

GEM DIAMONDS



OUR APPROACH TO
CLIMATE CHANGE
HALF-YEAR REPORT

2023

Q AND A WITH OUR CHIEF OPERATING OFFICER (COO)

HOW WAS DECARBONISATION INTEGRATED INTO THE GROUP STRATEGY IN 2023?

We adopted the recommendations of the Taskforce on Climate-related Financial Disclosures (TCFD) in 2021. This drove the implementation of our Group-wide climate-related governance and risk management frameworks. These frameworks aided our critical focus on impact and financial materiality by identifying and assessing climate and decarbonisation-related risks and opportunities, and ensuring decarbonisation was integrated into the Group strategy.

Over the period, we developed and implemented initiatives to drive decarbonisation, enable us to extract maximum value from our Letšeng operation and prepare for a low-carbon future. We adopted a bottom-up approach to identifying and implementing viable decarbonisation initiatives. We contributed to the Group's strategic priorities through our continued focus on reducing energy and water consumption and identifying and implementing lower-carbon and renewable energy sources. By integrating climate and decarbonisation-related risks and opportunities and how we manage these into our strategic thinking, we maximised our ability to create sustainable value for all our stakeholders.

DOES THE GROUP'S DECARBONISATION STRATEGY IMPACT ITS COST CONTROL OBJECTIVES?

The Group views cost control and decarbonisation as intrinsically linked objectives, since a reduction in energy consumption positively impacts carbon emissions and operational costs. Our decarbonisation strategy identifies two key levers for decarbonisation – improving energy efficiency and reducing our reliance on fossil fuel-based energy with appropriate and available low-carbon and renewable energy sources. Energy efficiency improvement gives us the opportunity to immediately and cost-effectively reduce carbon emissions while lowering the consumption of energy and associated costs. This is in line with the International Energy Agency (IEA) view that energy efficiency measures contribute approximately 37% of what is needed globally to achieve sustainable development targets and reach our goal of net zero by 2050.

During the period, the Group engaged independent energy and carbon subject matter experts to identify opportunities to transition to lower-carbon and renewable energy sources to reduce associated Scope 1 and 2 carbon emissions. The remoteness and unique environmental context of our operations were considered in identifying viable and appropriate solutions for potential future implementation. We considered solutions including hydro, solar and wind power and it is likely that a combination of these will prove to be most effective for our operations.

WHAT PROGRESS HAVE YOU MADE IN TERMS OF YOUR 2030 COMMITMENT TO REDUCE YOUR CARBON FOOTPRINT BY 30%?

Our carbon footprint continued to decrease, mostly driven by mining optimisation initiatives. These included shortening hauling distances and reducing waste mining with steeper slopes in the Main pipe at Letšeng. During the first half of 2023 we focused on reducing Scope 1 and 2 carbon emissions. Our initiatives included optimising the mining fleet, relocating basic service and refuelling infrastructure on-site, replacing lighting infrastructure with energy-efficient technology, improving blasting practices and reducing the volumes of waste mined. These initiatives positively impacted our carbon footprint and related energy costs.

We monitor our progress in achieving our 30% reduction goal by regularly assessing our energy use and carbon footprint. This guides how we identify appropriate measures to further reduce energy consumption and associated carbon emissions. We continually evaluate and implement these measures as appropriate.

Brandon de Bruin

Chief Operating Officer

30 August 2023

OUR APPROACH TO CLIMATE CHANGE

OUR APPROACH TO REPORTING

Our reporting on climate change and decarbonisation is evolving alongside our approach to understanding and managing the potential effects on our operations and the risks and opportunities they present. In April 2022, the UK amended the Companies Act, 2006 to include the recommendations of the TCFD. Gem Diamonds recognises and supports these recommendations and we incorporated TCFD-recommended disclosures into our annual and half-year reporting.

OUR APPROACH TO CLIMATE CHANGE AND DECARBONISATION

Gem Diamonds is committed to responsible, safe and sustainable mining. In support of this commitment, the Board adopted the TCFD framework in June 2021 and a decarbonisation strategy in March 2023. The decarbonisation strategy sets out our ambitions to mitigate potential negative impacts on the climate by reducing energy consumption, improving our energy efficiency and transitioning to renewable energy sources.

Having achieved the objectives of phase 1 and 2 of our TCFD roadmap in 2021 and 2022 respectively, we remain on target to achieve full TCFD implementation by the end of 2023.

OUR TCFD ROADMAP

Phase 1: 2021	Phase 2: 2022	Phase 3: 2023
Establish the necessary governance, strategy and risk foundations to support meaningful, science-based decision-making	Understand the climate-related risks Gem Diamonds faces to reassess our organisational resilience Identify climate-related opportunities available to the Group and establish clear metrics and targets for decarbonisation	Monitor and manage our climate-related exposure and measure this against our decarbonisation targets
Completed	Completed	On track

2023 HALF-YEAR HIGHLIGHTS

Reduced Scope 1, 2 and 3 emissions by 17 255 tonnes of carbon dioxide equivalent (tCO₂e)	Developed a priority controlled electrical load management system	Reduced Scope 1 and 2 energy consumption by 29%
Carbon emissions intensity indicators improved in terms of tonnes mined and treated	Implemented technology to reduce lighting-related energy use	Water consumption intensity indicators improved in terms of tonnes mined and treated

GOVERNANCE AND RISK MANAGEMENT

How we govern climate-related risks and opportunities

The Board is ultimately responsible for the governance of climate-related risks and opportunities and is supported by the Sustainability and Audit Committees. In 2021, the Group implemented a governance and risk management framework for climate-related risk and opportunities, as reported in our **Annual Report and Accounts 2022** and **Sustainability Report 2022**. These structures remain in place to ensure that our decarbonisation strategy is implemented with our stakeholders' best interests in mind.

How we identify, assess and manage climate-related risks

We worked with relevant experts to identify emerging risks and potential opportunities for improvement or mitigation, with the aim of assessing our readiness to respond. Our collaboration with external experts enabled us to bolster our organisational system readiness and plan appropriately to mitigate future risks to the business. We regularly review and update our comprehensive physical and transition risk exposure assessments to determine the materiality of potential impacts on financial performance and position. The table below provides a high-level overview of some of the Group's climate-related risks and opportunities.

Climate-related risks	Potential financial impact	Climate-related opportunities	Potential financial impact
Short term: 1 to 3 years			
Short-term processes include annual business and financial planning, performance reporting, short-term capital allocation and contract negotiations.			
<ul style="list-style-type: none"> • Increase in occurrence of moderate precipitation • Enhanced emissions reporting obligations • Enhanced ESG obligations 	<ul style="list-style-type: none"> • Increased operating costs • Increased capital investment 	<ul style="list-style-type: none"> • Improve resource efficiencies and reduce our reliance on fossil fuels • Enhance water use strategies • Waste reduction and recycling initiatives 	<ul style="list-style-type: none"> • Reduced operating costs • Increased capital investment
Medium term: 3 to 5 years; long term: 5 to 10 years			
Medium to long-term processes include strategy development, social and environmental management plans, rehabilitation planning, capital management plans, financing and capital investments and operational planning, including contract negotiations and future-focused projects.			
<ul style="list-style-type: none"> • Increase in occurrence and severity of precipitation • Rising mean temperature • Strong winds • Increased frequency and duration of droughts • Failure of electricity providers to move to a low-carbon economy • Substitution of technology with lower-emission alternatives • Social risks due to resource constraints, particularly in developing countries • Evolving regulatory context regarding carbon tax • Increased costs of carbon-intensive products (such as diesel) • Reputational risk 	<ul style="list-style-type: none"> • Increased capital investment • Increased operating cost • Reduced revenue from decreased production capacity • Increased insurance premium or insurance unavailability • Research, development and implementation costs of new technology • Inappropriate investment decisions 	<ul style="list-style-type: none"> • Identify opportunities to transition to renewable energy sources • Position Gem Diamonds as an ethical and responsible producer of low-carbon-footprint diamonds • Use of new technologies 	<ul style="list-style-type: none"> • Reduced exposure to carbon and fossil fuel pricing • Increased capital availability • Reputational benefits • Decreased operating costs • Increased capital investment

STRATEGY

The impacts of climate-related risks and opportunities on our strategic priorities

Our Group strategy to sustainably maximise stakeholder value goes hand in hand with our commitment to be responsible stewards of our natural resources. Gem Diamonds identified three strategic priorities that underpin how the Group creates value for our stakeholders. We believe effectively managing our climate-related matters contributes to the Group's performance within these priorities.

Strategic priorities		
 Extracting maximum value from our operations	 Working responsibly and maintaining our social licence to operate	 Preparing for our future
Climate considerations		
Operational initiatives will improve efficiencies, thereby reducing operating costs and ensuring future availability of resources for all stakeholders	Bolstering our resilience to the physical impacts of climate change, while working with our project-affected communities to improve their readiness and resilience, ensures that Gem Diamonds protects its social licence to operate and continues to work responsibly with our stakeholders	The Group's existing business continuity and disaster management plans include considerations for natural weather events, which we have successfully managed at our operations for many years
H1 2023 progress		
<ul style="list-style-type: none"> We further optimised our mining fleet over the period, resulting in reduced costs, fossil fuel consumption and associated carbon emissions We installed technology to improve lighting-related energy use efficiency, resulting in reduced costs, fossil fuel consumption and carbon emissions We reduced direct energy consumption by 29% compared to H1 2022 	<ul style="list-style-type: none"> We reduced Scope 1, 2 and 3 emissions by 24% compared to H1 2022 We invested in water remediation and treatment technology We provided water and sanitation infrastructure to project-affected communities 	<ul style="list-style-type: none"> We committed to reducing our Scope 1 and 2 carbon emissions by 30% by 2030 We developed a priority controlled electrical load management system We commissioned an energy feed assessment for viable future alternative energy solutions

Our decarbonisation strategy

Decarbonisation reduces anthropogenic carbon emissions through reduced resource consumption and the implementation of lower-carbon and renewable energy sources, and is a key factor in meeting our climate change commitments.

The Group is committed to reducing Scope 1 and 2 emissions by 30% by 2030, translating to a reduction of 39 044 tCO₂e from our 2021 emissions footprint baseline of 153 863 tCO₂e. We adopted a bottom-up approach to identify decarbonisation risks and opportunities and consider potential implementation pathways for resource-use efficiency and carbon-reduction initiatives. We identified initiatives that could support the Group's decarbonisation objectives through improved resource use efficiencies, lower carbon emissions and reduced operational costs.

Priority controlled electrical load management system

During the first half of 2023, the Group commissioned a project to reduce on-site electricity consumption at Letšeng. The project targets specific interventions during normal uninterrupted electricity supply from the South African grid and off-grid supply during load shedding.

The priority controlled electrical load management system will be implemented in three phases. Each phase has specific solutions that target reduced electricity consumption and increased decarbonisation through lower carbon emissions.

Phase 1: During the first phase, we will compile a prioritisation schedule to enable site-wide implementation of a control system that will manage electricity consumption during uninterrupted and interrupted electricity supply. This will encompass a cloud-based hybrid system that communicates with the electricity supply centres on site.

Phase 2: During the second phase, the control system will be extended to additional individual devices (such as underfloor heating, geysers and plugs) to ensure control over lower-priority devices and optimise control of phase 1 consumers to further reduce overall electricity consumption. The expansion of the system to include individual consumer points will ensure that no electricity is wasted when accommodation blocks or offices are unoccupied.

Phase 3: During the final phase, a maximum demand control mechanism will be programmed into the load management system. This will allow control of maximum demand to predetermined thresholds, preventing lower-priority systems from starting up at the same time or when maximum demand reaches a predetermined limit.

Our decarbonisation levers

In H1 2023, our Scope 1 and 2 carbon footprint comprised 51% direct Scope 1 emissions (H1 2022: 46%) and 49% indirect Scope 2 emissions (H1 2022: 54%). Currently, the Group targets both Scope 1 and Scope 2 emissions as part of our decarbonisation strategy and our 30% reduction by 2030 objective.

Letšeng draws its power from the South African power grid, supplied through the national power utility, Eskom. A 2021 study by the Centre for Research on Energy and Clean Air found Eskom to be the world's most polluting company. This is as a result of Eskom's 15 coal-fired power stations, which produce 80% of South Africa's power. Eskom-supplied grid electricity is currently the only grid power that Letšeng has access to, and accounts for all our Scope 2 emissions. No renewable or alternative electricity sources are currently accessible to Letšeng to replace the existing grid supply. Mobile (mining fleet and equipment) and stationary (diesel-powered generators) combustion activities account for 98% of our Scope 1 emissions as a result of the diesel consumed through these activities.

The Gem Diamonds decarbonisation strategy focuses primarily on Letšeng, which represents 98% of the Group's carbon footprint. Our strategy targets two key levers for reduced carbon emissions within Scope 1 and 2:

- to reduce our energy use and associated carbon emissions by improving the efficiency of our processes and equipment; and
- to replace our dependence on fossil fuel-based energy sources with lower-carbon and renewable energy sources.

Reducing the overall demand for energy means that using renewable energy sources and offsetting residual emissions will become as efficient and cost-effective as possible.

TARGETS AND METRICS

The targets and metrics used to assess and manage relevant climate-related risks and opportunities

The Group monitors various metrics to inform its assessment of climate-related risks and opportunities, and we assess our carbon and water footprints every six months. This provides shorter-term monitoring and control of our progress against our set goals and the associated risks and opportunities, and allows us to respond sooner to climate and energy-related matters such as consumption rates, carbon emission trends, and opportunities to improve usage efficiencies.

The following metrics and trends are measured and monitored as part of our normal operations:

- Carbon emissions
- Water consumption
- Freshwater dam levels
- Precipitation patterns
- Energy consumption trends
- Environmental expenditure
- Land use and rehabilitation activities

For more information on our carbon emissions, including Scope 1, 2 and 3 emissions and other climate-related metrics, refer to our **Annual Report and Accounts 2022** and our **Sustainability Report 2022**.

Our carbon, energy and water footprints

Carbon

Gem Diamonds' carbon footprint is calculated in accordance with the GHG Protocol Corporate Accounting and Reporting Standard, an accounting tool developed by the World Resources Institute and the Business Council for Sustainable Development to manage GHG emissions. The standard includes Intergovernmental Panel on Climate Change GHG inventory guidelines for specific heating values, carbon content, densities and emission factors. Our H1 2023 total carbon footprint for the Group was 54 138 tCO₂e (H1 2022: 71 393 tCO₂e). The Group successfully reduced its relative comparative carbon footprint and associated intensity indicators over the period. This includes direct carbon emissions (Scope 1), energy indirect carbon emissions (Scope 2) and material Scope 3 emissions.

The Group's reduced carbon footprint was primarily driven by a 29% reduction in Scope 2 emissions as a result of load shedding in South Africa. The Letšeng operation in Lesotho is the main driver of the Group carbon footprint and, during periods of load shedding, the operation uses diesel generator back-up power to ensure operations are not interrupted. Generator-related diesel consumption at Letšeng increased by 218% over the period. However, this was offset by a decrease in mobile-related diesel consumption, which resulted in an overall Scope 1 emission reduction of 12% over the period.

The reduction was also driven by mining optimisation initiatives such as shorter hauling distances, steeper slopes and reduced waste mining. During the first half of 2023, additional initiatives were implemented to reduce Scope 1 and 2 carbon emissions. These included optimising the mining fleet, relocating basic services and refuelling infrastructure on-site, replacing all lighting infrastructure with energy-efficient technology, improving blasting practices and further reducing the volumes of waste mined. These initiatives contributed to a reduced carbon footprint, and helped mitigate the impact of increased diesel costs during 2023 due to increased reliance on diesel-powered generators.

The power availability of the South African grid deteriorated over the past 12 months, with January, February and April 2023 each recording higher blackout hour rates than any month previously. The 2022 record high of 34.56 accumulated days of blackout time was surpassed on 9 May 2023 when 34.68 accumulated blackout days were recorded for the year to date. The unavailability of grid power required the use of diesel generators to power Letšeng operations for 1 277 hours (effectively 53 days) over the period compared to 530 hours over the same period in 2022.

The Group monitors intensity indicators to assess and appropriately respond to carbon emission changes. The H1 2023 intensity indicators improved by 2% and 4% respectively for direct carbon emissions per tonne mined and tonne treated when compared to the H1 2022 period.

OUR APPROACH TO CLIMATE CHANGE

Carbon emissions	Unit	H1 2023	H1 2022	% change
Scope 1 (direct)	tCO ₂ e	23 960	27 283	(12)
Scope 2 (indirect)	tCO ₂ e	22 913	32 287	(29)
Total Scope 1 and 2	tCO ₂ e	46 873	59 570	(21)
Scope 3 (indirect)	tCO ₂ e	7 265	11 823	(39)
Total Scope 1, 2 and 3	tCO ₂ e	54 138	71 393	(24)
Total tonnes mined (ore and waste)	tonnes	7 633 804	9 508 995	(20)
Ore tonnes treated	tonnes	2 467 250	3 017 664	(18)
Intensity indicator: Scope 1 and 2 (tCO ₂ e)/tonnes mined (ore and waste)	ratio	0.0061	0.0063	(2)
Intensity indicator: Scope 1 and 2 (tCO ₂ e)/tonnes ore treated	ratio	0.0190	0.0197	(4)

The Group will continue to measure and report on our carbon footprint performance as we work towards our goal of reducing our footprint by 30% by 2030, using 2021 as a base.

Energy

Group-wide energy consumption (for Scope 1 and 2 activities) in H1 2023 was 23.5 million kWh (H1 2022: 33.0 million kWh). Almost all (99%) our Scope 1 and 2 energy consumption in H1 2023 is attributable to Letšeng, where our principal energy sources are grid electricity and diesel. The reduction in energy consumption resulted in an improvement in energy use efficiencies for both intensity indicators monitored by the Group. Energy consumption per tonne mined and ore treated improved by 12% and 13% respectively (see the table below). This illustrates an improvement in energy consumption across the value chain, from mining to treated production.

Energy consumption	Unit	H1 2023	H1 2022	% change
Scope 1	kWh	85 006	90 977	(7)
Scope 2	kWh	23 380 177	32 945 945	(29)
Total Scope 1 and 2	kWh	23 465 000	33 037 000	(29)
Total tonnes mined (ore and waste)	tonnes	7 633 804	9 508 995	(20)
Ore tonnes treated	tonnes	2 467 250	3 017 664	(18)
Intensity indicator: kWh/tonnes mined (ore and waste)	ratio	3.07	3.47	(12)
Intensity indicator: kWh/tonnes ore treated	ratio	9.51	10.95	(13)

Water

The Group water footprint (net water usage) for H1 2023 was 2.2 million cubic metres (m³) (H1 2022: 2.8 million m³). Letšeng implemented a number of water stewardship initiatives focused on optimising water consumption throughout the operations. These include improved stormwater management, water treatment and recycling initiatives and pit dewatering systems. Together, these initiatives reduce the volume of fresh water consumed by the Letšeng operation and ensure water quality is protected through focused engineering controls. Below is a comparison of our water consumption performance over the period. Net water use (m³) per tonne mined (ore and waste) and tonne treated improved by 2% and 4% respectively.

Water consumption	Unit	H1 2023	H1 2022	% change
Net water usage	million m ³	2.2	2.8	(21)
Water withdrawal and capture	million m ³	0.6	0.6	—
Water recycled	million m ³	3.1	3.2	(3)
Water loss through evaporation, entrainment and seepage	million m ³	1.1	0.9	22
Total tonnes mined (ore and waste)	tonnes	7 633 804	9 508 995	(20)
Ore tonnes treated	tonnes	2 467 250	3 017 664	(18)
Net water use (m ³)/tonnes mined (ore and waste)	ratio	0.288	0.294	(2)
Net water use (m ³)/tonnes ore treated	ratio	0.89	0.93	(4)

GEM DIAMONDS 

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