initial estimate to manage and mitigate the seepage based on these studies has been considered as part of the fair value exercise in terms of IFRS 3. Further feasibility studies will be conducted to refine these estimates in the future.

Should the additional studies result in different solutions than the ones initially proposed, or the regulators do not approve the proposed plans, it might result in a change in estimate to the recorded liabilities or the group recording liabilities over and above the current provisions.

38 Commitments and contingencies continued

Commitments and guarantees continued

Contingent liabilities continued

(d) The individual Harmony mining operations have applied for the respective National Water Act, Section 21 Water Use Licenses to the Department of Water and Sanitation (DWS). The respective Water Use License Applications have subsequently not yet been approved by DWS for our Free State operations and Doornkop. Notably, the Department issued a Water Use Licence for the expansion of the Kareerand Tailings Facility operated by Mine Waste Solutions. The Water Use Licence conditions for the respective operations without a Water Use License are subsequently not yet known and the subsequent potential water resource impact liability as part of the mine rehabilitation and closure process (to which DWS is an important participant and decision maker) is uncertain. All operations continue to operate legally and responsibly.

(e) In terms of the sale agreements entered into with Rand Uranium, Harmony retained financial exposure relating to environmental disturbances and degradation caused by it before the effective date, in excess of R75 million of potential claims. Rand Uranium is therefore liable for all claims up to R75 million and retains legal liability. The likelihood of potential claims cannot be determined presently and no provision for any liability has been made in the financial statements.

39 Financial risk management

The group's operating activities expose it to a variety of financial risks: market risk (including commodity price risk, foreign exchange risk, interest rate risk and other price risk), credit risk and liquidity risk. The group may use derivative financial instruments to hedge certain risk exposures.

The group's financial assets and liabilities are classified as set out below:

	SA Rand					
Figures in million	Debt instruments at amortised cost	Equity instruments designated at fair value through OCI	Derivatives designated as cash flow hedges	Derivatives at fair value through profit or loss	Debt instruments at fair value through profit or loss	Financial liabilities at amortised cost
At 30 June 2022						
Financial assets						
Restricted cash and investments	4 128	292	—	—	1 162	—
Other non-current assets	15	75	—	—	148	—
Non-current derivative financial instruments	—	—	131	6	—	—
– Rand gold hedging contracts	—	—	113	—	—	—
– US$ gold hedging contracts	—	—	18	—	—	—
– US$ silver contracts	—	—	—	6	—	—
Current derivative financial instruments	—	—	436	83	—	—
– Rand gold hedging contracts	—	—	410	—	—	—
– US$ gold hedging contracts	—	—	26	—	—	—
– Foreign exchange contracts	—	—	—	12	—	—
– US$ silver contracts	—	—	—	71	—	—
Trade and other receivables	938	—	—	—	—	—
Cash and cash equivalents	2 448	—	—	—	—	—
Financial liabilities						
Non-current derivative financial instruments	—	—	3	—	—	—
– US$ gold hedging contracts	—	—	3	—	—	—
Current derivative financial instruments	—	—	8	—	—	—
– US$ gold hedging contracts	—	—	8	—	—	—
Borrowings	—	—	—	—	—	3 205
Contingent consideration liability	—	—		—	356	—
Other non-current liabilities	—	—	—	—	—	263
Trade and other payables	—	—	—	—	—	1 791

39 Financial risk management continued

Figures in million	SA Rand					
	Debt instruments at amortised cost	Equity instruments designated at fair value through OCI	Derivatives designated as cash flow hedges	Derivatives at fair value through profit or loss	Debt instruments at fair value through profit or loss	Financial liabilities at amortised cost
At 30 June 2021						
Financial assets						
Restricted cash and investments	3 656	252	—	—	1 391	—
Other non-current assets	16	74	—	—	177	—
Non-current derivative financial instruments	—	—	319	9	—	—
– Rand gold hedging contracts	—	—	279	—	—	—
– US$ gold hedging contracts	—	—	40	—	—	—
– US$ silver contracts	—	—	—	9	—	—
Current derivative financial instruments	—	—	1 087	384	—	—
– Rand gold hedging contracts	—	—	1 079	—	—	—
– US$ gold hedging contracts	—	—	8	—	—	—
– Foreign exchange contracts	—	—	—	383	—	—
– US$ silver contracts	—	—	—	1	—	—
Trade and other receivables	979	—	—	—	—	—
Cash and cash equivalents	2 819	—	—	—	—	—
Financial liabilities						
Non-current derivative financial instruments	—	—	—	6	—	—
– US$ silver contracts	—	—	—	6	—	—
Current derivative financial instruments	—	—	114	92	—	—
– Rand gold hedging contracts	—	—	41	—	—	—
– US$ gold hedging contracts	—	—	73	—	—	—
– US$ silver contracts	—	—	—	92	—	—
Borrowings	—	—	—	—	—	3 361
Contingent consideration liability	—	—	—	—	417	—
Other non-current liabilities	—	—	—	—	—	173
Trade and other payables	—	—	—	—	—	1 505

Risk management is carried out by a central treasury department (Group treasury) under policies approved by the board of directors. Group treasury identifies, evaluates and hedges certain selected financial risks in close cooperation with the group's operating units. The audit and risk committee and the board provide written principles for overall risk management, as well as written policies covering specific areas, such as commodity price risk, foreign exchange risk, interest rate risk, credit risk, use of derivative financial instruments and non-derivative financial instruments, and the investment of excess liquidity.

Market risk

Foreign exchange risk

The group operates internationally and is exposed to foreign exchange risk arising from various currency exposures, primarily with respect to the US dollar (US$). Foreign exchange risk arises when future commercial transactions or recognised financial assets or liabilities are denominated in a currency that is not the entity’s functional currency. Harmony’s revenues are sensitive to the R/US$ exchange rate as all revenues are generated by commodity sales denominated in US$. Harmony may enter into hedging transactions to reduce this risk. The limit currently set by the board is 25% of the group's foreign exchange risk exposure for a period of 24 months. Refer to note 19 and the fair value determination for financial assets and liabilities section below for details of the contracts. The audit and risk committee reviews the details of the programme quarterly.

The Rand weakened during the current financial year, from R14.27/US$1 on 30 June 2021 to close at R16.27/US$1 on 30 June 2022. The weakening negatively impacted on the derivative valuations of contracts that were outstanding at 30 June 2022.

39 Financial risk management continued

Market risk continued

Foreign exchange risk continued

The group is exposed to foreign exchange risk arising from borrowings and cash denominated in a currency other than the functional currency of that entity (refer to note 2.2 for details on the group's functional currencies). As of 1 October 2020, the contingent consideration liability has also been included. Refer to note 29 for details. These exposures are mainly to the US$. The Rand's levels impacted negatively on the translation of the US$ debt facilities at 30 June 2022. Refer to note 32 for further detail.

Translation of the international net assets was impacted by a weakening of the Rand against the Australian dollar from R10.72/A$1 at 30 June 2021 to R11.25/A$1 on 30 June 2022. A gain of R742 million has been recognised in other comprehensive income relating to the translation of the international net assets to Rand.

The group has reviewed its foreign currency exposure on financial assets and financial liabilities and has identified the following sensitivities in the exchange rates that would affect profit and loss:

- Rand/US$ exchange rate – 4% (2021: 6%) based on the standard deviation from a one-year forecast of various financial institution outlooks
- A$/US$ exchange rate – 4% (2021: 4%) based on the standard deviation from a one-year forecast of various financial institution outlooks
- PGK/US$ exchange rate – 0.1% (2021: 1%). The Papua New Guinean (PNG) government has fixed the exchange rate of the Kina to the US$ and adjusts it occasionally. These adjustments are very small and would not result in any significant impact on profit or loss.

	SA Rand	
Figures in million	**2022**	2021
Sensitivity analysis – borrowings		
Rand against US$		
Balance at 30 June	**3 180**	2 806
Strengthen by 4% (FY21: 6%)	**127**	168
Weaken by 4% (FY21: 6%)	**(127)**	(168)
Closing rate	**16.27**	14.27
US$ against Kina		
Balance at 30 June	**25**	109
Strengthen by 0.1% (FY21: 1%)	**—**	1
Weaken by 0.1% (FY21: 1%)	**—**	(1)
Closing rate	**0.28**	0.29
Sensitivity analysis – contingent consideration liability		
Rand against US$		
Balance at 30 June	**356**	417
Strengthen by 4% (FY21: 6%)	**14**	25
Weaken by 4% (FY21: 6%)	**(14)**	(25)
Closing rate	**16.27**	14.27

	SA Rand	
Figures in million	**2022**	2021
Sensitivity analysis – other financial instruments		
Rand against US$		
Balance at 30 June	**12**	383
Strengthen by 4% (FY21: 6%)	**19**	105
Weaken by 4% (FY21: 6%)	**(26)**	(127)
Closing rate	**16.27**	14.27
US$ against A$		
Balance at 30 June	**268**	723
Strengthen by 4% (FY21: 4%)	**10**	28
Weaken by 4% (FY21:4%)	**(11)**	(30)
Closing rate	**0.69**	0.75

39 Financial risk management continued

Market risk continued

Commodity price sensitivity

The profitability of the group's operations, and the cash flows generated by those operations, are affected by changes in the market price of gold, and in the case of Hidden Valley, silver as well. Harmony entered into Rand gold and US dollar forward gold sale contracts to manage the variability in cash flows from the group's production to create cash certainty and protect the group against lower commodity prices. The general limit for gold hedging currently set by the board is 20% for a 24-month period. The limit set by the board is 50% of silver exposure over a 24-month period. Management continues to top up these programmes as and when opportunities arise to lock in attractive margins for the business, but are not required to maintain hedging at these levels. The audit and risk committee reviews the details of the programme quarterly.

The exposure to the variability in the price of gold is managed by entering into gold forward sales contracts for a portion of the group's production. A portion of the production of the South African operations is linked to Rand gold forward contracts and US$ gold forward contracts were entered into for the production from Hidden Valley. The exposure to the variability in the price of silver for Hidden Valley is managed by entering into US$/silver zero cost collars. These contracts have not been designated as hedging instruments for hedge accounting and the gains and losses are accounted for in the income statement. Refer to note 19 and the fair value determination for financial assets and liabilities section below for further detail on these contracts.

The Rand weakened during the year (as discussed above), which had the effect of decreasing the gains on the contracts that matured during the 2022 financial year as well as negatively impacting those that were outstanding at 30 June 2022.

The group has reviewed its exposure to commodity-linked instruments and identified a sensitivity of 9% (2021: 7%), based on the standard deviation of a one-year forecast gold price from various financial institution outlooks. The estimated sensitivity would affect other comprehensive income in the 2022 financial year.

Only material commodity balances were considered when determining the need for a sensitivity analysis and therefore management has not performed a sensitivity analysis on silver commodities.

	SA Rand	
Figures in million	**2022**	2021
Sensitivity analysis		
Rand gold derivatives		
Other comprehensive income		
Increase by 9% (FY21: 7%)	**(1 001)**	(481)
Decrease by 9% (FY21: 7%)	**998**	612
US$ gold derivatives		
Other comprehensive income		
Increase by 9% (FY21: 7%)	**152**	130
Decrease by 9% (FY21: 7%)	**(150)**	(128)

Other price risk

The group is exposed to the risk of fluctuations in the fair value of fair value through profit or loss financial assets as a result of changes in market prices (other than changes in interest rates and foreign currencies). Harmony generally does not use any derivative instruments to manage this risk.

Sensitivity analysis

Certain of the restricted investments are linked to the Top 40 Index on the JSE. Management considered a sensitivity of 13% (2021: 15%) as appropriate, based on the continuing volatility in the market as well as the magnitude of fluctuations within the last year's historical data. A 13% increase in the Top 40 index at the reporting date, with all other variables held constant, would have increased profit or loss by R97 million (2021: R105 million) and an equal change in the opposite direction would have decreased profit or loss by R79 million (2021: R127 million).

Interest rate risk

The group's interest rate risk arises mainly from borrowings. The group has variable interest rate borrowings. Variable rate borrowings expose the group to cash flow interest rate risk.

During the 2022 year, the US Federal Reserve increased the fund rate by 150 basis points. Similarly, the SARB increased the repo rate by 125 basis points causing the higher interest rates to have a non-favourable impact on the group's cost of debt. This was offset by lower debt balances. The SOFR (Secured Overnight Financing Rate) has been used for the refinanced US$ borrowings, as opposed to LIBOR (London Interbank Offered Rate) that was used for the historic borrowings. This is due to LIBOR being phased out. During the refinancing process, the group was able to secure slightly improved margins on its facilities.

39 Financial risk management continued

Market risk continued

Interest rate risk continued

Even though it can be expected that the increase in the repo rate will result in a higher cost of debt as financial institutions will increase their lending rates, the group has not entered into interest rate swap agreements. The audit and risk committee reviews the group's risk exposure quarterly.

Interest rate risk arising from borrowings is offset by cash and restricted cash and investments held at variable rates. As at 30 June 2022, management reasonably expects profit or loss before tax to increase/(decrease) by the following sensitivities:

- A 88 basis points (2021: 25 basis points) finance cost movement based on the average of a one-year forecast of the South African prime interest rate from various financial institution outlooks
- A 185 basis points (2021: 1 basis point) finance cost movement based on the average of a one-year forecast US Fed rate from various financial institution outlooks
- A 88 basis points (2021: 25 basis points) sensitivity on interest received based on an average of a one-year forecast of the South African prime interest rate from various financial institution outlooks.

The above analysis assumes that all other variables remain constant.

	SA Rand	
Figures in million	**2022**	2021
Sensitivity analysis – borrowings (finance costs)		
Rand-denominated borrowings		
Increase by 88 basis points (FY21: 25 basis points)	**—**	(1)
Decrease by 88 basis points (FY21: 25 basis points)	**—**	1
US$-denominated borrowings		
Increase by 185 basis point (FY21: 1 basis point)	**(59)**	—
Decrease by 185 basis points (FY21: 1 basis point)	**59**	—
Sensitivity analysis – financial assets (interest received)		
Increase by 88 basis points (FY21: 25 basis points)	**59**	16
Decrease by 88 basis points (FY21: 25 basis points)	**(59)**	(16)

Credit risk

Credit risk is the risk that a counterparty may default or not meet its obligations in a timely manner. Financial instruments that are subject to credit risk are restricted cash and investments, derivative financial instruments and cash and cash equivalents, as well as trade and other receivables (excluding non-financial instruments).

Assessment of credit risk

In assessing the creditworthiness of local institutions, management uses the national scale long-term ratings. The credit risk arising from cash and cash equivalents, restricted cash and investments, and derivative financial assets is managed by ensuring amounts are only invested with financial institutions of good credit quality based on external credit ratings and by assessing the underlying source of where the funds are invested. The group has policies that limit the amount of credit exposure to any one financial institution. The audit and risk committee reviews the exposure on a quarterly basis. Exposure to credit risk on trade and other receivables is monitored on a regular basis by management.

At 30 June 2022, the rating of major SA banks remained unchanged at AA+, which is in line with the group's credit risk policy. The credit rating of the group's Australian counterparts remained unchanged at A+, resulting in the assessed ECL on cash and cash equivalents as well as restricted cash and investments remaining immaterial.

An assessment of the expected credit losses for the financial assets measured at amortised cost at 30 June 2022 resulted in an immaterial amount for each instrument, in line with the assessment performed in 2021 (refer to the expected credit loss assessment below for further detail).

Management will continue to review the underlying strength of the South African economy as well as the creditworthiness of the financial institutions during this time and make any changes deemed necessary to safeguard the assets and reduce the credit risk.

The group’s maximum exposure to credit risk is represented by the carrying amount of all financial assets determined to be exposed to credit risk, amounting to R9 495 million as at 30 June 2022 (2021: R10 837 million).

The Social Trust Fund of R19 million (2021: R19 million) has been invested in unit trust investments comprising interest-bearing instruments and shares in listed companies (refer to note 17). The group has also acquired a collective investment scheme in unit trusts of R49 million (2021: R47 million) and equity investments of R292 million (2021: R252 million) from the Mponeng operations and related assets acquisition in 2021 (refer to note 14 and 17).

39 Financial risk management continued

Credit risk continued

Financial institutions' credit rating by exposure (source: Fitch Ratings and Global Credit Ratings)

	SA Rand	
Figures in million	**2022**	2021
Cash and cash equivalents		
AA+	**1 711**	1 738
AA	**737**	1 081
Total	**2 448**	2 819
Restricted cash and investments (refer to note 17)		
AAA	**225**	225
AA+	**4 997**	4 756
Total	**5 222**	4 981
Derivative financial assets (refer to note 19)		
AA+	**226**	629
AA	**115**	286
AA-	**110**	145
A+	**205**	739
Total	**656**	1 799

Expected credit loss assessment

The group recognises loss allowances for expected credit losses (ECLs) on financial assets measured at amortised cost. The group's debt instruments at amortised cost consist of cash and cash equivalents, a portion of restricted cash and investments and trade and other receivables. The assessment of ECLs for the different debt instruments is discussed below:

Cash and cash equivalents

The cash and cash equivalents are held with banks and financial institutions which are rated between AA and AA+ (see above). The ECL on cash and cash equivalents has been determined using the simplification that allows the group to assume that the credit risk on financial instruments determined to have low credit risk at the reporting date, has not increased significantly since initial recognition of the financial instrument. The ECL was estimated with reference to a probability of default model using external credit ratings in determining the default risk of counterparties. The ECL was determined to be immaterial.

Restricted cash and investments

The restricted cash and investments relate largely to the environmental trust funds. These funds are held with banks and financial institutions that are rated AA+ (see above). As a result of the acquisition of Mponeng operations and related assets in 2021 (refer to note 14), the group obtained government bonds that are rated AAA (see above). Impairment of investments with investment-grade ratings has been determined using the simplification that allows the group to assume that the credit risk on financial instruments determined to have low credit risk at the reporting date, has not increased significantly since initial recognition of the financial instrument. The group considers that the majority of its restricted cash and investments have low credit risk based on the external credit ratings of the counterparties with which the funds are deposited. The ECL was estimated with reference to a probability of default model using external credit ratings in determining the default risk of counterparties. Concentration of credit risk on restricted cash and investments is considered minimal due to the group’s investment risk management and counterparty exposure risk management policies.

Trade and other receivables

The group’s exposure to credit risk arising from trade receivables (metals) and other trade receivables is influenced mainly by the individual characteristics of each customer.

Trade receivables result largely from the sale of gold and are fully performing. Exposure to credit risk on receivables from gold sales is limited through payment terms of two to three days after recognition of revenue for gold sales. The majority of other receivables comprise a limited number of individually significant customers. The group determines the ECL on trade receivables and individually significant other receivable balances with reference to a probability of default model using external credit ratings in determining the default risk of counterparties. The external credit ratings used range between BBB to AA-. The ECL was determined to be immaterial.

Loss allowances on individually insignificant other trade receivables has been determined using the simplified ECL approach using a provision matrix and reflects the short-term maturities of the exposures and past experienced credit judgement. Refer to note 20 for details on the amount of the loss allowance recognised and the stratification of trade and other receivables for purposes of the assessment.

Notes to the group financial statements continued

For the year ended 30 June 2022

39 Financial risk management continued

Liquidity risk

Prudent liquidity risk management implies maintaining sufficient cash and marketable securities, and the availability of funding through an adequate amount of committed credit facilities.

In the ordinary course of business, the group receives cash from its operations and is required to fund working capital and capital expenditure requirements. Management prepares cash flow forecasts weekly and ensures that surplus funds are invested in a manner to achieve market-related returns and to provide sufficient liquidity at the minimum risk. The group maintains and refinances committed credit facilities as medium-term forecasts require. The audit and risk committee reviews the updated forecasts quarterly. The group is able to actively source financing at competitive rates. Where necessary, funds will be drawn from its revolving credit facilities (refer to note 32).

The following are the undiscounted contractual maturities of financial liabilities (including principal and interest payments assuming the closing R/US$ exchange rate and interest rate at year end):

	SA Rand			
Figures in million	**2022**		2021	
	Current	**More than 1 year**	Current	More than 1 year
Contingent consideration liability[1]	**—**	**515**	—	647
Other non-current liabilities[2]	**—**	**18**	—	19
Lease liability	**206**	**338**	112	225
Trade and other payables (excluding non-financial liabilities)[2,3]	**1 594**	**—**	1 398	—
Derivative financial liabilities[3]	**9**	**3**	285	11
Borrowings[3]:				
Due between 0 to six months	**97**	**—**	256	—
Due between six to 12 months	**68**	**—**	249	—
Due between one to two years	**—**	**137**	—	267
Due between two to three years[4]	**—**	**3 251**	—	2 877
Total	**1 974**	**4 262**	2 300	4 046

[1] *The majority of this balance is expected to be settled between four to five years.*
[2] *These balances exclude the lease liability as it has been disclosed separately.*
[3] *The group will utilise its cash generated from operations to settle outstanding obligations.*
[4] *Final repayment of capital amount of R3 126 million (2021: R2 854 million) in May 2025.*

Capital risk management

The primary objective of managing the group's capital is to ensure that there is sufficient capital available to support the funding requirements of the group, in a way that optimises the cost of capital and matches the current strategic business plan.

The group manages and makes adjustments to the capital structure, which consists of debt and equity, as and when borrowings mature or when funding is required. This may take the form of raising equity, market or bank debt or hybrids thereof. In doing so, the group ensures it stays within the debt covenants agreed with lenders. The group may also sell assets to reduce debt or schedule projects to manage the capital structure.

The group's positive financial performance has resulted in generation of cash throughout the financial year, assisting in the repayment of old debt facilities (refer to note 32) and refinancing as mentioned in interest rate risk above. It remains the group's objective to adhere to a conservative approach to debt and maintain low levels of gearing.

Net debt is as follows:

	SA Rand	
Figures in million	**2022**	2021
Cash and cash equivalents	**2 448**	2 819
Borrowings	**(3 205)**	(3 361)
Net debt	**(757)**	(542)

There were no changes to the group's approach to capital management during the year.

39 Financial risk management continued

Fair value determination for financial assets and liabilities

The fair value levels of hierarchy are as follows:

Level 1: Quoted prices (unadjusted) in active markets

Level 2: Inputs other than quoted prices included within level 1 that are observable for the asset, either directly (that is, as prices) or indirectly (that is, derived from other prices)

Level 3: Inputs for the asset that are not based on observable market data (that is, unobservable inputs).

The following table sets out the group's assets and liabilities measured at fair value by level within the fair value hierarchy:

	SA Rand					
Figures in million	**At 30 June 2022**			At 30 June 2021		
	Level 1	**Level 2**	**Level 3**	**Level 1**	**Level 2**	**Level 3**
Fair value through other comprehensive income						
Other non-current assets (a)	**—**	**—**	**75**	—	—	74
Restricted cash and investments (b)	**292**	**—**	**—**	252	—	—
Fair value through profit or loss						
Restricted cash and investments (b)	**—**	**1 162**	**—**	—	1 391	—
Derivative financial assets (c)	**—**	**656**	**—**	—	1 799	—
Derivative financial liabilities (c)	**—**	**(11)**	**—**	—	(212)	—
Loan to ARM BBEE Trust (d)	**—**	**—**	**148**	—	—	177
Contingent consideration liability (e)	**—**	**—**	**(356)**	—	—	(417)

(a) The majority of the balance relates to the equity investment in Rand Mutual Assurance. The fair value of the investment was estimated with reference to an independent valuation. A combination of the "Embedded Valuation" and "Net Asset Value" techniques were applied to revalue the investment at the reporting dates. In evaluating the group's share of the business, common practice marketability and minority discounts as well as additional specific risk discounts were applied. There are no inputs to the valuation that a reasonably possible change would result in a material change in the fair value of the investment.

(b) The majority of the level 2 valued assets are directly derived from the Top 40 index on the JSE, and are discounted at market interest rates. This relates to equity-linked deposits in the group's environmental rehabilitation trust funds. The level 1 valued assets comprise listed equity securities designated as fair value through other comprehensive income instruments. The remaining balance of the environmental trust funds is carried at amortised cost and therefore not disclosed here.

(c) The mark-to-market remeasurement of the derivative contracts was determined as follows:

- Foreign exchange contracts comprise zero cost collars and FECs: The zero cost collars were valued using a Black-Scholes valuation technique derived from spot Rand/US$ exchange rate inputs, implied volatilities on the Rand/US$ exchange rate, Rand/US$ inter-bank interest rates and discounted at a market interest rate (zero-coupon interest rate curve). The value of the FECs is derived from the forward Rand/US$ exchange rate and discounted at a market interest rate (zero coupon interest rate curve)
- Rand gold contracts (forward sale contracts): spot Rand/US$ exchange rate, Rand and dollar interest rates (forward points), spot US$ gold price, differential between the US interest rate and gold lease interest rate which is discounted at a market interest rate
- US$ gold contracts (forward sale contracts): spot US$ gold price, differential between the US interest rate and gold lease interest rate and discounted at a market interest rate
- Silver contracts (zero cost collars): a Black-Scholes valuation technique, derived from the spot US$ silver price, strike price, implied volatilities, time to maturity and interest rates and discounted at a market interest rate

(d) At 30 June 2022, the fair value movement was calculated using a discounted cash flow model, taking into account forecast dividend payments over the estimated repayment period of the loan at a rate of 9.3% (2021: 7.9%). A 99 basis points (2021: 74 basis points) change in the discount rate, which would represent a reasonably possible change based on expected movements in lending rates, would not cause a material change in the fair value of the loan. The loan balance forms part of other non-current assets in the balance sheet.

39 Financial risk management continued

Fair value determination for financial assets and liabilities continued

(e) The contingent consideration liability related to the Mponeng operation (refer to note 29) was determined using the expected gold production profile for Mponeng at a post-tax real rate of 10.2% (2021: 10.3%). Should the expected gold production profile increase by 7.6% or decrease by 7.6%, the contingent consideration liability would increase by R251 million (2021: R208 million at 7%) or decrease by R189 million (2021: R183 million at 7%) respectively. This represents reasonably expected changes which were determined based on the standard deviation of previous years' production of the Mponeng operation. No other reasonably expected changes in key unobservable inputs would have caused a material change in the fair value of the liability.

The carrying values (less any impairment allowance) of short-term financial instruments are assumed to approximate their fair values. This includes restricted cash and investments carried at amortised cost. The fair values of borrowings are not materially different to their carrying amounts since the interest payable on those borrowings is at floating interest rates.

40 Subsequent events

(a) On 29 August 2022, a final dividend of 22 SA cents was declared, paid on 17 October 2022

(b) During the budgeting process for the 2023 financial year, a decision was taken to restructure the Tshepong Operations into two separate operations, being the Tshepong North and the Tshepong South operations. This decision was taken to create immediately profitable operations and had the impact of reducing the life-of-mine of Tshepong North from 19 years to seven years. From 1 July 2022, the operations will be reported on separately to the CODM and, as a result, be disclosed as two reportable segments.

(c) On 6 October 2022, Harmony entered into an agreement with Copper Mountain Mining Corporation (Copper Mountain), to acquire its wholly-owned Eva Copper Project and its 2 295 km^2 exploration land package in Queensland, Australia (collectively the acquired assets) for a total consideration of up to US$230 million.

Under the terms of the transaction, the acquisition consideration consists of the following:
- US$170 million in upfront cash payable on closing of the transaction
- Up to US$30 million in cash, based on a contingent payment arrangement where Harmony will pay Copper Mountain 10% of the incremental revenue generated from the acquired assets which is above revenue based on a US$3.80/lb copper price
- Up to US$30 million in cash, based on a contingent payment arrangement where Harmony will pay Copper Mountain US$0.03 per pound of contained copper for any SAMREC copper resource discovered and declared on a new deposit within the acquired assets after the closing of the transaction.

Harmony plans to fund the upfront purchase price using available cash and revolving credit facilities.

The closing of the transaction is subject to certain customary conditions, including approval from the Foreign Investment Review Board in Australia and Copper Mountain bondholder approval. The transaction has received approval from the South African Reserve Bank.

Management will assess the accounting treatment upon the closure of the transaction.

41 Segment report

Accounting policy

Operating segments are reported in a manner consistent with the internal reporting provided to the chief operating decision maker (CODM). The chief operating decision maker has been identified as the CEO's office.

The group has one main economic product, being gold. In order to determine operating and reportable segments, management reviewed various factors, including geographical location as well as managerial structure. It was determined that an operating segment consists of a shaft or a group of shafts or open pit mine managed by an operational management team.

After applying the qualitative and quantitative thresholds from IFRS 8 ***Operating Segments***, the reportable segments were determined as: Tshepong Operations, Moab Khotsong, Bambanani, Joel, Doornkop, Target 1, Kusasalethu, Masimong, Unisel, Mponeng, Mine Waste Solutions (as of 1 July 2021) and Hidden Valley. All other operating segments have been grouped together under all other surface operations.

The CODM has been identified as the CEO's office consisting of the:
- Chief executive officer
- Financial director
- Executive director: Stakeholder relations and Corporate affairs
- Chief executive officer: South-east Asia
- Chief operating officer: South Africa operations
- Chief financial officer: Treasury
- Senior executive: Enterprise risk and Investor relations
- Senior executive: Sustainable Development
- Senior executive: Human Capital
- Executive: Ore Reserve Management.

When assessing profitability, the CODM considers the revenue and production costs of each segment. The net of these amounts is the production profit or loss. Therefore, production profit has been disclosed in the segment report as the measure of profit or loss. The CODM also considers capital expenditure, gold production and tonnes milled when assessing the overall economic sustainability of each segment. The CODM, however, does not consider depreciation or impairment and therefore these amounts have not been disclosed in the segment report.

Segment assets consist of mining assets and mining assets under construction included under property, plant and equipment which can be attributed to the segment. Current and non-current group assets that are not allocated at a segment level form part of the reconciliation to total assets.

A reconciliation of the segment totals to the group financial statements has been included in note 42.

Notes to the group financial statements continued

For the year ended 30 June 2022

41 Segment report continued

	Revenue 30 June			Production cost 30 June			Production profit/(loss) 30 June			Segment assets 30 June			Capital expenditure# 30 June			Kilograms produced* 30 June			Tonnes milled* 30 June		
	2022	2021	2020	**2022**	2021	2020	**2022**	2021	2020	**2022**	2021	2020	**2022**	2021	2020	**2022**	2021	2020	**2022**	2021	2020
	Rand million			Rand million			Rand million			Rand million			Rand million			Kg			000t		
South Africa																					
Underground																					
Tshepong Operations	**6 351**	6 214	5 452	**5 084**	4 865	4 298	**1 267**	1 349	1 154	**3 779**	6 541	6 733	**1 514**	1 112	930	**7 022**	7 419	7 293	**1 561**	1 558	1 417
Moab Khotsong	**5 779**	6 048	5 008	**4 038**	3 842	3 344	**1 741**	2 206	1 664	**4 324**	4 008	3 842	**894**	633	498	**6 508**	7 166	6 592	**959**	903	746
Mponeng	**5 620**	4 750	—	**4 487**	2 938	—	**1 133**	1 812	—	**4 433**	4 321	—	**605**	493	—	**6 086**	5 446	—	**840**	683	—
Bambanani[1]	**1 286**	1 687	1 591	**1 163**	1 156	1 040	**123**	531	551	**—**	327	443	**25**	71	50	**1 433**	1 992	2 132	**176**	227	200
Joel	**1 411**	1 199	1 037	**1 308**	1 124	1 010	**103**	75	27	**1 244**	1 166	1 080	**225**	172	151	**1 556**	1 424	1 391	**434**	359	349
Doornkop	**3 106**	3 077	2 270	**2 453**	2 140	1 730	**653**	937	540	**3 222**	2 994	2 841	**491**	425	281	**3 444**	3 670	2 994	**874**	851	681
Target 1	**1 648**	1 410	1 524	**1 812**	1 667	1 499	**(164)**	(257)	25	**1 517**	1 367	1 276	**384**	368	347	**1 800**	1 603	2 244	**455**	488	543
Kusasalethu	**4 139**	3 400	2 293	**3 086**	2 955	2 577	**1 053**	445	(284)	**822**	1 057	1 253	**210**	205	188	**4 567**	3 999	3 015	**607**	708	615
Masimong	**1 733**	1 636	1 401	**1 504**	1 427	1 258	**229**	209	143	**17**	26	41	**49**	29	24	**1 910**	2 012	1 999	**486**	510	489
Unisel[2]	**—**	224	681	**—**	182	580	**—**	42	101	**—**	—	6	**—**	—	7	**—**	247	982	**—**	57	219
Surface																					
Mine Waste Solutions[3]	**2 642**	1 889	—	**1 588**	1 137	—	**1 054**	752	—	**1 027**	1 031	—	**264**	70	—	**2 899**	2 057	—	**23 443**	17 665	—
All other surface operations	**4 868**	5 136	3 302	**3 551**	3 587	2 135	**1 317**	1 549	1 167	**1 066**	890	745	**282**	265	118	**5 304**	6 031	4 349	**20 737**	21 824	16 264
Total South Africa	**38 583**	36 670	24 559	**30 074**	27 020	19 471	**8 509**	9 650	5 088	**21 451**	23 728	18 260	**4 943**	3 843	2 594	**42 529**	43 066	32 991	**50 572**	45 833	21 523
International																					
Hidden Valley	**3 159**	4 028	3 748	**2 122**	1 719	1 639	**1 037**	2 309	2 109	**4 141**	3 128	3 810	**1 249**	1 260	959	**3 707**	4 689	4 872	**3 229**	3 420	3 906
Total international	**3 159**	4 028	3 748	**2 122**	1 719	1 639	**1 037**	2 309	2 109	**4 141**	3 128	3 810	**1 249**	1 260	959	**3 707**	4 689	4 872	**3 229**	3 420	3 906
Total operations	**41 742**	40 698	28 307	**32 196**	28 739	21 110	**9 546**	11 959	7 197	**25 592**	26 856	22 070	**6 192**	5 103	3 553	**46 236**	47 755	37 863	**53 801**	49 253	25 429
Reconciliation of segment information to the consolidated income statement and balance sheet	**903**	1 035	938	**903**	1 035	938	**—**	—	—	**21 216**	21 947	22 622	**—**	—	—	**—**	—	—	**—**	—	—
	42 645	41 733	29 245	**33 099**	29 774	22 048	**9 546**	11 959	7 197	**46 808**	48 803	44 692	**6 192**	5 103	3 553	**46 236**	47 755	37 863	**53 801**	49 253	25 429

Capital expenditure for international operations excludes expenditure spent on Wafi-Golpu of R22 million (2021: R34 million) (2020: R54 million).

* *Production statistics are unaudited.*

1 *The Bambanani operation closed during June 2022.*

2 *The Unisel operation closed during October 2020.*

3 *The Mine Waste Solutions and All other surface operations line items were disaggregated as a result of Mine Waste Solutions meeting the 10% profit quantitative threshold for a reportable segment.*

42 Reconciliation of segment information to consolidated income statement and balance sheet

	SA Rand		
Figures in million	**2022**	2021	2020
Reconciliation of production profit to consolidated profit/(loss) before taxation			
Revenue per segment report	**41 742**	40 698	28 307
Revenue per income statement	**42 645**	41 733	29 245
Other metal sales treated as by-product credits in the segment report	**(903)**	(1 035)	(938)
Production costs per segment report	**(32 196)**	(28 739)	(21 110)
Production costs per income statement	**(33 099)**	(29 774)	(22 048)
Other metal sales treated as by-product credits in the segment report	**903**	1 035	938
Production profit per segment report	**9 546**	11 959	7 197
Cost of sales items other than production costs	**(8 828)**	(5 715)	(3 860)
Amortisation and depreciation of mining assets	**(3 622)**	(3 777)	(3 409)
Amortisation and depreciation of assets other than mining assets	**(61)**	(98)	(99)
Rehabilitation expenditure	**(136)**	(135)	(47)
Care and maintenance cost of restructured shafts	**(273)**	(144)	(146)
Employment termination and restructuring costs	**(218)**	(332)	(40)
Share-based payments	**(143)**	(114)	(130)
Impairment of assets	**(4 433)**	(1 124)	—
Other	**58**	9	11
Gross profit	**718**	6 244	3 337
Corporate, administration and other expenditure	**(984)**	(1 068)	(611)
Exploration expenditure	**(214)**	(177)	(205)
Gains/(losses) on derivatives	**53**	1 022	(1 678)
Foreign exchange translation gain/(loss)	**(327)**	670	(892)
Other operating expenses	**(1)**	(241)	(309)
Operating profit/(loss)	**(755)**	6 450	(358)
Gain on bargain purchase	**—**	303	—
Acquisition-related costs	**—**	(124)	(45)
Share of profit from associate	**63**	83	94
Investment income	**352**	331	375
Finance costs	**(718)**	(661)	(661)
Profit/(loss) before taxation	**(1 058)**	6 382	(595)

Notes to the group financial statements continued

For the year ended 30 June 2022

42 Reconciliation of segment information to consolidated income statement and balance sheet continued

	SA Rand		
Figures in million	**2022**	2021	2020
Reconciliation of total segment assets to consolidated assets includes the following:			
Non-current assets			
Property, plant and equipment not allocated to a segment	**7 280**	6 741	7 116
Mining assets (a)	**943**	757	1 062
Undeveloped property (b)	**4 004**	3 989	4 025
Other non-mining assets	**510**	411	115
Assets under construction (c)	**1 823**	1 584	1 914
Intangible assets	**48**	365	536
Restricted cash and investments	**5 555**	5 232	3 642
Investments in associates	**125**	126	146
Deferred tax assets	**203**	272	531
Other non-current assets	**374**	332	435
Derivative financial assets	**137**	328	50
Current assets			
Inventories	**2 818**	2 542	2 421
Restricted cash and investments	**27**	67	62
Trade and other receivables	**1 682**	1 652	1 308
Derivative financial assets	**519**	1 471	18
Cash and cash equivalents	**2 448**	2 819	6 357
Total	**21 216**	21 947	22 622

(a) These balances relate to Wafi-Golpu assets and assets that provide services to several CGUs, such as Harmony One Plant.

(b) Undeveloped properties comprise the Target North property as well as Wafi-Golpu's undeveloped properties.

(c) Assets under construction consist of the Wafi-Golpu assets.