SOUTH32

ANNUAL REPORT 2023

Annual Report 2023

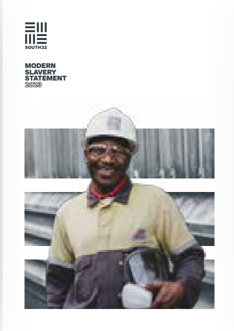
This report is a summary of our operations, activities, performance and financial position as at 30 June 2023.

Our 2023 Annual Reporting Suite

Sustainable Development Report

Sustainability Databook

Corporate Governance Statement



Modern Slavery Statement

Tax Transparency and Payments to Governments Report

+ You can view all the documents in our Annual Reporting Suite at *www.south32.net*

About this report

This Annual Report is a summary of the operations, activities and performance of South32 Limited (ABN 84 093 732 597) and its controlled entities and joint arrangements[1] for the year ended 30 June 2023 and its financial position as at 30 June 2023. South32 Limited is the ultimate holding company of the South32 group of companies. In this report, unless otherwise stated:

(a) References to South32, the South32 Group, the Group, we, us, our and similar expressions[2] refer to South32 Limited and its controlled entities and joint arrangements;

(b) Financial information is presented on the basis described in note 2 to the financial statements (Basis of preparation) on page 110, except for non-IFRS measures (see below for further details); and

(c) Metrics describing health, safety, environment, people and community related performance in this report are presented on the basis described in the "Reporting Boundaries" tab in our Sustainability Databook available at *www.south32.net*.

Unless specified otherwise, the text of this report does not distinguish between the activities of the ultimate holding company and those of its controlled entities and joint arrangements. Monetary amounts in this report are expressed in US dollars unless otherwise stated.

Forward-looking statements

While the forward-looking statements in this report reflect South32's expectations at the date of this report (including with respect to its strategies and plans regarding climate change), they may be affected by a range of variables which could cause actual outcomes and developments to differ materially from those expressed in such statements. These variables include but are not limited to: financial and economic conditions in various countries; fluctuations in demand, price, or currency; operating results; development progress including approvals; risks, including physical, technology and carbon emissions reductions risks; industry competition; loss of market for South32's products; legislative, fiscal, and regulatory developments; the conduct of joint venture participants and contractual counterparties, and estimates relating to cost, engineering, reserves and resources. For further information regarding South32's approach to risk, see page 28.

South32 makes no representation, assurance or guarantee as to the accuracy, completeness or likelihood of fulfilment of any forward-looking statement, any outcomes expressed or implied in any forward-looking statement or any assumptions on which a forward-looking statement is based. Except as required by applicable laws or regulations, South32 does not undertake to publicly update or review any forward-looking statements. Past performance cannot be relied on as a guide to future performance. South32 cautions against reliance on any forward-looking statements or guidance, including any disruption arising in connection with COVID-19.

Non-IFRS

This report includes non-IFRS financial measures, including underlying measures of earnings, effective tax rate, returns on invested capital, cash flow and net cash/(debt).

Non-IFRS measures should not be considered as alternatives to an IFRS measure of profitability, financial performance or liquidity. For an explanation of how South32 uses non-IFRS measures, see page 38. The definitions of individual non-IFRS measures used in this report are set out in the glossary on page 181.

(1) In this report, references to 'joint arrangements' mean operations that are not controlled by South32, such as joint ventures and joint operations. Joint arrangements are classified in accordance with IFRS 11 Joint Arrangements.
(2) This report also refers to commodities 'we produce' and commodities in 'our portfolio', which include commodities such as bauxite, alumina, aluminium and copper that may form part of, or be produced by, joint arrangements that are not operated by South32. References in this report to 'our operations', or commodities 'we produce' or in 'our portfolio', should be read in this context.

Cover: An operator at Groote Eylandt Mining Company in Australia.
Right: Local farmers from Maputo province in Mozambique.

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Acknowledgement

We acknowledge and pay our respects to the Indigenous, Traditional and Tribal Peoples of the lands, waters and territories on which South32 is located and where we conduct our business around the world.

We respect and acknowledge the unique cultural and spiritual relationships that Indigenous, Traditional and Tribal Peoples have to the lands, waters and territories, and their rich contribution to society.

In the spirit of respect and reconciliation, we will continue to support initiatives that strengthen culture and ways of life so that their legacy continues and extends to future generations.

FULFILLING OUR PURPOSE

South32 has undergone a major transformation over the past eight years to become a truly global, diversified producer of commodities critical to a low-carbon future.

We were profoundly shocked and saddened by the deaths of two of our colleagues, Mr Cristovão Alberto Tonela and Mr Alfredo Francisco Domingos João, at Mozal Aluminium in November 2022. On behalf of the Board, I express my sincere and deepest sympathies to their families, friends and colleagues.

This incident was devastating for everyone at South32 and has challenged each of us to ask ourselves every day whether our decisions and actions guarantee our own safety and that of our colleagues.

We had already commenced our journey to fundamentally shift our safety performance and deliver the cultural transformation required for sustained improvement. The tragic loss of our colleagues at Mozal Aluminium has demonstrated why this work is of utmost importance and strengthened our resolve to eliminate fatalities and serious injuries from our business.

We believe that supporting all our people to feel safe, included and respected at work can enhance individual and collective performance. The Board, working with the Lead Team, sets the direction and tone for our workplace culture and our focus is on building a culture that aligns with our purpose, reflects our values and supports the delivery of our strategy.

Our Board represents a broad cultural, ethnic, background and geographic mix. In May we welcomed Mr Carlos Mesquita and Ms Jane Nelson as independent Non-Executive Directors, based in the Americas. The appointments of Carlos and Jane further enhance the Board's broad range of skills and experience, particularly in major projects, operations and sustainability. We also farewelled Mr Guy Lansdown who resigned from our Board in May. I would like to thank Guy for his valuable contribution during his tenure as we expanded our presence in the Americas.

As part of the Board's program of regular meetings, Directors visited Hillside Aluminium, Hotazel Manganese Mines and Mozal Aluminium, as well as the Hermosa project in FY23. These site visits presented an opportunity to better understand the local operating context, consider the challenges and opportunities at each site, connect with our employees and contractors, and experience our culture first-hand. It has been inspiring to see how our people are making a difference at each of these locations as we all work to fulfil our purpose.

Against this volatile and uncertain backdrop, we set annual production records at three of our operations and delivered one of our largest underlying profit results to date, with Underlying earnings before interest, tax, depreciation and amortisation of US$2.5 billion. This was achieved despite lower commodity prices and industry-wide inflationary pressures.

We recorded a statutory loss after tax of US$173 million following the recognition of a non-cash impairment expense in relation to the Taylor Deposit at our Hermosa project, and ended the financial year with net debt of US$483 million as we made record returns to shareholders and invested in our business.

"We published our first Climate Change Action Plan in September 2022 and received strong shareholder support for the Plan."

The global economy has seen two successive major shocks in a short span of three years. While the world has re-opened since the COVID-19 pandemic, geopolitical tensions remained heightened throughout FY23, including the ongoing tragic war in Ukraine and strained ties between the major economic centres. This has contributed to market fragmentation and volatility in a landscape where policymakers and companies are already grappling with structural risks including climate change, higher sovereign debt levels, ageing demographics and rising income inequalities.

We returned US$1.2 billion to shareholders during FY23, including US$1,007 million in fully-franked ordinary and special dividends, and US$218 million via our on-market share buy-back. Reflecting our disciplined approach to capital management, the Board has resolved to further expand our capital management program to US$2.4 billion, leaving US$133 million to be returned by 1 March 2024.

One of the central aims of the United States Inflation Reduction Act is to increase investment in clean energy, offering tax incentives for domestic electric battery vehicle production and supply chains. The Hermosa project

supports this anticipated growth and is currently the only advanced project in the United States that could supply two federally designated critical minerals, zinc and manganese.

The development of Hermosa is an important step in our long-term strategy to reshape our portfolio by increasing our exposure to commodities critical to a low-carbon future. Our ambition is for Hermosa to be our first next generation mine with the potential to deliver improved safety and productivity while minimising our environmental impact and making a significant contribution to our host communities and the local economy. We are progressing the Taylor and Clark Deposits towards development, with a final investment decision on Taylor expected by the end of calendar year 2023.

Taking action to address the risks and opportunities which climate change presents is also a long-term focus for our business. We support the goals of the Paris Agreement and have a long-term goal to achieve net zero greenhouse gas (GHG) emissions by 2050, inclusive of Scope 1, 2 and 3 emissions. We also have a medium-term target to halve our operational GHG emissions (Scope 1 and 2) by 2035 from our FY21 baseline.

We published our first Climate Change Action Plan in September 2022, which was the subject of a non-binding advisory resolution at our 2022 Annual General Meeting. The Plan received strong shareholder support, with 89.6 per cent of votes cast in favour of the resolution. Subsequent to the meeting, we engaged with material shareholders that voted against the Plan to understand areas they would like to see improved and this feedback is taken into consideration by our Board in determining our approach to climate change going forward.

We have made progress against key elements of the Plan in FY23, including updating our 1.5°C scenario to stress-test the potential impacts of climate change on our business. We have also progressed our decarbonisation initiatives with a focus on the operations which account for the majority of our GHG emissions profile.

The Board oversees climate change as a strategic risk and material governance issue, and we will continue to provide annual updates on our progress against our Climate Change Action Plan in our Sustainable Development Report.

Just as we continue to share our approach and performance on climate change, the same is also true for other material sustainability topics, with the publication of new or updated approaches for Indigenous, Traditional and Tribal Peoples Engagement, Cultural Heritage, Human Rights, Water Stewardship, and Tailings Management.

In 2020 we announced our support for the Uluru Statement from the Heart as the pathway towards reconciliation put forward by Australia's First Nations Peoples, which includes enshrining a First Nations Voice to Parliament into the Australian Constitution.

We are aware that there are many different views on how to address the considerable disadvantage of Australia's First Nations Peoples. As a Board we have a duty to act in the best interests of our company. Those interests include the way in which we operate on the lands of First Nations Peoples. It is in our interests that the communities that support our operations are thriving and, in our view, this will be supported by First Nations Peoples having a say on matters relating to them.

With a referendum on an Indigenous Voice to Parliament taking place in Australia in October 2023, our hope is that everyone takes the time to inform themselves on what this means to the First Nations Peoples of Australia and the broader community.

The Board is pleased with the progress that has been made in FY23, while acknowledging that we must continue our critical work to improve our safety performance. We have much to look forward to in FY24, as we continue to transform our portfolio to provide commodities critical to a low-carbon future.

On behalf of the Board, I would like to thank our shareholders, communities and other key stakeholders for their ongoing support and reiterate our thanks to our people for their hard work and commitment throughout the year.

Karen Wood
Chair

MAKING A DIFFERENCE...

Our purpose

Our **purpose** is to make a difference by developing natural resources, improving people's lives now and for generations to come. We are trusted by our owners and partners to realise the potential of their resources.

Our strategy

Our purpose is underpinned by a simple yet powerful **strategy** which is focused on optimising the performance of our operations, unlocking their potential and identifying new opportunities to create value for our stakeholders.

OPTIMISE

+ **Learn more in Our strategy in action on pages 20 to 21.**

UNLOCK

+ **Learn more in Our strategy in action on pages 22 to 23.**

IDENTIFY

+ **Learn more in Our strategy in action on pages 24 to 25**

Sustainability is at the heart of our purpose and underpins the delivery of our strategy.

+ **Learn more about our approach to sustainability in our Sustainable Development Report at *www.south32.net*.**

Our values

While our strategy outlines what we do to achieve our purpose, our **values** guide how we do it. Every day, our values shape the way we behave and the standards we set for ourselves and others.

Care
We care about people, the communities we're a part of and the world we depend on.

Trust
We deliver on our commitments and rely on each other to do the right thing.

Togetherness
We value difference and we openly listen and share, knowing that together we are better.

Excellence
We are courageous and challenge ourselves to be the best in what matters.

+ **Learn more about our values at *www.south32.net*.**

Our performance

Our **key performance indicators** provide a balanced approach to measuring our performance against the delivery of our strategy, in support of our purpose and aligned with our values.

+ **Learn more about our key performance indicators on pages 26 to 27.**

...AND IMPROVING PEOPLE'S LIVES

Our stakeholders

We are committed to creating value for our **stakeholders**. We believe that, when done sustainably, the development of natural resources can change people's lives for the better. In delivering our strategy, we seek to create enduring social, environmental and economic value, in a way that aligns with our purpose and values.

+ **Learn more about how we are helping to improve people's lives on pages 12 to 13.**

+ **Learn more about our stakeholders in our Sustainable Development Report at *www.south32.net*.**

Our people

Nothing is more important than the health, safety and wellbeing of our **people**. We are committed to working together safely, creating a values-based culture and an inclusive and diverse workforce.

+ **Learn more about our approach to health and safety, and people and culture, in our Sustainable Development Report at *www.south32.net*.**

Our people are fundamental to our success. We seek to attract, develop and retain talented people who have a shared belief in our purpose and values. Our **reward framework** aims to reward business and individual performance, as well as drive ownership behaviours.

+ **Learn more about executive reward in our Remuneration report on pages 78 to 103.**

SOUTH32 IS A GLOBALLY DIVERSIFIED MINING AND METALS COMPANY

We produce commodities including bauxite, alumina, aluminium, copper, silver, lead, zinc, nickel, metallurgical coal and manganese from our operations in Australia, Southern Africa and South America. With a focus on growing our base metals exposure, we also have two development options in North America and several partnerships with junior explorers around the world.

With more than 9,000 employees and a presence in six continents, we are proud to be creating opportunities for our people and the communities in which we operate to benefit from the development of natural resources. We are transforming our business to increase our exposure to commodities critical to a low-carbon(1) future and are committed to continuously improving our sustainability performance, optimising our positive contributions and minimising adverse impacts.

1,461

Copper equivalent production (kilotonnes)(2)

(FY22 1,375)

1,616

Underlying EBIT (US$ million)(3)

(FY22 3,967)

1,225

Shareholder returns (US$ million)(4)

(FY22 788)

(1) In this report we use particular terminology in relation to climate change. Definitions of the terms 'goal', 'target' and 'low-carbon' when used in the context of climate change are set out in the Glossary of terms and abbreviations on pages 181 to 187 of this report.
(2) Copper equivalent production was calculated using FY22 realised prices, and includes operated and non-operated operations.
(3) This is a non-IFRS measure. For an explanation of how South32 uses non-IFRS measures, see page 38.
(4) Fully-franked ordinary and special dividends paid in respect of H2 FY22 (US$784M), fully-franked ordinary dividends paid in respect of H1 FY23 (US$223M) and on-market share buy-back (US$218M).

OUR PERFORMANCE AT A GLANCE

- Recorded strong production growth in aluminium (14 per cent), base metals (17 per cent)[5] and manganese (four per cent), as we realised the benefit of recent portfolio improvements.
- Achieved annual production records at Hillside Aluminium, Australia Manganese and South Africa Manganese.
- This production growth, coupled with our continued focus on cost efficiencies, underpinned one of our largest underlying financial results.
- A record US$1.2 billion was returned to shareholders during FY23[4].
- Achieved significant milestones at our Hermosa project.
- Progressed near-term decarbonisation initiatives to support of delivery of our medium-term target[1][6].

1.4

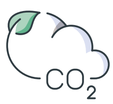
Lost Time Injury Frequency (per million hours worked)[7]

(FY22 2.0)

27.7

Social Investment (US$ million)[8]

(FY22 31.1)



21.0

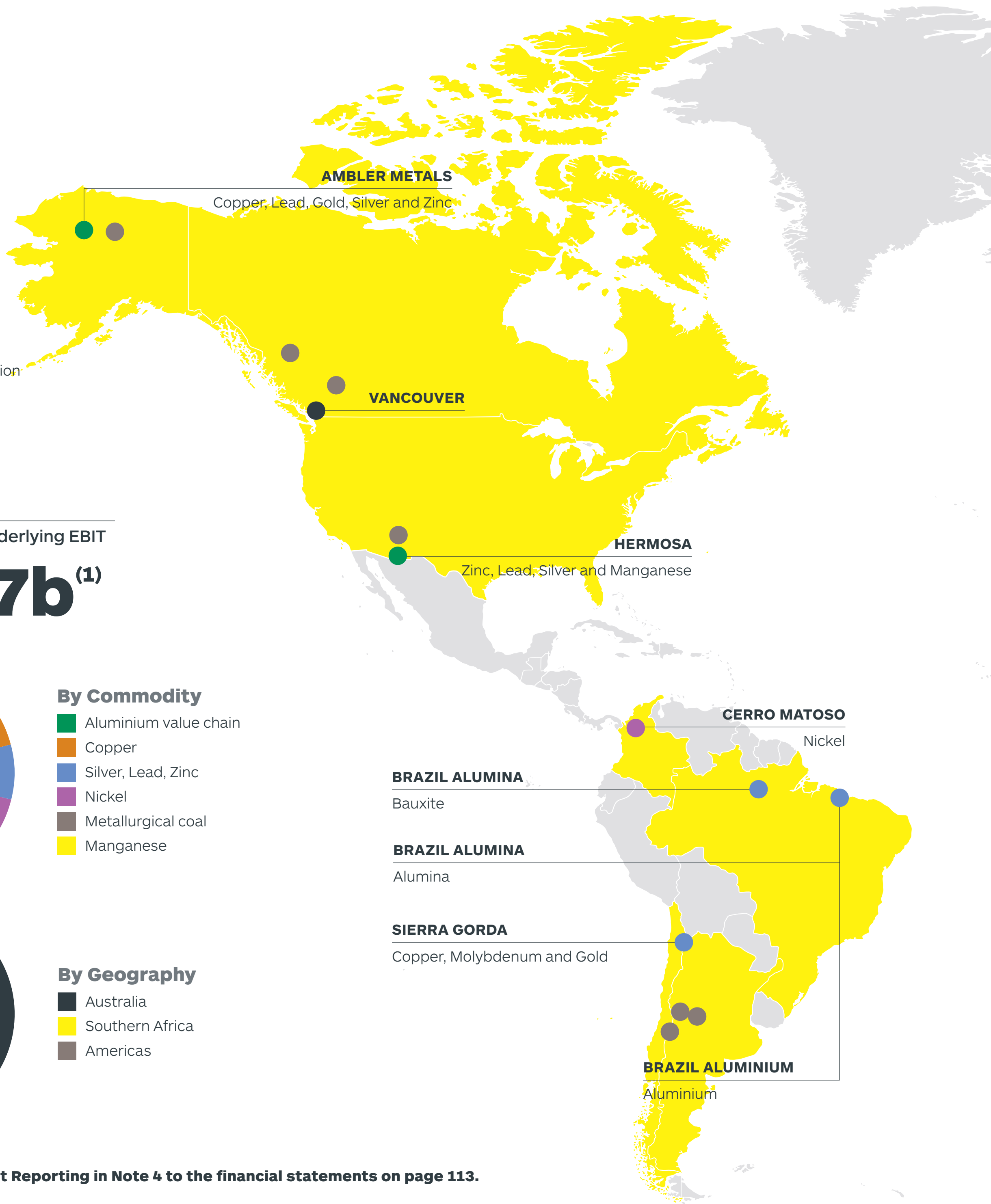
Operational greenhouse gas emissions (Million tonnes CO_2-e)[9]

(FY22 21.0)

+ **Learn more about our key performance indicators, including historical data, on pages 26 to 27**

(5) FY23 growth in copper equivalent production at our base metals operations (Sierra Gorda, Cannington and Cerro Matoso), compared to FY22. Copper equivalent production was calculated using FY22 realised prices.
(6) Our medium-term target is to reduce our operational greenhouse gas emissions by 50 per cent from FY21 levels by 2035. The FY21 baseline has been adjusted to exclude emissions from SAEC and TEMCO, which were divested in FY21.
(7) Incidents are included where South32 controls the work location or controls the work activity. Lost time injuries include injuries that result in one or more lost work days after the day of the event.
(8) Our total social investment comprised US$24.6M in direct investment (including Enterprise Development), US$2.5M in administrative costs, and US$0.6M of in-kind support.
(9) Includes Scope 1 and Scope 2 greenhouse gas emissions.

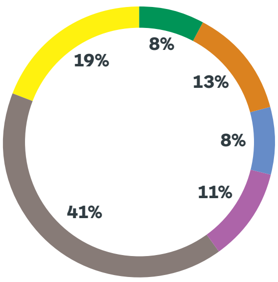
A DIVERSIFIED PORTFOLIO WITH A BIAS TO BASE METALS



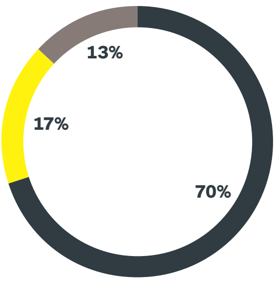
- South32-operated operation
- Non-operated operation
- Development option
- Exploration program
- Office

FY23 Key Commodity Underlying EBIT

US$1.7b[(1)]



By Commodity
- Aluminium value chain
- Copper
- Silver, Lead, Zinc
- Nickel
- Metallurgical coal
- Manganese



By Geography
- Australia
- Southern Africa
- Americas

+ **Read more on Segment Reporting in Note 4 to the financial statements on page 113.**

(1) Presented on a proportional consolidation basis and excludes manganese alloys (-US$6 million), Hermosa (-US$19 million), and Group and unallocated costs (-US$50 million).

Our commodities

Aluminium value chain

Our integrated aluminium value chain consists of high-quality bauxite resources, large alumina refineries and the two largest aluminium smelters in Africa.

Copper

We have an interest in a conventional open-cut copper mine in the prolific Antofagasta region in Chile, producing a commodity critical to a low-carbon world.

Silver, Lead, Zinc

We are one of the world's largest producers of silver and lead from one of our Australian operations that also produces zinc.

Nickel

We are one of the world's largest ferronickel producers with the potential to produce intermediary nickel products for electric vehicle markets.

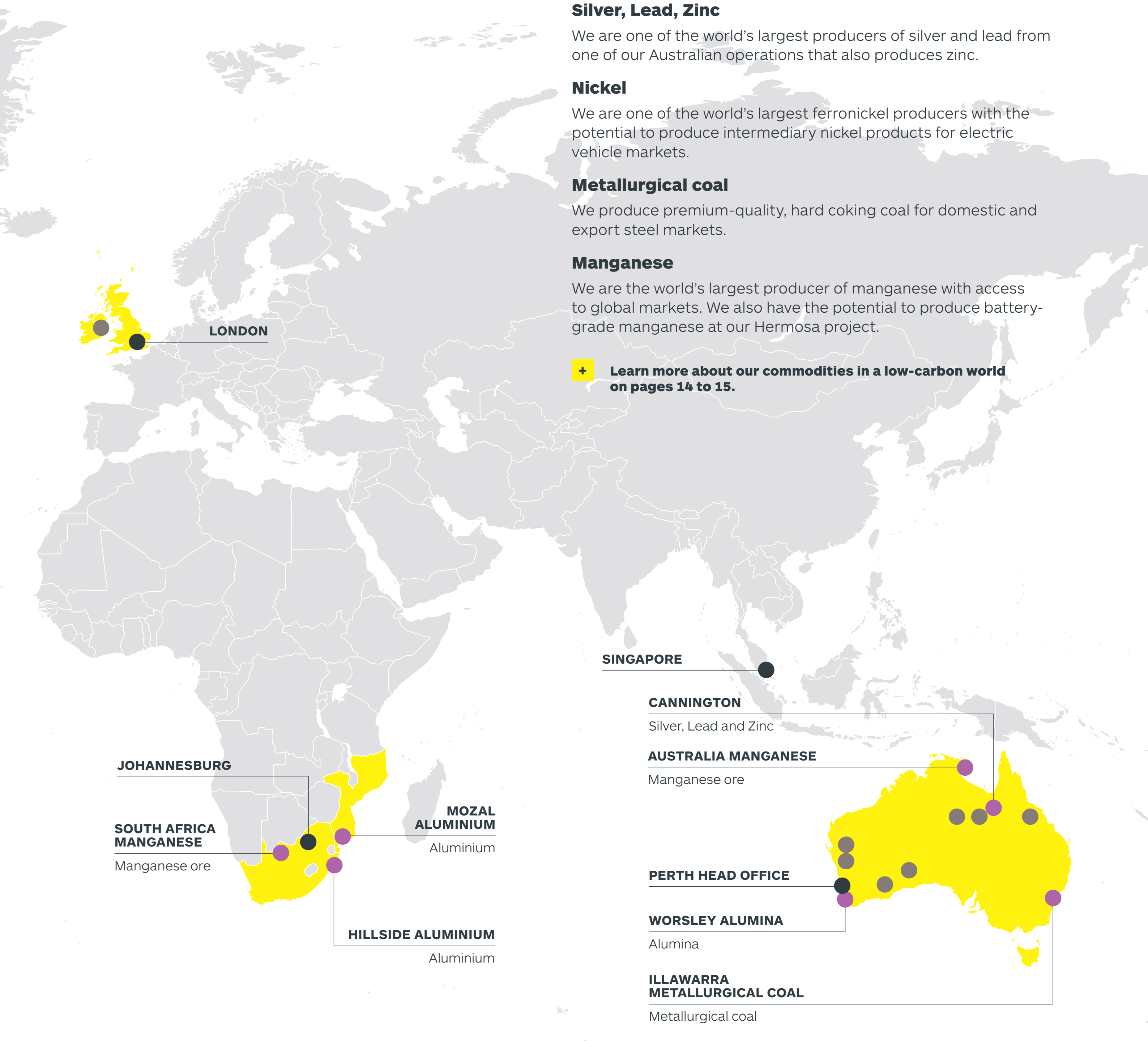
Metallurgical coal

We produce premium-quality, hard coking coal for domestic and export steel markets.

Manganese

We are the world's largest producer of manganese with access to global markets. We also have the potential to produce battery-grade manganese at our Hermosa project.

+ **Learn more about our commodities in a low-carbon world on pages 14 to 15.**



CREATING LONG-TERM VALUE

As a global mining and metals company, we create value by producing commodities that are used in many aspects of modern life and many of these commodities will play a critical role in a low-carbon future. Our operations, development options and exploration programs are diversified by commodity and geography. We work to minimise the impact of our activities and aim to create enduring value for our stakeholders, at each stage of the mining lifecycle.

The resources we rely on

People and expertise
Our global workforce is made up of both employees and contractors and is our most important resource, providing the skills, experience and technical expertise required to run our business.

Natural resources
The resources and reserves we access are the primary inputs for our business. Other natural resources such as water and energy are also important for the operation of our facilities, and we require access to land to conduct our business activities.

Physical assets
We have a suite of operations including open-cut and underground mines, refineries, smelters and associated infrastructure. We procure equipment from suppliers globally to support our operations, development options and exploration programs.

Finance
Our shareholders and lenders provide access to financial capital, which we put to work by operating our existing facilities and funding our pipeline of development options and exploration programs.

Relationships
Trust and transparency are essential to the way we operate. We seek to build trust in the communities where we operate to help realise the potential of their resources, and we work with our suppliers and customers to apply responsible business practices throughout our value chain.

What we do

Explore
We have a portfolio of more than 25 greenfield exploration options across the world to discover deposits to underpin our next generation of mines, with a focus on commodities critical to a low-carbon future. Wherever we explore, we work to minimise the footprint of our activities through the use of technology and well-designed programs.

Develop
Our development options have the potential to provide commodities which support the transition to a low-carbon world and we have a pipeline of options in feasibility, pre-feasibility and other study phases. As we advance these options we are looking to reshape the way we would mine at future projects including the Hermosa project to deliver transformational safety, productivity and emissions outcomes.

Mine/Process
We mine and process bauxite, copper, silver, lead, zinc, nickel, metallurgical coal and manganese. Our most important commitment at all of our sites is the health, safety and wellbeing of our employees, contractors, visitors and communities. We listen to our stakeholders and work together with the aim of creating shared value.

Refine/Smelt
We refine bauxite to produce alumina, we smelt alumina to produce aluminium, and we smelt nickel ore to produce ferronickel. We are also executing decarbonisation initiatives to support delivery of our operational decarbonisation target, focusing on our highest emitting refineries and smelters.

Market
We generate revenue from the sale of our commodities to a global customer base and purchase raw materials from global markets. We also analyse commodities and their markets to inform our strategic business planning and investment decisions. We are building meaningful partnerships with key customers and suppliers to support and co-design emissions reduction programs in the value chain.

Rehabilitate and Close
From exploration through to closure and beyond, we seek to minimise our adverse impacts on the surrounding communities and environments. We undertake progressive rehabilitation where possible, our closure plans are informed by the aspirations and expectations of our host communities and countries, and we aspire to leave a positive legacy.

The outcomes we create

We are committed to creating value for our stakeholders, including our people, communities, suppliers, customers, governments and the financial community including our shareholders.

+ **Learn more about our stakeholders and impact on pages 12 to 13.**

HELPING IMPROVE PEOPLE'S LIVES

We are committed to creating value for our stakeholders. We believe that, when done sustainably, the development of natural resources can change people's lives for the better. Here are some of the ways we are doing this.

People

9,616
employees globally[1]

US$805M in wages, salaries and other payments[2]

430 graduates, apprentices, trainees and learners in our talent pipeline

We invest in our people through training and development to help them realise their career aspirations

Our annual Your Voice employee survey allows us to understand and continuously improve the employee experience

+ Learn more about our people and culture in our Sustainable Development Report at *www.south32.net*

Communities

US$27.7M
invested in community programs[3]

Our direct social investment spend was across our four key focus areas - education and leadership (24 per cent), economic participation (14 per cent), good health and social wellbeing (50 per cent), and natural resource resilience (12 per cent)

We work closely with Indigenous, Traditional and Tribal Peoples to preserve cultural heritage

+ Learn more about how we deliver value to society in our Sustainable Development Report at *www.south32.net*

(1) Includes direct employees at Brazil Alumina, Brazil Aluminium and Sierra Gorda.
(2) Includes operations at their respective percentage shareholding, including South32's ownership proportion of our manganese equity accounted investments.
(3) Our total social investment comprised US$24.6M in direct investment (including Enterprise Development), US$2.5M in administrative costs, and US$0.6M of in-kind support.

Environment and Climate Change

We have set a medium-term target to halve our operational greenhouse gas emissions (Scope 1 and 2) by 2035 from an FY21 baseline, and we have set a goal of net zero operational greenhouse gas emissions by 2050

We have set a goal of net zero Scope 3 greenhouse gas emissions by 2050

Water use efficiency, which measures water recycled and reused as a percentage of total water use, was 61.5 per cent in FY23

333 hectares of land rehabilitated in FY23

+ **Learn more about our approach to climate change and our approach to managing our environmental impact in our Sustainable Development Report at *www.south32.net***

Financial Community

Our capital management framework prioritises maintaining safe and reliable operations and an investment grade credit rating through the cycle, before distributing a minimum of 40 per cent of underlying earnings as ordinary dividends

US$1,007M in dividends returned to shareholders during FY23

US$218M allocated to our on-market share buy-back during FY23

+ **Learn more about our capital management framework in Our strategy on page 19.**

Suppliers and Customers

US$1,017M
spent on local procurement

A$30M procured from Aboriginal and Torres Strait Islander businesses in Australia

US$15M spent on Enterprise and Supplier Development in South Africa[4]

We aim to source responsibly and enhance product stewardship across our value chain, working with 5,623 direct suppliers in 57 countries and 195 customers in 32 countries

+ **Learn more about our approach to responsible value chains in our Sustainable Development Report at *www.south32.net***

Governments

US$1,470M
in total taxes and royalties paid[5]

Underlying effective tax rate of 36.1 per cent

Wherever we operate, we seek to work cooperatively with governments to help them realise value from natural resources and transition towards low-carbon economies

We work with a range of stakeholders and seek to influence public policy to create an environment that supports the sustainable development of natural resources

+ **Learn more about our approach to tax in our Tax Transparency and Payments to Government Report, and our approach to industry associations at *www.south32.net***

(4) Enterprise and Supplier Development (ESD) consists of two activities, Enterprise Development and Supplier Development. The Enterprise Development component, which was US$5.2 million in FY23, is captured in both the ESD total and the social investment total.
(5) Includes South32's ownership proportion for equity accounted investments.

HELPING CREATE A LOW-CARBON FUTURE

Our commodities are used in many aspects of modern life and we are actively reshaping our portfolio to increase our exposure to the commodities critical to a low-carbon future. Key market sectors where our commodities have an important role to play include construction, energy and renewables, the automotive industry and consumer goods.

Aluminium

Aluminium is often referred to as the metal of the future. It is lightweight, durable, strong, resistant to corrosion, recyclable and it can conduct electricity, meaning it has a wide range of applications including construction, electrical wiring, transportation, packaging and consumer goods such as electronics and household items. We have doubled our low-carbon aluminium[(1)] capacity and operate the largest aluminium smelter in the southern hemisphere.

Copper

Copper is a key metal used in electric vehicles and charging infrastructure. It is also an excellent conductor of electricity. As the world moves towards electrification, copper will increasingly be used in power-related infrastructure, including renewable energy. Copper is also used in kitchen cookware and plumbing as it conducts heat well and has antimicrobial properties. In FY22 we acquired an interest in our first operating copper mine, which transitioned to 100 per cent renewable electricity supply in FY23.

Silver, Lead, Zinc

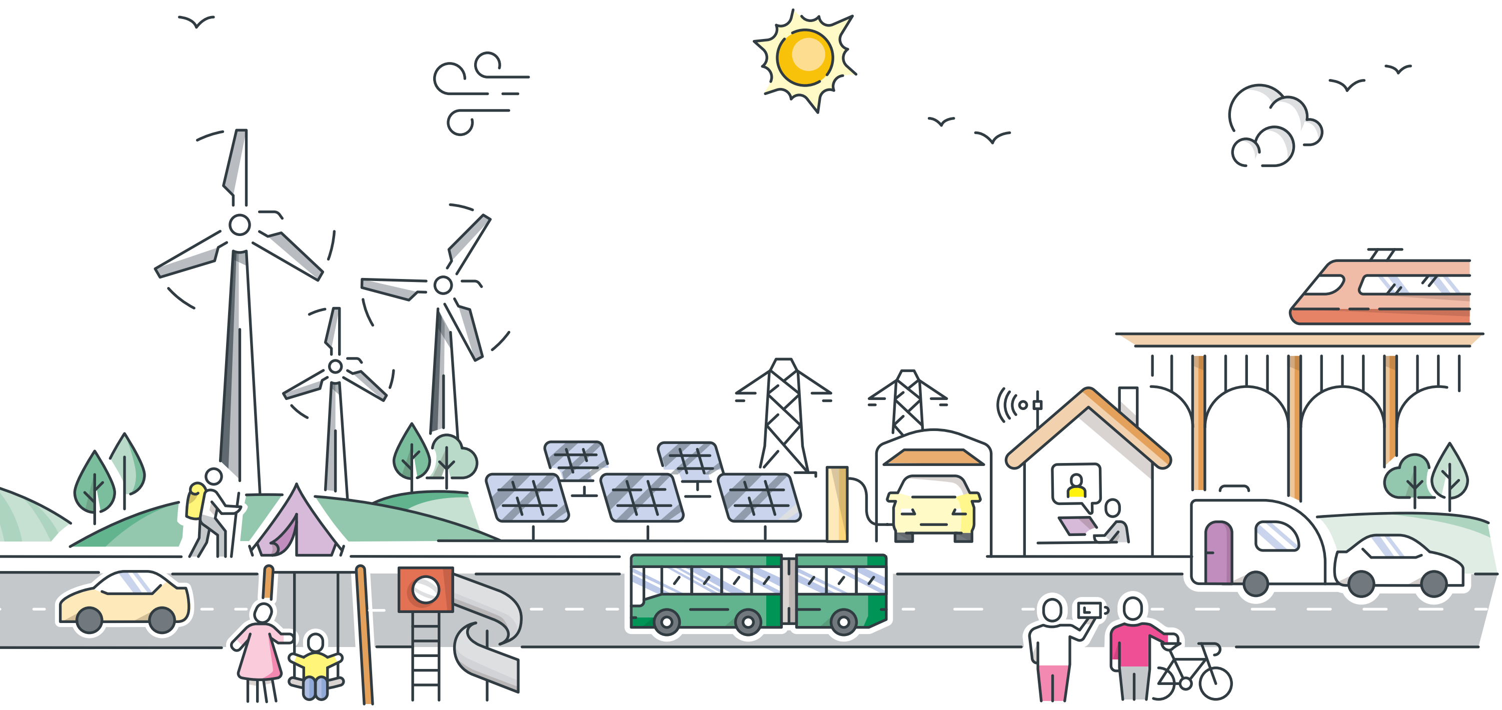
Silver is used in solar panels due to its superior electrical conductivity, and is also used to make medical appliances and consumer electronics. Lead is used in renewable energy storage systems. Zinc protects metals against corrosion and will play a key role in green infrastructure development as a protective coating for wind turbines and solar panels. In solar panels zinc oxide coatings help achieve higher energy conversion. We are a large producer of silver-rich lead concentrate and zinc concentrate.

(1) A definition of the term 'low-carbon aluminium' when used in the context of climate change is set out in the Glossary of terms and abbreviations on page 185 of this report.

FY23 production at a glance

Aluminium (kt)	Copper (kt)	Silver (koz)	Lead (kt)
1,133	**70.7**	**11,813**	**101.7**
Zinc (kt)	Nickel (kt)	Metallurgical coal (kt)	Manganese (kwmt)
59.2	**40.8**	**5,497**	**5,653**

+ **Learn more about our portfolio in a low-carbon world in our Sustainable Development Report at *www.south32.net***



Nickel

Nickel is used in stainless steel, which is used in transportation, manufacturing, household items and surgical instruments. Nickel has an important role to play as the world transitions to a more sustainable future as it is used as an alloy in wind and solar power infrastructure. Nickel-rich batteries are also critical for the rapid adoption of electric vehicles. We are one of the world's largest ferronickel producers with the potential to produce intermediary products for electric vehicles.

Metallurgical coal

Currently there is no commercial scale alternative to metallurgical coal in the steelmaking process. The use of high-quality metallurgical coal that we produce supports greenhouse gas emissions reduction targets in the steel industry through improved blast furnace efficiency, when compared with lower-quality metallurgical coal. Growth in steel demand is anticipated for green infrastructure development and vehicle electrification, as well as for the establishment of new steel capacity in emerging markets.

Manganese

Manganese is used to improve the quality and strength of steel in major infrastructure such as hospitals, office towers and bridges. Manganese also has the potential to displace cobalt in lithium-ion batteries, with demand for manganese-rich cathode chemistries expected to grow. We are well positioned to meet future demand as we are the world's largest producer of manganese and our Hermosa project has the potential to produce battery-grade manganese.

DELIVERING NOW AND FOR THE FUTURE

Our strategy continues to serve us well and we delivered strong growth in commodities critical to a low-carbon future. We are investing to grow our business, have made substantial progress at our Hermosa project and are maturing our decarbonisation efforts.

Nothing is more important than the health, safety and wellbeing of our people. Unfortunately, we did not deliver on our most important commitment in FY23.

In November 2022, we were devastated by the loss of two of our colleagues, Mr Cristovão Alberto Tonela and Mr Alfredo Francisco Domingos João, who were fatally injured in an incident while undertaking maintenance work on a raising girder at Mozal Aluminium. Our deepest sympathies remain with their families and colleagues.

I visited Mozal Aluminium following the incident and its impact caused great sadness for all of us. Our initial priorities were to care for those involved, and respond to the immediate potential risk for the remaining raising girders by implementing additional controls at both Mozal Aluminium and Hillside Aluminium.

We owe it to everyone who has been affected by the deaths of Mr Tonela and Mr Domingos to learn from this terrible event. We worked with the original equipment manufacturer to identify further safety improvements, and once the investigation was completed, key learnings were shared across our business and our industry.

Our Lost Time Injury Frequency (LTIF) decreased by 30 per cent compared to the FY22 baseline and our Total Recordable Injury Frequency (TRIF) increased by 11 per cent compared to the FY22 baseline. LTIF is a measure of serious injuries whereas TRIF is a measure of all recordable injuries, so although we saw an increase in recordable injury events, the frequency of severe events decreased.

Despite this, we recognise that we must continue to improve our health and safety performance and everyone, across all levels of our organisation, are focused on this.

We continue to implement our multi-year Safety Improvement Program that commenced in FY22, which aims to deliver the cultural transformation required for sustained improvement. We have also made changes to the structure of our health and safety teams to continue to drive the integration between culture and health and safety.

Every day, we ask our people to reflect on whether they can guarantee both their safety and that of their colleagues when executing their role. If the answer is no, then the challenge is to stop work and ask what would need to be done differently to provide that guarantee. This is articulated as our ‘safety guarantee’ and it is used to create a sense of chronic unease, reduce complacency, and assist to reduce risk tolerance. We are working to further embed our 'safety guarantee' across our business.

We made some changes to our Lead Team in FY23, with Katie Tovich moving from the Chief Financial Officer role to become our Chief Human Resources and Commercial Officer, and we appointed Sandy Sibenaler as our new Chief Financial Officer following an internal promotion. With these changes, we have 50 per cent female representation on our Lead Team and while we continue to focus on increasing gender balance across the business, ultimately inclusion and diversity is about our workforce reflecting the communities in which we operate.

Inclusiveness extends beyond the workplace and in Australia, we support an Indigenous Voice to Parliament as a key element of the Uluru Statement from the Heart. We mine on Indigenous lands, and as part of determining our own position on the Statement we consulted the Traditional Owner Groups and Registered Indigenous Groups where we operate to confirm their support of the Statement. This year we have created opportunities for discussion and learning, including panel discussions with Indigenous Australians from where we operate, so that when our people decide whether to support a Voice to Parliament, they do so in an informed way.

> **“Recent portfolio improvements have helped us deliver strong production growth in aluminium, base metals and manganese.”**

In the same way that we are working to create workplaces that are physically safe, we are also focused on creating workplaces that are psychologically safe. We manage sexual harassment as a material health and safety risk and have implemented additional controls and safety measures which aim to mitigate against the potential for sexual harassment to occur in our workplaces, focusing on our highest exposure areas such as accommodation facilities.

We know that an inclusive and diverse workforce produces better outcomes and we are working to instil a culture that supports a positive employee experience and a safe and productive workplace.

The macroeconomic environment remained volatile throughout FY23. Inflationary pressures persisted in many jurisdictions which lead to an unprecedented pace of interest rate rises

by major central banks which impacted demand, particularly industrial activity. Although China reopened from its zero-COVID policy in the second half of the year, economic growth did not meet initial expectations.

Despite the challenging operating environment, we achieved record annual production at Hillside Aluminium, Australia Manganese and South Africa Manganese, and had a strong finish to the year with Brazil Alumina, Cannington and Illawarra Metallurgical Coal returning to stable operations following adverse weather and other temporary impacts.

Underlying earnings decreased as the combination of a decline in commodity prices from record levels in many markets in the prior period, and higher inflation and uncontrollable costs, more than offset higher production volumes.

We continue to prioritise a strong balance sheet and investment grade credit rating through all cycles, finishing the period with net debt of US$483 million as we made record returns to shareholders during FY23 and invested to grow our future production of commodities critical to a low-carbon future.

Our strategy of optimising the performance of our operations, unlocking their potential and identifying new opportunities to create value for our stakeholders has helped us navigate economic cycles over the last eight years.

Recent portfolio improvements have helped us deliver strong production growth, with aluminium production increasing by 14 per cent, base metals by 17 per cent and manganese by 4 per cent in FY23.

We have made substantial progress at our Hermosa project in the United States. Hermosa is currently the only advanced project in the United States that could supply two federally designated critical minerals, zinc and manganese, which are important for a low-carbon future. In May 2023, Hermosa was confirmed as the first mining project to be added to the FAST-41 process, enabling a more efficient and transparent federal permitting process for the project.

We have recognised a non-cash impairment expense for the Taylor Deposit at Hermosa with our FY23 financial results, due to delays from the impact of COVID-19, the significant dewatering requirements and current inflationary market conditions. We continue to see substantial opportunity to unlock additional value across the Taylor and Clark Deposits and our highly prospective regional exploration package.

In July 2023, we released an updated Mineral Resource estimate for Taylor, including a 41 per cent increase in the Measured Mineral Resource, providing a compelling base to underpin future production. In the second half of calendar year 2023 we expect to complete the feasibility study and make a final investment decision for Taylor.

Separately, study work for the Clark Deposit at Hermosa has confirmed its potential to supply battery-grade manganese to the rapidly forming North American electric vehicle supply chain. Study work is continuing, pilot plant production has commenced and decline construction is expected to commence in the first half of FY24.

We are encouraged by the exploration options across our regional land package at Hermosa, including our high priority Peake and Flux Prospects, with recent drilling at Peake delivering our best copper exploration results to date.

We continue to invest to discover deposits to underpin our next generation of mines and during the period we exercised our earn-in right to acquire a controlling stake in the Chita Valley copper exploration project in the highly prospective San Juan province of Argentina.

Our development options and exploration activities form part of our approach to climate change. We published our first Climate Change Action Plan in September 2022 and have continued to mature our decarbonisation efforts, including commencing the conversion of Worsley Alumina's first coal-fired boiler to natural gas and deploying the AP3XLE energy efficiency technology at Hillside Aluminium. In addition, we progressed decarbonisation studies at Hillside Aluminium, Worsley Alumina and Illawarra Metallurgical Coal.

For Hillside Aluminium, while our studies have confirmed the challenges associated with developing renewable and low-carbon energy sources in South Africa, we continue to investigate a range of potential solutions including acquiring energy attributes to reduce the emissions intensity of its product in the near-term. At Mozal Aluminium, we are working to extend the supply of hydro-electric power beyond 2026.

Despite the headwinds experienced in FY23, and the expectation of continued macroeconomic challenges in FY24, we are continuing to deliver results now and create value for the future. I would like to thank all our teams around the world for their contribution to our performance and progress as we solidify our position as a global, diversified producer of commodities critical to a low-carbon future.

Graham Kerr
Chief Executive Officer

A STRATEGY TO ACHIEVE OUR PURPOSE

Our purpose is at the heart of who we are. Every day, in support of our purpose and underpinned by our approach to sustainability, our people work to deliver our strategy for the benefit of our stakeholders.

Our **purpose** is to make a difference by developing natural resources, improving people's lives now and for generations to come. We are trusted by our owners and partners to realise the potential of their resources.

Our purpose is underpinned by a simple yet powerful **strategy**.

We **optimise** our business by working safely, minimising our impact, consistently delivering stable and predictable performance, and continually improving our competitiveness.

We **unlock** the full value of our business through our people, innovation, projects and technology.

We **identify** and pursue opportunities to sustainably reshape our business for the future, and create enduring social, environmental and economic value.

Sustainability is at the heart of our purpose and underpins the delivery of our strategy. Our approach to sustainability comprises five interconnected pillars which focus on areas that are material to our business and stakeholders.

- Protecting and respecting our people
- Delivering value to society
- Operating ethically and responsibly
- Managing our environmental impact
- Addressing climate change

While our business has many positive impacts, we also recognise that our business activities have the potential to cause adverse impacts. We are committed to continuously improving our sustainability performance, optimising our positive contributions and minimising adverse impacts.

+ **Learn more about our approach to sustainability in our Sustainable Development Report at *www.south32.net*.**

Delivering our strategy

We deliver on our purpose and our strategy by aligning our workforce behind seven ‘breakthroughs’ – commitments which shape our annual business planning process at corporate, operational and functional levels, enabling us to focus on what’s important.

Our first breakthrough is ‘we all guarantee everyone goes home safe and well’, which asks each person in our workforce to take responsibility for their own safety and wellbeing, and that of their colleagues. Our 'safety guarantee' is an internal approach that is used to create a sense of chronic unease, reduce complacency, and assist to reduce risk tolerance.

Risk framework and corporate governance

We are governed by robust risk management and corporate governance frameworks. Learn more in our Risk management section on pages 28 to 37, and in our Corporate Governance Statement at *www.south32.net*.

Climate-related financial disclosures

Our climate-related financial disclosures, which we consider to be consistent with the four recommendations and the 11 recommended disclosures of the Task Force on Climate-related Financial Disclosures (TCFD) are set out in the Addressing Climate Change section of our Sustainable Development Report and the Emissions Methodology tab in our Sustainability Databook, both of which are available at *www.south32.net*. In addition, certain disclosures in connection with the governance-related recommendations and recommended disclosures can be found in our Corporate Governance Statement which is also available at *www.south32.net*.

We have included our TCFD-aligned disclosures in the separate Sustainable Development Report and Sustainability Databook to enable us to provide them alongside detailed information on our Climate Change Action Plan and the progress we have been making, in the context of our sustainability activities more widely, and in our Corporate Governance Statement so that they are discussed in the context of our corporate governance arrangements more generally. This Annual Report should therefore be read in conjunction with the Sustainable Development Report, the Sustainability Databook and the Corporate Governance Statement.

You can find a table setting out each of the TCFD's 11 recommended disclosures, and where information relating to each recommended disclosure can be found, in our Sustainability Databook (see the TCFD Index tab) which is available at *www.south32.net*.

Capital management framework

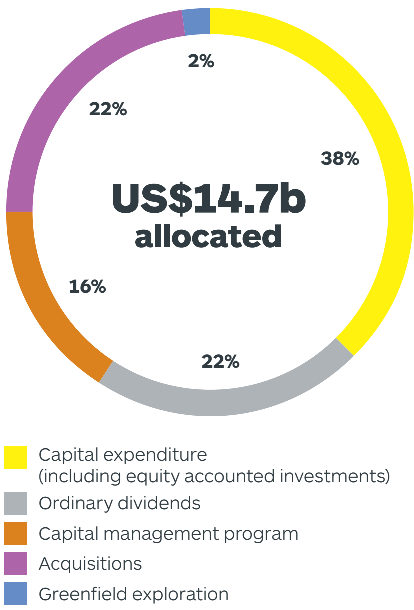
Our simple strategy is underpinned by a disciplined approach to capital management.

Our capital management framework remains unchanged, supporting investment in our business and rewarding shareholders as our financial performance improves.

Our capital allocation priorities are to maintain safe and reliable operations and an investment grade credit rating through the cycle. We intend to distribute a minimum of 40 per cent of Underlying earnings as ordinary dividends to our shareholders following each six-month reporting period. We encourage internal competition for excess capital, which can include further investment in new projects, acquisitions, greenfield exploration, share buy-backs or special dividends.

We returned US$1,225 million to shareholders during FY23 via ordinary dividends, special dividends and our on-market share buy-back. The Board further expanded our capital management program to US$2.4 billion in August 2023, leaving US$133 million to be returned by 1 March 2024.

Capital allocation since FY16



Working safely

Our FY23 commitments:

- At least 80 per cent senior leader attendance at LEAD Safely Every Day workshops and coaching sessions;
- A reported significant hazard frequency of 55;
- A 20 per cent reduction in Lost Time Injury Frequency (LTIF)(1) against the FY22 baseline, and a 10 per cent reduction in Total Recordable Injury Frequency (TRIF)(2) against the FY22 baseline; and
- A 20 per cent reduction in potential material health exposures against the baseline.

Progress during the year:

In November 2022, we were devastated by the loss of two of our colleagues, Mr Cristovão Alberto Tonela and Mr Alfredo Francisco Domingos João, who were fatally injured in an incident while undertaking maintenance work on a raising girder at Mozal Aluminium. Our deepest sympathies remain with the families and colleagues of the deceased to whom we provided our support and counselling. An investigation into the incident was completed and key learnings were shared across our business and our industry.

We also disclose fatalities for contractor activities that are associated with our operations, but that take place in locations where we do not have control. In FY23, an employee from a company contracted by South Africa Manganese lost their life in an off-site road trucking accident.

We recognise that we must continue to improve our health and safety performance. We are focused on building a culture of safety and continuously improving our safety leadership, behaviours, processes, and systems to eliminate fatalities, serious injuries and illnesses.

We continue to implement our Group-wide Safety Improvement Program, a multi-year global program of work launched in FY22 and designed with the aim of enhancing our safety culture and by changing mindsets and behaviours, achieving a step change in our safety performance.

One of the key focus areas of the Safety Improvement Program is shifting mindsets through leadership. To help achieve this, in FY23 we rolled out a program called LEAD Safely Every Day, which comprises workshops and coaching for senior leaders, managers, superintendents and supervisors across all operations and functions. With 99 per cent of our senior leaders completing the workshops and coaching sessions in FY23, in FY24 we plan to extend the roll out of the LEAD Safely Every Day program to frontline employees and frontline contractors. Learn more about the LEAD Safely Every Day program in our Sustainable Development Report at *www.south32.net*.

Every day, we ask our people to reflect on whether they can guarantee both their safety and that of their colleagues when executing their role. If the answer is no, then the challenge is to stop work and ask what would need to be done differently to provide that guarantee. This is articulated as our ‘safety guarantee’ and it is used to create a sense of chronic unease, reduce complacency, and assist to reduce risk tolerance. We are working to further embed our 'safety guarantee' across our business.

Proactive hazard reporting is an important part of our approach to safety, and we exceeded our target with a reported significant hazard frequency of 92, indicating a positive reporting culture and increased hazard awareness and identification.

Our LTIF decreased by 30 per cent compared to the FY22 baseline, exceeding our target, and our TRIF increased by 11 per cent compared to the FY22 baseline, falling short of our target. This outcome is primarily attributed to an increase in recordable injuries reported during the financial year. Although we saw an increase in recordable injury events, the number of lost time injury events decreased, resulting in our lowest ever LTIF.

The number of people potentially exposed to material health exposures against the baseline increased by one per cent, falling short of our target. While we saw a significant reduction in potential material exposures at some operations, an increase in employee numbers in certain exposed job groups, as well as production factors, led to an increase in potential material exposures at others.

(1) Per million hours worked. Incidents are included where South32 controls the work location or controls the work activity. Lost time injuries include injuries that result in one or more lost work days after the day of the event.
(2) Per million hours worked. Incidents are included where South32 controls the work location or controls the work activity.

Stable and predictable performance while minimising impact

Our FY23 commitments:

- Revenue equivalent production within 97 to 102 per cent of budget[3];
- Controllable costs within US$50 million of budget (adjusted for foreign exchange, price-linked costs and other adjustments)[3];
- Capital expenditure (excluding growth projects) within five per cent of budget (adjusted for foreign exchange) and fewer than 20 per cent break-in capital projects[3];
- Capital expenditure on growth projects within 10 per cent of budget (adjusted for foreign exchange) and schedule[3]; and
- Achieve budget adjusted return on invested capital (ROIC)[4].

Progress during the year:

We achieved 95 per cent of budgeted revenue equivalent production. We achieved record annual production volumes at Hillside Aluminium, Australia Manganese and South Africa Manganese, and we had a strong finish to the year with other operations including Cannington and Illawarra Metallurgical Coal returning to stable operations following adverse weather and other temporary impacts. For more information on our operating performance, see pages 48 to 58.

Controllable costs were US$28 million above budget, predominantly due to higher contractor and maintenance costs.

Capital expenditure excluding growth projects was 94 per cent of budget, as we invested in the Appin mine at Illawarra Metallurgical Coal and progressed productivity and decarbonisation initiatives at Worsley Alumina and other operations; and there were 70, or 14 per cent, break-in capital projects.

Capital expenditure on growth projects, which was focused on the Hermosa project, was 88 per cent of budget and delivered on schedule, as we progressed studies for the Taylor and Clark Deposits and developed essential infrastructure. The adjusted ROIC was 26.4 per cent against the budget of 28.1 per cent.

+ **Learn more about how we seek to minimise our impact in Create social, environmental and economic value on page 24.**

Robot Dog to Help Improve Safety and Productivity

At Cannington we are working with a technology provider to develop and test light detection and ranging (LiDAR) scanning and automation technology.

'Spot' the Robot Dog was put through its paces at Cannington in FY23 to trial its capabilities in a real underground mining environment.

The technology has the potential to improve safety and productivity by deploying the autonomous capabilities of Spot in various scenarios, with different data capture tools including scanning, video recording and heat sensing.

The focus of the trial was to test Spot's capabilities in post blast re-entry scenarios and emergency response. With an integrated LiDAR scanner, Spot autonomously navigated sections of the mine, travelling through uneven and wet ground, exploring unlit areas and producing a three dimensional point cloud map of the area.

Since the initial trial, Spot has returned to Cannington for further scenario testing, including gas detection and additional post blast re-entry.

(3) Excludes non-operated entities.
(4) This is a non-IFRS measure. For an explanation of how South32 uses non-IFRS measures, see page 38.

Our people are connected and engaged

Our FY23 commitments:

- Meet the targets for our eight inclusion and diversity measurable objectives;
- Deliver the annual Inclusion and Diversity Action Plan;
- Maintain or improve our inclusion index score; and
- Maintain or improve our employee engagement score.

Progress during the year:

Our inclusion and diversity measurable objectives provide a series of targets and actions aimed at improving inclusion and diversity in our workplace. In FY23, we met the target for four of our eight measurable objectives.

There are five measurable objectives for representation of employees and senior leaders who are women. The representation of women in our overall workforce improved, increasing to 20 per cent from 19 per cent in FY22, but falling short of our FY23 target of 22 per cent. The representation of women on our Lead Team increased to 50 per cent from 37.5 per cent in FY22 and exceeded our FY23 target of 38 per cent, the representation of women in our Senior Leadership Team decreased to 30 per cent from 32 per cent in FY22 and fell short of our FY23 target of 34 per cent, and the representation of women in our Operational Leadership Team[1] improved to 29 per cent from 20 per cent in FY22 and met our FY23 target of 28 per cent. The representation of women on our Board increased to 44 per cent from 37.5 per cent in FY22, meeting our FY23 target of at least 40 per cent.

We maintained the representation of Black People in our workforce in South Africa, reaching 87 per cent and meeting our target of 85 per cent or more, however the representation of Black People in management roles in South Africa decreased to 55 per cent, below our target of 60 per cent or more. We continue to target pay equity for our employees with respect to gender and ethnicity and completed our annual equity pay review, investing US$338,000 to improve pay equity and narrowly missing our target of reducing spend year-on-year to close the pay gap.

Our FY23 Inclusion and Diversity Action Plan consisted of four priority areas – managing sexual harassment as a material health and safety risk, providing safe and respectful workplaces for our people, establishing inclusion and diversity networks at all our locations, and delivering the 'Living our Code' discussion series, with substantial progress made in each area.

In FY23, 7,358 individuals, or 78 per cent of employees, completed our annual Your Voice employee survey, the highest participation rate since South32 was formed in 2015. The survey tested five dimensions – safety, leadership, employee engagement, employee experience and workplace conduct, with respondents reporting an improvement in performance against all five dimensions. Based on the survey responses, our inclusion index score improved from 80 per cent in FY22 to 81.5 per cent in FY23 and our employee engagement score improved from 78 per cent in FY22 to 79 per cent in FY23.

Technology and innovation unlock value

Our FY23 commitments:

- At least 75 per cent of agreed initiative milestones met for the Next Generation Mine Mission.

Progress during the year:

Technology and innovation are key enablers of our transition towards a low-carbon future and to realising our objective of safer, cleaner and more productive operations. To focus our innovation investment in the areas that matter most, in FY21 we established Innovate32, our strategy-aligned, value-creating approach to better enable innovation at South32.

One of Innovate32's strategic focus areas is the Next Generation Mine Mission, which seeks to reshape the way we mine and operate, with a specific focus on future projects including the Hermosa project, to strive to deliver transformational safety, productivity and emissions outcomes.

In FY23, eight priority initiatives were progressed across automation, electrification, sensing, advanced analytics, orebody knowledge, and high impurity processing technologies, with six, or 75 per cent, fully delivered and two partially delivered.

Another area of focus for Innovate32 is the Low Footprint Mission which aims to actively reduce our footprint with respect to energy and water use, waste generation and biodiversity impact. In FY23 we refreshed our competitive ambition and roadmap of opportunities, and doubled our portfolio of funded initiatives.

We actively collaborate with other companies, industry groups and research organisations to complement our innovation and technology programs through initiatives such as the Electric Mine Consortium, BluVein, Amira, the Heavy Industry Low-Carbon Transition Cooperative Research Centre, the Long Duration Energy Storage Council, the Think and Act Differently industry joint venture, and a partnership with Unearthed to source ideas and solutions to unsolved problems. Learn more about these partnerships in our Sustainable Development Report at *www.south32.net*.

(1) In FY23 we have revised the Operational Leadership Team definition and calculation methodology to better reflect our organisational structure. FY22 data displayed is based on previous methodology as disclosed in the 2022 Sustainability Databook.

Project execution

Our FY23 commitments:

- Complete the Taylor Deposit feasibility study;
- Complete the construction of Hermosa Water Treatment Plant 2 and commence commissioning;
- Complete the Clark Deposit pre-feasibility selection study; and
- Identify battery partner options and advance discussions.

Progress during the year:

We have made substantial progress at our Hermosa project, which is currently the only advanced project in the United States that could supply two federally designated critical minerals, zinc and manganese, which are important commodities for a low-carbon future. In May, Hermosa was confirmed as the first mining project to be added to the FAST-41 process, enabling a more efficient and transparent federal permitting process for the project. In July 2023, we announced an update to the Mineral Resource estimate for the Taylor Deposit at Hermosa, including a 41 per cent increase in the Measured Mineral Resource[(2)].

We have recently completed study work that confirmed that the Taylor Deposit and the Clark Deposit can be developed independently and have since recognised a non-cash impairment expense for the Taylor Deposit within our FY23 financial results, driven by delayed first production as a result of COVID-19 related restrictions and significant dewatering requirements, as well as capital cost escalation in line with industry-wide inflation. We continue to see substantial opportunity to unlock additional value across the Hermosa land package.

We now expect to complete the feasibility study for the Taylor Deposit in the second half of calendar year 2023, as we undertake additional engineering studies to align the mine development schedule for a federal permitting process under FAST-41 and incorporate current market cost estimates, followed by a final investment decision expected by the end of calendar year 2023.

Dewatering activity is progressing, enabling access to both the Taylor and Clark Deposits. The construction of Hermosa Water Treatment Plant 2 was completed in early June and commissioning is well advanced.

Study work for the Clark Deposit has confirmed its potential to supply battery-grade manganese to the rapidly forming North American electric vehicle supply chain. The pre-feasibility selection study was completed in FY23 and has defined the potential for an underground mining operation and a separate plant to produce high-purity manganese sulphate monohydrate. Further study work is underway, pilot plant production has commenced and construction of an exploration decline is expected to commence in the first half of FY24. We continue to engage with potential customers, supported by multiple non-binding, non-exclusive memorandums of understanding for the future potential supply of battery-grade manganese.

Hermosa also offers a highly prospective regional land package with the potential for future discoveries. Recent drilling results at the Peake Prospect include our best intercept to date[(2)]. Further exploration drilling at Peake, along with drilling at the Flux Prospect, is planned in the first half of FY24.

We have unlocked value at our existing operations in FY23 with the commissioning of the Ore Sorting and Mechanical Ore Concentration project at Cerro Matoso, which underpinned a 15-year extension to Cerro Matoso's mining contract to 2044, and with the approval of the Eastern Lease South life extension project at Groote Eylandt Mining Company. At Cerro Matoso we are studying the potential to produce incremental volume in the form of intermediary nickel products for battery markets. We also announced our decision not to proceed the Dendrobium Next Domain project at Illawarra Metallurgical Coal.

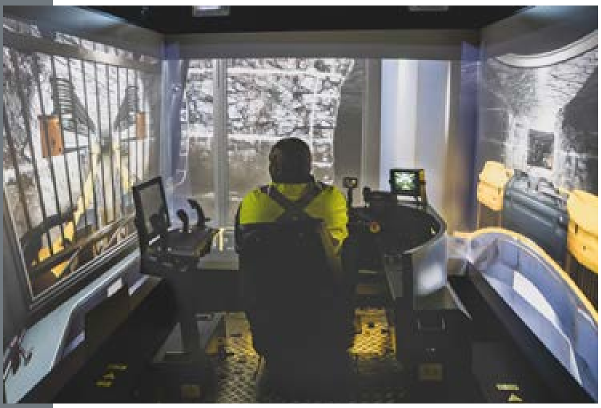
Rig Simulator Facility Helps Build New Skills

Hotazel Manganese Mines (HMM) is unlocking value with the implementation of several growth projects at the Wessels underground mine.

The projects include the implementation of new generation rigs, which aim to increase drilling depths to achieve a better advance per blast, and a fleet automation journey to help improve the safety and productivity of drilling and underground support processes.

To support the introduction of the new rigs, a virtual production machine and rig simulators have been installed to train employees to operate them. As well as increasing advance per blast, the new rig technology offers improved data gathering and analysis.

The establishment of these facilities in the Wessels training centre is helping equip our workforce with new skills which will benefit both them, and the operation, as the new technology is deployed.



(2) Refer to market release dated 24 July 2023 at *www.south32.net*.

Create social, environmental and economic value

Our FY23 commitments:

- Implement social investment plans for each operation and increase the proportion of social investment allocated to strategic investments;
- Develop economic development plans which include local employment and procurement targets at each operation; and
- Deliver contextual water target milestones and achieve water use efficiency target.

Progress during the year:

Social investment plans were implemented for each operation and we invested US$27.7 million in community initiatives[(1)]. Our direct social investment spend was across our four key focus areas - education and leadership (24 per cent), economic participation (14 per cent), good health and social wellbeing (50 per cent), and natural resource resilience (12 per cent). We increased the proportion of social investment allocated to strategic investments with long-term objectives from 82 per cent in FY22 to 90 per cent in FY23.

The economic value of our presence in communities is an important part of our societal contribution and we develop economic development plans as outlined in our internal social performance standard. These are complementary to our social investment plans and identify opportunities to contribute to local communities through employment, procurement, business development, and regional economic development. In FY23, economic development plans were developed for all operations.

We believe that growing and developing small, medium, and micro enterprises (SMMEs) is fundamental to the transformation of the South African economy. We collaborate with SMMEs on Enterprise and Supplier Development (ESD) and in FY23 we exceeded our target for ESD with a total spend of US$15 million[(2)]. In Australia, we remain committed to providing genuine access and support to build the capability and capacity of Aboriginal and Torres Strait Islander businesses where we have a presence, and our direct spend increased by 18 per cent to A$30 million. Learn more about how we are creating value for our stakeholders on pages 12 to 13.

We continue to look for opportunities to improve water use. We have identified water-related material risks at five operations and have set contextual water targets for each, with two targets achieved and the others remaining on track. Currently, we have four operations in areas defined as having baseline water stress and for these a target was set in FY22 to achieve at least a 10 per cent improvement in water use efficiency by FY27, from an FY21 baseline. Cumulatively across these four operations, we achieved more than two per cent improvement in FY23, exceeding the target of more than one per cent improvement during the year.

Around the world we have land holdings of 602,057 hectares. Cumulatively, we have disturbed approximately three per cent of our landholdings for operational reasons, of which approximately 33 per cent has been rehabilitated[(3)]. We aim to achieve no net loss outcomes for all new projects and major expansions to existing projects, and in FY23 worked in partnership with others to pilot the adoption of the Taskforce on Nature-related Financial Disclosures, an emerging disclosure framework.

We are also committed to implementing the Global Industry Standard on Tailings Management (GISTM) at all South32-operated tailings storage facilities and recently published our first GISTM report for our 'very high' consequence facilities, which are only at Worsley Alumina.

Our approach to climate change is focused on reshaping our portfolio, decarbonising our operations (with a focus on the four operations which account for the majority of our operational emissions profile), responding to the potential physical impacts of climate change, and working with others to address shared challenges and decarbonise the value chain.

Our reported Scope 1 and Scope 2 greenhouse gas (GHG) emissions for FY23 were 21.0 Mt CO_2-e, a 0.2 per cent increase from FY22. Direct emissions from activities at our operations (Scope 1) increased by 0.5 Mt CO_2-e, while there was a decrease of 0.4 Mt CO_2-e in emissions from electricity used by our operations (Scope 2).

We published our first Climate Change Action Plan in September 2022 and have made progress against key elements of the Plan in FY23, including updating our 1.5°C scenario to stress-test the potential impacts of climate change on our business.

We commenced the conversion of Worsley Alumina's first coal-fired boiler to natural gas and progressed decarbonisation studies including mud washing and waste heat to digestion. At Illawarra Metallurgical Coal we progressed a feasibility study into the commercial scale pilot of CSIRO ventilation air methane technology.

For Hillside Aluminium, while our studies have confirmed the challenges associated with developing renewable and low-carbon energy sources in South Africa, we continue to investigate a range of potential solutions. We are studying options to acquire energy attributes to reduce the GHG intensity of its product in the near-term, while we pursue other low-carbon energy solutions for the longer term. At Mozal Aluminium, we are working with key stakeholders to extend the supply of hydro-electric power beyond 2026 and continue to investigate additional emissions reduction projects and technologies.

Learn more about how we seek to deliver value to society, operate ethically and responsibly, manage our environmental impact and address climate change in our Sustainable Development Report at *www.south32.net*.

(1) Our total social investment comprised US$24.6M in direct investment (including Enterprise Development), US$2.5M in administrative costs, and US$0.6M of in-kind support.
(2) Enterprise and Supplier Development (ESD) consists of two activities, Enterprise Development and Supplier Development. The Enterprise Development component, which was US$5.2 million in FY23, is captured in both the ESD total and the social investment total.
(3) Represents the proportion of land disturbed by South32 which has since been rehabilitated.

Sustainably reshape our business for the future

Our FY23 commitments:

- Develop and pursue opportunities to optimise our portfolio.

Progress during the year:

The substantial changes we made to our portfolio in FY22 to increase our exposure to the commodities critical to a low-carbon future have more than doubled our low-carbon aluminium capacity and introduced copper to the portfolio.

While we remain open to opportunities around the world, our next phase of growth is expected to come from our development options in North America. In addition to the Hermosa project, our portfolio in Alaska includes our 50 per cent interest in the Ambler Metals Joint Venture which holds two sizeable base metals deposits including copper, silver, lead, zinc and gold in the highly prospective Ambler mining district. The Ambler Metals Joint Venture is focused on consolidating geological knowledge and advancing engineering studies for the Arctic Deposit.

We continue to invest to discover deposits to underpin our next generation of mines with over 25 base metals exploration prospects around the world[4]. Consistent with this approach, during the period we exercised our earn-in right to acquire a controlling stake in the Chita Valley copper exploration project in the San Juan province of Argentina, a region which hosts several copper deposits along a highly prospective mineral belt. At our wholly owned Roosevelt Project in Alaska, which is located in the same mineral belt as the Ambler mining district, an expansive drilling program was commenced in 2023 targeting potential copper and zinc mineralisation.

In July 2022 we completed the sale of a package of non-core development-stage base metals royalties for a sale price of up to US$200 million, a further step forward in unlocking latent value from our portfolio.

Exploring Opportunities to Support Host Communities

At the Roosevelt Project in northern Alaska, we are engaging with the Doyon Native Corporation and five tribal villages that live in relative proximity to our early-stage exploration activities.

As part of this engagement, we sponsored the Koyukuk River Spring Carnival, held at the village of Allaket, in April 2023. A logistical challenge given the remote location, the sponsorship included funding a fixed wing charter flight to transport a dog sled team to compete in the main event.

The carnival was an opportunity for people to come together, particularly after restrictions imposed by the COVID-19 pandemic. In addition to the fiercely competitive dog sled and snowshoe races, younger generations were exposed to the traditions and cultural heritage of their elders and ancestors, a key aspect for the long-term sustainability of these communities.

(4) Please refer to page 170 for Our exploration, research and development.

A BALANCED APPROACH TO MEASURING OUR PERFORMANCE

FINANCIAL

	Why it matters	Performance in FY23
Production Copper equivalent production (kt)[1] **1,461** FY22: **1,375** FY21: **1,370**	Provides a baseline to easily benchmark our production performance against other mining and metals companies.	Strong production growth in aluminium, base metals and manganese reflecting recent portfolio improvements and three annual production records.
Capital expenditure Investment (US$M)[2] **1,177** FY22: **723** FY21: **637**	Measures our approach to investing in safe and reliable operations, improvements and life extensions, and growth options.	We increased our investment in productivity, improvement and growth activities across our portfolio, including at the Hermosa project and reflecting the inclusion of Sierra Gorda.
Earnings Underlying EBIT (US$M)[3] **1,616** FY22: **3,967** FY21: **1,039**	Underlying measures of earnings are important when assessing underlying financial and operating performance.	Production growth, coupled with our continued focus on cost efficiencies, supported one of our largest underlying financial results despite lower commodity prices and inflationary pressures.
Cash flow Free cash flow from operations (US$M) **57** FY22: **2,240** FY21: **639**	Cash flow measures are important when assessing underlying financial and operating performance.	Lower free cash flow reflects higher capital expenditure and one-off tax payments in relation to our Sierra Gorda acquisition and non-core royalty sale.
Shareholders Shareholder returns (US$M)[4] **1,225** FY22: **788** FY21: **460**	Provides an indicator for shareholders of how well their investment is performing.	We delivered record returns to shareholders during FY23 via ordinary and special dividends and our on-market share buy-back.

(1) Copper equivalent production was calculated using FY22 realised prices, and includes operated and non-operated operations.
(2) Includes intangibles and capitalised exploration expenditure, and material equity accounted investments on a proportional consolidation basis.
(3) This is a non-IFRS measure. For an explanation of how South32 uses non-IFRS measures, see page 38.
(4) Fully-franked ordinary and special dividends paid in respect of H2 FY22 (US$784M), fully-franked ordinary dividends paid in respect of H1 FY23 (US$223M) and on-market share buy-back (US$218M).

KEY

Strategy pillar

Sustainability pillar

Strategic risks

Remuneration

SUSTAINABILITY

	Why it matters	Performance in FY23
Health and safety Lost Time Injury Frequency (per million hours worked)[(5)] **1.4** FY22: **2.0** FY21: **1.7**	Nothing is more important than the health, safety and wellbeing of our people.	LTIF reduced by 30 per cent compared to the FY22 baseline, reflecting a reduction in the frequency of severe events.
People Employee engagement (per cent) **79** FY22: **78** FY21: **-** *(survey did not take place due to the impact of COVID-19)*	Engaging directly with our people allows us to understand how they experience all aspects of South32 and identify areas for improvement.	Our employee engagement score, as measured in our Your Voice employee survey, improved by one per cent year-on-year.
Community Social investment (US\$M)[(6)] **27.7** FY22: **31.1** FY21: **22.2**	We invest in local communities with the aim of contributing to their social, economic, and institutional development.	Social investment decreased by 11 per cent year-on-year, primarily due to social investment at Hillside Aluminium which is price-linked under South African legislation.
Environment Water use efficiency (per cent)[(7)] **61.5** FY22: **66** FY21: **56**	Water is a valuable resource that we all share and a critical input for our operations.	Water use efficiency decreased by four per cent due to challenges faced at operations such as above average rainfall and management of excess water.
Climate change Operational greenhouse gas emissions (Mt CO_2-e)[(8)] **21.0** FY22: **21.0** FY21: **20.7**[(9)]	Human activity is causing climate change and the impacts are affecting ecosystems, biodiversity, and communities around the world.	Our reported Scope 1 and Scope 2 greenhouse gas emissions increased by 0.2 per cent year-on-year, with Scope 1 emissions increasing by 0.5 Mt CO_2-e and Scope 2 emissions decreasing by 0.4 Mt CO_2-e.

(5) Incidents are included where South32 controls the work location or controls the work activity. Lost time injuries include injuries that result in one or more lost work days after the day of the event.
(6) Our total social investment comprised US\$24.6M in direct investment (including Enterprise Development), US\$2.5M in administrative costs, and US\$0.6M of in-kind support.
(7) Water use efficiency is calculated as the total recycling and reuse divided by the sum of total recycling and reuse and total operational inputs/withdrawal.
(8) Includes Scope 1 and Scope 2 greenhouse gas emissions.
(9) The FY21 baseline has been adjusted to exclude emissions from SAEC and TEMCO, which were divested in FY21.

MANAGING OUR RISKS TO PROTECT AND UNLOCK VALUE

Risk management is fundamental to maximising the value of our business and informing its strategic direction. Effective risk management enables us to identify priorities, allocate resources, demonstrate due diligence in discharging legal and regulatory obligations, and meet the standards and expectations of our stakeholders.

Our approach to risk management is governed by our risk management framework. Our internal risk management standard outlines the minimum mandatory requirements for the management of risks that can materially impact our ability to achieve our purpose, strategy and business plans. The framework and standard are delivered through our system of risk management which is aligned to the principles of the International Standard for Risk Management AS/NZS ISO 31000:2018.

Our approach to risk management applies to all employees, directors and contractors of South32. Our risks are regularly assessed and managed at both a company-wide strategic level and at a tactical level for operation, project and function risks.

Risk appetite

Risk appetite is the level of residual risk that we are willing to take in pursuit of our strategic objectives, which is established in relation to our operating environment. Our Board considers and approves the risk appetite developed by management. Our internal Risk Appetite Statements outline the extent to which we are or are not willing to engage with higher levels of risk (both threats and opportunities) in order to realise greater benefit in the pursuit of our purpose and strategy and in alignment with our values and Code of Business Conduct. Key risk indicators (KRIs) are set by management and used to monitor performance against our set risk appetite. Understanding our risk appetite across our strategic risks assists in decision-making across the Group.

Material risks

We apply the three lines operating model to our system of risk management, which determines how our structures, processes, and organisational roles work together to facilitate strong risk management and assurance. This approach is used to manage our material risks and enables us to:

- Provide stable and consistent processes, tools and routines to identify and regularly assess the most impactful threats and opportunities;
- Deliver predictable outcomes and prevent unforeseen events with material impacts;
- Understand our risks and manage these at all levels of the organisation; and
- Reduce or seek to eliminate risks where appropriate or improve our processes using a risk-based approach.

Our material risks are those which can materially impact our ability to achieve our purpose, strategy and business plans. The effective management of our material risks is routinely assessed by our Lead Team. An overview of these risks are reviewed by our Risk and Audit Committee and Sustainability Committee, which assist our Board to carry out its role of overseeing our risk management and assurance practices.

We report transparent real-time risk data through our risk management tool, Global360. This software connects data relating to the management of our risks, events, hazards and assurance actions. Aside from helping us manage our business, reliable data on material risks contributes towards the monitoring and management of our strategic risks. This provides insight into trends and emerging themes that can trigger a review of our business plans or inform a change in strategic direction.

Strategic risks

Our strategic risks are risks which can affect our ability to achieve our strategic objectives. They have the capacity to affect all, or a significant part, of our organisation and therefore tend to have significant impacts, both negative and positive. With that in mind, our strategic risks, associated KRIs and management responses are monitored and evaluated twice per year. The review process is informed by external and internal events that could have a potential impact on our organisation, as well as emerging themes across our material risks. In FY23, we identified 13 strategic risks which could influence our plans and the sustainability of our business, each of which is explained further in subsequent pages.

Strategic risk key

The inherent risk impact or likelihood has increased over the past 12 months (i.e. without considering internal controls or management responses).

The inherent risk impact or likelihood has remained constant over the past 12 months (i.e. without considering internal controls or management responses).

The inherent risk impact or likelihood has decreased over the past 12 months (i.e. without considering internal controls or management responses).

Keeping our people safe and well

A safe and healthy working environment is fundamental to living our values.

Risk exposure trend 2023

Risk appetite

Aligned to our purpose and values, we will not take actions that compromise the health, safety or wellbeing of our people, contractors and communities.

Opportunities

Keeping our people safe and well underpins the culture we aspire to and sets our expectations of each other.

Threats

The impact of not having a safe working environment can be devastating for our employees, contractors and communities. It can alter lives and impact shareholder returns, stakeholder confidence and ultimately our licence to operate.

Our response includes:

- In everything we do, we focus on the health, safety and wellbeing of our people, contractors and communities;
- We have a system of risk management and comprehensive internal health and safety policies, standards and systems with associated performance requirements designed to prevent and mitigate potential exposure to health and safety risks;
- We value and strive to build inclusion and diversity in our workplace where everyone is valued and can participate to achieve their full potential. We do not tolerate any form of inappropriate conduct which includes bullying, harassment, discrimination or victimisation;
- We engage, develop and train our people so that our work is well designed and executed;
- We investigate actual and potential significant events that could have led to severe injury or higher outcomes, put controls in place and share the learnings across our organisation;
- We continuously improve our work environment with the aim of making it safer, healthier and more productive for our people. We are implementing our multi-year Group-wide Safety Improvement Program designed with the aim of enhancing our safety culture and by changing mindsets and behaviours, achieving a step change in our safety performance; and
- In line with the three lines operating model, we have assurance functions independent of our operating activities that provide assurance against our own comprehensive internal standards.

+ **Learn more about our approach to health and safety in our Sustainable Development Report at *www.south32.net*.**

Portfolio reshaping

Our objective is to improve our return on invested capital and create shareholder value by increasing our exposure to high-quality operations in commodities with a strong and sustainable outlook, in jurisdictions where we believe we can operate in line with our values and Code of Business Conduct.

Risk exposure trend 2023

Risk appetite

We accept that in actively transforming our portfolio, we need to take risk to capture opportunities. We will seek to do so in jurisdictions and commodities where we believe we can operate or invest in line with our values and Code of Business Conduct.

Opportunities

Increasing our exposure to the commodities critical to a low-carbon future will position our business for a low-carbon world, in alignment with our strategy. Acquisitions of operations or development options (including non-operating and non-controlling shares in these operations and development options) present us with opportunities to create shareholder value through increasing our exposure to these commodities. Partnering with junior explorers also creates opportunities for us in early-stage exploration in more challenging jurisdictions.

Threats

Changing global sentiment presents a threat to the sustainability of our current portfolio mix if we do not act to reshape our portfolio. In responding to stakeholder expectations, we could make decisions to dispose of climate or carbon exposed operations, development options and investments at less than market value. Increasing demand for the commodities critical to a low-carbon future may drive higher valuations of operations and development options that we want to acquire, making acquisitions challenging and potentially value destructive. A scarcity of attractive opportunities or a reliance on exploration to fill our pipeline of opportunities may impact the pace of transition. Geopolitical developments may also limit those jurisdictions in which we can operate or those counterparties with which we can partner or transact.

Our response includes:

- We are actively reshaping our portfolio towards commodities critical to a low-carbon future;
- We take more risk on early-stage exploration projects, including jurisdictional risk as well as through joint ventures and earn-ins, but commensurate with the commercial exposure;
- We will be flexible on opportunistic acquisitions including non-controlling and non-operating shareholdings in incorporated or unincorporated joint ventures; and
- We carry out an annual review of commodity prices and exchange rates, to develop long-term views for our portfolio commodities and foreign exchange rates for the jurisdictions where we operate. This process is supplemented by tri-annual updates.

+ **Learn more about how we are reshaping our portfolio in Our strategy in action on page 25.**

Climate change and environment

Climate change poses physical risks to our business, our people and the infrastructure, communities and environment on which we rely. The political, social and economic responses to the challenges posed by climate change and the transition to a low-carbon economy also pose risks to our business performance (i.e. demand for some of our commodities, cost and profit margins, social licence, regulatory exposure). Learn more about our approach to climate change, including our detailed assessment of the risks climate change poses to our business, in the Addressing Climate Change section of our Sustainable Development Report and our Climate Change Action Plan (CCAP), both of which available at *www.south32.net*.

Our operations also have the potential to impact biodiversity, air, land and water resources. This may result in increased costs to mitigate or address such impacts, prevent or delay project approvals, and result in reputational damage.

Water is critical to our operations and water scarcity, increased competition for supply or costs to access can impact our operations, supply chains and communities.

Risk exposure trend 2023

Risk appetite

We recognise the impact our operations have on the environment due to the extractive nature of our activities and that the greenhouse gas emissions associated with our activities contribute to climate change. We also recognise the role our industry plays in providing the materials that are essential in the transition to a net zero global economy and we want to be part of that solution. We acknowledge that we have potential vulnerabilities to the physical impacts of climate change and exposure to climate-related transition risk and nature-related risk. We accept that we need to take risks in order to minimise our environmental impact and reduce our exposure to physical and transition climate change risk and nature-related risk. We seek to take risks that may arise as we transform our portfolio to maintain competitiveness in a low-carbon world and pursue our greenhouse gas emissions reduction target and goals.

Opportunities

Aligning our business strategy, including how we operate and what we produce, with stakeholder expectations, future technologies and evolving climate and environmental policies and regulations, contributes to a resilient and high performing portfolio. We aim to increase the efficiency of our operations and support business continuity through responsibly assessing and addressing our climate change and environment-related risks, dependencies and impacts, and increasing the resilience of our business, the value chain and communities in which we operate.

Threats

The complex and pervasive nature of climate change means that climate-related risks and opportunities are reflected across our risk profile. For further details on the potential impacts of climate change on our strategic risks, refer to the Addressing Climate Change section of our Sustainable Development Report and pages 99 to 101 of our CCAP.

Failure to manage environmental and climate-related risks may impact our ability to secure development approvals, permits or licences and increase our legal exposures. It may also limit our ability to access capital and insurances, develop strategic partnerships with Indigenous, Traditional and Tribal Peoples or environmental organisations, attract and retain employees, deliver our project portfolio, and grow our business in existing and new jurisdictions.

Our response includes:

- Our approach to managing the transition and physical risks of climate change is outlined in the Addressing Climate Change section of our Sustainable Development Report and our CCAP;
- Our sustainability approach, inclusive of our environmental performance requirements, is guided by the ICMM Mining Principles, United Nations Global Compact (UNGC) Ten Principles and United Nations Sustainable Development Goals and is outlined in our Sustainability Policy and Sustainable Development Report at *www.south32.net*;
- We seek to manage water resources using a holistic approach to promote better water use, effective catchment management and to contribute to improved water security and sanitation;
- We establish contextual water targets for operations exposed to water-related material risks with consideration for broader stakeholder and catchment needs;
- Our operations address biodiversity impacts with a focus on minimising our operational impacts through application of the biodiversity mitigation hierarchy and collaborating with others to contribute towards biodiversity conservation and restoration;
- We aim to achieve no net loss outcomes for all new projects and major expansions to existing projects through a balanced application of the biodiversity mitigation hierarchy of avoidance, minimisation, rehabilitation and offsetting;
- We integrate land management and rehabilitation processes into our business planning and give consideration to cumulative impacts when developing management controls to minimise impacts on surrounding ecosystems;
- We manage our waste streams to minimise environmental impact and realise value through a balanced application of the waste mitigation hierarchy of prevention, minimisation, reuse, recycle, recovery and disposal;
- We engage regularly with investors, governments, industry partners, membership-based sustainability organisations, environmental, social, and governance (ESG) proxy advisers and ESG activist groups to identify and monitor emerging environmental and climate change risks, opportunities and trends; and
- We are transparent in our disclosure of environment and climate-related opportunities and threats in our annual reporting, in accordance with the Global Reporting Initiative (GRI) Sustainability Reporting Standards and recommendations of the Task Force on Climate-related Financial Disclosures.

+ **Learn more about how we are addressing climate change and managing our environmental impact in our Sustainable Development Report at *www.south32.net*.**

Maintain, realise or enhance the value of our Mineral Resources and Ore Reserves

We intend to realise the potential of the resources and reserves we are entrusted to develop. We work to continually optimise our operations through sound technical and economic understanding of our resources and reserves.

Risk exposure trend 2023

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Risk appetite

We are not willing to take risks that inhibit our ability to realise the potential of the resources and reserves we are entrusted to develop.

Opportunities

We continue to enhance our understanding of our resources and reserves. We leverage this enhanced understanding through the annual planning cycle to define and assess additional opportunities to add value to our business.

Threats

If we fail to continually optimise our operations and projects, it will have a significant impact on future shareholder returns, the benefits our stakeholders receive and ultimately, the sustainability of the company

Our response includes:

- We have capital prioritisation, capital allocation and planning processes which prioritise the highest-value options across our portfolio;
- We apply an annual planning process that considers the impact of climate change on our Ore Reserves, with plans structured to maximise value throughout the life of our operations;
- Drill plans and budgets are approved as part of our annual planning cycle and compliance to those plans is reported monthly. Where there is material deviation to plan, actions are taken to reduce deviation;
- We apply a rigorous project development process that includes independent peer review of project risks and approval tollgates;
- We report Mineral Resources and Ore Reserves (including Coal Resources and Coal Reserves) in accordance with the JORC Code as required in the ASX Listing Rules (Chapter 5); and
- We have an internal closure standard which requires that the full life of operation value incorporates closure and rehabilitation liabilities.

+ **Learn more about resources and reserves (including governance processes) on pages 169 to 176.**

Major external events or natural catastrophes

Our operations and logistics networks can be disrupted by events such as pandemics, natural disasters and extreme weather events that could impact people's safety, wellbeing, security, the integrity of tailings storage facilities and key operating infrastructure.

Risk exposure trend 2023

—

Risk appetite

We are not willing to take risks that compromise our ability to manage natural catastrophes. However, we accept we operate in a diverse range of geographic locations, which are exposed to natural events and other external events.

Opportunities

Achieving stable and predictable performance enhances the value proposition to our shareholders, stakeholders and the communities in which we operate. The better we prepare for and learn from events, the better we are placed to respond and aim to reduce the impact of future events – strengthening our organisational resilience.

Threats

Failure to manage major events or natural catastrophes could result in a significant event or other long-term damage that could harm the company's access to logistics chains and critical goods and services, financial performance, and licence to operate. The role of climate change in increasing the frequency and severity of natural catastrophes is addressed under 'Climate change and environment' on page 30.

Our response includes:

- When facing potential catastrophes, we put safety and wellbeing at the heart of everything we do;
- We use our system of risk management in design, construction and operation phases to analyse risks, and design and implement actions that aim to prevent or limit business impacts;
- We utilise climate modelling data to inform our long-term plans and project pipelines, and conduct physical risk assessments of our assets every two years;
- We have business continuity and disaster response plans in place with trigger action response scenarios. We have tested these to make sure we can respond rapidly to major events and safely restore our operations, aiming to protect the health and safety of our people and the communities in which we operate;
- Consistent with the three lines operating model, we have assurance functions independent of our operating activities that provide assurance against our own comprehensive internal standards including equipment integrity, tailings management and technical stewardship. Where relevant, we work with external experts, relevant industry bodies and technology suppliers, to provide additional assurance and input; and
- We purchase insurance coverage against many, but not all, potential losses or liabilities arising from major events or natural catastrophes. This coverage has a deductible cost to the company and limits that mean full financial coverage cannot be achieved.

Maintain competitiveness through technology and innovation

Technology and innovation are advancing at a rapid pace. Companies which are unable to effectively leverage technology and innovation may find themselves failing to deliver against shareholder expectations on returns, unable to attract and retain talent or, in the example of decarbonisation, failing to maintain licence to operate. The use of ransomware is becoming more prevalent in cybersecurity incidents across the mining industry.

Risk exposure trend 2023

Risk appetite

We are not willing to take risks that will result in a loss of data or disruptions to our operations and projects due to the theft, disclosure or corruption of information. Aligned to our strategy, we will pursue technology and innovation that may have a lower certainty of success where there is commensurate potential for high return on investment.

Opportunities

To stay competitive, we position our organisation to effectively identify, develop and adopt sustainable business models for technology and innovation in our operations and projects. Priority innovation opportunities are identified and delivered through Innovate32, our strategy-aligned, value-focused, innovation portfolio. This approach will assist us to deliver on shareholder return expectations and position us for future business opportunities.

Threats

Failure to keep pace with, and leverage advances in, technology and innovation could result in reduced shareholder returns and impact our licence to operate. Failure to adopt automation, electrification and digital systems could result in deteriorating performance across safety, productivity, returns and greenhouse gas emissions. Cybersecurity incidents could pose multiple risks including disruption to new projects and operations, theft, disclosure or corruption of information.

Our response includes:

- We have a clearly defined approach to innovation, improvement and technology;
- We deliver specific programs focused on adoption and improvement of critical technology capabilities across multiple time horizons;
- We have a value-based ‘portfolio’ approach to testing and scaling up innovation across the company;
- We have rigorous internal technology standards and processes (technology ‘ways of working’);
- We benchmark our digital technology performance against industry best practice and coordinate and integrate technology advances into our growth portfolio;
- We actively manage cybersecurity and loss of critical systems risks through our system of risk management; and
- We monitor internal customer satisfaction and manage customer support.

+ **Learn more about how technology and innovation are unlocking value in Our strategy in action on page 22.**

Predictable operational performance

Loss of predictable operational performance will prevent us from reliably delivering on our strategic objectives. We build resilience and predictability into our business by sustaining our ability to keep our people safe and well, meeting our regulatory and social obligations, managing cost inflation and consistently providing quality products to our customers.

Risk exposure trend 2023

Risk appetite

We are not willing to take risks that compromise the stable and predictable performance of our operations.

Opportunities

We mature our Operating System to control and continuously improve our operations and processes, so that we can deliver stable and predictable performance and unlock the full value of our business. We invest in our operations to sustain and improve production capacity that generates reliable cash flow to deliver on our strategic objectives.

Threats

External volatility and challenges can impact predictable performance. These include labour and supply chain tightness as well as regulatory and geopolitical change. If we are unable to safely and consistently achieve our production, cash flow or profitability targets, it could negatively impact our ability to deliver on our strategic objectives and negatively impact shareholder returns.

Our response includes:

- We have embedded, and continuously verify and improve our safety and risk management systems across our business;
- We have an effective asset management system in place at each operation and review our asset health, asset integrity and capital investments on a regular basis;
- We actively verify and improve the effectiveness of our Operating System by embedding our operating practices including operational planning, work design and standards, process control and improvement;
- We actively manage risks to our resources and reserves, mine and operational planning including reconciliation of Ore Reserves to production, plan and spatial compliance and management of geotechnical risks;
- We manage an integrated system of long to short-term planning and scheduling processes that considers ESG themes and optimises the value from our resources;
- We actively manage product delivery and supply chain risks including effective sales and operational planning processes, monitoring of raw material supply and management of target inventory operating windows; and
- We carry out quality assurance programs over our products and operations.

+ **Learn more about our operational performance in Our strategy in action on page 21.**

Delivery of our project portfolio

Delivery of our project portfolio, both brownfield and greenfield, forms a critical component of our strategy. Delivery of projects safely, on schedule and within budget allows us to optimise and unlock the value of our business.

Risk exposure trend 2023

Risk appetite

Aligned to our strategy of unlocking value in our business, we will not take actions that compromise the planning and execution of our major projects. However, we may accept greater levels of risk to pursue opportunities to extend the life of existing operations through brownfield projects and in executing decarbonisation projects for our assets.

Opportunities

Delivery of our project portfolio on time and within budget allows us to improve reliability, complement our existing assets, extend the life of our operations, realise our external commitments and grow volumes into structurally attractive markets.

Threats

Inability to deliver the project pipeline may impact on our future cash flows, reputation and return on investments. Known and emerging uncertainties that may challenge the timely and successful execution of our projects can include satisfying conditions for regulatory approvals, permitting delays, supply chain disruptions, high inflation, joint venture partner misalignment, and activism.

Our response includes:

- A comprehensive and adaptable project management framework supports disciplined project development and execution to realise the value of opportunities while mitigating the risk of suboptimal outcomes;
- We continue to develop our Operating System for major projects, and mature our performance in delivering projects on cost and on schedule;
- Our joint venture agreements include mechanisms such as technical committees and independent peer reviews to influence project, schedule, and cost outcomes;
- We apply a standardised valuation methodology with consistent key macroeconomic assumptions;
- We maintain a life of operation annual planning process. By evaluating the embedded project options in our operations, we look to optimise value throughout the life of our operations;
- We conduct an annual review of commodity prices and exchange rates which informs our project budgets. This process is supplemented by tri-annual updates; and
- Our internal investment framework defines a disciplined tollgate process with a mature and independent peer review mechanism which we rigorously follow to inform key investment decisions.

+ **Learn more about our project execution in Our strategy in action on page 23.**

Security of supply of logistics chains, and critical goods and services

The inability to secure supply of critical goods and services, such as raw materials, energy, water, gas, equipment and spare parts, consumables, technology, corporate services, labour and logistics (which includes road, rail and shipping), has the potential to impact business performance and our strategic objectives.

The procurement of critical goods and services must be undertaken in a manner that aligns to our purpose and values, meets stakeholder expectations and adheres to the policies and regulations where we operate. This includes sustainable sourcing and supporting local communities.

The security of our supply chain is heavily impacted by pandemics, jurisdictional unrest, geopolitical tensions and a shift from globalism towards protectionism.

Risk exposure trend 2023

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Risk appetite

Aligned to our strategy of optimising our business, we are not willing to take undue risks that compromise the security of our supply chain logistics and critical services. However, we accept that we have a strong reliance on certain critical suppliers, particularly to provide energy, logistics, and raw materials to our operations and we have limited ability to reduce this reliance.

Opportunities

Optimal and sustainable management of supply chain risk positions our business to operate safely and reliably, at the lowest possible cost and in a manner that meets or exceeds the expectations of our stakeholders.

It also provides us with the ability to influence how others in our industry approach sustainable sourcing and to position us to benefit as trade flows respond to rising protectionism, social consciousness and general trends to de-risk value chains.

Threats

Disruption of our supply chain could materially impact our ability to deliver on our commitments and meet the expectations of our stakeholders. Failure to meet minimum ethical supply chain standards has the potential to damage our social licence to operate (this is further addressed under 'Evolving societal expectations' on page 36). Climate change has the potential to increase the frequency and severity of extreme weather events which may threaten our supply chains, particularly logistics and the availability of critical goods and services (this is addressed under 'Climate change and environment' on page 30, and in the Addressing Climate Change section of our Sustainable Development Report).

Our response includes:

- We understand, assess and continually monitor the risks in our supply chains through an integrated system that considers the supply of critical goods and services. This includes risks relating to potential shortages, critical suppliers and categories, vendor liquidity, logistics, climate change and decarbonisation, and modern slavery;
- Internal and external data is integrated so we have a good understanding of existing and emerging risks and can take action to mitigate;
- We use this understanding of risk to deploy controls to support predictable operations. This includes working closely with our vendors and operations to match availability with demand; understanding options for alternative sources of supply and implementing multi-source supply where required; optimising inventory levels; flexing commercial terms and maintaining up-to-date business continuity plans. We continually optimise our approach between 'just in case' and 'just in time' as supply chain risk ebbs and flows;
- We build strong strategic partnerships with key suppliers on a long-term, mutually beneficial basis;
- We have a clearly defined transformation strategy and Enterprise Supplier Development program in South Africa aimed at building and growing small, medium and micro enterprises;
- We have Reconciliation Action Plan targets to develop and support Aboriginal and Torres Strait Islander enterprises in Australia;
- We have local procurement initiatives designed to increase opportunities for local suppliers;
- We actively review and manage payment terms to support small and local businesses in all jurisdictions in which we operate; and
- We have an established process to assess and mitigate potential modern slavery risks.

+ **Learn more about our responsible value chain activities in our Sustainable Development Report at *www.south32.net*.**

Shaping our culture and managing diverse talent

We must actively shape and embed our culture to attract, develop, support, and retain our talented people to deliver safe, predictable performance and continuously improve.

To align with the evolving needs of our people, business and broader stakeholders, we continuously monitor our culture and seek feedback to enhance the employee experience.

Risk exposure trend 2023

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Risk appetite

People underpin everything we do and we are not willing to take risks that could negatively impact our culture and the way our people connect to our purpose. However, we recognise our size and the competitive labour market in which we operate and therefore must be willing to take risk to build our talent and succession pipeline.

Opportunities

By shaping and embedding our aspired culture through our systems, symbols and behaviours, we will create an employee experience that engages all our people to better deliver our strategic objectives, together.

Threats

If we are unable to embed our preferred culture, we will likely have lower levels of engagement, disconnected teams that lack diversity and operate in silos, and relationship rather than performance-based decision making. Over time, this may constrain innovative thinking and impact our ability to attract and retain talent, which may lead to significant shareholder value erosion and reputational damage.

Our response includes:

- Our Code of Business Conduct sets out our expected standards of conduct, with formal training and assessment routines in place. Anyone can report a business conduct concern, anonymously if preferred, or by using our confidential and independently administered reporting hotline;
- We measure and discuss culture using a Culture Tensions framing model. This process acts as a health check and allows us to assess positive or negative change and test whether we are making progress towards our preferred culture that better balances relationships with performance, systems and processes with innovation and empowerment;
- We measure our employee experience, including at onboarding, annually through our 'Your Voice' employee survey, and at exit. The Your Voice survey responses are shared with line leaders to enable team-based conversations that directly empower improvements to the local employee experience;
- We have an internal Inclusion and Diversity Policy, standard and framework which sets out our commitments, strategy, requirements, measurable objectives and approach to performance reporting;
- We have a Leadership Model which strengthens alignment to our preferred culture and behaviours, and is integrated across our people systems and processes;
- We have a performance and goals process which supports our reward philosophy, and recognises and rewards aligned leadership behaviours and performance;
- We design our reward elements in accordance with our global reward framework taking into consideration local labour market practices, which enables us to attract appropriate skills and experience, engage employees and improve performance;
- We routinely review our key talent and critical role successors globally, creating individualised plans to further their development and address talent pipeline risks as appropriate. This includes targeted retention programs for key talent and/or team members occupying critical roles;
- We support employees who undertake further education and training related to their current or future career with South32; and
- We have an internal flexible work procedure which empowers our leaders to engage with their teams to determine the ways of working that balance individual, team and business requirements.

+ **Learn more about our people and culture in our Sustainable Development Report at *www.south32.net*.**

Evolving societal expectations

The expectations of resource companies by employees, governments, investors, lenders, host communities, customers, non-governmental organisations and broader society continue to evolve.

In order to keep pace with these rapidly evolving expectations and understand the potential impact to our business performance, reputation and delivery of our strategic objectives, we maintain an active stakeholder engagement program and undertake external monitoring on a wide range of financial and ESG issues, including climate change.

We regularly engage with our stakeholders to understand and respond to their views, which may be divergent, and aim to identify ways we can create enduring social, environmental and economic value, in a way that aligns with our purpose and values.

Risk exposure trend 2023

Risk appetite

We are not willing to take risks that will result in a failure to meet societal expectations, in human rights, cultural heritage, modern slavery and community safety. However, we accept that we will be required to take some risks in areas such as impacts of mining (e.g. on the environment) and commodity selection that may not completely align with societal expectations.

Opportunities

Proactive, collaborative and transparent engagement with our stakeholders builds relationships based on trust and shared understanding. Our ongoing licence to operate is built on our contribution to our stakeholders and broader society.

Threats

Failure to meet evolving societal expectations for ESG performance could damage our reputation and negatively impact our licence to operate, limiting our ability to access capital or markets, retain and attract employees and grow our business in existing and new jurisdictions.

Our response includes:

- Our purpose and strategy expressly balance economic outcomes with social and environmental outcomes, now and into the future. In the decisions we take, we look to minimise impact, respect human rights and aim to create enduring social, environmental and economic value for all our stakeholders, in a way that aligns with our purpose and values;
- We undertake internal and external stakeholder analysis and engagement on a wide range of financial and ESG issues, including an annual materiality process to understand our material ESG issues. Our approach is aligned with the ICMM Mining Principles, The UNGC Ten Principles and GRI Sustainability Reporting Standards;
- We engage with our customers to understand their requirements and drivers for responsible production, sourcing and stewardship in the supply chain. We work with certification bodies such as the Aluminium Stewardship Initiative to seek certification against their performance standards to help facilitate continued access to markets;
- We work to build strong, positive and meaningful relationships with local communities. We regularly complete and review community perception surveys, human rights impact assessments, social baseline studies and social impact and opportunity assessments to improve our understanding of the communities in which we operate;
- We review and amend our social investment program annually to align with community and stakeholder priorities. We measure the outputs and outcomes of our social investments as it informs future investment decisions and improves social investment project design;
- We develop economic development plans at all our operations which contribute to local and regional economic development through employment, procurement and business development. These plans include targets informed by local context, including women and people with diverse backgrounds;
- We engage with Indigenous, Traditional and Tribal Peoples across our operations to build mutual understanding and strengthen cultural heritage management. Our engagement with Indigenous, Traditional and Tribal Peoples throughout the life of our operations is sensitive to and respects cultural protocols; and
- We participate in sustainability reporting transparency initiatives and ESG rating agency reviews that assess and score our performance.

+ **Learn more about how we are delivering value to society in our Sustainable Development Report at *www.south32.net*.**

Political risks, actions by governments and/or authorities

Changes in legislation, regulation, policy and geopolitical activity have the potential to impact our strategic objectives and the way we work. This includes broader policy decisions and regulatory changes, related but not limited to, changes to royalty and taxation policy, nationalisation of mineral resources, supply chains, renegotiation or nullification of contracts, leases, permits or agreements, climate change and emissions reduction requirements and environmental and social performance requirements.

We aim to effectively manage this uncertainty through engagement with key stakeholders and industry associations, monitoring of political activity, policy, legislative and regulatory changes, and by having access to specialised knowledge.

Risk exposure trend 2023

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Risk appetite

We have a low appetite for activities that are likely to result in non-compliance with applicable legal or regulatory requirements. We maintain programs that seek to comply with those requirements. However, there can be no guarantee that such programs will always be effective to identify or prevent breaches of the law. Further, we operate in certain complex environments and jurisdictions, which are subject to legislative, regulatory or government policy changes that may adversely impact our business. Therefore, there will always be residual risk in relation to compliance with legal and regulatory requirements and changes to those requirements that may adversely impact our business.

Opportunities

Proactive engagement leading to strong relationships with governments and authorities provides a mutual understanding of drivers for decision making. This increases clarity around policy and regulatory environments, enables appropriate and tailored responses to issues and provides investment certainty.

Threats

Legislation adverse to our business and regulatory or policy decisions taken by governments or authorities, particularly relating to societal expectations, can result in operational disruption, permitting uncertainty, affect future planning or lead to cessation of operations or non-investment in operations or projects.

Our response includes:

- We have specialised knowledge through in-house expertise or the use of external experts, including tax management capability, tax advice and external affairs advice;
- We monitor political activity, policy, and legislative and regulatory changes in the jurisdictions where we operate, and we also engage with relevant authorities, to understand and mitigate potential impacts on our business performance;
- We engage with key stakeholders in all jurisdictions where we operate, in accordance with our stakeholder engagement plans;
- We work through selected industry associations to influence how the industry is positioned; and
- We produce an annual Tax Transparency and Payments to Governments Report, which shows how we meet our regulatory tax obligations.

+ **Learn more about our approach to tax in our Tax Transparency and Payments to Government Report at *www.south32.net*.**

Global economic uncertainty and liquidity

We prioritise an investment grade credit rating and a disciplined approach to allocating capital which aims to keeps our balance sheet strong, providing us with financial flexibility regardless of market conditions. By creating competition for capital and investing selectively in our existing operations, growth options and external opportunities, or by making returns to shareholders, we aim to maximise total shareholder returns over time.

Risk exposure trend 2023

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Risk appetite

We are not willing to take risks that may limit our ability to maintain a minimum liquidity balance and/or access to funding on acceptable terms. We recognise our preferred commodity basket and our operating costs have the potential for price and exchange rate volatility outside of our control, and while we accept that as a resource company we are exposed to this inherent risk, we will act to reduce its impact by understanding its effect on our business.

Opportunities

By investing selectively in our existing operations and growth options, external opportunities, or by making returns to shareholders, we aim to maximise total shareholder returns over time.

Threats

A significant or sharp deterioration in economic conditions can adversely impact market demand, commodity prices, and/or exchange rates which has the potential to significantly reduce profitability, cash flow and returns to shareholders. An increase in volatility, especially when it has an impact on in-bound and out-bound supply chains, has the potential to increase working capital requirements, affecting our liquidity. A reduction in liquidity available in capital markets has the potential to impact our balance sheet and ability to pursue our strategy.

Our response includes:

- We have a diverse portfolio of operations, commodities and end markets which strengthens our resilience to the disruption of any one commodity, geography or operation;
- We prioritise a strong balance sheet and an investment grade credit rating, with the aim of remaining resilient through economic cycles;
- We test our financial strength across a range of scenarios, including a depressed demand and pricing environment. We also maintain a minimum liquidity buffer and access to a diverse range of funding sources;
- We adjust our capital allocation plans according to market conditions;
- We maintain strong relationships with high-quality financial institutions, customers and suppliers from all around the world;
- We mostly sell our products with reference to floating, market-based prices, which are broadly correlated with floating global currency markets and the input costs we are exposed to; and
- We carry out an annual review of commodity prices and exchange rates, which informs our operational plans. This process is supplemented by tri-annual updates.

+ **Learn more about our capital management framework in Our strategy on page 19.**

STRONG GROWTH IN COMMODITIES CRITICAL FOR A LOW-CARBON FUTURE

We increased our supply of commodities critical for a low-carbon future, recording strong production growth as we realised the benefit of recent portfolio improvements.

The Group uses both International Financial Reporting Standards (IFRS) and non-IFRS financial measures such as underlying measures of earnings, effective tax rate (ETR), return on invested capital (ROIC), cash flow and net cash/(debt), to assess the Group's performance. The Directors believe that the non-IFRS measures are important when assessing the underlying financial and operating performance of the Group and its operations. The meanings of individual non-IFRS measures used in this report are set out in the Glossary on page 181.

The basis of the Group's underlying financial results is included on page 113 in note 4 to the financial statements, which reflect the Group's interest in material equity accounted joint ventures on a proportional consolidation basis. We believe that Underlying earnings before interest, tax, depreciation and amortisation (EBITDA), Underlying earnings before interest and tax (EBIT) and Underlying earnings provide useful information, but should not be considered as an indication of, or an alternative to, profit/(loss) after tax as an indicator of actual operating performance or as an alternative to cash flow as a measure of liquidity.

In discussing the operating results of the Group, the focus is on Underlying earnings and ROIC. Underlying earnings is the key measure that is used by the Group to assess our performance, make decisions on the allocation of resources and assess senior management's performance.

In addition, the performance of each of the Group's operations and operational management is assessed based on Underlying EBIT. Management uses this measure because financing structures and tax regimes differ across the Group's operations and substantial components of tax and interest charges are levied at a Group level rather than an operational level.

In order to calculate Underlying EBITDA, Underlying EBIT and Underlying earnings, the following items are adjusted as applicable each period, irrespective of materiality:

- Exchange rate (gains)/losses on restatement of monetary items;
- Impairment losses/(reversals);
- (Gains)/losses on disposal and consolidation of interests in operations;
- (Gains)/losses on non-trading derivative instruments, contingent consideration and other investments measured at fair value through profit or loss;
- Major corporate restructures;
- Joint venture adjustments for material equity accounted investments;
- Exchange rate variations on net cash/(debt);
- Tax effect of earnings adjustments; and
- Exchange rate variations on tax balances.

In addition, items that do not reflect the underlying operations of the Group, and are individually, or in combination with other related earnings adjustments, significant to the financial statements, are excluded to determine Underlying earnings.

Financial key performance indicators for FY23

Financial highlights

US$M	FY23	FY22	Change
Revenue	**7,429**	9,269	(20%)
Profit before tax and net finance income/(costs)	**198**	3,724	(95%)
Profit/(loss) after tax	**(173)**	2,669	N/A
Basic earnings per share (US cents)[1]	**(3.8)**	57.4	N/A
Ordinary dividends per share (US cents)[2]	**8.1**	22.7	(64%)
Special dividends per share (US cents)	**-**	3.0	N/A
Other financial measures			
Underlying revenue[3]	**9,050**	10,630	(15%)
Underlying EBITDA	**2,534**	4,755	(47%)
Underlying EBITDA margin	**29.4%**	47.1%	(17.7%)
Underlying EBIT	**1,616**	3,967	(59%)
Underlying EBIT margin	**18.7%**	39.4%	(20.7%)
Underlying earnings	**916**	2,602	(65%)
Basic Underlying earnings per share (US cents)[1]	**20.0**	56.0	(64%)
ROIC	**10.0%**	33.0%	(23.0%)
Ordinary shares on issue (million) at the end of the reporting period	**4,545**	4,628	(2%)

(1) FY23 basic earnings per share is calculated as Profit/(loss) after tax divided by the weighted average number of shares for FY23 (4,572 million). FY23 basic Underlying earnings per share is calculated as Underlying earnings divided by the weighted average number of shares for FY23. FY22 basic earnings per share is calculated as Profit after tax divided by the weighted average number of shares for FY22 (4,647 million). FY22 basic Underlying earnings per share is calculated as Underlying earnings divided by the weighted average number of shares for FY22.

(2) FY23 ordinary dividends per share is calculated as H1 FY23 ordinary dividend announced (US$224M) divided by the number of shares on issue at 31 December 2022 (4,572 million) plus H2 FY23 ordinary dividend announced (US$145M) divided by the number of shares on issue at 30 June 2023 (4,545 million).

(3) Underlying revenue includes revenue from third party products and services.

External factors and trends affecting the Group's result

The following describes the main external factors and trends that have had a material impact on the Group's financial position and results of operations during the financial year. Details of the Group's most significant risk factors (including environmental, social and governance risks), and how they are mitigated can be found in the Risk management section on pages 28 to 37.

The Board and management monitor particular trends arising from external factors with a view to managing the potential impact on the Group's future financial position and results of operations.

Commodity prices and changes in product demand and supply

South32 produces metals, concentrates and ores, for which prices are driven by global demand and supply for each of these commodities. Commodity prices were generally lower in FY23 compared to FY22 as most physical markets weakened on the back of global monetary tightening following the rise in inflation. The prices that the Group obtains for its products are a key driver of business performance, and fluctuations in these markets affect our results, including cash flows and shareholder returns.

Estimated impact on Underlying EBIT of a +/- 10% change in commodity price

US$M	FY23
Aluminium[1]	**287**
Alumina	**180**
Metallurgical coal[2]	**154**
Manganese ore	**88**
Copper[3]	**65**
Nickel	**60**
Silver	**22**
Lead	**18**
Zinc	**12**

(1) Aluminium sensitivity shown without any associated increase in alumina pricing.

(2) Includes metallurgical and energy coal at Illawarra Metallurgical Coal.

(3) Includes molybdenum, gold, and silver at Sierra Gorda.

The following table shows the quoted market prices of the Group's most significant commodities in FY23 and FY22. These prices differ from the realised prices on the sale of production due to contracts to which the Group is a party, differences in quotational periods, quality of products, delivery terms and the range of quoted prices that are used for contracting sales in different markets.

Quoted commodity prices

	Average Value			Closing Value		
Year ended 30 June	FY23	FY22	Change	FY23	FY22	Change
Alumina[(1)] (US$/t)	**340**	**382**	**(11%)**	330	367	(10%)
Aluminium (LME Cash)[(2)] (US$/t)	**2,334**	**2,889**	**(19%)**	2,097	2,397	(13%)
Copper (LME Cash)[(2)] (US$/t)	**8,280**	**9,645**	**(14%)**	8,210	8,245	(0%)
Silver[(3)] (US$/toz)	**21.7**	**23.6**	**(8%)**	22.5	20.4	10%
Lead (LME Cash)[(2)] (US$/t)	**2,082**	**2,304**	**(10%)**	2,105	1,907	10%
Zinc (LME Cash)[(2)] (US$/t)	**2,989**	**3,509**	**(15%)**	2,363	3,252	(27%)
Nickel (LME Cash)[(2)] (US$/t)	**23,924**	**23,547**	**2%**	20,125	23,100	(13%)
Metallurgical coal[(4)] (US$/t)	**279**	**390**	**(28%)**	233	302	(23%)
Manganese ore[(5)] (US$/dmtu)	**5.19**	**6.16**	**(16%)**	4.54	7.27	(38%)

(1) Platts Alumina Index (PAX) Free on Board (FOB) Australia – market price assessment of calcined metallurgical/smelter grade alumina.
(2) London Metal Exchange (LME) Cash represents the Official Seller price for nickel, copper, lead, zinc, and aluminium.
(3) Daily London Bullion Market Association (LBMA) Silver Fix.
(4) Platts Low-Vol Hard Coking Coal Index FOB Australia – representative of high-quality hard coking coals.
(5) FastMarkets Manganese Ore 44 per cent Mn Cost, Insurance, and Freight (CIF) Tianjin China.

The following summarises the pricing trends of our most significant commodities for FY23. The price change reflects the average of FY23 over FY22.

Alumina: The average FOB Australia price for FY23 was 11 per cent lower than FY22 driven by the combination of weak aluminium demand, and supply capacity being added from alumina refinery expansions within China.

Aluminium: The average LME cash settlement price for FY23 was 19 per cent lower than FY22. The price decrease was driven by subdued global demand, and lower cost of aluminium production stemming from falling energy costs, in some regions.

Copper: The FY23 average LME cash settlement price was 14 per cent lower than FY22. The price decrease was underpinned by weak global demand and expected strong supply growth in the next few years.

Silver: The FY23 average LBMA silver price was eight per cent lower than FY22. The price fall was underpinned by the rising interest rates which tempered investment appetite for silver. Weaker industrial activity globally, including in China, also impacted demand for silver as an industrial metal.

Lead: The FY23 average LME cash settlement price was 10 per cent lower than FY22. Despite improved global automotive output, price declines were driven by an uncertain macroeconomic outlook and rising interest rates which impacted market sentiment and smelter restarts in the world ex-China, leading to higher refined lead availability.

Zinc: The FY23 average LME cash settlement price was 15 per cent lower than FY22. Weaker global demand, including softer industrial activity in China and Europe led to a decline in prices amidst expectation of higher refined production as smelters restart in Europe.

Nickel: The FY23 average LME cash settlement price was two per cent higher than FY22. Prices strengthened in the first half of FY23 due to trading activity and strong demand for nickel-in-batteries. In the second half of FY23, prices declined due to growing supply in Class I nickel (which contains a minimum of 99.8 per cent nickel), slower than expected demand recovery in Chinese stainless steel, and concerns over rapid new supply growth over the next few years.

Metallurgical coal: The FY23 average Platts Premium Low-Vol Hard Coking Coal price was 28 per cent lower than FY22. Price declined as the market rebalanced due to improved seaborne supply, particularly from Australia in Q4 FY23 after the end of the La Niña weather impacts, while demand outlook weakened with Chinese steel demand recovery underperforming market expectations.

Manganese ore: The FY23 average Manganese Ore Metal Bulletin 44 per cent Mn CIF China price was 16 per cent lower than FY22. Despite supply disruptions, weak global demand resulted in oversupply of ore and high Chinese port inventories, contributing to the price decline.

Exchange rates

Global risk sentiment, central bank monetary policy and commodity prices continue to be key drivers of currency markets. In FY23, producer currencies saw mixed results against the United States (US) dollar. The US dollar started to weaken in the second half of FY23 as various central banks were pushed into raising interest rates, reducing the rate differentials between the US and major economies. On average, the Brazilian real strengthened two per cent over FY23 on a record trade surplus and better economic outlook after the government published a new fiscal framework. The Australian dollar, South African rand, Colombian peso, and Chilean peso weakened against the US dollar over FY23 mainly driven by lower commodity prices which negatively impacted the countries' export earnings and terms of trade.

The Group is exposed to exchange rate risk on foreign currency sales, purchases and expenses, as no active currency hedging is undertaken. As the majority of sales are denominated in US dollars, and the US dollar plays a dominant role in the Group's business, funds borrowed and held in US dollars provide a natural hedge to currency fluctuations. Operating costs and costs of locally-sourced equipment are influenced by fluctuations in local currencies, primarily the Australian dollar, South African rand, Brazilian real, Colombian peso, and Chilean peso.

The Group is also exposed to exchange rate translation risk in relation to net monetary liabilities, being foreign currency denominated monetary assets and liabilities, including debt, tax and other long-term liabilities. Details of the exposure to foreign currency fluctuations are set out in note 19 to the financial statements on pages 142 to 149.

The following table indicates the estimated impact on FY23 Underlying EBIT of a change in the significant currencies to which the Group is exposed against the US dollar. The sensitivities give the estimated impact on Underlying EBIT based on the exchange rate movement in isolation. The sensitivities assume all variables except for exchange rates remain constant. There is an inter-relationship between currencies and commodity prices where movements in exchange rates can cause movements in commodity prices and vice versa. This is not reflected in the sensitivities below. These sensitivities should therefore be used with care.

Estimated impact on Underlying EBIT of a +/-10% change in producer currencies relative to the US dollar

US$M	FY23
Australian dollar	**212**
South African rand	**112**
Brazilian real	**39**
Colombian peso	**28**
Chilean peso	**17**

The following table shows the average and period end closing exchange rates of the most significant currencies that affect the Group's results.

Exchange rates(1)

	Average Value			Closing Value		
Year ended 30 June	FY23	FY22	Change	FY23	FY22	Change
Australian dollar(2)	**0.67**	**0.73**	**(8%)**	0.66	0.69	(4%)
South African rand(3)	**17.76**	**15.22**	**(17%)**	18.75	16.26	(15%)
Colombian peso(3)	**4,593**	**3,903**	**(18%)**	4,191	4,127	(2%)
Brazilian real(3)	**5.16**	**5.24**	**2%**	4.82	5.24	8%
Chilean peso(3)	**863**	**812**	**(6%)**	803	924	13%

(1) Positive per cent change in foreign exchange indicates strengthening currency relative to US$.
(2) Displayed as US$ per A$ based on common convention.
(3) Displayed as local currency per US$.

2023 Financial year summary

Performance summary

The Group reported a statutory loss of US$173 million in FY23, following the recognition of a non-cash impairment expense of US$1,300 million in relation to the Taylor Deposit at our Hermosa project, a decrease of US$2,842 million from FY22.

We increased our supply of commodities critical for a low-carbon future, recording strong production growth in aluminium (14 per cent), base metals (17 per cent), and manganese (four per cent), as we realised the benefit of recent portfolio improvements and achieved annual production records at Hillside Aluminium, Australia Manganese and South Africa Manganese.

Underlying earnings were US$916 million, a decrease of US$1,686 million from FY22, as lower commodity prices, higher inflation and uncontrollable costs, more than offset higher production volumes at some of our operations.

Underlying EBITDA decreased by US$2,221 million to US$2,534 million in FY23, for a Group operating margin of 29 per cent. This represented one of our largest Underlying EBITDA results, despite lower commodity prices and uncontrollable cost impacts. Our investments in Sierra Gorda and increased ownership in Mozal Aluminium contributed Underlying EBITDA of US$240 million.

Free cash flow from operations, including equity accounted investment distributions, was US$244 million, impacted by a build in inventories and one-off cash tax payments in relation to our Sierra Gorda acquisition and non-core royalty sale.

We returned a record US$1,225 million to shareholders during FY23, with US$1,007 million in fully-franked ordinary and special dividends, and US$218 million via our on-market share buy-back. We have announced a fully-franked final ordinary dividend of US$145 million (US 3.2 cents per share) in respect of H2 FY23, and expanded our capital management program by US$50 million leaving US$133 million to be returned by 1 March 2024, reflective of our disciplined approach to capital management.

We continue to prioritise a strong balance sheet and investment grade credit rating through all cycles. We finished the period with net debt of US$483 million, following the return of record amounts to shareholders and our investments to grow production volumes of commodities critical for a low-carbon future. This strong platform and our disciplined approach to capital management provides us with the flexibility to continue to return capital to shareholders in the most efficient and value accretive manner, while investing in our growth options.

Specific highlights for FY23 included:

- Record annual production at three operations;
- Embedded portfolio improvements in copper and low-carbon aluminium;
- Fifteen per cent production growth in aluminium and base metals;
- Record US$1.2 billion returned to shareholders, equivalent to 11 per cent of our current market capitalisation;
- Advanced our portfolio of high-quality growth options, progressing work to support planned investment decisions for the development of Hermosa's Taylor zinc-lead-silver Deposit and the Sierra Gorda copper expansion in FY24;
- Confirmed the opportunity to produce battery-grade manganese from Hermosa's Clark Deposit and signed multiple non-binding, non-exclusive memorandums of understanding for future potential supply into North American markets;
- Consolidated our position in San Juan, Argentina, exercised our earn-in right for a 50.1 per cent interest in the Chita Valley copper prospect and acquired a strategic interest in Aldebaran Resources Inc;
- Advanced near-term decarbonisation programs to support our target to halve operational greenhouse gas (GHG) emissions by 2035 from an FY21 baseline[(1)], with Worsley Alumina on-track to convert its first onsite boiler from coal to natural gas in Q1 FY24;
- Transitioned Sierra Gorda to cost efficient, 100 per cent renewable electricity supply from January 2023; and
- Progressed partnerships to address value chain emissions and expanded our climate change goals to include net zero Scope 3 GHG emissions by 2050.

(1) FY21 baseline adjusted to exclude GHG emissions from SAEC and TEMCO, which were divested in FY21.

Earnings

US$M	FY23	FY22
Profit/(loss) after tax	**(173)**	2,669
Total adjustments to derive Underlying EBIT	**1,418**	243
Total adjustments to derive Underlying net finance costs	**(203)**	(124)
Total adjustments to derive Underlying income and royalty related tax expense	**(126)**	(186)
Underlying earnings	**916**	2,602

The Group's statutory profit after tax decreased by US$2,842 million to a loss of US$173 million in FY23, including the US$1,300 million non-cash impairment of Hermosa's Taylor Deposit, while Underlying earnings decreased by US$1,686 million to US$916 million.

Consistent with our accounting policies, various items are excluded from the Group's statutory profit/(loss) to derive Underlying earnings. Total adjustments to derive Underlying EBIT (US$1,418 million), include:

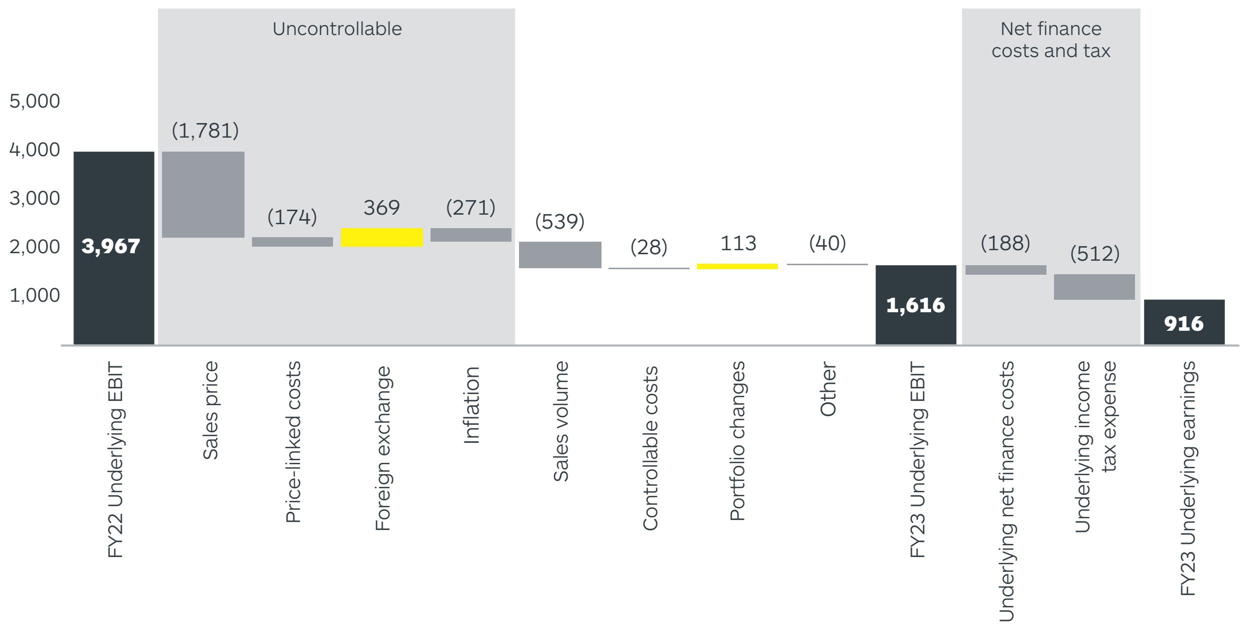
- Net impairment loss of non-financial assets (+US$1,300 million): non-cash impairment expense of Hermosa's Taylor Deposit, as announced on 24 July 2023. The impairment reflected the impact of delays due to COVID-19, significant dewatering requirements, and current inflationary pressures;
- Significant items (-US$186 million): gain on disposal of non-core base metal royalties to Ecora Resources PLC (-US$189 million pre-tax) and recognition of other income in relation to the indemnity for Chilean mining tax changes negotiated as part of our acquisition of Sierra Gorda (-US$48 million pre-tax), partially offset by a non-cash asset write-off following our decision not to proceed with the Dendrobium Next Domain (DND) project at Illawarra Metallurgical Coal (+US$51 million pre-tax);
- Sierra Gorda (+US$144 million) and Manganese (+US$147 million) joint venture adjustments: adjustments to reconcile the statutory equity accounting position to a proportional consolidation basis; and
- Net impairment loss of financial assets (+US$71 million): periodic revaluation of the shareholder loan receivable from Sierra Gorda reflecting copper price and other macroeconomic assumptions. An offsetting amount is recorded in the Sierra Gorda joint venture adjustments noted above.

Further information on these earnings adjustments is included on page 118.

The Group's Underlying EBIT decreased by US$2,351 million (or 59 per cent) to US$1,616 million, as Underlying depreciation and amortisation increased by US$130 million to US$918 million primarily due to the inclusion of Sierra Gorda in our portfolio.

The following key factors influenced Underlying EBIT in FY23, relative to FY22.

Reconciliation of movements in Underlying EBIT (US$M)[(1)(2)(3)]



(1) Sales price variance reflects the revenue impact of changes in commodity prices, based on the FY23 sales volume. Price-linked costs variance reflects the change in royalties together with the change in input costs driven by changes in commodity prices or market traded consumables. Foreign exchange reflects the impact of exchange rate movements on local currency denominated costs and sales. Sales volume variance reflects the revenue impact of sales volume changes, based on the comparative period's sales prices. Controllable costs variance represents the impact from changes in the Group's controllable local currency cost base, including the variable cost impact of production volume changes on expenditure, and period-on-period movements in inventories. The controllable cost variance excludes earnings adjustments including significant items.

(2) Underlying net finance costs and Underlying income tax expense are actual FY23 results, not year-on-year variances.

(3) South32's ownership shares of operations are presented as follows: Worsley Alumina (86 per cent share), Brazil Alumina (36 per cent share), Brazil Aluminium (40 per cent share), Hillside Aluminium (100 per cent), Mozal Aluminium (63.7 per cent share, noting that the FY22 Income statement reflects only one month of our increased ownership at 63.7 per cent following the completion of the acquisition for an additional 16.6 per cent shareholding on 31 May 2022), Sierra Gorda (45 per cent share), Cannington (100 per cent), Hermosa (100 per cent), Cerro Matoso (99.9 per cent share), Illawarra Metallurgical Coal (100 per cent), Australia Manganese (60 per cent share), South Africa Manganese ore (54.6 per cent share) and South Africa Manganese alloy (60 per cent share).

Earnings continued

Earnings analysis	US$M	Commentary
FY22 Underlying EBIT	**3,967**	
Change in sales price	(1,781)	Lower average realised prices for our commodities, including: Aluminium (-US$631 million) and alumina (-US$124 million) Metallurgical coal (-US$550 million) and energy coal (-US$11 million) Nickel (-US$209 million) Manganese ore (-US$181 million) Zinc (-US$63 million), lead (-US$13 million) and silver (+US$1 million)
Net impact of price-linked costs	(174)	Higher aluminium smelter raw material input prices (-US$115 million), including pitch and coke Higher coal, fuel oil and diesel prices (-US$76 million) Higher caustic soda prices at Brazil Alumina (-US$36 million) and Worsley Alumina (-US$33 million) Higher electricity prices (-US$33 million) at Cerro Matoso and Illawarra Metallurgical Coal Partially offset by lower freight and distribution costs (+US$93 million) and lower price-linked royalties (+US$16 million)
Change in exchange rates	369	Weaker South African rand (+US$166 million), Australian dollar (+US$157 million) and Colombian peso (+US$48 million)
Change in inflation	(271)	Inflation-linked indexation of our Southern African aluminium smelter electricity prices (-US$82 million) General inflation across Australia (-US$120 million), Southern Africa (-US$36 million) and Colombia (-US$24 million)
Change in sales volume	(539)	Lower volumes, including Illawarra Metallurgical Coal (-US$133 million), Cannington (-US$119 million), Worsley Alumina (-US$96 million), Brazil Alumina (-US$83 million) and Mozal Aluminium (-US$48 million)
Controllable costs	(28)	Inventory and volume related movements (+US$137 million) including a build in stocks at Australia Manganese, and higher inventory levels at Illawarra Metallurgical Coal Higher contractor and maintenance costs (-US$112 million) to support planned maintenance at Worsley Alumina, at Australia Manganese to support higher volumes, and at Cerro Matoso to deliver the Ore Sorting and Mechanical Ore Concentration (OSMOC) project Higher labour costs (-US$48 million) to support increased activity
Portfolio changes	113	Improved profitability following our first full year of ownership of Sierra Gorda (+US$142 million), partially offset by Brazil Aluminium (-US$38 million) as the smelter continued to ramp-up following the restart of all three potlines
Other	(40)	Higher profit from our equity interest in Mineração Rio do Norte (MRN), and non-core royalties received, more than offset by higher depreciation and amortisation primarily at Illawarra Metallurgical Coal and Australia Manganese
FY23 Underlying EBIT	**1,616**	

Further analysis of operations performance is outlined on pages 48 to 58.

Net finance income/(costs)

The Group's FY23 Underlying net finance costs of US$188 million primarily comprise the unwinding of the discount applied to our closure and rehabilitation provisions (US$113 million), interest on lease liabilities (US$56 million) largely for our multi-fuel co-generation facility at Worsley Alumina, and interest on our US$700 million of senior unsecured notes (US$31 million) issued in FY22 to partly fund the Sierra Gorda acquisition.

Tax expense

The Group's Underlying income tax expense, which includes our material equity accounted investments, was US$512 million in FY23, for an Underlying ETR of 36.1 per cent. Our Group Underlying ETR reflects our geographical earnings mix and the corporate tax rates of the jurisdictions in which we operate. The impact of the recent changes in Colombian tax legislation, with dividend withholding tax increasing from 10 per cent to 20 per cent and income tax deductions no longer available for royalty payments, has increased Cerro Matoso's effective tax rate.

The Underlying ETR for our manganese business was 43.7 per cent in FY23, including the royalty related tax at Australia Manganese.

The Underlying ETR for our Sierra Gorda equity accounted investment was 46.0 per cent in FY23, including royalty related tax. As anticipated, reforms to the Chilean Mining Tax were enacted in August 2023 and will be effective from 1 January 2024, resulting in higher royalty related tax in future periods. Sierra Gorda has a tax stability agreement to December 2028 which defers the effective start date of the mining tax reforms until 1 January 2029. In addition, we have an indemnity from the vendors of our Sierra Gorda acquisition for mining tax changes enacted prior to December 2025, to mitigate the impact of these reforms. We have recorded a receivable of US$48 million (pre-tax) in relation to the indemnity and expect to recover this amount from the vendors in FY24.

The Group's cash tax paid in FY23, excluding equity accounted investments, was US$818 million. This reflected the lagged effect of higher profitability in the prior period, as well as one-off cash taxes paid in relation to our Sierra Gorda acquisition (US$115 million) and non-core royalty sale (US$32 million).

Third party product sales

The Group differentiates the sale of its production from the sale of third party products due to a significant difference in profit margin earned on these sales. The table below shows the breakdown between the Group's production and third party products:

US$M	FY23	FY22
Group Production		
Underlying revenue	**8,511**	10,030
Related operating costs (net of other income)	**(6,918)**	(6,083)
Group Production Underlying EBIT	**1,593**	3,947
Underlying EBIT margin on Group production	**18.7%**	39.4%
Third party products		
Underlying revenue	**539**	600
Related operating costs (net of other income)(1)	**(516)**	(580)
Third party Underlying EBIT	**23**	20
Underlying EBIT margin on third party products	**4.3%**	3.3%
Group underlying results		
Underlying revenue	**9,050**	10,630
Related operating costs (net of other income)	**(7,434)**	(6,663)
Underlying EBIT	**1,616**	3,967

(1) Includes depreciation and amortisation.

The Group engages in third party trading for the following reasons:

- To seek to provide a consistent supply of materials to its customers;
- As a result of production variability and occasional shortfalls from the Group's operations; and
- To enhance value through product blending and supply chain optimisation.

Capital expenditure

We allocate capital in line with our strategy and capital management framework to optimise our business, unlock the full value of operations and identify and pursue opportunities which aim to create value. In FY23 the Group continued to prioritise capital for the safety and reliability of our operations, to progress life extension, innovation and improvement projects, and to fund our current and future growth projects.

US$M	FY23	FY22
Safe and reliable capital expenditure	**(470)**	(367)
Improvement and life extension capital expenditure	**(64)**	(58)
Growth capital expenditure	**(256)**	(97)
Intangibles and the capitalisation of exploration expenditure	**(104)**	(37)
Total capital expenditure (excluding equity accounted investments)	**(894)**	(559)
Equity accounted investments capital expenditure(1)	**(283)**	(164)
Total capital expenditure (including equity accounted investments)	**(1,177)**	(723)

(1) Equity accounted investments capital expenditure reflects the Group's interest in material equity accounted joint ventures and is presented on a proportional consolidation basis.

Total capital expenditure, excluding equity accounted investments, increased by US$335 million to US$894 million in FY23 as we increased our investment in productivity, improvement and growth activities across our portfolio:

- Safe and reliable capital expenditure increased by US$103 million to US$470 million as we invested in Illawarra Metallurgical Coal's transition to a more efficient single longwall configuration at Appin from FY25, and additional ventilation capacity to enable mining in Appin's Area 7 until at least 2039;
- Improvement and life extension capital expenditure increased by US$6 million to US$64 million as we progressed productivity and decarbonisation projects primarily at Worsley Alumina and Brazil Alumina;
- Growth capital expenditure increased by US$159 million to US$256 million at Hermosa as we installed critical path dewatering infrastructure and advanced studies for both Taylor and Clark Deposits; and
- Intangibles and capitalised exploration increased by US$67 million to US$104 million, as we extended Cerro Matoso's mining contract to 2044, and completed multiple exploration programs across our portfolio focused on base metals.

Our share of capital expenditure for our material equity accounted investments increased by US$119 million to US$283 million in FY23, reflecting the inclusion of Sierra Gorda in our portfolio. Capital expenditure for our Sierra Gorda equity accounted investment was US$199 million, as the operation invested in deferred stripping and additional tailings storage infrastructure. It also invested to grow future potential copper volumes, executing the plant de-bottlenecking project and progressing study work for the fourth grinding line expansion.

Capital expenditure for our manganese equity accounted investments was US$84 million as we invested in additional mining equipment and completed the feasibility study for Australia Manganese's Eastern Lease South life extension project.

Cash flow

The Group generated free cash flow from operations of US$57 million and received net distributions of US$187 million from our equity accounted investments in FY23. Group free cash flow reflected higher expenditure on productivity, improvement and growth projects (+US$335 million) and one-off tax payments in relation to our Sierra Gorda acquisition and non-core royalty sale (+US$147 million).

Working capital was largely unchanged over the financial year. The increase in inventories of US$126 million in FY23 reflected a permanent increase related to the restart of Brazil Aluminium, as well as temporary impacts at Mozal Aluminium.

Net distributions from our equity accounted investments comprised US$173 million from our manganese equity accounted investments and US$14 million from our Sierra Gorda equity accounted investment. At Sierra Gorda we invested in projects to increase potential copper production, implementing the plant de-bottlenecking project, and progressed studies for the fourth grinding line expansion to support a planned final investment decision in H2 FY24.

Free cash flow from operations

US$M	FY23	FY22
Profit from operations	**198**	3,724
Non-cash or non-operating items	**1,852**	694
Share of (profit)/loss from equity accounted investments	**(246)**	(272)
Working capital movement	**10**	(428)
Cash generated from operations	**1,814**	3,718
Total capital expenditure, excluding equity accounted investments, including intangibles and capitalised exploration	**(894)**	(559)
Operating cash flows generated from operations after capital expenditure	**920**	3,159
Net interest paid[1]	**(45)**	(51)
Income tax paid	**(818)**	(868)
Free cash flow from operations	**57**	2,240

(1) Net interest paid excludes distributions from material equity accounted investments.

Working capital movement

US$M	FY23	FY22
Trade and other receivables	**178**	(300)
Inventories	**(126)**	(206)
Trade and other payables	**(45)**	160
Provisions and other liabilities	**3**	(82)
Working capital movement	**10**	(428)

Balance sheet and capital management

The Group finished the period with a net debt balance of US$483 million as we delivered a record US$1,225 million to shareholders during FY23, paying fully-franked ordinary and special dividends of US$1,007 million, and a further US$218 million via our on-market share buy-back.

Consistent with our commitment to maintain an investment grade credit rating, during the year our current BBB+/Baa1 credit ratings were re-affirmed by S&P Global Ratings and Moody's, respectively.

Our capital management framework remains unchanged, and is designed to promote competition for capital through investment in high returning options or to protect portfolio value, as well as to reward shareholders as our financial performance improves. Demonstrating this, the Board has resolved to pay a fully-franked final ordinary dividend of US 3.2 cents per share (US$145 million) in respect of H2 FY23, representing 41 per cent of Underlying earnings. The Board has also further expanded our capital management program by US$50 million, leaving US$133 million to be returned by 1 March 2024.

Net debt and sources of liquidity

Our policies on debt and treasury management are as follows:

- Commitment to maintain an investment grade credit rating;
- Diversification of funding sources; and
- Generally maintain borrowings and holdings of excess cash in US dollars.

Gearing and net (debt)/cash

The table below presents net (debt)/cash and net assets of the Group, based on the balance sheet as at 30 June 2023:

US$M	FY23	FY22
Cash and cash equivalents	**1,258**	2,365
Current external debt	**(365)**	(402)
Non-current external debt	**(1,376)**	(1,425)
Net (debt)/cash	**(483)**	538
Net assets	**9,375**	10,779
Gearing[1]	**4.9%**	(5.3%)

(1) Gearing is the ratio of (Net debt/(cash)) to (Net debt/(cash)) plus Net assets.

Funding sources

In addition to cash flow from operations as a primary source of funding, the Group has US$700 million of senior unsecured notes outstanding, which are due in 2032 and accrue interest at a rate of 4.35 per cent per annum. We also retain access to significant liquidity, through an undrawn, sustainability-linked revolving credit facility, to have available capacity of US$1.4 billion to December 2026, and US$1.2 billion to December 2027. This facility is a standby arrangement to the Group's US dollar commercial paper program and is not subject to financial covenants at the Group's current credit rating. Certain financing facilities in relation to specific operations are the subject of covenants that vary from facility to facility; however, these are considered normal for such facilities.

Additional information regarding the maturity profile of the Group's debt obligations and details of our major standby agreement is included in note 19 to the financial statements on pages 142 to 149.

Operations analysis

A summary of the underlying performance of the Group's operations is presented below and more detailed analysis is presented on pages 48 to 58.

Operations table (South32 share)[1]

	Underlying Revenue		Underlying EBIT	
US$M	FY23	FY22	FY23	FY22
Worsley Alumina	**1,363**	1,625	**68**	386
Brazil Alumina	**456**	524	**(45)**	89
Brazil Aluminium	**166**	–	**(136)**	(44)
Hillside Aluminium	**1,823**	2,254	**191**	666
Mozal Aluminium	**886**	924	**56**	271
Sierra Gorda	**684**	241	**217**	75
Cannington	**542**	736	**142**	315
Hermosa	**–**	–	**(19)**	(14)
Cerro Matoso	**698**	929	**189**	463
Illawarra Metallurgical Coal	**1,643**	2,338	**692**	1,388
Australia Manganese	**688**	848	**266**	402
South Africa Manganese	**344**	419	**45**	58
Third party products and services[2]	**539**	600	**23**	20
Inter-segment / Group and unallocated	**(782)**	(808)	**(73)**	(108)
South32 Group	**9,050**	10,630	**1,616**	3,967

(1) South32's ownership share of operations is as per footnote (3) on page 43.
(2) FY23 Third party products and services sold comprise US$86 million for aluminium, US$25 million for alumina, US$140 million for coal, US$106 million for freight services, US$149 million for raw materials and US$33 million for manganese. Underlying EBIT on third party products and services comprise (US$1 million) for aluminium, US$13 million for alumina, US$11 million for coal, (US$1 million) for freight services, US$1 million for raw materials and nil for manganese. FY22 Third party products and services sold comprise US$110 million for aluminium, US$25 million for alumina, US$115 million for coal, US$145 million for freight services, US$165 million for raw materials and US$40 million for manganese. Underlying EBIT on third party products and services comprise US$8 million for aluminium, US$8 million for alumina, US$7 million for coal, (US$3 million) for freight services, nil for raw materials and nil for manganese.

WORSLEY ALUMINA

Location: **Western Australia, Australia**
South32 share: **86 per cent**

South32 holds an 86 per cent share in Worsley Alumina, while Japan Alumina Associates (Australia) Pty Ltd owns 10 per cent and Sojitz Alumina Pty Ltd owns four per cent.

Bauxite is mined near the town of Boddington, 130 kilometres south-east of Perth. It is transported by overland conveyor to the alumina refinery near Collie and turned into alumina powder, before being transported by rail to Bunbury port. It is then shipped to smelters around the world, including our Hillside Aluminium and Mozal Aluminium smelters in southern Africa.

We are executing decarbonisation and energy security initiatives at Worsley Alumina, including commencing the conversion of the first coal-fired boiler to natural gas.

South32 share	FY23	FY22
Alumina production (kt)	**3,839**	3,991
Alumina sales (kt)	**3,817**	3,974
Realised sales price (US$/t)	**357**	409
Operating unit cost (US$/t)	**291**	265

South32 share (US$M)	FY23	FY22
Underlying revenue	**1,363**	1,625
Underlying EBITDA	**251**	571
Underlying EBIT	**68**	386
Net operating assets	**2,457**	2,571
Capital expenditure	**82**	55
Safe and reliable	**49**	47
Improvement and life extension	**33**	8
Social investment	**1.1**	1.6

Safety

Lost Time Injury Frequency (LTIF) at Worsley Alumina was 0.6 in FY23, a 63 per cent decrease year-on-year. Total Recordable Injury Frequency (TRIF) was 8.6 in FY23, a 32 per cent increase year-on-year.

Volumes

Worsley Alumina saleable production decreased by four per cent (or 152kt), from record levels in FY22, to 3,839kt in FY23. The refinery successfully managed short-term energy supply challenges and completed planned calciner maintenance in Q1 and Q3 FY23, finishing the year with production rates above nameplate capacity in Q4 FY23.

Operating costs

Operating unit costs increased by 10 per cent to US$291/t in FY23, as the benefit of a weaker Australian dollar was more than offset by higher uncontrollable costs including an increase in caustic soda (FY23: US$659/t, FY22: US$581/t) and coal prices.

Financial performance

Underlying EBIT decreased by 82 per cent (or US$318 million), to US$68 million in FY23, as a 13 per cent decrease in the average realised price of alumina (-US$198 million), lower sales volumes (-US$64 million) and higher inflation and uncontrollable costs (-US$74 million), more than offset the benefit of a weaker Australian dollar (+US$50 million). The operation also incurred additional contractor costs (-US$18 million) to deliver planned maintenance activity.

Capital expenditure

Safe and reliable capital expenditure was US$49 million in FY23 as we invested in infrastructure to enable access to new mining areas and continued to invest in additional bauxite residue disposal capacity.

Improvement and life extension capital expenditure was US$33 million in FY23 as we advanced decarbonisation projects at the refinery.

Social investment

We invested US$1.1 million in communities around Worsley Alumina in FY23, with a focus on natural resource resilience, economic development, good health and social wellbeing, and education and leadership programs.

+ **Learn more about Worsley Alumina at *www.south32.net*.**

BRAZIL ALUMINA

Location: **Pará and Maranhão, Brazil**
South32 investment: **Bauxite - 33 per cent**
South32 share: **Alumina - 36 per cent**

South32 holds a 33 per cent interest in the non-operated Mineração Rio do Norte (MRN) bauxite mine. Vale holds 40 per cent, Rio Tinto Alcan holds 12 per cent, Companhia Brasileira de Aluminio S.A. holds 10 per cent and Hydro holds five per cent.

The MRN mine is an open-cut strip mining operation. Mined ore is hauled to primary crushers and then transported by conveyor belt to the beneficiation plant. A feasibility study is underway for the West Zone project at MRN, with the potential to extend the mine life by more than 20 years.

The bauxite produced from the MRN mine is sold to its shareholders. Our share of bauxite produced from MRN is supplied to the Alumar alumina refinery.

We govern our share of MRN through participation in MRN's Board, the main governance forum responsible for the strategic direction and oversight of MRN.

We also hold a 36 per cent share of the non-operated Alumar alumina refinery. Alcoa holds 54 per cent and Rio Tinto Alcan holds 10 per cent. A de-bottlenecking project at the refinery is expected to lift capacity from FY26.

The alumina produced from the refinery is exported through the Alumar port and supplied to the co-located Alumar aluminium smelter.

We govern our share of Alumar through participation in the Supervisory Committee, the main governance forum responsible for the strategic direction and oversight of Alumar.

South32 share	FY23	FY22
Alumina production (kt)	**1,262**	1,297
Alumina sales (kt)	**1,237**	1,299
Realised sales price (US$/t)	**369**	403
Operating unit cost (US$/t)[1]	**368**	288

South32 share (US$M)	FY23	FY22
Underlying revenue	**456**	524
Underlying EBITDA	**7**	150
Underlying EBIT	**(45)**	89
Net operating assets	**738**	696
Capital expenditure	**58**	51
Safe and reliable	**45**	51
Improvement and life extension	**13**	–

Volumes

Brazil Alumina saleable production decreased by three per cent (or 35kt) to 1,262kt in FY23 as the refinery reduced output in Q4 FY23 to manage temporary port infrastructure outages.

Operating costs

Operating unit costs increased by 28 per cent to US$368/t in FY23, with a significant rise in uncontrollable costs accounting for more than 70 per cent of this increase, together with one-off costs associated with the port infrastructure outages.

Uncontrollable cost inflation, including higher caustic soda prices (FY23: US$722/t, FY22: US$425/t), coal-linked energy prices, and bauxite costs linked to alumina and aluminium prices on a trailing basis, was most acute in H1 FY23, with these input prices all trending lower in H2 FY23.

Financial performance

Underlying EBIT decreased by US$134 million, to a loss of US$45 million in FY23, as an eight per cent decrease in the average realised price of alumina (-US$38 million), lower sales volumes (-US$30 million) and higher uncontrollable costs (-US$72 million), more than offset higher profit from our equity accounted interest in MRN (+US$10 million).

Capital expenditure

Safe and reliable capital expenditure decreased by US$6 million to US$45 million in FY23 as we continued our investment in bauxite residue disposal capacity.

Improvement and life extension capital expenditure was US$13 million in FY23 as the refinery progressed work on the de-bottlenecking project.

+ **Learn more about Brazil Alumina at *www.south32.net*.**

(1) Excludes the profit from our equity accounted interest in MRN.

BRAZIL ALUMINIUM

Location: **Maranhão, Brazil**
South32 share: **40 per cent**

South32 holds a 40 per cent share in the non-operated Alumar aluminium smelter, which was restarted during FY22 after being on care and maintenance since 2015. Alcoa Corporation holds a 60 per cent share.

Following the restart, first production was achieved in the June 2022 quarter, with nameplate capacity from the smelter's three potlines expected to be achieved in FY26. It has a solid metal production capacity of 447kt per year (on a 100 per cent basis) and produces standard aluminium ingots for the domestic and export markets.

Our share of Brazil Aluminium is powered by 100 per cent cost efficient renewable power.

We govern our share of Alumar through participation in the Supervisory Committee, the main governance forum responsible for the strategic direction and oversight of Alumar.

South32 share	FY23	FY22
Aluminium production (kt)	**68.9**	0.3
Aluminium sales (kt)	**67.7**	–
Realised sales price (US$/t)	**2,452**	–
Operating unit cost (US$/t)	**4,357**	–

South32 share (US$M)	FY23	FY22
Underlying revenue	**166**	–
Underlying EBITDA	**(129)**	(43)
Underlying EBIT	**(136)**	(44)
Net operating assets	**28**	46
Capital expenditure	**9**	1
Safe and reliable	**9**	1

Volumes

Brazil Aluminium saleable production was 68.9kt in FY23 following the restart of all three potlines at the smelter. Lower overhead crane availability in Q4 FY23 delayed pot restart activities and metal production.

Operating costs

Brazil Aluminium recorded gross operating costs of US$295 million in FY23 as the smelter continued to ramp-up and raw material input prices remained elevated across the industry.

Financial performance

Underlying EBIT was a loss of US$136 million in FY23, as sales revenue (+US$166 million) was more than offset by costs to support the smelter's restart and ramp-up of all three potlines (-US$258 million).

Capital expenditure

Safe and reliable capital expenditure was US$9 million in FY23 as the restart of the Aluminium smelter progressed.

+ **Learn more about Brazil Aluminium at *www.south32.net*.**

HILLSIDE ALUMINIUM

Location: **KwaZulu-Natal, South Africa**
South32 share: **100 per cent**

The Hillside Aluminium smelter is located in Richards Bay in the South African province of KwaZulu-Natal and is 100 per cent owned and operated by South32 with a solid metal production capacity of 720kt per year.

Hillside Aluminium is the largest aluminium smelter in the southern hemisphere. The smelter produces high-quality, primary aluminium for the domestic and export markets.

To support the development of the downstream aluminium industry in South Africa a portion of liquid metal is supplied to Hulamin and other local companies that sell products in the domestic and export markets.

Following the completion of a trial of the AP3XLE energy efficiency technology in FY22, Hillside Aluminium commenced deploying the technology, converting 18 per cent of pots in FY23.

South32 share	FY23	FY22
Aluminium production (kt)	**719**	714
Aluminium sales (kt)	**719**	713
Realised sales price (US$/t)	**2,535**	3,161
Operating unit cost (US$/t)	**2,178**	2,137

South32 share (US$M)	FY23	FY22
Underlying revenue	**1,823**	2,254
Underlying EBITDA	**257**	730
Underlying EBIT	**191**	666
Net operating assets	**845**	927
Capital expenditure	**18**	24
Safe and reliable	**16**	20
Improvement and life extension	**2**	4
Social investment	**9.1**	13.1

Safety

LTIF at Hillside Aluminium was 1.7 in FY23, a 55 per cent increase year-on-year. TRIF was 3.0 in FY23, a 131 per cent increase year-on-year.

Volumes

Hillside Aluminium saleable production increased by one per cent (or 5kt) to a record 719kt in FY23 as the smelter continued to test its maximum technical capacity, despite the impact of elevated load-shedding.

Operating costs

Operating unit costs increased by two per cent to US$2,178/t in FY23, as the benefit of a weaker South African rand and lower alumina prices, was more than offset by elevated smelter raw material input prices (including coke, pitch and aluminium tri-fluoride), and inflation-linked indexation of energy costs.

Financial performance

Underlying EBIT decreased by 71 per cent (or US$475 million), to US$191 million in FY23, as the benefit of a weaker South African rand (+US$106 million) and higher sales volumes (+US$18 million), was more than offset by a 20 per cent reduction in the average realised price of aluminium (-US$449 million) and higher raw material input prices (-US$56 million) and energy costs (-US$66 million).

Ninety-six pots were relined at a cost of US$281,000 per pot in FY23 (FY22: 162 pots at US$274,000 per pot). The smelter is deploying AP3XLE technology in its pot relining program, which is expected to enhance the smelter's energy efficiency and reduce GHG emissions.

Capital expenditure

Capital expenditure was US$18M in FY23 as the smelter invested in plant upgrades and continued to roll-out the AP3XLE energy efficiency technology in its pot relining program.

Social investment

We invested US$9.1 million in communities around Hillside Aluminium in FY23, with a focus on enterprise development, education, and development of sustainable agricultural practices.

+ **Learn more about Hillside Aluminium at *www.south32.net*.**

MOZAL ALUMINIUM

Location: **Maputo, Mozambique**
South32 share: **63.7 per cent**

South32 holds a 63.7 per cent share of Mozal Aluminium. The Industrial Development Corporation of South Africa Limited holds 32.4 per cent and the Government of the Republic of Mozambique holds 3.9 per cent (through preference shares).

Mozal Aluminium is located 20 kilometres west of Mozambique's capital city Maputo and has a solid metal production capacity of 580kt per year (on a 100 per cent basis).

Mozal Aluminium is the only aluminium smelter in Mozambique and the second largest aluminium smelter in Africa (behind our Hillside Aluminium smelter in South Africa). It produces standard aluminium ingots for the domestic and export markets.

To support the development of the downstream aluminium industry in Mozambique a portion of liquid metal is supplied to Midal Cables, a local company that sells products in the domestic and export markets.

Deployment of the AP3XLE energy efficiency technology is well advanced at Mozal Aluminium and expected to conclude in FY24.

South32 share	FY23	FY22(1)
Aluminium production (kt)	**345**	278
Aluminium sales (kt)	**334**	276
Realised sales price (US$/t)	**2,653**	3,348
Operating unit cost (US$/t)	**2,329**	2,243

South32 share (US$M)	FY23	FY22(1)
Underlying revenue	**886**	924
Underlying EBITDA	**108**	305
Underlying EBIT	**56**	271
Net operating assets	**578**	615
Capital expenditure	**17**	11
Safe and reliable	**16**	10
Improvement and life extension	**1**	1
Social investment	**1.8**	1.6

Safety

Tragically, two of our colleagues, Mr Cristovão Alberto Tonela and Mr Alfredo Francisco Domingos João, lost their lives in a fatal incident at Mozal Aluminium in November 2022. Our deepest sympathies remain with their families and colleagues to whom we have provided support and counselling.

LTIF at Mozal Aluminium was 0.4 in FY23, a 100 per cent increase year-on-year. TRIF was 1.5 in FY23, a 67 per cent increase year-on-year.

Volumes

Mozal Aluminium saleable production increased by 24 per cent (or 67kt) to 345kt in FY23, following our acquisition of an additional 16.6 per cent interest in May 2022. During FY23, production volumes were impacted by the safe recovery plan in response to the fatal incident in November 2022, as well as wet weather impacts experienced in Q3 FY23.

Operating costs

Operating unit costs increased by four per cent to US$2,329/t in FY23, as the benefit of a weaker South African rand and lower alumina prices, was more than offset by elevated smelter raw material input prices (including coke, pitch and aluminium tri-fluoride), and inflation-linked indexation of energy costs.

Financial performance

Underlying EBIT decreased by 79 per cent (or US$215 million), to US$56 million in FY23, as the benefit of our additional interest in Mozal Aluminium and a weaker South African rand (+US$26 million), was more than offset by a 21 per cent decrease in the average realised price of aluminium (-US$182 million), lower sales volumes (-US$48 million) and higher raw material input prices (-US$8 million) and energy costs (-US$17 million).

Eighty-two pots were relined in FY23 at a cost of US$318,000 per pot as the pot relining schedule was modified with the smelter's recovery plan (FY22: 127 pots at US$266,000 per pot). The smelter is deploying AP3XLE technology in its pot relining program, which is expected to deliver incremental production benefits, with no associated increase in power consumption.

Capital expenditure

Capital expenditure was US$17 million in FY23 as the smelter invested in plant upgrades and continued to roll-out the AP3XLE energy efficiency technology in its pot relining program.

Social investment

We invested US$1.8 million in communities around Mozal Aluminium in FY23, with a focus on education and skills development, health, sanitation, community wellbeing, and development of sustainable agricultural practices.

+ **Learn more about Mozal Aluminium at *www.south32.net*.**

(1) The results reflect the completion of our acquisition of an additional 16.6 per cent shareholding in the smelter on 31 May 2022, taking our ownership to 63.7 per cent. Prior period numbers have not been restated for this change in ownership (presented on a 47.1 per cent basis).

SIERRA GORDA

Location: **Antofagasta, Chile**
South32 share: **45 per cent**

South32 holds a 45 per cent share in the Sierra Gorda copper mine in Chile via the Sierra Gorda S.C.M. incorporated Joint Venture, alongside 55 per cent joint venture partner KGHM Polska Miedz.

Sierra Gorda is a large scale, open-pit mine in the prolific Antofagasta copper mining region and produces copper, molybdenum, gold and silver. Ore processing includes crushing, grinding, flotation, thickening and filtering to produce concentrates. The mine is serviced by established infrastructure, including renewable power and a seawater pipeline, with freight rail and a national highway connecting the operation to the ports of Antofagasta and Angamos.

A de-bottlenecking project is expected to be completed in FY24 and a fourth grinding line expansion study is underway, with the potential to increase plant throughput and lower operating unit costs.

South32 has joint control and governance rights alongside KGHM Polska Miedz under a Joint Venture Agreement. This joint control is exercised through the Owners Council, the main governance forum responsible for the strategic direction and oversight of Sierra Gorda S.C.M., which has an independent management team.

South32 share	FY23	FY22[1]
Ore mined (Mt)	**26.0**	13.7
Ore processed (Mt)	**21.2**	7.5
Ore grade processed (%, Cu)	**0.42**	0.42
Payable copper equivalent production (kt)[2]	**86.2**	30.6
Payable copper production (kt)	**70.7**	25.3
Payable molybdenum production (kt)	**1.2**	0.4
Payable gold production (koz)	**28.8**	9.6
Payable silver production (koz)	**630**	253
Payable copper sales (kt)	**71.8**	27.7
Payable molybdenum sales (kt)	**1.3**	0.6
Payable gold sales (koz)	**29.1**	9.9
Payable silver sales (koz)	**639**	282
Realised copper sales price (US$/lb)	**3.51**	3.50
Realised molybdenum sales price (US$/lb)	**21.3**	18.5
Realised gold sales price (US$/oz)	**1,821**	1,934
Realised silver sales price (US$/oz)	**21.9**	23.5
Operating unit cost (US$/t ore processed)[3]	**15.4**	14.6

South32 share (US$M)	FY23	FY22[1]
Underlying revenue	**684**	241
Underlying EBITDA	**358**	133
Underlying EBIT	**217**	75
Net operating assets	**1,588**	1,402
Capital expenditure	**196**	81
Safe and reliable	**151**	36
Improvement and life extension	**45**	45
Exploration expenditure	**7**	2
Exploration expensed	**4**	1

Volumes

Sierra Gorda payable copper equivalent production was 86.2kt in FY23, in our first full year of ownership, with plant throughput of 47.1Mt (100 per cent basis) and an average realised copper grade of 0.42 per cent.

Operating costs

Operating unit costs were US$15.4/t ore processed in FY23, following the transition to cost efficient, 100 per cent renewable electricity from January 2023.

Financial performance

Underlying EBIT was US$217 million in FY23 at a margin of 52 per cent, which improved the Group margin and increased our exposure to commodities critical for a low-carbon future.

Capital expenditure

Safe and reliable capital expenditure was US$151 million in FY23 as the operation invested in deferred stripping and additional tailings infrastructure.

Improvement and life extension capital expenditure was US$45 million in FY23 as the operation progressed the plant de-bottlenecking project, including the installation of a third tailings thickener.

+ **Learn more about Sierra Gorda at *www.south32.net*.**

(1) Realised sales prices and Operating unit costs presented in the table above reflect the period 1 March 2022 to 30 June 2022, whereas production and sales numbers, and all Income Statement items reflect the period from first ownership (22 February 2022). Operating unit costs of US$1.42/lb CuEq and realised prices (copper of US$3.18/lb, molybdenum of US$18.73/lb, gold of US$1,776/oz and silver of US$20.65/oz) reflect the period from first ownership (22 February 2022).
(2) Payable copper equivalent production (kt) was calculated by aggregating revenues from copper, molybdenum, gold and silver, and dividing the total Revenue by the price of copper. FY22 realised prices for copper (US$3.50/lb), molybdenum (US$18.48/lb), gold (US$1,934/oz) and silver (US$23.5/oz) have been used for FY22 and FY23.
(3) Sierra Gorda Operating unit cost is Underlying revenue less Underlying EBITDA divided by ore processed. Periodic movements in finished product inventory may impact Operating unit costs.

CANNINGTON

Location: **Queensland, Australia**
South32 share: **100 per cent**

Located in north-west Queensland, Cannington is 100 per cent owned by South32 and is one of the world's largest producers of silver and lead.

Cannington consists of an underground hard rock mine and surface processing facility, a road-to-rail transfer facility and a concentrate handling and ship loading facility at the Port of Townsville.

Silver, lead and zinc are extracted from the ore using grinding, sequential flotation and leaching techniques that produce high-grade, marketable lead and zinc concentrates with a high silver content.

The transition to 100 per cent truck haulage to bring product to the surface was completed in FY23, bringing forward higher-grade material. We are studying tailings reprocessing and open pit options to potentially extend the operation's life.

South32 share	FY23	FY22
Ore mined (kwmt)	**2,223**	2,753
Ore processed (kdmt)	**2,156**	2,618
Ore grade processed (g/t, Ag)	**187**	180
Ore grade processed (%, Pb)	**5.6**	5.4
Ore grade processed (%, Zn)	**3.8**	3.5
Payable zinc equivalent production (kt)(1)	**195.6**	224.2
Payable silver production (koz)	**11,183**	12,946
Payable lead production (kt)	**101.7**	120.6
Payable zinc production (kt)	**59.2**	64.5
Payable silver sales (koz)	**10,739**	12,898
Payable lead sales (kt)	**99.0**	122.2
Payable zinc sales (kt)	**58.1**	66.2
Realised silver sales price (US$/oz)	**21.1**	21.0
Realised lead sales price (US$/t)	**1,919**	2,046
Realised zinc sales price (US$/t)	**2,151**	3,248
Operating unit cost (US$/t ore processed)(2)	**153**	133

South32 share (US$M)	FY23	FY22
Underlying revenue	**542**	736
Underlying EBITDA	**213**	388
Underlying EBIT	**142**	315
Net operating assets	**172**	141
Capital expenditure	**61**	45
Safe and reliable	**60**	43
Improvement and life extension	**1**	2
Exploration expenditure	**8**	3
Exploration expensed	**6**	2
Social investment	**0.5**	0.3

Safety

LTIF at Cannington was 4.3 in FY23, a 187 per cent increase year-on-year. TRIF was 11.0 in FY23, a 21 per cent increase year-on-year.

Volumes

Cannington payable zinc equivalent production decreased by 13 per cent to 195.6kt in FY23, as the operation successfully recovered from severe weather impacts in Q3 FY23.

Operating costs

Operating unit costs increased by 15 per cent to US$153/t in FY23, as the benefit of a weaker Australian dollar and lower price-linked royalties was more than offset by lower mill throughput.

Financial performance

Underlying EBIT decreased by 55 per cent (or US$173 million), to US$142 million in FY23, as lower zinc and lead prices (-US$75 million) and reduced sales volumes (-US$119 million), more than offset the benefit of a weaker Australian dollar (+US$21 million) and lower price-linked royalties (+US$10 million).

Capital expenditure

Capital expenditure increased by US$16 million to US$61 million in FY23 as we invested in additional tailings storage capacity and upgrades to water and ventilation infrastructure.

Social investment

We invested US$0.5 million in communities around Cannington in FY23, with a focus on education, local economic participation, natural resource resilience, and community wellbeing.

+ **Learn more about Cannington at *www.south32.net*.**

(1) Payable zinc equivalent (kt) was calculated by aggregating revenues from payable silver, lead and zinc, and dividing the total Revenue by the price of zinc. FY22 realised prices for zinc (US$3,248/t), lead (US$2,046/t) and silver (US$21.0/oz) have been used for FY22 and FY23.

(2) Cannington Operating unit cost is Underlying revenue less Underlying EBITDA divided by ore processed. Periodic movements in finished product inventory may impact Operating unit costs.

CERRO MATOSO

Location: **Córdoba, Colombia**
South32 share: **99.9 per cent**

Cerro Matoso is an integrated nickel laterite mine and smelter located in the Córdoba area of northern Colombia, consisting of a truck and shovel open-cut mine and a processing plant. South32 owns 99.9 per cent of Cerro Matoso. Current and former employees own 0.02 per cent, with the balance of shares held in a reserve account following a buy-back.

Cerro Matoso is a major producer of nickel contained in ferronickel which is used to make stainless steel. Ore mined is blended with ore from stockpiles, which is then dried in rotary kilns and smelted in two electric arc furnaces where ferronickel is produced.

We commissioned the Ore Sorting and Mechanical Ore Concentration (OSMOC) project in FY23, which will partly offset natural nickel grade decline and underpinned a 15-year extension to Cerro Matoso's mining contract from 2029 to 2044.

South32 share	FY23	FY22
Ore mined (kwmt)	**5,560**	4,867
Ore processed (kdmt)	**2,807**	2,703
Ore grade processed (%, Ni)	**1.62**	1.73
Payable nickel production (kt)	**40.8**	41.7
Payable nickel sales (kt)	**40.8**	41.8
Realised sales price (US$/lb)	**7.76**	10.08
Operating unit cost (US$/lb)	**5.03**	4.34

South32 share (US$M)	FY23	FY22
Underlying revenue	**698**	929
Underlying EBITDA	**246**	529
Underlying EBIT	**189**	463
Net operating assets	**363**	349
Capital expenditure	**38**	37
Safe and reliable	**33**	18
Improvement and life extension	**5**	19
Exploration expenditure	**2**	–
Exploration expensed	**2**	–
Social investment	**4.8**	3.9

Safety

LTIF at Cerro Matoso was 1.3 in FY23, a 19 per cent decrease year-on-year. TRIF was 1.6 in FY23, a 43 per cent decrease year-on-year.

Volumes

Cerro Matoso payable nickel production decreased by two per cent to 40.8kt in FY23, as the benefits of the OSMOC project were offset by a temporary access restriction to the higher-grade Queresas and Porvenir (Q&P) pit. The OSMOC project is expected to partially offset natural grade decline.

Operating costs

Operating unit costs increased by 16 per cent to US$5.03/lb in FY23, as the benefit of a weaker Colombian peso was more than offset by higher labour and contractor costs, including the delivery of the OSMOC project.

Financial performance

Underlying EBIT decreased by 59 per cent (or US$274 million), to US$189 million in FY23, as a 23 per cent decline in the average realised nickel price (-US$209 million), reduced sales volumes (-US$22 million) and increased labour and contractor costs (-US$20 million), was partially offset by a weaker Colombian peso (+US$48 million).

Capital expenditure

Safe and reliable capital expenditure increased by US$15 million to US$33 million in FY23 as we progressed planned furnace upgrades and invested in a new mobile fleet.

Improvement and life extension capital expenditure decreased by US$14 million to US$5 million in FY23 following the successful commissioning of the OSMOC project in H1 FY23.

The extended mining contract underpinned by the OSMOC project is expected to unlock existing resources and creates an opportunity to analyse options to optimise our product mix in the battery supply chain. As part of this, we progressed concept studies to assess the potential to produce intermediary nickel products for electric vehicle markets.

Social investment

We invested US$4.8 million in communities around Cerro Matoso in FY23, with a focus on cultural programs, education, agriculture projects and community housing.

+ **Learn more about Cerro Matoso at *www.south32.net*.**

ILLAWARRA METALLURGICAL COAL

Location: **New South Wales, Australia**
South32 share: **100 per cent**

Located in the southern coalfields of New South Wales, Illawarra Metallurgical Coal is 100 per cent owned by South32 and operates two underground metallurgical coal mines, Appin mine and Dendrobium mine, and West Cliff and Dendrobium coal preparation plants. Illawarra Metallurgical Coal also manages the Port Kembla Coal Terminal on behalf of a consortium of partners.

Illawarra Metallurgical Coal produces premium-quality, hard coking coal for steelmaking, and energy coal. The operation supports the domestic steelmaking industry by supplying product to BlueScope Steel's Port Kembla Steelworks, the largest steel production facility in Australia.

We are investing to improve productivity and extend the life of Appin mine, and focusing on optimising the Dendrobium mine within approved domains.

South32 share	FY23	FY22
Metallurgical coal production (kt)	**5,497**	5,712
Energy coal production (kt)	**1,023**	797
Metallurgical coal sales (kt)[(1)]	**5,402**	5,823
Energy coal sales (kt)[(1)]	**957**	783
Realised metallurgical coal sales price (US$/t)	**279**	381
Realised energy coal sales price (US$/t)	**144**	156
Operating unit cost (US$/t)	**127**	126

South32 share (US$M)	FY23	FY22
Underlying revenue	**1,643**	2,338
Underlying EBITDA	**833**	1,507
Underlying EBIT	**692**	1,388
Net operating assets	**769**	786
Capital expenditure	**248**	189
Safe and reliable	**242**	177
Improvement and life extension	**6**	12
Exploration expenditure	**17**	11
Exploration expensed	**9**	9
Social investment	**0.9**	1.2

Safety

LTIF at Illawarra Metallurgical Coal was 3.2 in FY23, a 40 per cent decrease year-on-year. TRIF was 20.8 in FY23, a 26 per cent increase year-on-year.

Volumes

Illawarra Metallurgical Coal saleable production was largely unchanged at 6.5Mt in FY23 (Appin ~3.2Mt, Dendrobium ~3.3Mt). The operation completed two longwall moves during the year and overcame challenging mining conditions encountered at Appin in FY23.

Operating costs

Operating unit costs were largely unchanged at US$127/t in FY23, as the benefit of a weaker Australian dollar and lower price-linked royalties was offset by higher local energy costs.

Financial performance

Underlying EBIT decreased by 50 per cent (or US$696 million), to US$692 million in FY23, with a 27 per cent decline in the average realised price for metallurgical coal (-US$550 million), lower volumes (-US$133 million) and higher contractor and labour costs (-US$23 million). This more than offset the benefit of a weaker Australian dollar (+US$52 million) and lower price-linked royalties (+US$43 million).

Depreciation and amortisation increased by US$22 million, to US$141 million, reflecting higher development rates in FY23.

Capital expenditure

Safe and reliable capital expenditure increased by US$65 million to US$242 million in FY23. We continued our investment to support the transition to a more efficient single longwall configuration at Appin and commenced work to install additional ventilation capacity to enable mining in Area 7.

Improvement and life extension capital expenditure decreased to US$6 million in FY23 as we ceased activity on the DND project.

Social investment

We invested US$0.9 million in communities around Illawarra Metallurgical Coal in FY23, with a focus on the local environment, education, health, community support and services, and initiatives for Aboriginal and Torres Strait Islander Peoples.

+ **Learn more about Illawarra Metallurgical Coal at *www.south32.net*.**

(1) Volumes and prices do not include any third party trading that may be undertaken independently of equity production.

AUSTRALIA MANGANESE

Location: **Northern Territory, Australia**
South32 share: **60 per cent**

Australia Manganese consists of Groote Eylandt Mining Company Pty Ltd (GEMCO) in the Northern Territory. South32 holds a 60 per cent share in GEMCO and Anglo American Plc holds the remaining 40 per cent.

GEMCO is an open-cut strip mining operation, producing high-grade manganese ore and is located in close proximity to Asian export markets. It is one of the largest manganese ore producers in the world.

In FY23 we approved the Eastern Lease South life extension project, which is expected to extend the mine life at GEMCO, with first ore expected in FY25.

South32 share	FY23	FY22
Manganese ore production (kwmt)	**3,545**	3,363
Manganese ore sales (kwmt)	**3,261**	3,372
Realised external manganese ore sales price (US$/dmtu, FOB)(1)(2)	**4.59**	5.29
Ore operating unit cost (US$/dmtu)(2)(3)	**1.88**	1.86

South32 share (US$M)	FY23	FY22
Underlying revenue	**688**	848
Underlying EBITDA	**369**	488
Underlying EBIT	**266**	402
Net operating assets	**239**	258
Capital expenditure	**58**	62
Safe and reliable	**41**	56
Improvement and life extension	**17**	6
Exploration expenditure	**1**	1
Exploration expensed	**–**	–
Social investment	**0.8**	1.1

Safety

LTIF at Australia Manganese was 1.5 in FY23, a 66 per cent decrease year-on-year. TRIF was 6.3 in FY23, an 11 per cent decrease year-on-year.

Volumes

Australia Manganese saleable ore production increased by five per cent (or 182kwmt) to a record 3,545kwmt in FY23, as improved yields supported higher primary concentrator output, and our low-cost PC02 circuit continued to operate above its design capacity.

Operating costs

Operating unit costs were largely unchanged at US$1.88/dmtu in FY23, as the operation delivered strong production volumes and benefitted from a weaker Australian dollar.

Financial performance

Underlying EBIT decreased by 34 per cent (or US$136 million), to US$266 million in FY23, as the benefit of lower freight rates (+US$36 million) and a weaker Australian dollar (+US$21 million), was more than offset by a 13 per cent decline in average realised manganese ore prices (-US$128 million), higher diesel prices (-US$14 million) and contractor costs (-US$12 million).

Sales volumes declined (-US$32 million) due to in-land logistics constraints. We have optimised our road haulage and implemented alternative shipping solutions to improve our logistics chain.

Capital expenditure

Safe and reliable capital expenditure decreased by US$15 million to US$41 million in FY23 as we invested in access infrastructure.

Improvement and life extension capital expenditure increased by US$11 million to US$17 million in FY23 as we completed the feasibility study for the Eastern Lease South life extension project.

Social investment

We invested US$0.8 million in communities around Australia Manganese in FY23, with a focus on education and leadership, economic development, and health and wellbeing programs for Aboriginal and Torres Strait Islander Peoples.

+ **Learn more about Australia Manganese at *www.south32.net*.**

(1) Volumes and prices do not include any third party trading that may be undertaken independently of equity production. Realised ore prices are calculated as underlying revenue less freight and marketing costs, divided by external sales volume.
(2) Australia Manganese FY23 average manganese content of external ore sales was 43.8 per cent on a dry basis (FY22: 44.2 per cent). 96 per cent of FY23 external manganese ore sales (FY22: 96 per cent) were completed on a CIF basis. FY23 realised FOB ore prices and Operating unit costs have been adjusted for freight and marketing costs of US$62 million (FY22: US$96 million).
(3) FOB ore operating unit cost is Underlying revenue less Underlying EBITDA, freight and marketing costs, divided by ore sales volume.

SOUTH AFRICA MANGANESE

Location: **Northern Cape and Gauteng, South Africa**
South32 share: **Ore - 44.4 per cent, Alloy - 60 per cent**

South Africa Manganese consists of two manganese mines and the Metalloys manganese alloy smelter which was placed on care and maintenance in FY20.

Hotazel Manganese Mines (HMM) is located in the Kalahari Basin. South32 holds a 60 per cent interest in Samancor Holdings (Pty) Ltd (Samancor Holdings) and Anglo American Plc holds the remaining 40 per cent. Samancor Holdings indirectly owns 74 per cent of HMM, which gives South32 its ownership interest of 44.4 per cent. The remaining 26 per cent of HMM is owned by Broad-Based Black Economic Empowerment entities.

South32 holds an effective 60 per cent interest in Samancor Manganese (Pty) Ltd (Metalloys manganese alloy smelter). The site remains on care and maintenance as we assess future options for the smelter.

We are studying options to unlock logistics capacity in our South Africa manganese business and expand our high-grade Wessels mine.

South32 share[(1)]	FY23	FY22
Manganese ore production (kwmt)	**2,108**	2,069
Manganese ore sales (kwmt)	**2,065**	2,170
Realised external manganese ore sales price (US$/dmtu, FOB)[(2)(3)]	**3.58**	3.92
Ore operating unit cost (US$/dmtu)[(3)(4)]	**2.64**	2.73

South32 share (US$M)[(1)]	FY23	FY22
Underlying revenue	**344**	419
Manganese ore	**344**	419
Manganese alloy	**–**	–
Underlying EBITDA	**66**	78
Manganese ore	**72**	99
Manganese alloy	**(6)**	(21)
Underlying EBIT	**45**	58
Manganese ore	**51**	79
Manganese alloy	**(6)**	(21)
Net operating assets/(liabilities)	**143**	135
Manganese ore	**195**	211
Manganese alloy	**(52)**	(76)
Capital expenditure	**25**	19
Safe and reliable	**16**	14
Improvement and life extension	**9**	5
Exploration expenditure	**1**	1
Exploration expensed	**1**	1
Social investment	**3.2**	3.7

Safety

LTIF at South Africa Manganese was 0.7 in FY23, a 61 per cent decrease year-on-year. TRIF was 0.7 in FY23, a 77 per cent decrease year-on-year.

Volumes

South Africa Manganese saleable production increased by two per cent (or 39kwmt) to a record 2,108kwmt in FY23, with increased volumes of premium material from our Mamatwan mine.

Operating costs

Operating unit costs decreased by three per cent to US$2.64/dmtu in FY23, as the benefit of a weaker South African rand more than offset lower sales volumes due to a temporary reduction in third-party rail and port availability.

Financial performance

Ore Underlying EBIT decreased by 35 per cent (or US$28 million), to US$51 million in FY23, as the benefit of a weaker South African rand (+US$32 million) and lower freight rates (+US$25 million), was more than offset by a nine per cent decline in average realised manganese ore prices (-US$53 million) and lower sales volumes (-US$22 million) due to the timing of shipments.

The Metalloys manganese alloy smelter remains on care and maintenance.

Capital expenditure

Safe and reliable capital expenditure was US$16 million in FY23 as we invested in mining equipment.

Improvement and life extension capital expenditure was US$9 million in FY23 as we advanced work to access new mining areas at our high-grade underground Wessels mine.

Social investment

We invested US$3.2 million in communities around South Africa Manganese in FY23, with a focus on education, economic participation, natural resources resilience, health and wellbeing.

+ **Learn more about South Africa Manganese at *www.south32.net*.**

(1) South Africa Manganese ore has been reported as a 54.6 per cent interest reflecting our Metalloys manganese alloy smelter (60 per cent interest) having been placed on care and maintenance, and aligning with our interest in HMM. South32 has a 44.4 per cent ownership interest in HMM. Twenty-six per cent of HMM is owned by a B-BBEE consortium comprising Ntsimbintle Mining (nine per cent), NCAB Resources (seven per cent), Iziko Mining (five per cent) and HMM Education Trust (five per cent). The interests owned by NCAB Resources, Iziko Mining and HMM Education Trust were acquired using vendor finance with the loans repayable via distributions attributable to these parties, pro rata to their share in HMM. Until these loans are repaid, South32's interest in HMM is accounted at 54.6 per cent.

(2) Volumes and prices do not include any third party trading that may be undertaken independently of equity production. Realised ore prices are calculated as underlying revenue less freight and marketing costs, divided by external sales volume.

(3) South Africa Manganese FY23 average manganese content of external ore sales was 39.1 per cent on a dry basis (FY22: 39.7 per cent). 88 per cent of FY23 external manganese ore sales (FY22: 75 per cent) were completed on a CIF basis. FY23 realised FOB ore prices and Operating unit costs have been adjusted for freight and marketing costs of US$61 million (FY22: US$88 million).

(4) FOB operating unit cost is Underlying revenue less Underlying EBITDA, freight and marketing costs, divided by ore sales volume.

Outlook

Information on likely developments in the Group's business strategies, prospects and operations for future financial years and the expected results of those operations that could or is likely to result in unreasonable prejudice to the Group (for example, information that is commercially sensitive, confidential or could give a third party a commercial advantage) has not been included in this report. The categories of information omitted include forward-looking estimates and projections prepared for internal management purposes, information regarding the Group's operations and projects, which are developing and susceptible to change, and information relating to commercial contracts.

Production

Our recent portfolio improvements delivered strong growth in aluminium and base metals in FY23. Looking forward, these investments are expected to underpin production growth in aluminium and copper of four per cent in FY24 and a further three per cent in FY25.

Production guidance (South32's share)[1]

	FY23	FY24e[2]	FY25e[2]	Key guidance assumptions
Worsley Alumina				
Alumina production (kt)	**3,839**	4,000	4,000	Expected to sustain nameplate capacity in FY24 and FY25
Brazil Alumina (non-operated)				
Alumina production (kt)	**1,262**	1,400	1,420	Expected to increase by 11 per cent in FY24 as the refinery returns to nameplate capacity, ahead of creeping volumes in FY25
Brazil Aluminium (non-operated)				
Aluminium production (kt)	**68.9**	100	130	Expected to increase by 45 per cent in FY24 and 30 per cent in FY25 as the smelter ramps-up to nameplate capacity (179ktpa, 40 per cent basis) in H2 FY26
Hillside Aluminium				
Aluminium production (kt)	**719**	720	720	Expected to test its maximum technical capacity Guidance remains subject to load-shedding
Mozal Aluminium				
Aluminium production (kt)	**345**	365	372	Expected to increase by six per cent in FY24, returning to nameplate capacity in Q2 FY24 Guidance remains subject to load-shedding
Sierra Gorda (non-operated)				
Ore processed (Mt)	**21.2**	21.8	21.8	Higher expected throughput following the plant de-bottlenecking project and planned copper grades of 0.38 per cent and 0.42 per cent in FY24 and FY25, respectively
Payable copper equivalent production (kt)[3]	**86.5**	89.0	91.8	
Payable copper production (kt)	**70.7**	67.0	71.0	
Payable molybdenum production (kt)	**1.2**	2.5	2.2	
Payable gold production (koz)	**28.8**	22.5	25.0	
Payable silver production (koz)	**630**	550	550	
Cannington				
Ore processed (kdmt)	**2,156**	2,300	2,400	Payable zinc equivalent production expected to increase by 11 per cent in FY24 with improved plant throughput and higher planned silver and lead grades Further increase in plant throughput in FY25, offset by lower planned grades in accordance with the mine plan
Payable zinc equivalent production (kt)[4]	**259.6**	287.2	275.8	
Payable silver production (koz)	**11,183**	12,500	12,000	
Payable lead production (kt)	**101.7**	115.0	110.0	
Payable zinc production (kt)	**59.2**	62.0	60.0	
Cerro Matoso				
Ore to kiln (kt)	**2,807**	2,700	2,750	OSMOC project expected to partially offset natural grade decline, with expected processed nickel grade of 1.63 per cent and 1.48 per cent in FY24 and FY25, respectively
Payable nickel production (kt)	**40.8**	40.5	35.0	
Illawarra Metallurgical Coal				
Total coal production (kt)	**6,520**	5,000	5,500	FY24 production is expected to reduce to 5.0Mt, with the next longwall at Dendrobium to commence in Q2 FY24 Production is expected to increase by 10 per cent to 5.5Mt in FY25, consistent with medium-term production guidance for the complex
Metallurgical coal production (kt)	**5,497**	4,400	4,700	
Energy coal production (kt)	**1,023**	600	800	
Australia Manganese				
Manganese ore production (kwmt)	**3,545**	3,400	3,400	Expected to continue its strong performance, subject to wet season impacts
South Africa Manganese				
Manganese ore production (kwmt)	**2,108**	2,000	Subject to demand	We expect to continue to use higher cost trucking to optimise sales volumes FY25 guidance is subject to market demand

(1) South32's ownership share of operations is as per footnote (3) on page 43.
(2) The denotation (e) refers to an estimate or forecast year.
(3) Payable copper equivalent production (kt) was calculated by aggregating revenues from copper, molybdenum, gold and silver, and dividing the total Revenue by the price of copper. FY23 realised prices for copper (US$3.51/lb), molybdenum (US$21.28/lb), gold (US$1,821/oz) and silver (US$21.9/oz) have been used for FY23, FY24e and FY25e.
(4) Payable zinc equivalent (kt) was calculated by aggregating revenues from payable silver, lead and zinc, and dividing the total Revenue by the price of zinc. FY23 realised prices for zinc (US$2,151/t), lead (US$1,919/t) and silver (US$21.1/oz) have been used for FY23, FY24e and FY25e.

Costs

Operating unit cost performance and guidance(1)(2)

FY23 Operating unit costs were in-line with our expectations, as our strong operating performance to finish the year and continued focus on cost efficiencies provided partial relief from industry-wide cost pressures.

A planned increase in production volumes across the majority of our operations in FY24 and our ongoing focus on controllable cost initiatives is expected to partly offset ongoing industry-wide inflationary pressures.

While Operating unit cost guidance is not provided for our aluminium smelters, their cost profile will continue to be influenced by the price of raw material inputs, which have begun to moderate from elevated levels across the industry in FY23.

	FY22	FY23	FY24e(3)(4)	Commentary
Worsley Alumina (US$/t)	265	**291**	290	**FY22 versus FY23:** Benefit of a weaker Australian dollar was more than offset by higher uncontrollable costs including an increase in caustic soda and coal prices **FY24 key guidance assumptions:** Expected to be largely unchanged with lower caustic soda prices and consumption, to offset higher energy and labour costs
Brazil Alumina (non-operated) (US$/t)	288	**368**	Not provided	**FY22 versus FY23:** Significant rise in uncontrollable costs, together with one-off costs associated with the port infrastructure outages **FY24 key guidance assumptions:** Not provided but expected to continue to be influenced by energy and the price of raw material inputs
Brazil Aluminium (non-operated) (US$/t)	N/A	**4,357**	Not provided	**FY24 key guidance assumptions:** Not provided but expected to be influenced by the smelter's ramp-up profile and the price of raw material inputs and energy
Hillside Aluminium (US$/t)	2,137	**2,178**	Not provided	**FY22 versus FY23:** Benefit of a weaker South African rand and lower alumina prices was more than offset by elevated smelter raw material input prices and energy cost inflation **FY24 key guidance assumptions:** Not provided but expected to continue to be influenced by the price of raw material inputs, the South African rand and inflation-linked energy costs
Mozal Aluminium (US$/t)	2,243	**2,329**	Not provided	**FY22 versus FY23:** Benefit of a weaker South African rand and lower alumina prices was more than offset by elevated smelter raw material input prices and energy cost inflation **FY24 key guidance assumptions:** Not provided but expected to continue to be influenced by the price of raw material inputs, the South African rand and inflation-linked energy costs
Sierra Gorda (non-operated) (US$/t)(5)	14.6	**15.4**	16.0	**FY22 versus FY23:** Transitioned to cost efficient, 100 per cent renewable electricity from January 2023 **FY24 key guidance assumptions:** Expected higher plant throughput and lower electricity prices, more than offset by higher labour costs
Cannington (US$/t)(5)	133	**153**	155	**FY22 versus FY23:** Benefit of a weaker Australian dollar and lower price-linked royalties was more than offset by lower mill throughput **FY24 key guidance assumptions:** Expected to be largely unchanged with improved throughput, more than offset by higher labour costs
Cerro Matoso (US$/lb)	4.34	**5.03**	5.30	**FY22 versus FY23:** Benefit of a weaker Colombian peso was more than offset by higher labour and contractor costs, including the delivery of the OSMOC project **FY24 key guidance assumptions:** Expected to be influenced by lower price-linked royalties, more than offset by a stronger Colombian peso and higher labour costs
Illawarra Metallurgical Coal (US$/t)	126	**127**	140	**FY22 versus FY23:** Benefit of a weaker Australian dollar and lower price-linked royalties was offset by higher local energy costs **FY24 key guidance assumptions:** Expected lower volumes, with four planned longwall moves in FY24
Australia Manganese ore (FOB) (US$/dmtu)	1.86	**1.88**	2.15	**FY22 versus FY23:** Benefit of a weaker Australian dollar was more than offset by higher diesel prices and contractor costs **FY24 key guidance assumptions:** Expected increased mining activity and contractor costs to deliver planned volumes
South Africa Manganese ore (FOB) (US$/dmtu)	2.73	**2.64**	2.60	**FY22 versus FY23:** Benefit of a weaker South African rand was partially offset by lower sales volumes due to a temporary reduction in third-party rail and port availability **FY24 key guidance assumptions:** Expected weaker South African rand and lower price-linked royalties, to more than offset higher in-land logistics costs

(1) South32's ownership share of operations is as per footnote (3) on page 43.

(2) Operating unit cost is Underlying revenue less Underlying EBITDA, excluding third party sales, divided by sales volumes. Operating cost is Underlying revenue less Underlying EBITDA excluding third party sales.

(3) FY24 Operating unit cost guidance includes royalties (where appropriate) and the influence of exchange rates, and includes various assumptions for FY24, including: an alumina price of US$349/t; an average blended coal price of US$210/t for Illawarra Metallurgical Coal; a manganese ore price of US$4.85/dmtu for 44 per cent manganese product; a nickel price of US$8.90/lb; a silver price of US$24.5/troy oz; a lead price of US$2,131/t (gross of treatment and refining charges); a zinc price of US$2,446/t (gross of treatment and refining charges); a copper price of US$3.87/lb (gross of treatment and refining charges); a molybdenum price of US$22.51/lb (gross of treatment and refining charges); a gold price of US$1,984/troy oz; an AUD:USD exchange rate of 0.65; a USD:ZAR exchange rate of 18.98; a USD:COP exchange rate of 4,033; USD:CLP exchange rate of 876; and a reference price for caustic soda; which reflect forward markets as at July 2023 or our internal expectations.

(4) The denotation (e) refers to an estimate or forecast year.

(5) US dollar per tonne of ore processed, calculated as Underlying revenue less Underlying EBITDA divided by ore processed. Periodic movements in finished product inventory may impact Operating unit costs.

Capital expenditure

FY24 Group capital expenditure guidance, excluding equity accounted investments, is set at US$860 million as we prioritise safe and reliable operations and invest to improve productivity and grow future volumes:

- Safe and reliable capital expenditure is expected to increase by US$145 million to US$615 million in FY24, reflecting elevated capital expenditure at Illawarra Metallurgical Coal as we transition Appin to a more efficient single longwall from FY25, and install additional ventilation infrastructure to extend Appin's mine life in Area 7 to at least 2039;
- Improvement and life extension capital expenditure is expected to increase by US$11 million to US$75 million in FY24, as we advance decarbonisation projects at Worsley Alumina and the de-bottlenecking project at Brazil Alumina; and
- Growth capital expenditure at our Hermosa project is expected to be US$170 million in H1 FY24 as we complete critical path dewatering activity, invest in early works, and progress studies for both Taylor and Clark Deposits. We expect to provide H2 FY24 guidance following a final investment decision for the development of the Taylor Deposit, planned for H1 FY24.

Our share of capital expenditure for our material equity accounted investments is expected to increase by US$61 million to US$340 million in FY24:

- Capital expenditure for our manganese equity accounted investments is expected to increase by US$47 million to US$130 million in FY24 as we continue Australia Manganese's Eastern Lease South life extension project, with first production expected in FY25; and
- Capital expenditure for our Sierra Gorda equity accounted investment is expected to increase by US$14 million to US$210 million in FY24, with safe and reliable capital expenditure of US$180 million for deferred stripping and additional tailings capacity. Improvement and life extension capital expenditure is expected to be US$30 million, including the plant de-bottlenecking project and the feasibility study for the fourth grinding line expansion. We expect to update FY24 capital expenditure guidance following a final investment decision for the fourth grinding line expansion, planned for H2 FY24.

Capital expenditure guidance (South32's share)(1)(2)

US$M	FY22	FY23	FY24e(3)
Worsley Alumina	47	**49**	85
Brazil Alumina	51	**45**	60
Brazil Aluminium	1	**9**	10
Hillside Aluminium	20	**16**	35
Mozal Aluminium	10	**16**	20
Cannington	43	**60**	40
Cerro Matoso	18	**33**	45
Illawarra Metallurgical Coal	177	**242**	320
Safe and reliable capital expenditure (excluding equity accounted investments)	367	**470**	615
Worsley Alumina	8	**33**	45
Brazil Alumina	–	**13**	20
Cerro Matoso	19	**5**	-
Illawarra Metallurgical Coal	12	**6**	3
Other operations	19	**7**	7
Improvement and life extension capital expenditure (excluding equity accounted investments)	58	**64**	75
Hermosa	97	**256**	170(4)
Growth capital expenditure	97	**256**	170
Total capital expenditure (excluding equity accounted investments)	522	**790**	860
Equity accounted investments capital expenditure			
Sierra Gorda	36	**151**	180
Australia Manganese	56	**41**	55
South Africa Manganese	14	**16**	30
Safe and reliable capital expenditure (equity accounted investments)	106	**208**	265
Sierra Gorda	45	**45**	30(4)
Australia Manganese	6	**17**	35
South Africa Manganese	5	**9**	10
Improvement and life extension capital expenditure (equity accounted investments)	56	**71**	75
Total capital expenditure (equity accounted investments)	162	**279**	340
Total capital expenditure (including equity accounted investments)	684	**1,069**	1,200

(1) South32's ownership share of operations is as per footnote (3) on page 43.
(2) Total capital expenditure comprises safe and reliable, improvement and life extension (including decarbonisation), and growth capital expenditure, and excludes capitalised exploration and evaluation expenditure and the purchase of intangibles.
(3) The denotation (e) refers to an estimate or forecast year.
(4) Guidance for Hermosa reflects H1 FY24 estimated expenditure, subject to a planned final investment decision on Hermosa Taylor at the end of calendar year 2023. Guidance for our Sierra Gorda equity accounted investment is subject to a final investment decision for the fourth grinding line expansion.

Capitalised exploration guidance (South32's share)[1]

Capitalised exploration, including equity accounted investments, is expected to be largely unchanged at US$40 million in FY24. This includes US$23 million at our Hermosa project as we continue to test high priority regional targets, including further drilling at the Peake copper-lead-zinc-silver Prospect, and a first time drilling program planned at the Flux Prospect.

US$M	FY22	FY23	FY24e[2]
Capitalised exploration (excluding equity accounted investments)	33	**39**	35
Equity accounted investments capitalised exploration	2	**4**	5
Capitalised exploration (including equity accounted investments)	35	**43**	40

(1) South32's ownership share of operations is as per footnote (3) on page 43.
(2) The denotation (e) refers to an estimate or forecast year.

Other expenditure guidance

Other expenditure guidance items presented below are on a proportional consolidation basis including our manganese and Sierra Gorda equity accounted investments.

	FY23	FY24e[1]	Commentary
Group and unallocated expense in Underlying EBIT (excluding greenfield exploration and third party products and services EBIT) (US$M)	**31**	100	FY23 includes one-off benefits received. FY24 guidance reflects a normalised run-rate, including the effect of recent portfolio changes
Underlying depreciation and amortisation (US$M)	**918**	930	FY24 guidance reflects higher depreciation and amortisation expected at Cannington and Australia Manganese, following recent investments
Underlying net finance costs (US$M)	**188**	200	FY24 guidance reflects the balance sheet position as at FY23
Greenfield exploration (US$M)	**42**	30	FY24 guidance reflects targeted activity across our greenfield exploration programs focused on base metals in the Americas, Australia and Europe

(1) The denotation (e) refers to an estimate or forecast year.

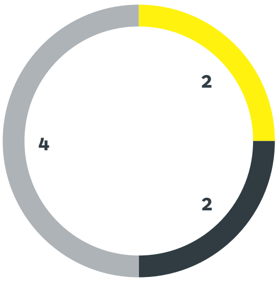
GOVERNANCE

OUR BOARD IN ACTION

The role of our Board is to represent shareholders and to promote and protect the interests of the Group. In FY23 our Board met 11 times, hosted our Annual General Meeting, and engaged with shareholders and other stakeholders. Directors also conducted site visits to Hillside Aluminium, Hotazel Manganese Mines, Mozal Aluminium and the Hermosa project.

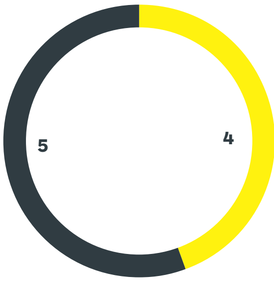
Board Composition as at 30 June 2023

Length of tenure
(Non-Executive Directors)



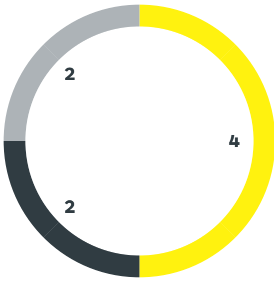
- 0-3 years
- 3-6 years
- 6-9 years

Gender diversity



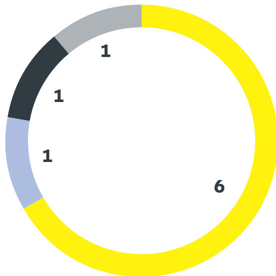
- Female
- Male

Location
(Non-Executive Directors)



- Australia
- Southern Africa
- Americas

Board ethnicity



- White British or other White (including minority-white groups)
- Asian/Asian British
- Black/African/Caribbean/Black British
- Not specified/prefer not to say

Our Board visits the Hermosa project

As part of its regular program of meetings, in June 2023 our Board visited the Hermosa project in Arizona, United States. Spread over three days, the visit provided an opportunity for Directors to receive the latest updates on project progress, engage with employees and local communities, and discuss the broader political context associated with Hermosa's development.

At the project site, the Board saw first-hand the progress that has been made on the ground including surface infrastructure and shafts for the Taylor Deposit, the recently constructed second water treatment plant and the recently upgraded core processing facility for geological samples.

At the nearby community of Nogales, which borders Mexico, Board members immersed themselves in local culture through food, music and dance, engaged with a cross-section of community leaders and reaffirmed our commitment to creating value for Santa Cruz County as the project progresses.

In addition to conducting a full set of Board and Committee meetings, the Board also heard from a panel of experts that provided valuable insights into the political environment and drive for critical minerals in the United States as we advance the development of the Hermosa project.

Board focus areas and activities in FY23

Safety and performance

- Maintained oversight of, and a focus on, our approach to safety and our safety performance;
- Actively engaged with management on our response following the devastating loss of two of our colleagues at Mozal Aluminium and received regular updates regarding the detailed investigation and the support provided to those affected;
- Maintained oversight of the findings of the investigation at Mozal Aluminium, including root causes as well as other contributing factors, and reviewed actions taken with management;
- Following a visit by our Chief Executive Officer in November 2022, two Non-Executive Directors visited Mozal Aluminium in December 2022;
- Maintained oversight of our approach to serious injury risk reduction through routine significant incident investigation reviews with management and material safety risk deep-dives during visits to our operations and projects;
- Monitored and assessed progress of our multi-year Safety Improvement Program, which aims to fundamentally shift our safety performance and deliver the culture transformation required for sustained improvement; and
- Participated in our 'Living our Code' training, which is focused on our employees learning about acceptable and unacceptable workplace conduct, including sexual harassment as a material health and safety risk, and fostering inclusion, diversity and equality in the workplace.

Strategy

- Maintained oversight of strategy development and implementation;
- Participated in a dedicated Strategy Day and engaged with management on strategic issues, including our health and safety culture and performance, and our response to the risks and opportunities of climate change and other environmental, social, and governance issues;
- Approved our decision not to proceed with an investment in the Dendrobium Next Domain project at Illawarra Metallurgical Coal following consideration of study work and extensive analysis of alternatives;
- Maintained oversight of the progress of the Hermosa project;
- Approved the Eastern Lease South life extension project at Groote Eylandt Mining Company;
- Approved our inaugural Climate Change Action Plan, including a review of our climate change positions, greenhouse gas emissions target and goals and oversaw our pipeline of decarbonisation initiatives;
- Maintained oversight of the alignment of our remuneration and benefits framework with our purpose, strategy, values, and culture;
- Approved increases in our capital management program of US$206 million to US$2.3 billion and the payment of US$1,007 million in dividends in FY23; and
- Engaged with shareholders and other stakeholders on financial, operational, remuneration and other matters.

Culture

- Worked with our Lead Team to set the direction and tone for a workplace culture that aligns with our purpose, reflects our values, and supports the delivery of our strategy;
- Monitored culture through visits to our operations and offices, operational deep-dives, and management presentations, applying a `Culture Health Check' tool to assess alignment of our culture with our purpose, strategy and values;
- Received key observations from leaders on our annual 'Your Voice' employee survey and evaluated actions taken to address improvement areas;
- Maintained oversight of our approach to inclusion and diversity and approved a new Inclusion and Diversity Policy in July 2023;
- Monitored and assessed progress against our inclusion and diversity measurable objectives; and
- Visited the Kotulong Community Centre and Rearata Primary School in South Africa, the Filipe Nyusi Secondary School in Mozambique and met with community leaders and representatives from the communities in Santa Cruz County in Arizona in the United States.

Governance

- Governed the Group, having regard to our purpose, strategy, values and culture, our shareholders as a whole, and the interests of other stakeholders;
- Discharged the responsibilities of the Board and its four standing Committees: the Nomination and Governance Committee, Remuneration Committee, Risk and Audit Committee and Sustainability Committee;
- Maintained oversight of the integration of environmental, social, and governance considerations, including our response to the risks and opportunities that climate change presents, into our strategy and capital allocation, budget, risk oversight and governance;
- Maintained oversight of the development of a pipeline of talent for key roles;
- Following an extensive global search, appointed two new Non-Executive Directors, further enhancing the Board's broad range of skills and experience, particularly in major projects, operations and sustainability; and
- Reported on gender and ethnicity representation on the Board, confirming that our Board represents a broad cultural, ethnic, background and geographic mix, and achieves its gender diversity objectives.

+ **Learn more about our key corporate governance policies and practices in our Corporate Governance Statement at *www.south32.net***

Committee membership key:

- Chair appointment
- N Nomination and Governance Committee
- R Remuneration Committee
- RA Risk and Audit Committee
- S Sustainability Committee

N R

Ms Karen Wood BEd, LLB (Hons), 67
Chair and Independent Non-Executive Director
Appointed: 1 November 2017; Chair: 12 April 2019
Location: Australia

Career summary: Ms Wood has worked in legal practice and business.

In 2001, Ms Wood joined BHP and held several global executive leadership roles, including Group Company Secretary, Chief Governance Officer, Chief People Officer and President People and Public Affairs (Corporate Affairs). Before joining BHP, she worked at Bonlac Foods Limited, where she spent five years as General Counsel and Company Secretary. Following her retirement in 2014, she continued as an adviser to BHP's Board and CEO until 2015. She also chaired the BHP Foundation until 2019, overseeing grant provisions for not-for-profit organisations to deliver global programs in the areas of natural resource governance, human capability and social inclusion, and conserving and sustainably managing natural environments.

Other key positions Ms Wood has held include being a member of the Takeovers Panel (Australia) from 2000 to 2012, and roles with the Australian Securities and Investments Commission (Business Consultative Panel) and the Australian Government's Business Regulatory Advisory Group.

External appointments: ASX listed: Ms Wood is currently a Non-Executive Director of Djerriwarrh Investments Limited (since July 2016).

Ms Wood is also a Director of the Robert Salzer Foundation, serves as an ambassador for the Australian Indigenous Education Foundation and is a member of the Advisory Board of the Sir John Monash Leadership Academy.

Skills and experience: Ms Wood brings extensive corporate governance expertise to her roles as Chair of our Board and the Nomination and Governance Committee. In these roles, her experienced leadership promotes a cohesive environment of constructive challenge and oversight. Ms Wood's substantial tenure as a global executive within the resources industry means that she brings a strong understanding of the regulatory landscape and the key strategic risks and opportunities for a global mining and metals company. Her expertise in shaping culture (including through organisational and remuneration design), public policy, social performance and stakeholder engagement enables her to bring valuable insights in these areas.

Mr Graham Kerr BBus, FCPA, 52
Chief Executive Officer and Managing Director
Appointed: October 2014 and as Managing Director on 21 January 2015
Location: Australia

Career summary: Mr Kerr joined BHP in 1994 and held a wide range of operational and commercial roles across the business, including Chief Financial Officer Stainless Steel Materials, Vice President Finance Diamonds and Finance Director for the BHP Canadian Diamonds Company.

In 2004, Mr Kerr joined Iluka Resources Limited as General Manager Commercial. He returned to BHP in 2006, leading to his appointment as President of Diamonds and Specialty Products where he was accountable for the Ekati Diamond Mine in Canada, the Richards Bay Minerals joint venture in South Africa, diamonds exploration in Angola, the Corridor Sands Project in Mozambique and the development of BHP's potash portfolio in Canada.

Mr Kerr was appointed BHP's Chief Financial Officer in 2011, a role which he held until 2015 when he left to lead South32 through its demerger from BHP and listing in three countries.

External appointments: Director, CEOs for Gender Equity.

Skills and experience: Mr Kerr's strong track record in resources development, and global experience as a commercial and operational leader within the resources industry, means that he brings deep mining and metals expertise and exceptional financial acumen. His health and safety expertise, and passion for promoting diversity and inclusion, are valued contributions to our Board as it oversees our commitment to elevate our safety performance and instil a culture where everyone feels safe and respected at work. Mr Kerr's strong focus on a purpose-driven and values-led future for South32 make him a trusted leader as we progress the next phase of our strategy.

RA N R

Mr Frank Cooper AO, BCom, FCA, FAICD, 67
Independent Non-Executive Director
Appointed: 7 May 2015
Location: Australia

Career summary: Mr Cooper qualified as a chartered accountant in Australia, leading to a 40-year career in the finance and accounting profession. He has held a number of senior tax and finance roles, including Partner at Ernst & Young, Partner / Business Unit Leader, Tax Practice at PricewaterhouseCoopers and Managing Partner for Arthur Andersen in Perth (for just over 10 years), during which time he specialised in the mining, energy and utility sectors.

Other key positions Mr Cooper has held include Commissioner and Chairman of the Insurance Commission of Western Australia and Pro Chancellor of the University of Western Australia.

Throughout his career, Mr Cooper has had extensive involvement in community activities, including serving as Commissioner and Chair of the West Australian Football Commission and as a Member of the State Health Research Advisory Council (Western Australia).

In 2014 Mr Cooper was awarded an Officer of the Order of Australia. He was also named West Australian of the Year in the Professions category in 2015.

External appointments: ASX listed: Mr Cooper is currently a Non-Executive Director of Woodside Energy Group Limited (since February 2013) and Chair of its Audit and Risk Committee.

Mr Cooper is also a Director of St John of God Australia Limited and Wright Prospecting Pty Ltd.

Skills and experience: Mr Cooper brings exceptional financial acumen and accounting expertise, a strong understanding of legal and regulatory compliance and substantial experience in risk management oversight to our Board, all of which also make him a highly capable Risk and Audit Committee Chair. His listed company experience and expertise in capital management and corporate development are highly valued by our Board as it oversees the implementation of our strategy, as is his strong focus on organisational philosophy, values and standards.

N RA S

Dr Xiaoling Liu BEng (Extractive Metallurgy), PhD (Extractive Metallurgy), FAusIMM, FTSE, GAICD, 66
Independent Non-Executive Director
Appointed: 1 November 2017
Location: Australia

Career summary: Dr Liu completed her undergraduate study in Chongqing University in China and her PhD in Extractive Metallurgy at Imperial College in the United Kingdom, before joining the Rio Tinto Group as a senior research scientist in 1988.

Over her 26-year career with Rio Tinto, Dr Liu held various roles in smelting operations, including General Manager Operations at Bell Bay (Tasmania), leading to other senior operational and management roles, including Managing Director Technical Services, where she led Rio Tinto's global technical services unit. Prior to her retirement, Dr Liu was President and Chief Executive Officer of Rio Tinto Minerals, with responsibility for integrated operations of mining, processing, supply chain, marketing and sales for its Borates business in the United States, Europe and Asia.

Dr Liu has served as Vice President of the Board of the Australian Aluminium Council, a Board Member of the California Chamber of Commerce, a Director of Melbourne Business School and Chancellor of Queensland University of Technology. She has also served as a Non-Executive Director at Newcrest Mining Limited (September 2015 until November 2020) and Iluka Resources Limited.

External appointments: ASX listed: Dr Liu is currently a Non-Executive Director of Incitec Pivot Limited (since November 2019) and Chair of its Health, Safety, Environment and Community Committee.

Skills and experience: With her accomplished career as a global executive in the resources industry, Dr Liu brings to our Board expertise in mining and processing operations, the execution of major capital projects and commodity value chain management. Her high financial acumen, expertise in health and safety and strong understanding of the key environmental impacts, risks and opportunities relevant to our operations, make her a valued contributor to the Committees on which she serves. Dr Liu's knowledge and experience in technology and innovation, together with her technical background, is an asset to our Board as it oversees our advancement towards a low-carbon future.

N S

Mr Carlos Mesquita BEng (MetalEng), MBA, 65
Independent Non-Executive Director
Appointed: 1 May 2023
Location: Chile

Career summary: Mr Mesquita is a qualified Metallurgical Engineer. He has worked in the mining and metals industry for more than 40 years and has extensive experience in leading mining and processing operations and major capital projects.

Mr Mesquita spent 30 years with BHP where he held various positions in the company's base metals and aluminium businesses, including Asset President of Mozal Aluminium and Asset President of Escondida – the world's largest copper mine. During this time he also served as Vice President Major Projects where he led the base metals projects program, overseeing more than US$10 billion in mining investments in countries including Chile, Australia, and Peru.

Mr Mesquita has also previously advised mining companies and private equity funds on acquisitions of mining assets in South America and from 2014 to 2015 he was a Non-Executive Director of Mineração Serra Verde, a mid-sized rare earth minerals mine in central Brazil.

In the first half of 2022, Mr Mesquita was a consultant for South32 providing in-country support following our acquisition of a 45 per cent interest in the Sierra Gorda copper mine.

External appointments: None

Skills and experience: Mr Mesquita has extensive experience in the global mining and metals industry with a particular focus on base metals and aluminium in the Americas and Africa. His previous roles and first-hand experience of working at a projects in an operational capacity means he brings a unique and diverse perspective to our Board. This, together with his experience in leading complex operations with responsibility for safety, volume and costs, support our strategy of optimising our business by working safely, minimising our impact, consistently delivering stable and predictable performance, and continually improving our competitiveness.

N RA

Dr Ntombifuthi (Futhi) Mtoba CA(SA), DCom (Honoris Causa), BCompt (Hons), HDip Banking Law, BA (Econ)(Hons), BA (Arts), 68
Independent Non-Executive Director
Appointed: 7 May 2015
Location: South Africa

Career summary: Dr Mtoba qualified as a chartered accountant in South Africa and joined Deloitte and Touche in 1988, specialising in financial services. She was one of the first African Black women to be appointed Partner by one of the Big Four accounting firms, and was later appointed Chairperson of Deloitte Southern Africa.

Dr Mtoba is President and founder of TEACH South Africa, which recruits skilled teachers for underprivileged schools. She has held several board positions at organisations focused on economic development and community engagement, including the New Partnership for Africa's Development Business Foundation and the African Union Foundation. Dr Mtoba has also been President of the Association for the Advancement of Black Accountants and Business Unity South Africa and chaired the University of Pretoria Council for over 10 years.

Other positions Dr Mtoba has held include being a member of the International Monetary Fund Advisory Group of Sub-Saharan Africa, the World Economic Forum Global Advisory Council, and the United Nations Global Compact Board as well as a Director of the International Women's Forum (South Africa). She has received several awards for contributions to business and society, including Most Outstanding Leadership Women of the Year (Africa Economy Builders, 2018).

External appointments: Dr Mtoba is currently a Non-Executive Director and Deputy Chair of the Public Investment Corporation Limited and Chair of its Audit Committee, a Director of Discovery Bank Holdings Limited and Lead Independent Director and Audit Committee Chair of Discovery Bank Limited, and a Director of Vumelana Advisory Fund, and a Director of Chapter Zero Southern Africa (from July 2023).

Skills and experience: Dr Mtoba's tenure as partner and a leader at one of Africa's predominant financial professional services firms, and the numerous roles she has held in local, regional and international organisations and forums, means that she provides our Board with considerable financial, economic and public policy expertise and leadership. Dr Mtoba brings a strong focus on culture and her expertise in social performance and community and stakeholder engagement are an asset to our Board as it supports our aspiration to contribute social and economic value where we operate.

N S

Ms Jane Nelson BSc Agricultural Economics (Cum Laude), BA MA (Philosophy, Politics and Economics), 63
Independent Non-Executive Director
Appointed: 1 May 2023
Location: United States

Career summary: Ms Nelson was born in Zimbabwe and has a Bachelor of Science in Agricultural Economics (Cum Laude) from the University of KwaZulu-Natal in South Africa. She also holds a Bachelor of Arts and Master of Arts in Philosophy, Politics and Economics from the University of Oxford in the United Kingdom, where she was a Rhodes Scholar.

Ms Nelson has a well-established 30-year career researching and advocating for sustainable business practices and is the founding Director of the Harvard Kennedy School's Corporate Responsibility Initiative. She is a non-resident senior fellow in the Global Economy and Development program at Brookings and a former senior associate of Cambridge University's Programme for Sustainability Leadership.

Ms Nelson served on ExxonMobil's External Sustainability Advisory Panel from 2010 to 2023, the Independent Advisory Panel to the ICMM's Resource Endowment Initiative and on advisory councils for other companies, the World Bank Group and the United Nations. She also worked for The Prince of Wales International Business Leaders Forum in the United Kingdom, the World Business Council for Sustainable Development in Africa, FUNDES in Latin America and as a Vice President at Citibank working in Asia, Europe and the Middle East.

External appointments: NYSE listed: Ms Nelson is currently a Non-Executive Director of Newmont Mining Corporation (since 2011) and Chair of its Safety and Sustainability Committee.

Ms Nelson is currently a member of the World Economic Forum's (WEF) Global Future Council on Good Governance, WEF's Climate Governance Community of Experts and WEF's Stewardship Council for Food Systems. Ms Nelson is also a Member of the Business Commission to Tackle Inequality and an Emeritus Director of the World Environment Center.

Skills and experience: Ms Nelson's career comprises a portfolio of roles across academia as well as international policy, business leadership groups and not-for-profit organisations. She has expertise in sustainable development including in human rights, cultural heritage and Indigenous issues and a significant understanding of climate change and biodiversity issues.
Ms Nelson's strong focus on sustainable development, together with her passion for building partnerships between business, government and civil society, is an asset to our Board given this is at the heart of our purpose and underpins the delivery of our strategy.

R N RA S

Mr Wayne Osborn Dip Elect Eng, MBA, FTSE, 71
Independent Non-Executive Director
Appointed: 7 May 2015
Location: Australia

Career summary: Mr Osborn worked as an engineer in the telecommunications and iron ore industries, before joining Alcoa (Australia) in 1979.

Mr Osborn held several senior management positions with Alcoa over the course of his career, including having accountability for its Asia-Pacific manufacturing operations in China, Japan, Korea and Australia. In 2001 he was appointed Managing Director, leading an integrated business comprised of bauxite mining, alumina refining, coal mining, power generation and aluminium smelting until his retirement in 2008.

Since 2008, Mr Osborn has served as a Non-Executive Director in the mining, energy and construction industries. Most recently, he was a Non-Executive Director of Wesfarmers Limited from March 2010 to October 2021.

Other key roles Mr Osborn has held include Chairman of the Australian Institute of Marine Science, Chairman of the Western Australia Branch of the Australia Business Arts Foundation and Vice President of the Chamber of Commerce and Industry, Western Australia. He is also a recipient of the WA Business Leader Award (2007) and the Australian Institute of Company Directors Award for Excellence (2018).

External appointments: None.

Skills and experience: Mr Osborn brings expertise in mining and smelting operations, large-scale capital projects and commodity value chain management to our Board. His broad skills and experience in health and safety management and strong understanding of the key environmental issues, risks and opportunities relevant to our operations, are an asset to our Board as it oversees our commitments to improve our safety performance, our approach to sustainability-related risks and opportunities and how we manage our environmental impact. Mr Osborn's experience leading large workforces, expertise in overseeing remuneration design and implementation and strong focus on sustainability, make him a highly capable Remuneration Committee Chair.

S N R

Mr Keith Rumble BSc, MSc (Geology), 69
Independent Non-Executive Director
Appointed: 27 February 2015
Location: South Africa

Career summary: Mr Rumble is a qualified geologist. He joined Richards Bay Minerals (at that time, a joint venture between BHP and the Rio Tinto Group) in 1980, working in smelting and metallurgy, and held various management positions before becoming CEO in 1996. Prior to that appointment, Mr Rumble spent just under three years with Rio Tinto's iron and titanium business as Director of International Sales and Marketing. He was appointed President and CEO of Rio Tinto Iron and Titanium Inc. in Canada in 2000.

In 2001, Mr Rumble joined Impala Platinum, where he held the role of CEO until 2007 after which he moved to junior miner SUN Mining (part of the SUN Group), also as CEO.

Since his retirement as an executive in 2008, Mr Rumble has held Non-Executive Director positions at BHP and South African infrastructure and resources company, Aveng Limited.

External appointments: Mr Rumble is currently a Director of Enzyme Technologies (Pty) Limited and Elite Wealth (Pty) Limited.

Skills and experience: With his substantial tenure as an executive leader in the resources industry, Mr Rumble brings deep knowledge and experience in mining and smelting operations. His expertise in geological and geoscience matters and strong understanding of the key environmental impacts, risks and opportunities relevant to our business, enhance our Board's capability to oversee our sustainability commitments, risks and impacts. These skills, together with his health and safety management expertise and proficiency in risk management, make him a highly capable Sustainability Committee Chair.

This report is presented by the Board of Directors of South32 Limited, together with the Group's Financial report, for the financial year ended 30 June 2023.

This report is prepared in accordance with the requirements of the Corporations Act, with the following information forming part of this report:

– Operating and Financial Review on the inside front cover to page 62;
– Director biographical information on pages 66 to 70;
– Remuneration report on pages 78 to 103;
– Note 19(b) Financial risk management objectives and policies on pages 145 to 149;
– Note 20 Share capital on page 149;
– Note 21 Auditor's remuneration on page 150;
– Note 23 Employee share ownership plans on pages 151 to 155;
– Directors' declaration on page 162;
– Auditor's independence declaration on page 163;
– Resources and Reserves on pages 168 to 176;
– Shareholder information on pages 178 to 180; and
– Corporate directory on page 188.

Directors and meetings

At the date of this report, the Directors in office were:

Ms Karen Wood	Appointed 1 November 2017
Mr Graham Kerr	Appointed 21 January 2015
Mr Frank Cooper AO	Appointed 7 May 2015
Dr Xiaoling Liu	Appointed 1 November 2017
Mr Carlos Mesquita	Appointed 1 May 2023
Dr Ntombifuthi (Futhi) Mtoba	Appointed 7 May 2015
Ms Jane Nelson	Appointed 1 May 2023
Mr Wayne Osborn	Appointed 7 May 2015
Mr Keith Rumble	Appointed 27 February 2015

Mr Guy Lansdown was also a Director during FY23, having been appointed on 2 December 2019 and resigned with effect from 31 May 2023.

You can find information about our Directors' qualifications, experience, special responsibilities and other directorships on pages 66 to 70.

Board and Committee meetings and Director attendance

There are nine regularly scheduled meetings of our Board each year. Six of these are usually held face-to-face over three days and are held in one of our main geographic areas of operation to allow Directors to conduct site visits. Committee meetings are also held during this time.

A further three meetings are convened each year to consider annual disclosures, including half and full year results, and are usually held virtually. Additional meetings are convened as required to address business critical issues.

During FY23, there were a total of 11 Board meetings. The additional meetings were held to consider options in relation to the Dendrobium Next Domain project and Director succession planning and implementation. The FY23 Board program included a dedicated strategy day held in April 2023.

Following the easing of COVID-19 related travel and social distancing restrictions, our Board was able to meet physically five times throughout the year and Directors conducted site visits to Mozal Aluminium in Mozambique, Hillside Aluminium and Hotazel Manganese Mines in South Africa and the Hermosa project in the United States.

In addition to the site visits, during FY23 our Board continued to stay connected with our operations by way of operational overviews and briefing sessions conducted as part of the Board program.

To help it carry out its responsibilities, our Board has four standing Board Committees. From time to time and on an "as needs basis", the Board creates other committees to address important matters and areas of focus for the business.

All Directors have a standing invitation to attend all Committee meetings, and in practice, all Directors generally attend all meetings.

The number of Board and Committee meetings held in FY23, as well as the Directors who attended them, can be found in Table 1.1.

Our Chair sets the agenda for each Board meeting, with the Chief Executive Officer (CEO) and the Company Secretary. The meetings typically include:

– Minutes of the previous meeting and matters arising;
– Report from our Chair;
– Update on various governance matters;
– CEO's report;
– Finance report;
– Commercial report;
– Reports on major projects and strategic matters;
– Board Committee Chair reports;
– Continuous disclosure checkpoint; and
– Closed sessions with Directors and closed sessions with Non-Executive Directors only.

In between meetings, our Board receives regular reports from senior management on matters, including (but not limited to):

– Sustainability (including health and safety) performance;
– Financial and production performance;
– Government relations and political affairs;
– Investor relations hosted engagements (including environmental, social, and governance updates); and
– Project updates (including pending investment decisions) and other significant business imperatives.

Further, our Board receives updates from management on relevant issues such as cybersecurity risks, climate change, greenhouse gas emissions reduction targets including information on evolving regulation and policy developments, sexual harassment in the workplace, culture, inclusion and diversity, cultural heritage, community matters, business integrity and litigation. It also receives regular reports for discussion on operational, culture and leadership, corporate governance and other business matters, including market updates and market research.

As part of their ongoing education and training, during FY23 our Board received external briefings on various matters including cybersecurity risk, climate and biodiversity risk governance and disclosure matters, work health and safety including workplace sexual harassment, the political landscape and developments in North and South America, industrial relations reform in Australia and evolving regulation and policy developments and shifting societal expectations in relation to these areas.

Table 1.1 Board and Committee Meeting Attendance in FY23

	Board		Nomination and Governance Committee		Remuneration Committee		Risk and Audit Committee		Sustainability Committee	
	Eligible[1]	Attended[2]	Eligible[1]	Attended[2]	Eligible[1]	Attended[2]	Eligible[1]	Attended[2]	Eligible[1]	Attended[2]
K Wood[3]	11	11	8	8	7	7	-	9	7	7
G Kerr (CEO)	11	11	-	8	-	7	-	9	-	7
F Cooper	11	10	8	8	7	7	9	9	-	7
X Liu	11	11	8	8	-	7	9	9	7	7
G Lansdown[4]	10	10	7	7	6	6	8	8	6	6
C Mesquita[3][5]	1	1	-	1	-	1	-	1	-	1
N Mtoba	11	11	8	8	-	7	9	9	-	7
J Nelson[3][5]	1	1	-	1	-	1	-	1	-	1
W Osborn[3]	11	11	8	8	7	7	-	9	7	7
K Rumble	11	11	8	8	7	7	-	9	7	7

Member Chair

(1) Indicates the number of meetings held during FY23 while the Director was a member of the Board or Committee.
(2) Indicates the number of meetings the Director attended during FY23.
(3) Effective 1 July 2023, J Nelson and C Mesquita were each appointed members of the Nomination and Governance Committee and the Sustainability Committee, W Osborn was appointed a member of the Risk and Audit Committee and K Wood ceased to be a member of the Sustainability Committee.
(4) G Lansdown resigned as a Director effective 31 May 2023.
(5) J Nelson and C Mesquita were appointed as Directors effective 1 May 2023.

Diversity representation

Inclusion and diversity is a core element of our culture. We know an inclusive and diverse workforce is safer and allows for greater collaboration, innovation and performance. Our Inclusion and Diversity Policy was updated and approved by our Board in July 2023 and is available at *www.south32.net*.

We are committed to building and maintaining an inclusive and diverse workforce that reflects the communities in which we operate. Diversity is a key attribute of high performance in a well-functioning Board and Lead Team, and offers benefits including varied thoughts and perspectives along with unique insights and healthy challenge, which lead to better decision-making as we execute our strategy.

We consider inclusion and diversity in tandem, grounded in mutual respect, where each person's unique differences are recognised, valued, and celebrated.

Our vision for diversity considers the broadest definition of difference, including gender, ethnicity, nationality, cultural background, geographic location, language/accent, religious beliefs, socio-economic background, neurodiversity, disability, physical attributes, appearance, age, education, family responsibilities and sexuality.

Table 1.2 Gender and ethnicity representation on the Board and Executive Management as at 30 June 2023

Board and Executive Management diversity	Number of Board members	Percentage of the Board	Number of senior positions on the Board (CEO, CFO, SID and Chair)[1]	Number in executive management[2]	Percentage of executive management
Gender identity					
Men	5	55.6%	1	4	44.4%
Women	4	44.4%	1	5	55.6%
Not specified/prefer not to say	-	-	-	-	-
Ethnic background					
White British or other White (including minority-white groups)	6	66.7%	2	5	55.6%
Mixed/Multiple Ethnic Groups	-	-	-	3	33.3%
Asian/Asian British	1	11.1%	-	1	11.1%
Black/African/Caribbean/Black British	1	11.1%	-	-	-
Other ethnic group, including Arab	-	-	-	-	-
Not specified/prefer not to say	1	11.1%	-	-	-

(1) The Financial Conduct Authority (FCA) prescribes that the senior positions on the Board are the Chair, CEO, Chief Financial Officer (CFO) and Senior Independent Director (SID). For South32, the senior positions on the Board are only the Chair and the CEO. In line with market practice for Australian listed companies, the CFO does not sit on the Board and South32 does not have a SID as this role is not required under the corporate governance code South32 applies, being the ASX Principles and Recommendations.
(2) In accordance with the UK Listing Rules, Executive Management includes the Lead Team (our most senior executive body below the Board) and the Company Secretary, excluding administrative and support staff.

The FCA introduced new rules in 2022 that require listed companies to publish information on gender and ethnic representation of the Board and Executive Management. In addition, the FCA requires listed companies to disclose against diversity targets, specifically that at least 40 per cent of the Board are women, at least one of the senior Board positions is a woman and at least one member of the Board is from a non-white ethnic minority background. South32 meets or exceeds all of these targets, as set out in Table 1.2.

The data presented in Table 1.2 was collected via self-reported questionnaires completed by all members of the Board and Executive Management that included the definitions prescribed by the UK Listing Rules.

Principal activities, state of affairs and review of operations

Principal activities and significant changes during the financial year

In FY23, the principal activities of the Group were mining and metals production, from a portfolio of assets that included bauxite, alumina, aluminium, copper, silver, lead, zinc, nickel, metallurgical coal and manganese.

There were no significant changes in the Group's principal activities during the financial year.

State of affairs

There were no significant changes in the Group's state of affairs during the financial year, other than as set out in the Operating and Financial Review on the inside front cover to page 62.

Review of operations, likely developments and expected results

A review of the Group's FY23 operations is set out in the Operating and Financial Review on the inside front cover to page 62.

The Operating and Financial Review also includes likely developments in the Group's operations in future financial years and expected results of those operations.

Dividends

We paid the following dividends during FY23:

	Total dividend	Payment date
Final dividend of US 14.0 cents per share (fully-franked) for the year ended 30 June 2022	US$646 million	13 October 2022
Special dividend of US 3.0 cents per share (fully-franked) for the year ended 30 June 2022	US$138 million	13 October 2022
Interim dividend of US 4.9 cents per share (fully-franked) for the half-year ended 31 December 2022	US$223 million	6 April 2023

Matters since the end of the financial year

Capital management

On 24 August 2023, the Directors resolved to pay a fully-franked final dividend of US 3.2 cents per share (US$145 million) in respect of the 2023 financial year. The dividends will be paid on 12 October 2023. The dividends have not been provided for in the consolidated financial statements and will be recognised in the 2024 financial year.

On 24 August 2023, the Group also announced an increase to the existing capital management program, initially announced in March 2017, of US$50 million to a total of US$2.4 billion. This leaves US$133 million expected to be returned by 1 March 2024.

No other matters or circumstances have arisen since the end of the financial year that have significantly affected, or may significantly affect, the operations, results of operations or state of affairs of the Group in subsequent accounting periods.

Directors' relevant interests in shares

Table 1.3 Directors' Relevant Interests in South32 Limited Shares

Director	Number of South32 Limited shares in which a relevant interest is held as at the date of this Directors' Report
K Wood	367,825
G Kerr (CEO)[1]	7,221,105
F Cooper	128,010
X Liu	66,000
C Mesquita	177,440
N Mtoba	71,386
J Nelson	-
W Osborn	174,104
K Rumble	161,380

(1) At the date of this Directors' Report, G Kerr's total interest includes 2,040,944 South32 Limited ordinary shares and 5,180,161 rights over South32 Limited shares held under the South32 Equity Incentive Plan.

Rights and options over South32 Limited shares

No rights or options over South32 Limited ordinary shares are held by any of our Non-Executive Directors.

Our CEO and Managing Director, Graham Kerr, holds rights over South32 Limited shares, granted under the South32 Equity Incentive Plan. You can find more details about this in the Remuneration report on page 101.

The total number of rights over South32 Limited shares on issue as at 30 June 2023 is set out in note 23 to the financial statements (Employee share ownership plans) on pages 151 to 155. No rights have been granted since the end of FY23. As of the date of this report, the total number of rights over South32 Limited shares on issue is 34,788,550.

No shares have been issued on vesting of rights during or since the end of FY23.

South32 Limited did not have any options on issue during or since the end of FY23.

Company Secretary

Claire Tolcon
LLB, BComm, FGIA, GAICD

Claire Tolcon is our Company Secretary and was appointed to this position on 30 October 2020. Claire joined South32 in 2017 and was a corporate lawyer in our legal team before moving into Company Secretariat. Prior to South32, Claire held the role of General Counsel and Company Secretary for a number of Australian Securities Exchange (ASX) listed entities, prior to which she was a partner of a corporate law firm in Perth. She holds a Bachelor of Laws and Bachelor of Commerce from Murdoch University, a Graduate Diploma of Applied Finance and Investment from Kaplan and is a Fellow of the Governance Institute of Australia.

Indemnities and insurance

The South32 Limited Constitution requires that we indemnify each Director and Company Secretary (as well as employees appointed as directors and secretaries of a Group company) on a full indemnity basis and to the extent permitted by law against liability incurred by them in their capacity as an officer of any Group company. The Directors and the Company Secretary named in this report have the benefit of this indemnity (as do individuals who formerly held one of these positions).

As permitted by our Constitution, South32 Limited has entered into Deeds of Indemnity, Access and Insurance with each of the Company's Directors, Company Secretary and the CFO under which we agree to indemnify those persons on a full indemnity basis and to the extent permitted by law.

We purchase directors and officers liability insurance which insures against certain liabilities (subject to exclusions) in respect of current and former directors and other officers of the Group. Due to confidentiality obligations and undertakings of the insurance, we can't disclose any further details about the premium or insurance.

During FY23 and as at the date of this Directors' report, no indemnity in favour of a current or former Director or Officer of the Group has been called on.

Corporate Governance

Under ASX Listing Rule 4.10.3, ASX listed entities are required to benchmark their corporate governance practices against the fourth edition of the ASX Corporate Governance Council's Corporate Governance Principles and Recommendations (ASX Recommendations).

South32 is compliant with all relevant ASX Recommendations.

Our Corporate Governance Statement is available at *www.south32.net*. It also contains the information required under the United Kingdom FCA's Disclosure Guidance and Transparency Rules.

Auditor

Our External Auditor has provided an independence declaration in accordance with the Corporations Act, which is set out on page 163 and forms part of this report.

Non-audit services

No non-audit services were undertaken by, and no amounts in respect of such services were paid or are payable to, our External Auditor during FY23. Refer to note 21 to the financial statements (Auditor's remuneration) on page 150.

Political donations and social investment

Our Code of Business Conduct sets out our approach to political donations and social investment.

In FY23, we made no political donations to any political party, politician, political party official, elected official or candidate for public office in any country. On occasion, our representatives attend political events that charge an attendance fee where attendance is approved beforehand in accordance with our internal approval requirements. We record the details of attendances and the relevant costs at a corporate level.

In FY23, we contributed US$27.7 million in social investment that comprised direct investment, administrative costs and in-kind support. For more information on our social investment, please visit our Sustainable Development Report, available at *www.south32.net*.

Proceedings on behalf of South32

No proceedings have been brought or intervened in on our behalf, nor any application made, under section 237 of the Corporations Act.

Environmental performance

Performance in relation to environmental regulation

We seek to be compliant with all applicable environmental laws and regulations relevant to our operations.

We classify environmental incidents based on actual and potential impact type as defined by our internal material risk management standard. In FY23, there were no environmental events that resulted in a major impact to the environment.

Fines and prosecutions

In FY23, while we recorded no fines or prosecutions relating to environmental performance, we did record one significant non-compliance related to environment laws and regulations. In June 2023, Illawarra Metallurgical Coal (IMC) entered into an enforceable undertaking with the New South Wales Natural Resources Access Regulator for an alleged breach of the Water Management Act 2000 associated with incidental surface water taken as a result of carrying out operations at the Dendrobium mine. IMC agreed to implement various environmental protection works and activities at the mine, worth approximately A$2.9 million, in order to regularise its surface water take.

Rounding of amounts

South32 Limited is an entity to which the *Australian Securities and Investments Commission (ASIC) Corporations (Rounding in Financial/Directors' Reports) Instrument 2016/191* (ASIC Instrument 2016/191) applies. We have rounded amounts in this report in accordance with ASIC Instrument 2016/191. This means the amounts in this report and the financial statements have been rounded to the nearest million US dollars, unless stated otherwise.

Responsibility statement

The Directors state that to the best of their knowledge:

a) The consolidated financial statements and notes on pages 105 to 161 were prepared in accordance with applicable accounting standards, give a true and fair view of the assets, liabilities, financial position and profit and loss of the Group and the undertakings included in the consolidation taken as a whole; and

b) The Directors' report includes a fair review of the development and performance of the business and the position of the Group and the undertakings included in the consolidation taken as a whole, together with a description of the principal risks and uncertainties they face.

This Directors' report and the responsibility statement are made in accordance with a resolution of the Board.

Karen Wood
Chair

Graham Kerr
Chief Executive Officer and
Managing Director

Date: 7 September 2023

Graham Kerr
BBUS, FCPA, 52
Chief Executive Officer and Managing Director

See page 67 for Graham Kerr's qualifications and experience.

Sandy Sibenaler
BCom, MFin, CA, GAICD, 41
Chief Financial Officer

Sandy Sibenaler joined South32 in 2021 and became our Chief Financial Officer in April 2023, with responsibility for Financial Reporting, Management Reporting, Treasury, Business Evaluation, Tax, Investor Relations and Group Assurance. Prior to this role, Sandy was our Vice President Finance.

Sandy has more than 20 years of treasury, finance and commercial experience in the resources sector. Prior to joining South32, she held a number of senior finance and commercial roles at Woodside and BHP including Vice President of Treasury and Insurance, General Manager Logistics and Finance Reporting Manager.

Sandy holds a Bachelor of Commerce from the University of Western Australia, a Master of Finance from Kaplan Business School, is a Fellow of Chartered Accountants Australia and New Zealand and a Graduate of the Australian Institute of Company Directors.

Jason Economidis
MBA (Executive), GAICD, 54
Chief Operating Officer Australia

Jason Economidis became our Chief Operating Officer in July 2020, assuming responsibility for Australia Manganese, Cannington, Illawarra Metallurgical Coal and Worsley Alumina. Prior to this role, Jason was Vice President Operations at Illawarra Metallurgical Coal.

Jason is an experienced mining executive having worked in the sector in Australia and overseas for more than 25 years. He joined South32 from Orica, where he held the position of Vice President Coal and was responsible for 25 mining operations across Queensland and New South Wales.

Jason has held several other senior positions in the industry including General Manager of the Coppabella and Moorvale Complex for Peabody Energy, Chief Operating Officer of Vale Coal Australia, General Manager of Goonyella-Riverside and Caval Ridge, Vice President Health, Safety, Environment and Community for BHP and Chief Operating Officer of Discovery Metals, based in Botswana.

Jason holds a Master of Business Administration (Executive) from the Australian Graduate School of Management and is a Graduate of the Australian Institute of Company Directors.

Noel Pillay
NHDP Mech Eng, 55
Chief Operating Officer Africa and Colombia

Noel Pillay became our Chief Operating Officer in October 2021 and is responsible for our operations in Africa and Colombia.

Prior to this role, Noel was Vice President Operations at Worsley Alumina where he was responsible for the operation's safety, production and cost performance. Before his time at Worsley Alumina, Noel was Vice President Operations at Hillside Aluminium in South Africa.

Before joining South32, Noel worked for BHP from 1994 as a Maintenance Engineer at Hillside Aluminium and has held several leadership roles in Maintenance, Production, Business Improvement and Human Resources in South Africa and Australia.

Noel is a trained Mechanical Engineer and holds a National Higher Diploma from the University of Johannesburg.

Vanessa Torres
BSc (Chemical), MEng, DEng, 53
Chief Technical Officer

Vanessa Torres became our Chief Technical Officer in July 2020. She is responsible for Technology, Innovation, Business Optimisation, Global Business Services, Capital Projects as well as Health, Safety, Environment and Technical Stewardship.

Vanessa joined South32 in August 2018 as Chief Technology Officer. Before this role, she was Vice President Operational Infrastructure for BHP Western Australia Iron Ore. She has over 30 years of global mining experience across Australia, Canada, Brazil, Peru and New Caledonia, and has held various senior roles at BHP and Vale in strategy, projects, business development and operations.

Vanessa holds Doctorate and Master degrees in Minerals Engineering from the University of Sao Paulo, and a Bachelor of Science from the Federal University of Minas Gerais, Brazil. She was also a Visiting Scholar at the University of British Columbia, Canada, where her research focused on the application of artificial intelligence to the mining industry.

Katie Tovich
BCom, CA, GAICD, 53
Chief Human Resources and Commercial Officer

Katie Tovich joined South32 in 2015 and became our Chief Human Resources and Commercial Officer in April 2023, with responsibility for our Human Resources, Marketing and Supply functions. Katie was our Chief Financial Officer from May 2019 to March 2023 and prior to this role, was Vice President Corporate Affairs and Investor Relations, as well as Head of Treasury.

Katie brings more than 25 years of global experience in the resources sector. Before joining South32, she held senior finance and marketing roles at BHP in Australia and Asia, including Vice President Corporate Finance, Head of Finance Worsley Alumina and Vice President Finance Marketing – Carbon Steel Materials. Earlier in her mining career, she held finance and marketing leadership positions at WMC Resources Limited in Australia and North America.

Katie holds a Bachelor of Commerce from the University of Tasmania, is a member of Chartered Accountants Australia and New Zealand and is a Graduate of the Australian Institute of Company Directors.

Kelly O'Rourke
LLB, BCom, MAICD, 44
Chief Legal and External Affairs Officer

Kelly O'Rourke was appointed to the Lead Team in November 2020, initially as our Chief External Affairs Officer and subsequently as Chief Legal and External Affairs Officer in July 2021, where she is responsible for Legal, Company Secretariat, Business Integrity, Communications, Community, Government and Sustainability Strategy.

Kelly joined South32 in 2016 as Vice President of Corporate Affairs and Investor Relations. She previously worked at BHP for nine years where she held senior roles in Legal, Business Development, Mergers and Acquisitions and the Office of the Chief Executive.

Kelly has more than 20 years' experience in the mining industry across legal, commercial, business development, mergers and acquisitions, external affairs and community roles across Australia, the United Kingdom, Asia, Europe, Africa and the Americas.

Kelly holds a Bachelor of Laws (Distinction) from The University of Western Australia, a Bachelor of Commerce from Curtin University and is a Member of the Australian Institute of Company Directors.

Simon Collins
BE (Mining), MBA, 50
Chief Development Officer

Simon Collins has been our Chief Development Officer since October 2018. He is responsible for Greenfields Exploration, Corporate Development, Brazil Alumina, Brazil Aluminium, Sierra Gorda and the Hermosa project. He also represents South32 on the Board of Directors of Ambler Metals LLC.

Simon has nearly 30 years of experience in the resources industry in senior leadership, commercial and business development roles. Before joining South32, he worked for BHP for more than a decade, providing leadership to commercial and business development teams in Australia, Africa and the Americas. He began his career in mine operations initially in Australia and then South Africa.

Simon holds a Master of Business Administration from London Business School and a Bachelor of Engineering (Mining) from the University of New South Wales.

LETTER FROM OUR REMUNERATION COMMITTEE CHAIR

Dear Shareholders

On behalf of the Board, I'm pleased to present the Remuneration report for the year ended 30 June 2023 (FY23).

The Remuneration Committee assists the Board to oversee the remuneration and benefits framework for South32, providing assurance that remuneration arrangements support the delivery of our purpose and strategy, and are aligned to our values and the long-term interests of our shareholders.

FY23 performance

Nothing is more important than the health, safety and wellbeing of our people. The loss of our colleagues, Mr Cristovão Alberto Tonela and Mr Alfredo Francisco Domingos João, who were fatally injured while undertaking maintenance work at Mozal Aluminium in November 2022, has been felt deeply across our business. We have reflected on this tragic event and have captured and shared learnings across our business and industry, implemented additional controls at our aluminium smelters and identified further safety improvement opportunities.

Throughout FY23, we continued to implement our multi-year Safety Improvement Program designed with the aim of enhancing our safety culture and achieving a step change in our safety performance. While we exceeded several of our safety performance lead measures, notably in risk management and safety leadership, our Total Recordable Injury Frequency did not meet target, increasing by 11 per cent to 5.9 per million hours worked. For more information on our health and safety performance in FY23, and FY24 focus areas, please refer to our Sustainable Development Report available at *www.south32.net*.

Other important sustainability measures include our water performance and social investment. In FY23 we achieved more than two per cent improvement in water use efficiency collectively across our four operations in areas defined as having baseline water stress, and we invested US$27.7 million in community programs. As part of the evolution of our approach to social performance we also developed economic development plans, which include local employment and procurement targets, at all operations for the first time.

We know that an inclusive and diverse workforce produces better outcomes and is an important enabler to further embed our 'safety guarantee' across our business. This year we increased the representation of women on our Lead Team to 50 per cent and Operational Leadership Team to 29 per cent, and in the total workforce to 20 per cent. In addition, we progressed initiatives to create a more inclusive workplace, in which any form of inappropriate conduct is not tolerated.

Against a volatile global backdrop, in FY23 we delivered strong production growth in aluminium, base metals and manganese, underpinned by our recent portfolio improvements and annual production records at three of our operations. This strong production growth supported one of our largest underlying profit results to date, with Underlying EBITDA of US$2.5 billion, notwithstanding lower commodity prices and industry-wide inflationary pressures. This, in turn, supported continued strong shareholder returns in respect of FY23, including dividends totalling US$369 million and a further US$218 million returned via our ongoing on-market share buy-back.

We continue to reshape our portfolio toward commodities that are critical in the transition to a low carbon world and in FY23 we progressed work to support planned investment decisions for the development of the Hermosa project's Taylor zinc-lead-silver Deposit and confirmed the opportunity to produce battery-grade manganese from Hermosa's Clark Deposit.

Our performance across the year is recognised in our FY23 Business Scorecard, where an overall outcome of 83.8 per cent (out of a possible 150 per cent) was achieved. See page 89 for more information.

Application of the Business Modifier

The Business Modifier is an integral component of the short-term incentive (STI) that considers overall business outcomes or other factors that are not specifically contemplated in the Business Scorecard, to ensure unintended reward outcomes are avoided.

When considering the application of the Business Modifier for FY23, the Board primarily focused on two matters, the tragic loss of our two colleagues who were fatally injured in the incident at Mozal Aluminium, and the non-cash impairment expense of US$1.3 billion recognised in our FY23 financial results in relation to the Taylor Deposit at Hermosa.

In recognition of these events, the Board chose to exercise its discretion by reducing the overall STI outcome for the CEO by 25 per cent. A reduction ranging from 5 to 20 per cent has also been applied to the STI outcome of other Executive key management personnel (KMP) and members of the Lead Team. The application of the Business Modifier reflects our commitment to everyone going home safe and well and overall reward outcomes that reflect our performance and the shareholder experience.

FY23 reward outcomes

Our executive reward framework remained unchanged for FY23 following strong support at our 2022 Annual General Meeting, with over 98 per cent of shareholders voting in favour of the 2022 Remuneration report. The reward framework consists of fixed remuneration, STI and long-term incentives (LTI).

In September 2022, fixed remuneration increases were applied for the CEO and Executive KMP following our annual benchmarking exercise. These increases were aligned to the broader workforce and recognised the extensive skill sets of our CEO and Executive KMP.

The intent of the STI is to focus our executives on what they can influence in the performance year, so we remove the impacts of external factors such as commodity price volatility and foreign exchange rate movements. Taking into consideration the FY23 Business Scorecard outcome, including the Business Modifier, the CEO STI was 42 per cent of maximum, with other Executive KMP ranging from 40 to 74 per cent of maximum (see page 92).

The LTI is the component of executive remuneration most closely linked to the shareholder experience as it rewards executives for the delivery of returns that exceed peer benchmarks across a four-year period. While South32 delivered a total shareholder return (TSR) of 41 per cent over the four-year performance period of the FY20 LTI, our TSR fell short of the threshold required for vesting. As a result, all FY20 LTI awards lapsed in full for the fourth consecutive year.

We only grant performance tested LTI awards to permanent members of the Lead Team, including those designated as KMP. However, we do not penalise executives when they are promoted to the Lead Team and allow them to retain awards granted when they were in prior management roles, with the respective vesting conditions. As a result, our Chief Financial Officer and Chief Operating Officers continue to hold service-based awards that were previously granted to them prior to their permanent promotion to the Lead Team, which the Board approved to vest in August 2023. For more information on LTI, see pages 93 and 94.

Continuing from last year, we have included an update for our strategic measures highlighting key activities in FY23 (refer to page 95 for this update). This year, for the first time, we have also disclosed our CEO pay ratio in line with the Global Reporting Initiative and ICMM requirements. Our FY23 CEO pay ratio is 26:1. For more information on how this is calculated, see page 82.

Looking forward to FY24

In order to continue to pay executives appropriately, we annually benchmark KMP remuneration against similar-sized Australian listed companies and global mining companies that reflect the size, commodity mix, complexity and global presence of South32. Following completion of this process, the Board decided to award a four and a half per cent increase to the fixed remuneration of our CEO in recognition of his extensive experience and skill set after eight years in the role and consistent with the approach taken with the broader workforce. Fees for Non-Executive Directors will remain unchanged. See page 99 for further information about changes to Executive KMP fixed remuneration in FY24.

Following the adjustments made to the reward framework effective from FY22, no major changes are being made for FY24. We are, however, strengthening the link between safety and reward through an increased weighting in the Business Scorecard. See page 99 for our FY24 STI performance metrics and weightings.

We look forward to continuing to engage with shareholders and sharing in the future success of South32.

Thank you for your support.

Wayne Osborn
Chair, Remuneration Committee

FY23 at a glance

Record annual production at:
Hillside Aluminium
Australia Manganese
South Africa Manganese

Underlying EBIT[1]:
US$1,616M

Four-year total shareholder return[2]:
41%

Total Shareholder Return (TSR)[3]

Diagram 1.1 – Four-year South32 TSR relative to LTI comparator groups (AUD)

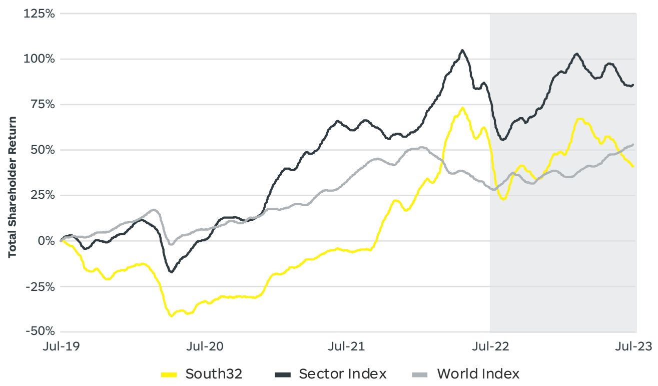
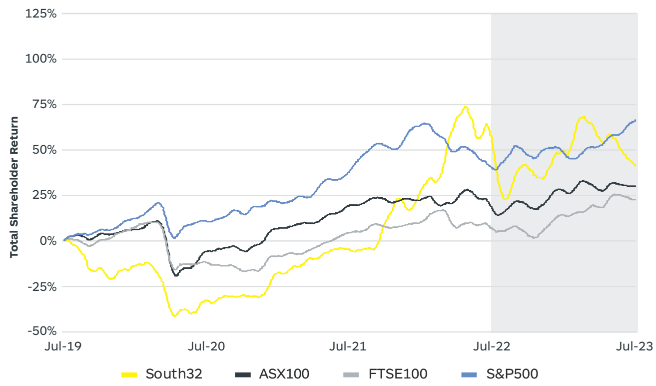


Diagram 1.2 - Four-year South32 TSR relative to key indices (AUD)



(1) This number has not been prepared in accordance with International Financial Reporting Standards (IFRS).
(2) TSR calculation uses June 2019 average return at the start and June 2023 average return at the end of the measured period.
(3) Rolling 22-day average TSR.

The following table outlines historic business performance outcomes.

Table 1.1 – Business performance

Performance measures[1]	FY23	FY22	FY21	FY20	FY19
Underlying earnings before interest and tax (EBIT) (US$M)[2]	**1,616**	3,967	1,039	622	1,797
Underlying earnings (US$M)[2]	**916**	2,602	489	193	992
Closing net cash/(debt) (US$M)	**(483)**	538	406	298	504
Movement in Adjusted ROIC (percentage)[3]	**(6.6%)**	0.4%	0.7%	0.0%	(1.4%)
Closing share price on 30 June (A$)[4]	**3.76**	3.94	2.93	2.04	3.18
Dividends/special dividends paid (US cents per share)	**21.9**	14.2	2.4	5.0	13.0
Total Recordable Injury Frequency (TRIF) (per million hours worked)	**5.9**	5.3	4.3	4.2	4.5

(1) The financial information in this table has not been prepared in accordance with IFRS.
(2) The underlying information reflects the Group's interest in material equity accounted investments and is presented on a proportional consolidation basis. Refer to pages 113 to 120 of the Annual Report for the basis of the underlying information and a reconciliation to statutory earnings.
(3) The movement in Adjusted ROIC (FY23: (6.6%)) is calculated as the difference between Adjusted ROIC for the current performance period (FY23: 26.4%) less ROIC from the previous performance period (FY22: 33.0%), and represents the impacts of sales volumes (FY23: (6.0%)) and other business performance impacts (FY23: (0.6%)) on ROIC. ROIC is calculated as Underlying EBIT (FY22: US$3,967 million) less the discount on rehabilitation provisions included in net finance costs, tax effected by the Group's Underlying effective tax rate (ETR) including our material equity accounted investments on a proportional consolidation basis (FY22: US$1,315 million), divided by the sum of the average balance of fixed assets and inventories (FY22: US$9,887 million) (excluding the average balance of any rehabilitation assets, the impact of impairment and impairment reversal, and unproductive capital (FY22: US$(3,117) million) including our material equity accounted investments on a proportional consolidation basis (FY22: US$1,265 million). Refer to pages 113 to 120 of the Annual Report for the basis of underlying information and a reconciliation to statutory earnings.
(4) The closing share price on 29 June 2018 (the last trading day in FY18) was A$3.61.

FY23 Key Management Personnel

Our KMP consist of our Board (including the Chief Executive Officer), and members of the Lead Team who have authority and responsibility for planning, directing and controlling the activities of the Group directly or indirectly. Table 1.2 below provides an overview of our KMP in FY23.

Table 1.2 – KMP in FY23

Non-Executive Directors	FY23 Term	Executive KMP	FY23 Term
K Wood[1]	Full year	G Kerr – Chief Executive Officer (CEO)	Full year
F Cooper AO[1]	Full year	K Tovich – Chief Financial Officer (CFO)[3]	Ceased on 31 March 2023
G Lansdown[1]	Ceased on 31 May 2023	S Sibenaler – CFO[4]	Appointed on 1 April 2023
X Liu	Full year	J Economidis – Chief Operating Officer (COO) Australia	Full year
C Mesquita	Appointed on 1 May 2023	N Pillay – COO Africa and Colombia	Full year
N Mtoba	Full year		
J Nelson	Appointed on 1 May 2023		
W Osborn[2]	Full year		
K Rumble[1]	Full year		

(1) Remuneration Committee member.
(2) Remuneration Committee Chair.
(3) K Tovich ceased to be CFO and a member of Executive KMP on 31 March 2023. Effective 1 April 2023, she was appointed as Chief Human Resources and Commercial Officer (CHRCO).
(4) S Sibenaler became CFO and a member of Executive KMP on 1 April 2023. Prior to this, she was Vice President Finance.

FY23 Executive remuneration overview

CEO fixed remuneration increase:
5.0%

Range of Executive KMP STI outcomes as a percentage of maximum STI opportunity:
40% to 74%

FY20 LTI vesting outcome:
0.0%

Fixed remuneration

The Board awarded a five per cent increase to the fixed remuneration of our CEO, Graham Kerr, from 1 September 2022 in recognition of his extensive experience and skill set, and consistent with the approach taken with the broader workforce. This was his second increase in fixed remuneration since commencing as CEO in 2015.

Fixed remuneration for other Executive KMP was also increased by between five and six per cent in recognition of their experience and aligned with the increases applied to the broader workforce in the relevant geographies (Australia and South Africa).

FY23 STI

In FY23, our performance against our Business Scorecard measures resulted in an outcome of 83.8 per cent (out of a possible 150 per cent).

Furthermore, the Board determined to apply a negative Business Modifier for all Executive KMP in recognition of the two fatalities at Mozal Aluminium and, for the CEO, in recognition of the non-cash impairment for the Taylor Deposit at our Hermosa project. This resulted in a negative Business Modifier of 25 per cent for Graham, 20 per cent for Noel Pillay, 10 per cent for Jason Economidis and 5 percent for Sandy Sibenaler and Katie Tovich respectively.

The overall STI outcome for Executive KMP ranged from 40 per cent to 74 per cent of maximum with Graham receiving 42 per cent.

LTI vesting in 2023

While South32 delivered TSR of 41 per cent over the four-year performance period, this fell short of the threshold required for vesting when compared to the two performance benchmarks. As a result, all FY20 LTI rights lapsed.

South32 does not offer retention rights to permanent members of the Lead Team, including those that are Executive KMP. However, employees who are promoted into Executive KMP roles retain unvested awards granted under the Management Share Plan (MSP) while in their prior role. These awards are a combination of performance rights and retention rights. As the service-based condition of the MSP retention rights granted to Sandy, Jason and Noel prior to their permanent appointment to the Lead Team was met, our Board approved these awards to vest in full in August 2023.

FY23 realised pay

Realised pay for Executive KMP (see page 82) was below Target Remuneration (see page 86) as the FY20 LTI did not vest, the Business Scorecard outcome was below target and the Board applied a negative Business Modifier when determining the STI outcome.

The Board considered all components of remuneration in reviewing the FY23 reward outcomes to align with our Guiding Principles (see page 83) and believes the FY23 realised pay is fair for Executive KMP and shareholders, based on performance for the year.

Realised pay for Executive KMP in FY23

Realised pay is the value of reward received by Executive KMP in relation to the financial year, rather than potential pay that may be earned or disclosed statutory pay. We publish this information to enable our shareholders to better understand the pay delivered to our Executive KMP through our reward framework (including the application of Board discretion) and how this is aligned to the performance of South32 over time.

The intention of our reward framework (see our Guiding Principles on page 83) is to deliver realised pay outcomes that reflect Company performance and the shareholder experience. The Board and Remuneration Committee believe that our realised pay outcomes reflect this objective.

FY23 realised pay for Executive KMP, outlined in Table 1.3, includes:

- Fixed remuneration earned in FY23 (including pension/superannuation);
- Other cash and non-monetary benefits earned in FY23;
- Total FY23 STI earned (including cash and deferred rights) based on performance during this financial year (see page 92); and
- LTI awards that vested based on performance and/or service conditions to 30 June 2023 (see page 94).

Realised pay is likely to vary substantially, either up or down, from statutory remuneration and from Target Remuneration (see page 86) because a significant portion of our Executive KMP pay is 'at risk' and based on challenging performance measures. Furthermore, as the LTI is measured over a four-year performance period, vesting outcomes will not always correlate to the TSR outcomes for a single year. In comparison to FY22, FY23 realised pay reflects the lower overall STI outcomes.

Table 1.3 – Realised pay in respect of FY23 (A$'000)

Executive KMP		Fixed remuneration	Other(1)	STI Cash	STI Deferred	LTI(2),(3)	Total Realised Pay
G Kerr	**FY23**	**1,891**	**48**	**719**	**719**	**-**	**3,377**
	FY22	1,815	42	1,215	1,215	-	4,287
K Tovich(4)	**FY23**	**907**	**15**	**611**	**611**	**-**	**2,144**
	FY22	863	9	691	691	170	2,424
S Sibenaler(5),(6)	**FY23**	**576**	**37**	**249**	**84**	**89**	**1,035**
	FY22	-	-	-	-	-	-
J Economidis	**FY23**	**812**	**12**	**352**	**352**	**372**	**1,900**
	FY22	780	7	482	482	245	1,996
N Pillay(7),(8)	**FY23**	**678**	**26**	**248**	**248**	**324**	**1,524**
	FY22	651	239	352	279	214	1,735

(1) Other includes such items as car parking, insurances and tax advice provided to Executive KMP.
(2) Value of LTI is based on a closing share price on 30 June 2023 of A$3.76 (FY23) and 30 June 2022 of A$3.94 (FY22).
(3) LTI includes Management Share Plan awards granted to S Sibenaler, J Economidis and N Pillay prior to their permanent appointment to the Lead Team (see page 93). FY22 LTI includes the FY20 Transitional LTI award granted to K Tovich on appointment to the Lead Team.
(4) K Tovich ceased to be CFO and a member of Executive KMP on 31 March 2023. Following this, she was appointed as CHRCO. FY23 realised pay reflects nine months as CFO and three months as CHRCO.
(5) S Sibenaler became CFO and a member of Executive KMP on 1 April 2023. Prior to this, she was Vice President Finance. FY23 realised pay reflects nine months in her prior role and three months as CFO.
(6) Other for S Sibenaler includes the pro-rated payout of a retention agreement of A$35,500 relating to her service as Vice President Finance that was paid prior to becoming a member of Executive KMP.
(7) N Pillay became COO Africa and Colombia on 1 October 2021 and a member of Executive KMP on 1 December 2021. Prior to this, N Pillay was Vice President Operations at Worsley Alumina. FY22 realised pay reflects three months in his prior role and nine months as COO. Salary relating to his time as COO is denominated in ZAR and has been converted to A$ using an exchange rate of AUD:ZAR 11.96 for FY23 and AUD:ZAR 11.13 for FY22.
(8) FY22 Other amounts for N Pillay include benefits provided to him to assist with his relocation from Australia to South Africa. These include a relocation allowance of ZAR1,500,000 paid on 25 October 2021 which has been converted to A$ using an exchange rate of AUD:ZAR 10.99.

CEO Pay Ratio

As part of our commitment to pay transparency, we have calculated the ratio of our CEO's total realised pay to the median total realised pay for all our employees globally. This results in an FY23 CEO pay ratio of 26:1 which reflects an STI outcome for the CEO that was below target and no LTI vesting. The pay ratio is expected to vary from year to year, given the significant portion of our CEO's pay which is 'at risk'.

CEO total realised pay has been calculated in accordance with the method used in Table 1.3. For all other employees realised pay is for the 12-month period to 30 June 2023 and includes all allowances, annual incentive payments received in the period and the value of shares that vested, but excludes other non-monetary benefits. Pension contributions have been calculated based on the cost to the Group of the contributions made in the 12-month period. Internationally mobile employees and employees who joined or left the Group after 1 July 2022 have been excluded from the calculation.

Our reward framework

The pages of the Remuneration report that follow (together with Table 1.1 – Business performance) have been prepared in accordance with section 300A of the *Corporations Act 2001 (Cth)* (the Act) and audited as required by section 308(3C) of the Act. These sections relate to those persons who were KMP of South32 during FY23, being the individuals listed in Table 1.2 on page 81.

Remuneration governance

The roles and responsibilities of our Board, Remuneration Committee, management and external advisors in relation to remuneration for Executive KMP and employees of South32 are outlined below.

Board	Our Board maintains overall responsibility for overseeing the remuneration policy and the principles and processes that underpin it. It approves the remuneration arrangements for our CEO and Non-Executive Directors. Changes to the Director fee pool and equity grants to the CEO are approved by shareholders.
Remuneration Committee	The Remuneration Committee approves reward arrangements for our Executive KMP (other than the CEO) and oversees the remuneration and benefits framework for all employees of South32. By taking advice from other Board Committees (such as the Sustainability and Risk and Audit Committees), the Remuneration Committee helps the Board oversee our remuneration policy, its specific application to the CEO, executives and Non-Executive Directors and, in general, our employees. The Remuneration Committee provides oversight to gain assurance that remuneration arrangements are equitable and aligned to the long-term interests of shareholders, operate within risk appetite and support our purpose, strategy and values.
CEO and management	Our CEO makes recommendations to the Remuneration Committee regarding our executives, and how the remuneration policy and framework applies to our employees. Management provides information and recommendations to the Remuneration Committee to help them consider and implement approved arrangements.
External advisors	Independent external advisors may be engaged either directly by the Remuneration Committee, or via management. These advisors provide information on remuneration-related issues, including benchmarking information and market data. The Remuneration Committee did not receive recommendations from external advisors, including remuneration consultants, in relation to KMP in FY23.

We seek information and analysis from a range of data sources. This allows us to make decisions that are informed, objective, weighted and aligned to the requirements of the Company, and consistent with our Guiding Principles.

Reward practices and outcomes

Our Guiding Principles

Purpose and Strategy

We align short-term and long-term performance measures to our purpose and strategy. This includes our efforts to:

- **Optimise** our business by working safely, minimising our impact, consistently delivering stable and predictable performance and continually improving our competitiveness;
- **Unlock** the full value of our business through our people, innovation, projects and technology; and
- **Identify** and pursue opportunities to sustainably reshape our business for the future, and create enduring social, environmental and economic value.

The way we work

Our culture is grounded in our values and is at the core of how we deliver our purpose and strategy. You'll see it reflected in our values, the decisions we take, the courage we show and the legacy we leave.

Supporting this is a strong belief that culture can be actively shaped through a focus on what we prioritise, what we measure, what we reward and who we appoint.

Shareholders

Our reward framework focuses executives and management on delivering superior TSR.

We do this through share ownership and LTI performance measures aligned to the shareholder experience.

We value feedback and regularly check-in with investors and proxy advisors.

Performance

Our reward outcomes align to performance by providing a large part of executive pay 'at risk' based on challenging financial and non-financial measures.

STI outcomes reflect performance over the financial year, while LTI outcomes reflect performance over a four-year period.

Market

Our reward is competitive and designed to attract and retain talented executives.

We benchmark our reward levels in consideration of similar sized companies on the Australian Securities Exchange (ASX), as well as our global mining peer group.

Components of our reward for FY23

Our intention	Attract and retain talented executives to lead South32	The majority of pay at risk reflects our commitment to pay for performance and deliver value to shareholders	
		Reward business and individual performance in the financial year	Drive long-term performance and ownership behaviours

Component	**Fixed Remuneration**	**Short-Term Incentive**	**Long-Term Incentive**
The why	Fixed remuneration is set with reference to the median of our peer groups, reflecting each member of Executive KMP's responsibilities, location, skills and experience.	STI focuses efforts on our key priorities both in the financial year and into the future. It aims to motivate Executive KMP to achieve challenging performance objectives. Our STI reflects performance during the year and measures outcomes within management's control.	LTI is directly linked to: – Relative TSR so that Executive KMP pay outcomes are aligned with the shareholder experience over the longer-term; and – Two strategic measures so that Executive KMP pay outcomes are aligned to the business priorities that we believe will underpin the long-term success of South32.
The how	Base salary and superannuation.	Fifty per cent paid in cash annually. Fifty per cent delivered in rights to receive South32 shares[1], deferred for two years[2].	Rights to receive South32 shares that are subject to meeting performance conditions over the four-year performance period.

Our approach in FY23

Fixed Remuneration

We benchmark our fixed remuneration and Target Remuneration against two key peer groups that reflect our profile as a Company and the markets in which we operate. Our peer groups are:

- An ASX peer group based on companies with half to double our market capitalisation (excluding foreign domiciled entities and real estate investment trusts); and
- An international mining peer group of 18 companies with a similar market capitalisation, commodity mix and/or global presence to South32 (see Our global mining peer group below).

Short-Term Incentive

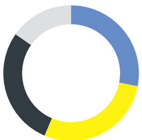
Quantum (percentage of fixed remuneration):

	Target Value	Maximum Opportunity
Executive KMP	120%	180%

Business Scorecard: The Business Scorecard reflects a balance of financial and non-financial measures that are a priority for us in the financial year.

The financial measures remove the impact of commodity prices and foreign exchange so that we reward for items management can control.

Performance measures:



Business Modifier: As scorecard measures do not always reflect all aspects of performance across a year, and to mitigate any unintended reward outcomes, the Board has the discretion to apply a Business Modifier to the Business Scorecard outcome. The Business Modifier may be applied to Executive KMP on an individual or group basis, having regard to the perspectives of stakeholders including employees, shareholders and communities.

Individual performance and behaviours: The Board also considers each member of Executive KMP's individual performance, taking into account their areas of responsibility and the alignment of their behaviours with our values (i.e. how outcomes have been achieved).

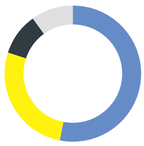
Long-Term Incentive

Quantum (percentage of fixed remuneration):

The quantum for FY23 was determined by multiplying fixed remuneration by the following face value percentages:

	Target Value	Face Value
CEO	120%	200%
Other KMP	80%	133%

Performance measures:



TSR performance: Eighty per cent of the LTI is assessed based on our TSR performance compared to two comparator groups, being:

- Two-thirds, or 53.3 per cent of the total award, is tested relative to the TSR performance of the companies that comprise the EMIX Global Mining Index at the start of each performance period (i.e. at 1 July 2022 for FY23 LTI award)[3]; and
- One-third, or 26.7 per cent, is tested relative to the TSR of the MSCI World Index.

Strategic measures: The strategic measures, which each have a weighting of 10 per cent of the LTI, are:

- Our response to climate change; and
- The transition of our portfolio towards the commodities critical to a low-carbon future.

More detail on the measures and our progress against them is outlined on page 95.

Vesting Scale:

	Vesting outcome[4]		
	0%	40%	100%
EMIX Global Mining Index constituents*	TSR <= 50th percentile	TSR > 50th percentile	TSR => 75th percentile
MSCI World Index*	TSR < Index	TSR = Index	TSR => Index + 23.9%
Strategic Measures	Vesting outcomes will be determined by the Board at the end of the performance period.		

*Vesting between 40 per cent and 100 per cent is on a straight-line basis.

The the Board has the discretion to adjust the TSR vesting outcome (both upwards and downwards) so that the overall vesting outcome is appropriate and aligned with our Guiding Principles (see page 83). There is no retesting if the performance condition is not met at the end of the performance period.

Our global mining peer group	The global mining peer group that we use as one of our reference points for benchmarking fixed remuneration and total reward levels includes the following companies: Agnico Eagle Mines, Alcoa, Anglo American, AngloGold Ashanti, Antofogasta, Barrick Gold, Evolution Mining, First Quantum Minerals, Fortescue Metals Group, Freeport McMoRan, Gold Fields, Kinross Gold, Lundin Mining, Newcrest Mining, Newmont, Northern Star Resources, Teck Resources and Vedanta.
Minimum shareholding requirement	A minimum shareholding requirement (MSR), equal to 100 per cent of fixed remuneration for Executive KMP, drives a long-term focus and alignment with our shareholders. The MSR applies to all Lead Team members, including those who are Executive KMP, and must be obtained within five years of appointment to the Lead Team. The valuation approach applied to determine the MSR uses the South32 Ltd share price at the time the assessment is made. See page 102 for our Executive KMP shareholdings.
Our service contracts	Contracts are entered into by Executive KMP in their personal capacity. The key terms are consistent for all Executive KMP, and include: – No fixed term; – Six months' notice by either party or payment by the company in lieu of notice; – Termination without notice for serious misconduct; – One month's notice by the Executive KMP[5] where a fundamental change occurs that materially diminishes their status, duties, authority or terms and conditions (receiving payment in lieu of six months' notice); – A maximum payment in lieu of notice of six months' fixed remuneration; and – Post-employment restraints for a period of up to six months after their employment with the Group ends. Shareholder approval was granted at the 2021 Annual General Meeting (AGM) for Executive KMP termination benefits.

(1) References in this Remuneration report to 'South32 shares' are references to fully paid ordinary shares in South32 Limited.
(2) The deferred rights are subject to a service condition only as performance conditions are applied during the STI performance year.
(3) The constituent group is fixed for the four-year performance period with Board discretion to adjust the constituent group to take into account events such as takeovers, mergers or demergers that may occur during the performance period.
(4) The Board and Remuneration Committee use information from an external provider to inform them of the TSR performance of the relevant index and companies to assess the vesting outcome for the LTI.
(5) Some legacy executive employment contracts, including for the CEO, allow resignation without notice if a fundamental change occurs.

Linking reward and environmental, social and governance (ESG) topics

The 'at risk' components of our Executive KMP reward reflects ESG topics that align remuneration outcomes not just with financial performance but also with our performance against ESG measures that underpin our business outcomes, as explained below.

STI

The Business Scorecard reflects a balance of financial and non-financial measures that reflect the key focus areas for us in the financial year. From an ESG perspective, 28.3 per cent of the FY23 Business Scorecard was assessed against 'sustainability' metrics, which include safety performance, health, community, risk management and water efficiency.

The overall Business Scorecard outcome is also subject to the Business Modifier. The Business Modifier allows the Board to appropriately adjust the Business Scorecard outcome to account for ESG-related topics. We have a track record of applying the Business Modifier to reflect non-financial performance and the overall shareholder experience (see page 91).

Further detail on our STI is included in the Short-Term Incentive for FY23 section starting on page 88.

LTI

Twenty per cent of the FY23 LTI directly links executive reward to climate change and the transition of our portfolio toward the commodities critical to a low-carbon future. More detail on the strategic measures and our progress against them is outlined on page 95.

Target Remuneration for FY23

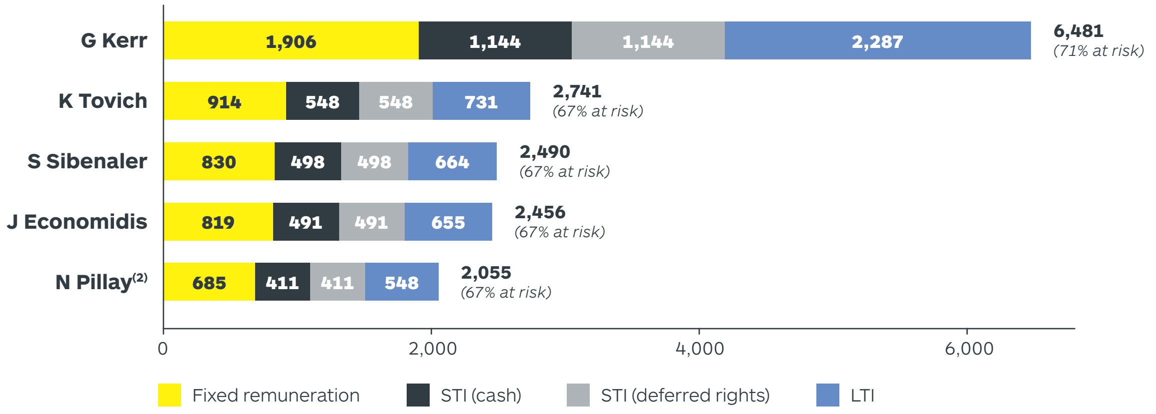
South32 sets Target Remuneration for each member of Executive KMP at a competitive level to attract and retain appropriate talent in the markets in which we operate. Our Target Remuneration is informed by the South32 reward framework (see page 83) that outlines the key factors the Board takes into consideration in setting Executive KMP reward and the strategic drivers of pay at South32.

It is important that reward levels fairly reflect the responsibilities and contribution of the Executive KMP and that outcomes are aligned to performance and the delivery of TSR. As a result, a meaningful portion of our Executive KMP remuneration is at risk, contingent on challenging individual and Company performance measures.

Target Remuneration, as outlined below, assumes on-target performance for the STI and considers the difficulty of achieving LTI given the performance hurdles. The figures reflected in the diagram below are therefore based on the STI paid at 100 per cent of target and the LTI vesting at 60 per cent of face value (see page 84 for details on face value).

Based on these principles, annual Target Remuneration for Executive KMP as at 30 June 2023 is illustrated in Diagram 1.3.

Diagram 1.3 – Annual FY23 Target Remuneration (A$'000)[1]



(1) Target Remuneration reflects a full year in the Executive KMP role.
(2) Target Remuneration has been converted from ZAR to A$ using an exchange rate of AUD:ZAR 11.96.

FY23 Target remuneration relative to peer groups (unaudited)

We have operations and offices on six continents and compete for talent in a global pool.

The diagrams below illustrate the measured approach we have adopted in positioning CEO fixed remuneration and Target Remuneration for FY23 compared to relevant benchmarks, being the ASX peer group and the global mining peer group (see page 85). CEO fixed remuneration is comparable to the median for both peer groups. CEO Target Remuneration is aligned to the upper quartile for the ASX peer group, but below the global mining peer group median.

Diagram 1.4 – CEO fixed remuneration vs. Peers

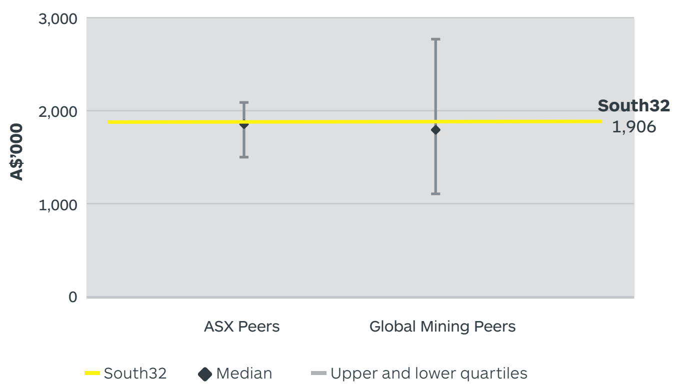
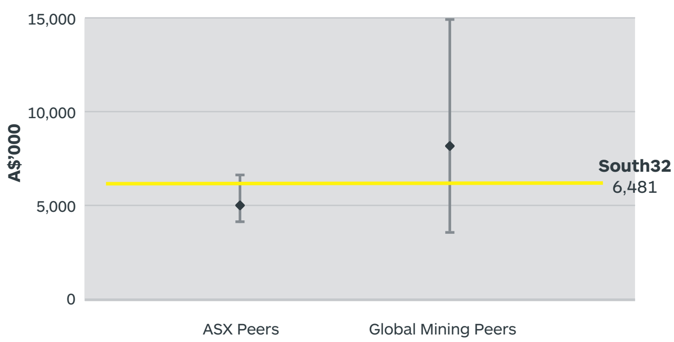


Diagram 1.5 – CEO Target Remuneration vs. Peers

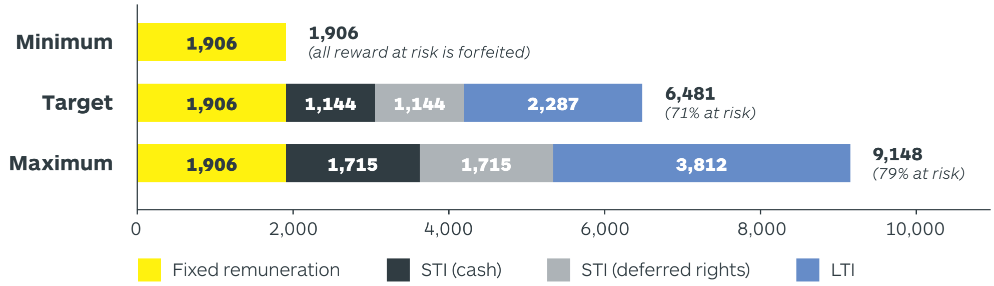


Range of possible remuneration outcomes

As actual Company and individual achievement over the performance period determines reward outcomes, the amount of pay received by Executive KMP each year will vary.

Diagram 1.6 illustrates the range of possible remuneration outcomes for the CEO, based on three performance outcome scenarios: minimum, target and maximum. While the figures in Diagram 1.6 and explanation are for the CEO, similar analysis can be undertaken for other Executive KMP to assess the minimum and maximum range of pay outcomes.

Diagram 1.6 – Range of CEO remuneration outcomes (A$'000)



In the **Minimum** scenario, no STI or LTI is paid. The CEO would receive fixed remuneration, inclusive of superannuation, of A$1.906 million.

Target outcomes would be achieved where the business meets the challenging STI performance hurdles, resulting in STI being paid at target levels (67 per cent of maximum opportunity, or 120 per cent of fixed remuneration, with half deferred into rights) and 60 per cent of the rights granted under the LTI vesting.

To deliver a **Maximum** outcome for the STI (i.e. 180 per cent of fixed remuneration, with half deferred into rights), South32 would need to achieve the stretch targets for every metric in the Business Scorecard. For the LTI to vest in full, over the four-year performance period:

- The South32 TSR would need to meet or exceed the TSR of the company at the 75th percentile in the EMIX Global Mining Index constituent group;
- The South32 TSR would need to exceed the MSCI World Index by 23.9 per cent; and
- The Board would need to assess performance against both strategic measures as outstanding.

Deferred STI and LTI in the Target and Maximum scenarios do not incorporate future share price movements.

Fixed remuneration for FY23

On 1 September 2022, Graham received an increase to fixed remuneration of five per cent from A$1,815,000 to A$1,906,000. This was his second increase in fixed remuneration since commencing in role in 2015. Katie, Jason and Noel received fixed remuneration increases of between five and six per cent. Fixed remuneration increases for Executive KMP aligned with the increases applied to the broader workforce in the relevant geographies (five per cent in Australia and six per cent in South Africa).

Table 1.4 – Fixed remuneration for Executive KMP in FY23, effective 1 September 2022[1]

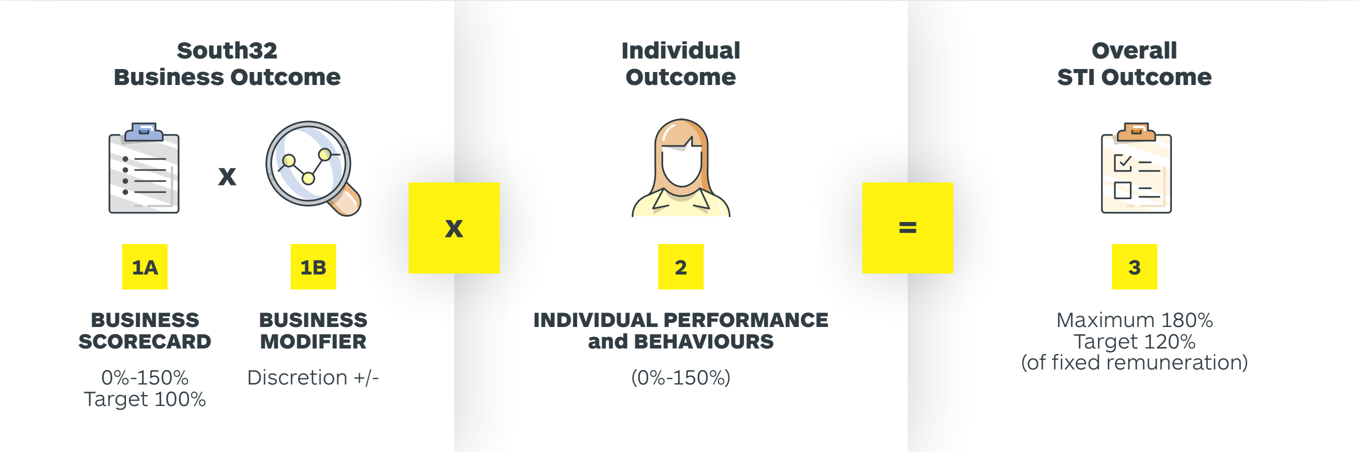
Executive KMP	FY22 fixed remuneration	FY23 fixed remuneration	Increase %
G Kerr	A$1,815,000	**A$1,906,000**	5.0
K Tovich[2]	A$870,000	**A$914,000**	5.1
S Sibenaler[3]	-	**A$830,000**	-
J Economidis	A$780,000	**A$819,000**	5.0
N Pillay[4]	ZAR 7,726,000	**ZAR 8,190,000**	6.0

(1) Fixed remuneration reflects a full year in the Executive KMP role.
(2) Fixed remuneration for K Tovich was effective until she ceased to be CFO and a member of Executive KMP on 31 March 2023.
(3) Fixed remuneration for S Sibenaler was effective from commencing as CFO on 1 April 2023.
(4) Fixed remuneration for N Pillay is denominated in ZAR. Using an exchange rate of AUD:ZAR 11.96, FY23 fixed remuneration in A$ is A$684,783.

Short-term Incentive for FY23

Determining STI awards

Diagram 1.7 – Determination of STI Awards



As outlined on page 84, the STI is intended to focus and reward Executive KMP for delivering on our key business priorities both in the financial year and into the future. The overall STI outcome is determined by assessing three key inputs: the Business Scorecard, the Business Modifier and individual performance and behaviours.

The **Business Scorecard** includes a balanced range of challenging measures that consider both our financial and non-financial performance, and help our Executive KMP focus on outcomes that are within their control and a priority for the year.

The **Business Modifier** considers overall business outcomes or other factors that are not specifically contemplated in the Business Scorecard. The Business Modifier may be applied to Executive KMP on an individual or group basis, having regard to the perspectives of stakeholders including employees, shareholders and communities.

Together, the Business Scorecard and the Business Modifier determine the South32 Business Outcome.

Individual performance is measured based on delivery against the relevant operations', projects' or functions' business plans. Our people are also assessed on demonstrated behaviour aligned to our values (i.e. both on what is achieved and how it is achieved).

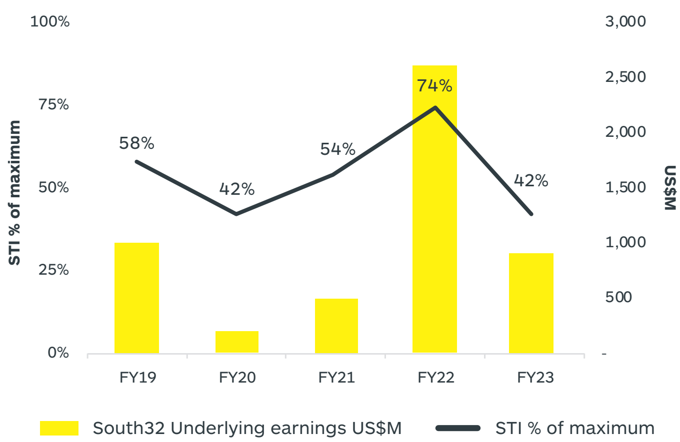
What this means in practice

Including STI performance measures that are within the control of our executives means that the Business Scorecard outcomes will not always mirror underlying South32 financial outcomes.

However, the Board has designed the STI, including the use of the Business Modifier and individual outcomes, so that executives are rewarded for delivering strong performance across areas within their control, taking into account overall business performance and shareholder experience.

Diagram 1.8 demonstrates the approach to STI Outcomes applied by the Board over the past five years.

Diagram 1.8 – CEO STI outcome vs. Underlying earnings



1A FY23 Business Scorecard

In November 2022, we were devastated by the loss of two of our colleagues, who were fatally injured in an incident while undertaking maintenance work at Mozal Aluminium. The Board recognises this significant safety event in our STI through the Business Modifier which adjusts the overall Business Scorecard outcome (see page 91). Table 1.5 reflects performance against our stated Business Scorecard measures.

Table 1.5 – FY23 Business Scorecard outcomes

Scorecard measure	Target	Performance	Outcome	Zero	Target	Maximum
Sustainability	**28.3%**		**28.7%**			

Safety[1]: At least 80 per cent senior leader attendance at the LEAD Safely Every Day workshops and coaching sessions. A reported significant hazard frequency of 55. Ensure 90 per cent of significant event investigations are completed and signed off within the allocated timeframe. Ensure 90 per cent of significant event actions are completed on time. Complete a deep dive review of 20 selected material risks across all operations. A 20 per cent reduction in lost time injury frequency (LTIF) against the baseline. A 10 per cent reduction in TRIF from the FY22 baseline.	**Good** as assessed against the stated Business Scorecard measure, but prior to the Business Modifier adjustment. FY23 LEAD Safely Every Day program senior leader attendance was 99 per cent. The significant hazard frequency for the period was 92 which exceeded target. 89 per cent of significant event investigations were completed and signed off within the allocated timeframe. 95 per cent of significant event actions were completed on time. 24 material risk deep dives were completed. LTIF reduced by 30 per cent compared to the FY22 baseline. TRIF increased by 11 per cent compared to the FY22 baseline.
Health[1]: A 20 per reduction in potential material exposures above 200 per cent of the Occupational Exposure Limit (OEL) compared to the revised FY22 baseline. Develop and implement a project pipeline to continue to reduce potential material exposures in excess of 200 per cent of OEL by FY24.	**Poor** Potential material exposures above 200 per cent of the OEL increased by 1.1 per cent compared to the revised FY22 baseline. The pipeline of FY24 projects aims to reduce potential exposures in excess of 200 per cent of OEL by 28 per cent compared to the FY23 outcome.
Community[1]: Implement social investment plans on time and on budget. Increase the proportion of social investment allocated to strategic investment by 10 percentage points up to a maximum of 90 per cent of the social investment budget. Implement at least one new strategic multi-year social investment with targets that support climate, biodiversity or just transition related outcomes. Develop economic development plans which include local employment and procurement targets at all operations.	**Excellent** FY23 social investment was delivered to plan. 90 per cent of social investment was allocated to strategic investments (up 8 percentage points from 82 per cent in FY22). Two strategic investments commenced in FY23; a just transition strategic investment at Worsley Alumina and a biodiversity strategic investment in Australia with the Australian Wildlife Conservancy. Economic development plans were established for all operations, which include local employment and procurement targets.
Risk management: Maintain risk routines at more than 95 per cent compliance with scheduled work. Increase the percentage of well controlled risks. Achieve 90 per cent compliance with the risk based assurance plan.	**Good** Risk routines averaged 95 per cent compliance to scheduled work in FY23. The percentage of the risk profile reported as 'requires significant improvement' was on target. 96 per cent of the combined assurance plan was delivered to schedule.
Water performance[1]: Deliver contextual water target milestones, and achieve the FY23 target water use efficiency outcome as defined within the Sustainability Linked Loan framework.	**Fair** The contextual water target for Hillside Aluminium was met. Targets at the remaining operations remained on track. FY23 water efficiency targets were met. However, the current identified pipeline of projects to achieve a 10 per cent improvement in water efficiency by FY27 compared to the FY21 baseline fell short of the required trajectory.

(1) Further information on this sorecard measure can be found in Our strategy in action section on pages 20 to 25 and our Sustainable Development Report at *www.south32.net*.

Scorecard measure	Target	Performance	Outcome
Financial: Production, cost and capital expenditure	**28.3%**		**23.4%**
Production[2][3]: Deliver 97 – 102 per cent of revenue equivalent production.		**Fair** Revenue equivalent production was 95 per cent.	
Controllable cost[2][3]: Deliver controllable costs that are within US$50 million of budget (adjusted for foreign exchange, price-linked costs and other adjustments).		**Fair** Adjusted controllable costs were above budget by US$28M.	
Capital expenditure[2][3]: Achieve capital expenditure (excluding growth) that is within five per cent of budget (adjusted for foreign exchange). Achieve growth capital expenditure that is within ten per cent of budget and schedule (adjusted for foreign exchange). Achieve fewer than 20 per cent break-in safe and reliable capital projects[4].		**Good** Capital expenditure (excluding growth) was 94 per cent of budget. Growth capital expenditure was 88 per cent compared to budget and was delivered on schedule. Break-in projects were at 14 per cent.	
Financial: Adjusted ROIC	**28.3%**		**15.1%**
Adjusted ROIC[2]: Achieve budget adjusted ROIC, consistent with our cost, production and capital expenditure targets.		**Poor** Adjusted ROIC was 26.4 per cent versus the budget of 28.1 per cent.	
Strategic priorities	**15.0%**		**16.6%**
Hermosa project[2]: Deliver FY23 Taylor Deposit and Clark Deposit agreed project milestones.		**Good** The feasibility study for the Taylor Deposit is expected to be completed in the second half of calendar year 2023, as we undertake additional engineering studies to align the mine development schedule for a federal permitting process under FAST-41 and incorporate current market cost estimates. Water Treatment Plant 2 construction was completed on schedule and commissioning commenced. The Clark pre-feasibility selection study was completed. Multiple non-binding, non-exclusive memorandums of understanding were signed for the future potential supply of battery-grade manganese.	
Next generation mine[2]: Deliver at least 75 per cent of the agreed initiative milestones for the Next Generation Mine mission.		**Good** Six of the eight agreed initiatives were fully delivered and two were partially delivered.	
Inclusion and Diversity[5]: Achieve FY23 measurable objectives and deliver the FY23 Inclusion and Diversity action plan. **Inclusion index[2]:** Achieve inclusion index scores that are at least equal to FY22 inclusion index scores. **Employee engagement[2]:** Achieve employee engagement scores that are at least equal to FY22 employee engagement scores.		**Good** **Inclusion and Diversity:** 50 per cent (two out of four) of our female representation targets and 50 per cent (one out of two) of our targets for Black People representation in South Africa were met. Completed our equity pay review, investing US$338,000 to improve pay equity. All elements of the Inclusion and Diversity action plan were delivered. **Inclusion index** and **employee engagement** scores exceeded target.	
Subtotal	**Target = 100%** Maximum = 150%		**83.8%**

(2) Further information on this scorecard measure can be found in Our strategy in action section on pages 20 to 25.
(3) Excludes non-operated entities.
(4) Capital expenditure projects categorised as safe and reliable above US$100,000 that were not included in the FY23 budget.
(5) Further information on this scorecard measure can be found in our Sustainable Development Report at www.south32.net.

1B FY23 Business Modifier

The Business Modifier is an integral component of the STI that considers overall business outcomes or other factors that are not specifically contemplated in the Business Scorecard, such as:

- Significant safety or environmental events;
- The shareholder experience;
- Unexpected material external events, including the impact of a global pandemic or a significant disruption to global trade;
- Significant reputational issues; and
- An assessment of risk, culture or any other item that the Board considers appropriate.

The Business Modifier, based on Board discretion, adjusts the overall Business Scorecard outcome so that STI outcomes reflect business performance, including both what has been delivered and how it has been achieved. The outcome may be positive or negative, and may be applied to Executive KMP on an individual or a group basis depending on the factors under consideration.

In FY23, the Board primarily focused on two matters when considering the application of the Business Modifier for Executive KMP.

The first was the loss of two of our colleagues, Mr Cristovão Alberto Tonela and Mr Alfredo Francisco Domingos João. Nothing is more important than the health, safety and wellbeing of our people. We will continue to work to improve our safety performance through our multi-year Safety Improvement Program that commenced in FY22. The program consists of four workstreams and was designed with the aim of enhancing our safety culture, and by changing mindsets and behaviours, achieving a step change in our safety performance.

As part of the Safety Improvement Program's focus on shifting mindsets through leadership, we conducted our LEAD Safely Every Day training for senior leaders, managers, superintendents and supervisors across all operations and functions. This comprised workshops, learning assignments and individual coaching, with 1,322 leaders having commenced the capability training, and 247 leaders having completed it by 30 June 2023. In addition, we have updated our risk guidance documentation and conducted risk training for our risk and control owners. We have also finalised our internal safety standard to introduce the Safety System of Work that includes the new requirements for safety-critical equipment and process safety management.

We have improved and extended our Contractor Management System of Work for our significant contractor workforce and have extended this into relevant functional departments in addition to operations. In FY24, we expect to launch a dedicated monitoring tool to better embed contractor management performance and to strengthen compliance with health and safety, and risk management requirements. More information on our safety initiatives, including our contractor management system of work, can be found in the Sustainable Development Report at *www.south32.net*.

The second matter was the non-cash impairment expense for the Taylor Deposit recognised in our FY23 financial results which reflected the impact of delays due to COVID-19, the significant dewatering requirements and inflationary market pressures. The Board considered this when determining the negative overall Business Modifier for the CEO.

Table 1.6 outlines the negative Business Modifiers the Board applied to the Business Scorecard for each member of Executive KMP. The different adjustments for the Executive KMP is intended to reflect the level of accountability each of them had in respect of the matters outlined above.

Table 1.6 – Application of the Business Modifier by the Board (multiplier applied to the Business Scorecard outcome)

	Modifier for	Modifier applied in previous years			
	FY23[1]	FY22[2]	FY21	FY20	FY19
CEO	**-25%**	-20%	-20%	-30%	No Business Modifier applied
COO Africa and Colombia	**-20%**	-20% -10%	-20%	-30%	
Other Executive KMP	**-10%** **-5%**	-10% -5%	-5%	-15%	

(1) In FY23, the Board decided to apply a Business Modifier of -10 per cent for J Economidis, and a Business Modifier of negative five per cent for K Tovich and S Sibenaler.
(2) In FY22, the Board decided to apply a Business Modifier of -20 per cent for the Chief Operating Officer Africa at the time of the fatality, a Business Modifier of -10 per cent for J Economidis and N Pillay, and a Business Modifier of negative five per cent for K Tovich.

2 FY23 individual performance

Our Board considers the individual scorecard outcomes for Executive KMP with regard to what was delivered, as demonstrated in the performance of each member of Executive KMP's portfolio, and how it was delivered, which considers leadership behaviours aligned to our values, risk framework and governance processes.

The board recognises Graham's outstanding leadership in delivering South32's purpose and strategy, but believes an individual outcome of 100% combined with the application of the Business Modifier is appropriate for FY23.

Individual outcomes applied to the other Executive KMP reflected the performance outcomes in their areas of accountability and development in their respective roles. These outcomes ranged from 85 per cent to 140 per cent, as indicated in Table 1.7 below.

3 Overall FY23 STI outcome

Overall STI outcomes for FY23 are determined through our Board's assessment of the business and individual outcomes, as outlined in Table 1.7.

Table 1.7 – STI earned by Executive KMP in respect of FY23 performance

	Business Scorecard Outcome %	Business Modifier +/- %	Individual Outcome %	Overall STI Outcome (% of Target)	Total STI Awarded	Cash	Deferred Rights	Percentage of maximum STI	
								Awarded	Forfeited
Executive KMP	(1A)	(1B)	(2)	1A x (1+1B) x (2)	(A$'000)	(A$'000)[1]	(A$'000)[1]	(%)	(%)
G Kerr	83.8	-25	100	62.9	**1,438**	719	719	**42**	58
K Tovich[2]	83.8	-5	140	111.5	**918**	459	459	**74**	26
S Sibenaler[3]	83.8	-5	85	67.7	**168**	84	84	**45**	55
J Economidis	83.8	-10	95	71.6	**704**	352	352	**48**	52
N Pillay	83.8	-20	90	60.3	**496**	248	248	**40**	60

(1) The cash portion of the STI will be paid in September 2023. The deferred rights to receive South32 shares are anticipated to be granted in or around December 2023 and will be due to vest in August 2025. The deferred rights remain subject to continued service with the Group.

(2) K Tovich ceased to be a member of Executive KMP on 31 March 2023. Details in the above table are for her period as a member of Executive KMP.

(3) S Sibenaler was appointed as a member of Executive KMP on 1 April 2023. Details in the above table are for her period as a member of Executive KMP. S Sibenaler's individual outcome for the nine months in her prior role as Vice President Finance, which is not reflected in the table, was 120 per cent.

Long-term Incentive

FY20 LTI and Management Share Plan (MSP) Performance award

Our FY20 LTI award was tested for vesting subject to service and performance conditions to 30 June 2023. This award is subject to TSR performance conditions over four years, with two-thirds measured with reference to a global mining sector index (the IHS Markit Global Mining Constrained Weights Index with additional constraints by sector) and one third with reference to a world index (the MSCI World Index). The four-year period for this award was from 1 July 2019 to 30 June 2023.

Jason and Noel were granted the FY20 MSP Performance award prior to their appointments as members of Executive KMP. This award has the same performance and vesting conditions as our FY20 LTI award.

For the LTI and MSP Performance awards to vest in full, they needed to outperform both indices by at least 23.9 per cent over the four-year performance period (equivalent to 5.5 per cent per annum cumulative). Given that our TSR failed to meet the threshold level of performance required against both comparator indices (see Diagram 1.9 and Table 1.8), these awards lapsed in full in August 2023.

Diagram 1.9 – South32 TSR relative to comparator groups

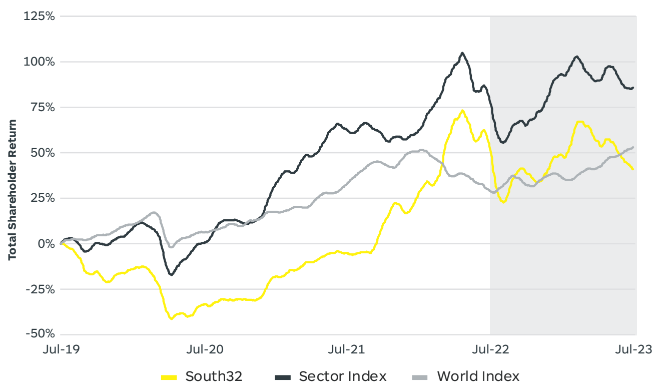


Diagram 1.10 – Vesting scale

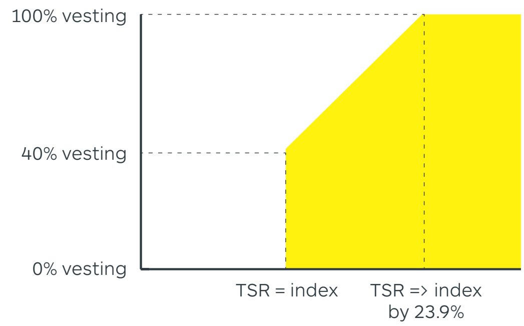


Table 1.8 – South32 FY20 LTI and MSP Performance award vesting outcomes

	TSR performance[(1)(2)]				Vesting outcome	Index weighting	Weighted vesting outcome
	Index (A)	South32 (B)	Required for 100% vesting	Achieved (B-A)	(C)	(D)	(C x D)
Sector Index	86%	**41%**	Index+23.9%	(45%)	0%	2/3	**0%**
World Index	53%		Index+23.9%	(12%)	0%	1/3	**0%**
							0%

(1) TSR calculation uses June 2019 average return at the start and June 2023 average return at the end of the measured period.
(2) The Board and Remuneration Committee use information from an external provider to inform them of the performance of the relevant index to assess the vesting outcome for the LTI.

FY21 MSP Retention award

Although South32 does not offer MSP Retention awards to permanent members of the Lead Team, including those that are Executive KMP, when individuals are promoted internally to Lead Team roles, they retain any unvested MSP awards that may vest while they are members of KMP. Sandy, Jason and Noel were granted FY21 MSP Retention awards prior to their appointments as permanent members of the Lead Team. As the service-based condition of these awards was met, our Board approved these awards to vest in full in August 2023.

The structure of the MSP is detailed on page 102.

Summary of LTI outcomes in FY23

Table 1.9 – South32 LTI awards vested or lapsed/forfeited

Executive KMP	Award	Number of rights granted	Number of rights vested	Number of rights lapsed/ forfeited	Value at grant[1] (A$'000)	Value lapsed/ forfeited[2] (A$'000)	Value of share price movement[3] (A$'000)	Value at vesting[4] (A$'000)
G Kerr	FY20 LTI	1,696,261	-	1,696,261	5,445	5,445	-	-
K Tovich	FY20 LTI	517,133	-	517,133	1,660	1,660	-	-
S Sibenaler	FY21 MSP Retention	23,762	23,762	-	48	-	41	89
J Economidis	FY20 MSP Performance	155,763	-	155,763	500	500	-	-
	FY21 MSP Retention	99,009	99,009	-	200	-	172	372
N Pillay	FY20 MSP Performance	135,708	-	135,708	436	436	-	-
	FY21 MSP Retention	86,262	86,262	-	174	-	150	324

(1) 'Value at grant' is the number of rights granted multiplied by the grant determination price in June 2019 of A$3.21 (for the FY20 LTI/FY20 MSP Performance) and June 2020 of A$2.02 (for the FY21 MSP Retention), based on the volume weighted average price (VWAP) of South32 Limited shares traded on the ASX over the last 10 trading days in June of the respective year.

(2) 'Value lapsed/forfeited' is the number of rights lapsed/forfeited based on performance relative to the performance measures, multiplied by the grant determination price of A$3.21 (for the FY20 LTI/FY20 MSP Performance) and A$2.02 (for the FY21 MSP Retention).

(3) 'Value of share price movement' is the number of shares that vested, multiplied by the difference between the grant determination price of A$3.21 (for the FY20 LTI/FY20 MSP Performance) and A$2.02 (for the FY21 MSP Retention) and the share price at 30 June 2023 of A$3.76. This reflects the value added/(lost) due to the change in share price over the performance period.

(4) 'Value at vesting' is the number of shares that vested in August 2023, multiplied by the closing share price of South32 shares on 30 June 2023 of A$3.76.

LTI granted in FY23

FY23 LTI Plan

Each year we grant performance rights to our Executive KMP. Our FY23 LTI Plan awards, which were granted in December 2022, have a four-year performance period and are subject to performance hurdles (see page 84). Shareholders approved, under ASX Listing Rule 10.14, the grant of rights for the CEO at the AGM on 27 October 2022.

FY23 MSP award

Sandy was granted awards under the MSP in December 2022 prior to her appointment to the Lead Team and before she became a member of Executive KMP. The structure of the MSP is detailed on page 102.

Table 1.10 – FY23 LTI and MSP grants

		Reward determination[1]					
Executive KMP	Award	Face Value (% of fixed remuneration)	Face value (A$'000)	Target value[2] (% of fixed remuneration)	Target value (A$'000)	Grant (December 2022): Number of rights granted[3]	Anticipated Vesting Date
G Kerr	FY23 LTI	200	3,812	120	2,287	**934,313**	August 2026
K Tovich	FY23 LTI	133	1,216	80	731	**297,946**	August 2026
S Sibenaler	FY23 MSP Retention	30	131	30	131	**32,113**	August 2025
	FY23 MSP Performance	50	218	30	131	**53,522**	August 2026
J Economidis	FY23 LTI	133	1,089	80	655	**266,977**	August 2026
N Pillay[4]	FY23 LTI	133	980	80	590	**240,246**	August 2026

(1) The grant of awards is based on the face value as outlined in Components of our reward (see page 84).

(2) The target value considers the difficulty of achieving performance hurdles.

(3) The number of awards granted to Executive KMP in December 2022 is calculated by dividing the face value by the VWAP of South32 Limited shares traded on the ASX over the last 10 trading days of June 2022, being A$4.08. The fair value at grant for accounting purposes, as calculated by an external provider, was A$2.37 per right for the FY23 LTI and FY23 MSP Performance awards and A$3.85 per right for the FY23 MSP Retention award.

(4) Fixed remuneration for N Pillay used to determine his FY23 LTI award was converted to A$ using an exchange rate of AUD: ZAR 11.11.

FY23 LTI Strategic Measures Performance Update

In FY22 we introduced two strategic measures, with a total weighting of 20 per cent of our LTI grant, to directly link executive remuneration to our approach to climate change and the transition of our portfolio towards the commodities critical for a low-carbon future.

Vesting outcomes for the strategic measures will be determined by the Board following the end of each four-year performance period (e.g. on 30 June 2026 for the FY23 LTI award), based on our ability to make material progress in these areas, while aiming to protect and create shareholder value as we navigate this business-critical transformation. The Board's rationale in assessing performance and determining the vesting outcome for each measure will be clearly articulated and shared with shareholders following the Board's assessment.

Table 1.11 below summarises the progress made against each four-year strategic measure during FY23.

Table 1.11 – Strategic Measures update for FY23

Measure	FY23 progress against Measure
Climate change	
We have announced plans to reduce our operational greenhouse gas emissions (Scope 1 and 2) by 50 per cent between FY21 and 2035, by implementing our decarbonisation framework, which includes: – The advancement of conceptual projects through our capital investment tollgates, and the successful commissioning of identified emissions reduction projects; – The ongoing assessment of new technologies and alternative energy sources; and – Continued participation and direct investment in research and development partnerships. Consistent with our purpose, we will work to provide a just transition towards net zero in a way that supports our people, local communities and other stakeholders.	In FY23[1], we have continued to mature and accelerate our planned decarbonisation programs to support our medium-term target and long-term goals. Key milestones included: – Commencing the conversion of Worsley Alumina's first coal-fired boiler to natural gas, and progressing decarbonisation studies including mud washing, waste heat to digestion, and coal-alternative steam supply; – Converting 18 per cent of Hillside Aluminium pots to AP3XLE energy efficiency technology and progressing studies to transition the smelter's energy source from coal-based power to secure, reliable and affordable low-carbon energy in the medium-term; – Progressing the commercial scale pilot of CSIRO ventilation air methane technology into feasibility at Illawarra Metallurgical Coal; – Transitioning Sierra Gorda to 100 per cent renewable energy; – Leading the Electric Mine Consortium's infrastructure workstream and contributing by trialling light electric vehicles at Cannington; and – Embedding our just transition guiding principles into our environment and climate change standard and our social performance standard.
Portfolio management	
We are planning to further reshape our portfolio and increase our exposure to the commodities critical to a low-carbon future by: – Building a high-quality portfolio of greenfield and brownfield exploration and development options; – Optimising our existing portfolio by responsibly transferring ownership of non-core operations or transitioning them to closure; – Developing or acquiring operations which are cash generative through the cycle, improving the overall quality of our business; and – Maintaining discipline by adhering to our proven capital management framework.	In FY23, we have continued to make progress in this transformative area. Key milestones included: – Embedding our recent investments in Sierra Gorda copper and our expanded low-carbon aluminium capacity, increasing aluminium production by 14 per cent and base metals by 17 per cent; – Progressing multiple exploration programs as we continued work to discover our next generation of base metals mines; – Consolidating our position in Argentina's highly prospective San Juan province by exercising our earn-in right with Minsud Resources for 50.1 per cent of the Chita Valley copper exploration prospect and acquiring an interest in Aldebaran Resources; – Commencing our largest greenfield exploration program at our 100 per cent-owned Roosevelt project in Alaska, targeting copper and zinc mineralisation; – Completing the sale of four non-core royalties, unlocking further latent value in our portfolio; and – Progressing exploration for copper, in additional to zinc, lead and silver at Hermosa's Peake prospect. In addition, permit applications have been advanced during the last 12 months to allow for testing of the Flux Prospect, a high priority target with similarities to the Taylor Deposit.

(1) Further information on the progress of items listed can be found in our Sustainable Development Report at *www.south32.net*.

Terms and conditions of rights awarded under equity plans

Type of equity	We deliver deferred STI and LTI equity awards (including Transitional LTI and MSP awards) in the form of share rights. These are rights to receive fully paid ordinary shares in South32 Limited (or at the Board's discretion, a cash equivalent amount) subject to meeting specific performance and vesting conditions. As the rights are an element of remuneration, no amount is payable by employees to be allocated the rights. If the rights vest, no consideration or exercise price is payable for the allocation of shares. As rights are automatically exercised on vesting, they do not have an expiry date.
Dividend and voting rights	Rights carry no entitlement to voting, dividends or dividend equivalent payments.
Cessation of employment	Unless our Board determines otherwise: – Resignation or termination for cause: all unvested rights lapse; – Death, serious injury, disability or illness that prevents continued employment or total permanent disability: all unvested rights vest immediately; and – Other circumstances, generally: • Deferred STI awards: all unvested rights vest immediately; • LTI and MSP Performance awards: all unvested rights are pro-rated and the reduced portion remains on foot and eligible for vesting in the ordinary course, subject to any applicable performance hurdles; and • MSP Retention awards: all unvested rights are pro-rated and the reduced portion vests immediately. Where awards are pro-rated, the remaining portion lapses.
Change of control	Our Board can determine the level of vesting (if any) having regard to the portion of the vesting period elapsed, performance to date against any applicable performance conditions and other factors they deem appropriate.
Malus and Clawback	Our Board can reduce or clawback all vested and unvested STI and LTI awards in certain circumstances so that executives do not obtain an inappropriate benefit. These circumstances are broad, and can include: – An executive engaging in misconduct; – A material misstatement of our accounts that results in vesting; – Behaviours of executives that bring South32 into disrepute; – A significant unexpected or unintended consequence or outcome; and – Any other factor our Board deems justifiable.
Rights to participate in new issues	A participant cannot take part in new issues of securities in relation to their unvested rights. However, the relevant plan rules include specific provisions dealing with rights issues, bonus issues and corporate actions, and other capital reconstructions.

Non-Executive Director remuneration

Components of our reward for FY23

Component	Board Fees	Committee Fees	Travel Allowance
The why	As a global company, it's important that we offer competitive Non-Executive Director fees to help us attract the appropriate level of experience from a diverse global pool. Our Board fees reflect the size, complexity and global nature of our business and acknowledge the responsibilities of serving on our Board. To preserve the independence of our Non-Executive Directors, their remuneration does not have an 'at risk' element.	We pay Committee fees to recognise the additional responsibilities associated with participating on a Board Committee.	Our Board meetings are ordinarily held in Australia, South Africa and North and South America (see page 71 for more details). Site visits are also an important part of our usual Board program, giving Directors: – A better understanding of workplace culture through interactions with site-based employees; – An improved understanding of local and operational risks; – A chance to participate in continuous education; and – On-the-ground experience. As these meetings (site visits and other engagements) take time and commitment, particularly if they are in remote locations, we provide our Non-Executive Directors with a travel allowance.
The how	Board fee inclusive of superannuation.	We pay a fixed fee to our Board Chair for all responsibilities, including participation on any Board Committees. Other Non-Executive Directors receive Committee Chair and member fees (where applicable).	For air travel to a Board commitment that is greater than three hours but less than 10 hours to the destination, a one-off allowance of A$5,000 per trip applies. Where air travel is greater than 10 hours to the destination, the allowance per trip is A$10,000. The travel allowance is only paid where travel is undertaken and does not apply to domestic travel to a regularly scheduled Board meeting.
Fee Pool	The maximum aggregate amount we can pay our Non-Executive Directors remains at A$3.9 million per annum (fee pool). We will always seek shareholder approval before making any changes to this pool.		
Minimum shareholding requirement	Each Non-Executive Director is required to accumulate a minimum shareholding level of one year's Board fees within a reasonable period. See page 102 for shareholdings of our Non-Executive Directors.		

FY23 Non-Executive Director fees

We review fees every year and may get external advice to help us do so. We based the review of FY23 fees on data provided by external consultants. This resulted in a three per cent increase to Board fees for the Chair and other Non-Executive Directors from 1 September 2022, which were the first increases to Board fees since 1 September 2019.

The table below outlines the fee levels for FY23. There will be no increase to Non-Executive Director fees in FY24.

Table 1.12 – FY23 Board fees, effective 1 September 2022

Fee	Description	FY23 fee (A$ per annum)	Increase % from FY22 fee
	Board of Directors		
Board fees	Chair of the Board	595,250	3.0
	Other Non-Executive Directors	195,000	3.0
	Risk and Audit, Remuneration, and Sustainability Committees		
Committee fees(1)	Committee Chair	46,000	0
	Members	23,000	0

(1) No Committee Chair or member fees were paid in FY23 for participation on the Nomination and Governance Committee.

FY23 Non-Executive Director remuneration

In Table 1.13, we have set out the statutory disclosures required under the Act and in accordance with Australian Accounting Standards, in respect of FY23 remuneration paid to Non-Executive Directors.

Table 1.13 – Non-Executive Director remuneration (A$'000)

Non-Executive Director	FY23 term		Short-term benefits: Board and Committee fees	Short-term benefits: Non-monetary benefits[1]	Short-term benefits: Other cash allowances and benefits[2]	Post-employment benefits: Superannuation	Total
K Wood	Full year	**FY23**	**567**	**0**	**20**	**25**	**612**
		FY22	554	-	10	24	588
F Cooper AO	Full year	**FY23**	**238**	**0**	**10**	**25**	**273**
		FY22	235	-	10	24	269
G Lansdown	Ceased on 31 May 2023	**FY23**	**239**	**2**	**45**	**3**	**289**
		FY22	256	1	25	1	283
X Liu	Full year	**FY23**	**215**	**0**	**30**	**25**	**270**
		FY22	212	-	10	24	246
C Mesquita	Appointed on 1 May 2023	**FY23**	**33**	**0**	**10**	**0**	**43**
		FY22	-	-	-	-	-
N Mtoba	Full year	**FY23**	**214**	**4**	**40**	**3**	**261**
		FY22	212	-	20	1	233
J Nelson	Appointed on 1 May 2023	**FY23**	**33**	**0**	**5**	**0**	**38**
		FY22	-	-	-	-	-
W Osborn	Full year	**FY23**	**238**	**0**	**35**	**25**	**298**
		FY22	235	-	10	24	269
K Rumble	Full year	**FY23**	**260**	**2**	**45**	**3**	**310**
		FY22	258	2	20	1	281
Total		**FY23**	**2,037**	**8**	**240**	**109**	**2,394**
		FY22	1,962	3	105	99	2,169

(1) Includes assistance with tax return preparation.
(2) Includes travel allowances paid.

Looking forward to FY24

No major changes are proposed for the reward framework for FY24. The Board has confidence in the integrity of the reward framework, the core elements of which have remained unchanged since demerger, and believes it incorporates the necessary flexibility to reward our Executive KMP for performance that is aligned with the interests of stakeholders.

Fixed remuneration

The Board approved increases to the fixed remuneration of Executive KMP to maintain fixed remuneration at competitive levels in alignment with our reward framework (see page 84). These align with the increases applied to the broader workforce in the relevant geographies (four and a half per cent in Australia and six per cent in South Africa) (see Table 1.14).

Table 1.14 – Fixed remuneration for Executive KMP in FY24, effective 1 September 2023

Executive KMP	FY23 fixed remuneration (A$)	FY24 fixed remuneration (A$)	Increase %
G Kerr	1,906,000	**1,991,000**	4.5
S Sibenaler	830,000	**867,000**	4.5
J Economidis	819,000	**856,000**	4.5
N Pillay(1)	ZAR 8,190,000	**ZAR 8,680,000**	6.0

(1) Fixed Remuneration for N Pillay is denominated in ZAR. Using an exchange rate of AUD:ZAR 11.96, FY24 fixed remuneration in A$ is A$725,750.

Short-term incentive

The structure of our STI plan will remain unchanged for FY24. However, we have adjusted the measures in our Business Scorecard and their respective weightings (refer Diagram 1.11 for the FY24 STI measures) to reflect the key focus areas of our Executive KMP and other Lead Team members in FY24. The adjustment will result in an increase in weighting towards Safety and Culture as well as Environment and Social measures whilst maintaining focus on the financial metrics. Further, we have narrowed our Strategic Delivery measure to focus on delivery of key Hermosa project milestones, with the 20 per cent weighting in the LTI capturing the delivery of our broader strategic milestones.

Diagram 1.11 – FY24 STI Business Scorecard Performance Metric Weightings

Measures	Performance metrics	FY24 weighting
Safety and Culture	Safety and health, risk management, people	**25.0%**
Environment and Social	Social performance, water performance	**10.0%**
Financial	Adjusted return on invested capital, production, cost and capital expenditure	**57.5%**
Strategic Delivery	Hermosa	**7.5%**
X		
Business Modifier	Consider factors that are not specifically contemplated in the Business Scorecard	**+/-**
=		
South32 Business Outcome	Reflects our performance over the financial year	

Long-term incentive

We are not changing the design of the LTI for FY24. We will continue to measure our performance over a four-year period with 80 per cent assessed based on TSR performance relative to two comparator groups and 20 per cent assessed against two strategic measures, climate change and portfolio management, each with a 10 per cent weighting.

Director Fees

There will no increase to Non-Executive Director fees or change to the travel allowances in FY24.

Statutory disclosures

Statutory remuneration table for Executive KMP

In the following table, we have set out the statutory disclosures required under the Act and in accordance with the Australian Accounting Standards. The amounts shown reflect the remuneration for each member of Executive KMP that relates to their service as KMP in FY23.

Table 1.15 – Statutory remuneration of Executive KMP in FY23 (A$'000)

		Short term benefits			Post employment benefits	Termination benefits	Other long-term benefits[3]	Share based payments[4]			
Executive KMP		Salary	Cash bonus[1]	Non-monetary benefits[2]	Superannuation			LTI / MSP	STI	Total remuneration	Percentage of total remuneration which is performance tested
G Kerr	**FY23**	**1,651**	**719**	**48**	**28**	**-**	**176**	**2,605**	**833**	**6,060**	**69%**
	FY22	1,640	1,215	42	25	-	168	2,500	852	6,442	71%
K Tovich[5]	**FY23**	**609**	**459**	**11**	**21**	**-**	**62**	**622**	**425**	**2,209**	**68%**
	FY22	768	691	9	28	-	79	698	478	2,751	68%
S Sibenaler[6]	**FY23**	**195**	**84**	**1**	**6**	**-**	**19**	**49**	**9**	**363**	**39%**
	FY22	-	-	-	-	-	-	-	-	-	-
J Economidis	**FY23**	**716**	**352**	**12**	**26**	**-**	**74**	**748**	**271**	**2,199**	**62%**
	FY22	726	482	7	40	-	71	637	185	2,148	61%
N Pillay[7]	**FY23**	**631**	**248**	**26**	**-**	**-**	**79**	**593**	**151**	**1,728**	**57%**
	FY22	523	217	101	-	-	47	285	56	1,229	45%
Total	**FY23**	**3,802**	**1,862**	**98**	**81**	**-**	**410**	**4,617**	**1,689**	**12,559**	
	FY22	3,657	2,605	159	93	-	365	4,120	1,571	12,570	

(1) STI is provided half in cash (which is included in the cash bonus column of the table) in September following the end of the performance period and half in deferred rights (which is included in the share-based payments column of the table). The value of the deferred equity portion is amortised over the vesting period.

(2) Non-monetary benefits are non-pensionable and include such items as insurances, car parking and personal tax assistance. FY22 non-monetary benefits for N Pillay also include relocation benefits provided prior to becoming a member of Executive KMP to assist with his relocation to South Africa.

(3) Other long-term benefits is the accounting expense of annual and long-service leave accrued.

(4) The related awards were not actually provided to the Executive KMP. The figures are calculated in accordance with Australian Accounting Standards and are the amortised fair values of equity and equity-related instruments that have been granted to Executive KMP. Refer to Table 1.16 on page 101 in this report for information on awards outstanding during FY23.

(5) FY23 remuneration for K Tovich is for the period until she ceased to be a member of Executive KMP (31 March 2023).

(6) FY23 remuneration for S Sibenaler is for the period from when she commenced as a member of Executive KMP (1 April 2023).

(7) FY23 salary for N Pillay has been converted to A$ using an exchange rate of AUD: ZAR 11.96. FY22 remuneration for N Pillay is for the period from when he became a member of Executive KMP (1 December 2021). FY22 salary for N Pillay has been converted to A$ using an exchange rate of AUD: ZAR 11.13 with the exception of a relocation allowance of ZAR 1,500,000 paid on 25 October 2021 which has been converted to A$ using an exchange rate of AUD: ZAR 10.99.

Details of rights held by Executive KMP

In the following table, we have set out more information about the rights over South32 shares held by Executive KMP, including the movements in rights held during FY23. No closely related parties of any Executive KMP are issued rights over South32 shares. See page 96 for terms and conditions of rights awarded under our equity plans.

Table 1.16 – Detail and movement of rights over South32 shares held by Executive KMP during FY23

Award[(1)(2)]	Opening balance as at 1 July 2022	Grant date	Granted in FY23[(3)]	Vested in FY23		Lapsed / forfeited or other change in FY23		Closing balance as at 30 June 2023[(6)]	Anticipated vesting date[(4)]
Executive KMP	Number		Number	Number[(4)]	%[(5)]	Number	%[(5)]	Number	
G Kerr	**7,632,787**		**1,217,602**	**280,988**	**16**	**1,450,819**	**84**	**7,118,582**	
FY22 Deferred STI (S)	-	08-Dec-22	283,289	-	-	-	-	283,289	Aug-24
FY23 LTI (P)	-	08-Dec-22	934,313	-	-	-	-	934,313	Aug-26
FY21 Deferred STI (S)	242,160	06-Dec-21	-	-	-	-	-	242,160	Aug-23
FY22 LTI (P)	1,267,015	06-Dec-21	-	-	-	-	-	1,267,015	Aug-25
FY20 Deferred STI (S)	280,988	04-Dec-20	-	280,988	100	-	-	-	Aug-22
FY21 LTI (P)	2,695,544	04-Dec-20	-	-	-	-	-	2,695,544	Aug-24
FY20 LTI (P)	1,696,261	06-Dec-19	-	-	-	-	-	1,696,261	Aug-23
FY19 LTI (P)	1,450,819	07-Dec-18	-	-	-	1,450,819	100	-	Aug-22
K Tovich[(6)]	**2,325,220**		**459,198**	**199,124**	**47**	**225,503**	**53**	**2,359,791**	
FY22 Deferred STI (S)	-	08-Dec-22	161,252	-	-	-	-	161,252	Aug-24
FY23 LTI (P)	-	08-Dec-22	297,946	-	-	-	-	297,946	Aug-26
FY21 Deferred STI (S)	157,804	06-Dec-21	-	-	-	-	-	157,804	Aug-23
FY22 LTI (P)	403,874	06-Dec-21	-	-	-	-	-	403,874	Aug-25
FY20 Deferred STI (S)	156,030	04-Dec-20	-	156,030	100	-	-	-	Aug-22
FY21 LTI (P)	821,782	04-Dec-20	-	-	-	-	-	821,782	Aug-24
FY20 LTI (P)	517,133	06-Dec-19	-	-	-	-	-	517,133	Aug-23
FY20 Transitional LTI (P)	129,283	06-Dec-19	-	43,094	33	86,189	67	-	Aug-22
FY19 MSP Performance (P)	139,314	07-Dec-18	-	-	-	139,314	100	-	Aug-22
S Sibenaler[(7)]	**284,124**		**-**	**-**	**-**	**-**	**-**	**284,124**	
FY23 MSP Retention (S)	32,113	08-Dec-22	-	-	-			32,113	Aug-25
FY23 MSP Performance (P)	53,522	08-Dec-22	-	-	-			53,522	Aug-26
FY22 MSP Retention (S)	43,246	06-Dec-21	-	-	-			43,246	Aug-24
FY22 MSP Performance (P)	72,076	06-Dec-21	-	-	-			72,076	Aug-25
FY21 MSP Retention (S)	23,762	06-May-21	-	-	-			23,762	Aug-23
FY21 MSP Performance (P)	59,405	06-May-21	-	-	-			59,405	Aug-24
J Economidis	**1,437,646**		**379,481**	**62,305**	**33**	**123,704**	**67**	**1,631,118**	
FY22 Deferred STI (S)	-	08-Dec-22	112,504	-	-	-	-	112,504	Aug-24
FY23 LTI (P)	-	08-Dec-22	266,977	-	-	-	-	266,977	Aug-26
FY21 Deferred STI (S)	37,628	06-Dec-21	-	-	-	-	-	37,628	Aug-23
FY22 LTI (P)	362,094	06-Dec-21	-	-	-	-	-	362,094	Aug-25
FY22 Transitional LTI (P)	102,094	06-Dec-21	-	-		-		102,094	Aug-24
FY21 MSP Retention (S)	99,009	04-Dec-20	-	-	-	-	-	99,009	Aug-23
FY21 MSP Performance (P)	495,049	04-Dec-20	-	-	-	-	-	495,049	Aug-24
FY20 MSP Retention (S)	62,305	06-Dec-19	-	62,305	100	-	-	-	Aug-22
FY20 MSP Performance (P)	155,763	06-Dec-19	-	-	-	-	-	155,763	Aug-23
FY19 MSP Performance (P)	123,704	07-Dec-18	-	-	-	123,704	100	-	Aug-22
N Pillay	**1,031,024**		**301,582**	**54,283**	**32**	**116,120**	**68**	**1,162,203**	
FY22 Deferred STI (S)	-	08-Dec-22	61,336	-	-	-	-	61,336	Aug-24
FY23 LTI (P)	-	06-Dec-22	240,246	-	-	-	-	240,246	Aug-26
FY22 LTI (P)	329,962	06-Dec-21	-	-	-	-	-	329,962	Aug-25
FY22 Transitional LTI (P)	93,034	06-Dec-21	-	-	-	-	-	93,034	Aug-24
FY21 MSP Retention (S)	86,262	04-Dec-20	-	-	-	-	-	86,262	Aug-23
FY21 MSP Performance (P)	215,655	04-Dec-20	-	-	-	-	-	215,655	Aug-24
FY20 MSP Retention (S)	54,283	06-Dec-19	-	54,283	100	-	-	-	Aug-22
FY20 MSP Performance (P)	135,708	06-Dec-19	-	-	-	-	-	135,708	Aug-23
FY19 MSP Performance (P)	116,120	07-Dec-18	-	-	-	116,120	100	-	Aug-22

(1) At the time of vesting, the quantum of all awards that vest based on performance and/or service conditions will automatically convert to South32 ordinary shares, in the participant's name, for nil consideration. Any rights that do not vest will immediately lapse, hence there is no expiry date associated with the awards. (S) - Service only or (P) - Performance and Service conditions apply. As rights are subject to service and/or performance conditions, the minimum possible total value of rights granted under South32 equity plans for future financial years is nil and the maximum possible total value is the number of rights multiplied by the market price of South32 shares on the date of vesting.

(2) Further details regarding each of the prior year equity grants are described in past South32 Annual Reports.

(3) The fair value for awards granted in FY23 is the grant date fair value for accounting purposes being A$3.99 for the FY22 Deferred STI award, A$2.37 for the FY23 LTI award and MSP Performance award and A$3.85 for the FY23 MSP Retention award. Shareholders approved, under ASX Listing Rule 10.14, the grant of rights for the CEO at the AGM on 27 October 2022.

(4) Rights that vested in FY23 converted to South32 ordinary shares for nil consideration on 26 August 2022. The South32 closing share price on this date was A$4.23. The vesting outcome for FY20 LTI awards, FY20 MSP Performance awards and FY21 MSP Retention awards scheduled to vest in August 2023 is summarised on page 94.

(5) The percentage is based on the maximum number of rights available to vest in FY23.

(6) K Tovich ceased to be a member of Executive KMP on 31 March 2023. Closing balance is at this date.

(7) S Sibenaler became a member of Executive KMP on 1 April 2023. Opening balance is as at this date.

Details of MSP and Transitional LTI awards

Key terms and conditions of MSP and Transitional LTI awards are outlined below in table 1.17. For additional terms of the rights granted under the two plans, see Terms and conditions of rights awarded under equity plans on page 96.

Table 1.17 – Key terms and performance conditions of awards[(1)]

Award	Key Terms and Performance Conditions
MSP	The MSP is our LTI plan for eligible management employees below Lead Team level. The Plan has two elements: – Retention rights with a three-year vesting and service period from 1 July to 30 June, vesting in August three years from grant provided employees remain employed in the Group[(2)]; and – Performance rights with a four-year performance and service period from 1 July to 30 June, vesting in August four years from grant, subject to the same performance and vesting conditions as the LTI for Executive KMP (see page 84) for that year. There is no retesting if the performance condition is not met and any rights that don't vest will immediately lapse/ be forfeited. Rights do not attract any entitlement to voting, dividends or dividend equivalent payments. Katie, Sandy, Jason and Noel participated in the MSP prior to being permanently appointed to the Lead Team.
Transitional LTI plan	When an executive is promoted to a role in the Lead Team, they move from the MSP (three-year retention rights and four-year performance rights) to the LTI plan for the Lead Team (four-year performance rights). The Transitional LTI is a one-off award that may be granted to address the potential shortfall in vesting after three years. These awards have the same TSR performance conditions as LTI awards granted in the same year except these awards have a three-year performance period. No Transitional LTI awards were granted or vested for Executive KMP during FY23. Details about Transitional LTI awards that are currently on foot are outlined above in table 1.16. Further details regarding Transitional LTI awards granted in earlier years are described in past South32 Annual Reports.

(1) See page 84 for key terms of the LTI.
(2) The retention rights are subject to a service condition. Performance hurdles are factored into the performance rights component of MSP awards.

Shareholdings of KMP

The minimum shareholding requirement for Executive KMP is summarised on page 85.

For Non-Executive Directors, the valuation approach used to determine the minimum shareholding requirement of one year's Board fee is the cost to the Non-Executive Director to acquire the shares, except for shares acquired at demerger which are valued based on the closing South32 Ltd share price on 18 May 2015 (A$2.05). As at 30 June 2023, all Non-Executive Directors except Ms Jane Nelson and Dr Ntombifuthi (Futhi) Mtoba met this requirement. The percentage of fees reflected in the table below is based on our share price at 30 June 2023.

Table 1.18 – South32 shares held directly, indirectly or beneficially by each KMP, including their related parties

	Held at 1 July 2022	Received on vesting of rights	Received as remuneration	Other net change[(1)]	Held at 30 June 2023	% of Board Fees/ fixed remuneration[(2)]
Non-Executive Directors						
K Wood	367,825	-	-	-	367,825	232
F Cooper AO	128,010	-	-	-	128,010	247
G Lansdown[(3)]	80,000	-	-	-	80,000	154
X Liu	60,000	-	-	6,000	66,000	127
C Mesquita[(4)]	177,440	-	-	-	177,440	342
N Mtoba	71,386	-	-	-	71,386	138
J Nelson[(4)]	-	-	-	-	-	0
W Osborn	174,104	-	-	-	174,104	336
K Rumble	161,380	-	-	-	161,380	311
Executive KMP						
G Kerr	3,804,621	280,988	-	(2,108,837)	1,976,772	390
K Tovich[(5)]	455,574	199,124	-	(93,590)	561,108	231
S Sibenaler[(6)]	-	-	-	-	-	0
J Economidis	78,743	62,305	-	(29,284)	111,764	51
N Pillay	292,167	54,283	-	(24,412)	322,038	177

(1) Other net change includes purchases and sales and transfers of vested shares.
(2) Based on Board fees and fixed remuneration at 30 June 2023 and the closing share price of South32 shares as at that date of A$3.76.
(3) G Lansdown ceased to be a Non-Executive Director on 31 May 2023. Closing balance is as at this date.
(4) C Mesquita and J Nelson were appointed as Non-Executive Directors on 1 May 2023. Opening balance is as at this date.
(5) K Tovich ceased to be a member of Executive KMP on 31 March 2023. Closing balance is at this date.
(6) S Sibenaler became a member of Executive KMP on 1 April 2023. Opening balance is as at this date.

Additional information

Transactions with KMP

There are no amounts payable to any KMP at 30 June 2023.

During FY23, there were no transactions between KMP or their close family members and the Group other than as described in this report.

There are no loans with any KMP.

A number of Directors of the Group have control or joint control of other entities (also known as personal entities). During the year, there have been no transactions between those entities and the Group, and no amounts were owed by or to the Group from those entities.

This Remuneration report was approved by our Board on 7 September 2023.

FINANCIAL REPORT

CONSOLIDATED INCOME STATEMENT
FOR THE YEAR ENDED 30 JUNE 2023

US$M	Note	FY23	FY22
Revenue:			
Group production		**6,795**	8,522
Third party products and services		**634**	747
	4	**7,429**	9,269
Other income		**345**	183
Expenses excluding finance costs	5	**(7,822)**	(6,000)
Share of profit/(loss) of equity accounted investments	26	**246**	272
Profit from operations		**198**	3,724
Comprising:			
Group production		**175**	3,704
Third party products and services		**23**	20
Profit from operations		**198**	3,724
Finance income		**222**	79
Finance costs		**(207)**	(110)
Net finance income/(costs)	18	**15**	(31)
Profit before tax		**213**	3,693
Income tax expense	6	**(386)**	(1,024)
Profit/(loss) for the year		**(173)**	2,669
Attributable to:			
Equity holders of South32 Limited		**(173)**	2,669
Profit/(loss) for the year attributable to equity holders of South32 Limited:			
Basic earnings per share (cents)	8	**(3.8)**	57.4
Diluted earnings per share (cents)	8	**(3.8)**	57.0

The accompanying notes form part of the consolidated financial statements.

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME
FOR THE YEAR ENDED 30 JUNE 2023

US$M	Note	FY23	FY22
Profit/(loss) for the year		**(173)**	2,669
Other comprehensive income			
Items that may be reclassified to the Consolidated Income Statement:			
Share of other comprehensive income/(loss) of equity accounted investments	26	**6**	(4)
Total items that may be reclassified to the Consolidated Income Statement		**6**	(4)
Items that will not be reclassified to the Consolidated Income Statement:			
Investments in equity instruments designated as fair value through other comprehensive income (FVOCI):			
Net fair value gains/(losses)		**(11)**	(78)
Income tax (expense)/benefit		**3**	24
Share of other comprehensive income/(loss) of equity accounted investments	26	**-**	1
Gains/(losses) on pension and medical schemes	15	**3**	3
Income tax (expense)/benefit recognised within other comprehensive income		**(1)**	(1)
Total items that will not be reclassified to the Consolidated Income Statement		**(6)**	(51)
Total other comprehensive income/(loss)		**-**	(55)
Total comprehensive income/(loss)		**(173)**	2,614
Attributable to:			
Equity holders of South32 Limited		**(173)**	2,614

The accompanying notes form part of the consolidated financial statements.

CONSOLIDATED BALANCE SHEET
AS AT 30 JUNE 2023

US$M	Note	FY23	FY22
ASSETS			
Current assets			
Cash and cash equivalents	16	**1,258**	2,365
Trade and other receivables	9	**778**	844
Other financial assets	19	**1**	1
Inventories	10	**1,102**	982
Current tax assets		**54**	4
Other assets		**46**	44
Total current assets		**3,239**	4,240
Non-current assets			
Trade and other receivables	9	**1,923**	1,903
Other financial assets	19	**118**	64
Inventories	10	**82**	76
Property, plant and equipment	11	**8,050**	8,988
Intangible assets	12	**242**	186
Equity accounted investments	26	**499**	470
Deferred tax assets	6	**390**	394
Other assets		**21**	15
Total non-current assets		**11,325**	12,096
Total assets		**14,564**	16,336
LIABILITIES			
Current liabilities			
Trade and other payables	14	**985**	989
Interest bearing liabilities	17	**365**	402
Other financial liabilities	19	**-**	6
Current tax payables		**10**	308
Provisions	15	**194**	186
Deferred income		**6**	6
Total current liabilities		**1,560**	1,897
Non-current liabilities			
Trade and other payables	14	**19**	8
Interest bearing liabilities	17	**1,376**	1,425
Other financial liabilities	19	**37**	84
Deferred tax liabilities	6	**210**	307
Provisions	15	**1,986**	1,835
Deferred income		**1**	1
Total non-current liabilities		**3,629**	3,660
Total liabilities		**5,189**	5,557
Net assets		**9,375**	10,779
EQUITY			
Share capital	20	**13,251**	13,469
Treasury shares	20	**(51)**	(32)
Reserves		**(3,553)**	(3,558)
Retained earnings/(accumulated losses)		**(271)**	901
Total equity attributable to equity holders of South32 Limited		**9,376**	10,780
Non-controlling interests		**(1)**	(1)
Total equity		**9,375**	10,779

The accompanying notes form part of the consolidated financial statements.

CONSOLIDATED CASH FLOW STATEMENT
FOR THE YEAR ENDED 30 JUNE 2023

US$M	Note	FY23	FY22
Operating activities			
Profit before tax		**213**	3,693
Adjustments for:			
Non-cash or non-operating significant items	4	**(186)**	(77)
Depreciation and amortisation expense		**653**	624
Net impairment loss/(reversal) of financial assets		**71**	26
Net impairment loss/(reversal) of non-financial assets		**1,300**	145
Employee share awards expense		**24**	23
Net finance (income)/costs		**(15)**	31
Share of (profit)/loss of equity accounted investments		**(246)**	(272)
(Gains)/losses on derivative instruments, contingent consideration and other investments measured at fair value through profit or loss (FVTPL)		**(6)**	(29)
Other non-cash or non-operating items		**(4)**	(18)
Changes in assets and liabilities:			
Trade and other receivables		**178**	(300)
Inventories		**(126)**	(206)
Trade and other payables		**(45)**	160
Provisions and other liabilities		**3**	(82)
Cash generated from operations		**1,814**	3,718
Interest received		**78**	66
Interest paid		**(109)**	(70)
Income tax paid		**(818)**	(868)
Dividends received		**3**	-
Dividends received from equity accounted investments		**223**	224
Net cash flows from operating activities		**1,191**	3,070
Investing activities			
Purchases of property, plant and equipment		**(790)**	(522)
Exploration expenditure		**(98)**	(70)
Exploration expenditure expensed and included in operating cash flows		**59**	37
Purchase of intangibles		**(65)**	(4)
Investment in financial assets		**(179)**	(222)
Proceeds from financial assets		**117**	230
Payments related to the acquisition of subsidiaries and joint operations, net of their cash		**(25)**	(114)
Payments related to the acquisition of equity accounted investments		**-**	(1,430)
Proceeds from sale of intangibles		**73**	-
Net cash flows from investing activities		**(908)**	(2,095)
Financing activities			
Proceeds from interest bearing liabilities		**-**	1,527
Repayment of interest bearing liabilities		**(133)**	(932)
Purchase of shares by Employee Share Ownership Plan (ESOP) Trusts		**(33)**	(22)
Share buy-back		**(218)**	(128)
Dividends paid	7	**(1,007)**	(660)
Net cash flows from financing activities		**(1,391)**	(215)
Net increase/(decrease) in cash and cash equivalents		**(1,108)**	760
Cash and cash equivalents, net of overdrafts, at the beginning of the year		**2,365**	1,613
Effect of foreign exchange rate changes on cash and cash equivalents		**1**	(8)
Cash and cash equivalents, net of overdrafts, at the end of the year	16	**1,258**	2,365

The accompanying notes form part of the consolidated financial statements.

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY
FOR THE YEAR ENDED 30 JUNE 2023

US$M	Share capital	Treasury shares	Financial assets reserve[1]	Employee share awards reserve[2]	Other reserves[3]	Retained earnings/ (accumulated losses)	Total	Non-controlling interests	Total equity
	Attributable to equity holders of South32 Limited								
Balance as at 1 July 2022	**13,469**	**(32)**	**(6)**	**45**	**(3,597)**	**901**	**10,780**	**(1)**	**10,779**
Profit/(loss) for the year	**-**	**-**	**-**	**-**	**-**	**(173)**	**(173)**	**-**	**(173)**
Other comprehensive income/(loss)	**-**	**-**	**(8)**	**-**	**6**	**2**	**-**	**-**	**-**
Total comprehensive income/(loss)	**-**	**-**	**(8)**	**-**	**6**	**(171)**	**(173)**	**-**	**(173)**
Transactions with owners:									
Dividends	**-**	**-**	**-**	**-**	**-**	**(1,007)**	**(1,007)**	**-**	**(1,007)**
Shares bought back and cancelled	**(218)**	**-**	**-**	**-**	**-**	**-**	**(218)**	**-**	**(218)**
Employee share entitlements for unvested awards, net of tax	**-**	**-**	**-**	**29**	**-**	**-**	**29**	**-**	**29**
Employee share awards vested and lapsed, net of tax	**-**	**14**	**-**	**(22)**	**-**	**6**	**(2)**	**-**	**(2)**
Purchase of shares by ESOP Trusts	**-**	**(33)**	**-**	**-**	**-**	**-**	**(33)**	**-**	**(33)**
Balance as at 30 June 2023	**13,251**	**(51)**	**(14)**	**52**	**(3,591)**	**(271)**	**9,376**	**(1)**	**9,375**
Balance as at 1 July 2021	13,597	(22)	(22)	48	(3,593)	(1,053)	8,955	(1)	8,954
Profit/(loss) for the year	-	-	-	-	-	2,669	2,669	-	2,669
Other comprehensive income/(loss)	-	-	(54)	-	(4)	3	(55)	-	(55)
Total comprehensive income/(loss)	-	-	(54)	-	(4)	2,672	2,614	-	2,614
Transactions with owners:									
Dividends	-	-	-	-	-	(660)	(660)	-	(660)
Shares bought back and cancelled	(128)	-	-	-	-	-	(128)	-	(128)
Employee share entitlements for unvested awards, net of tax	-	-	-	27	-	-	27	-	27
Employee share awards vested and lapsed, net of tax	-	12	-	(30)	-	12	(6)	-	(6)
Purchase of shares by ESOP Trusts	-	(22)	-	-	-	-	(22)	-	(22)
Transfer of cumulative fair value loss on an investment in equity instruments designated as FVOCI[4]	-	-	70	-	-	(70)	-	-	-
Balance as at 30 June 2022	13,469	(32)	(6)	45	(3,597)	901	10,780	(1)	10,779

(1) Represents the fair value movement in financial assets designated as FVOCI.
(2) Represents the accrued employee entitlements to share awards that have not yet vested.
(3) Primarily consists of the common control transaction reserve of US$3,569 million, which reflects the difference between consideration paid and the carrying value of assets and liabilities acquired, as well as the gains/losses on disposal of entities as part of the demerger of the Group in 2015.
(4) Relates to the acquisition of an additional 18.2 per cent shareholding and related rights in Mineração Rio do Norte in FY22.

The accompanying notes form part of the consolidated financial statements.

This section sets out the accounting policies that relate to the consolidated financial statements of South32 Limited (referred to as the Company) and its subsidiaries and joint arrangements (collectively, the Group) as a whole. Where an accounting policy, critical accounting estimate, assumption or judgement is specific to a note, these are described within the note to which they relate. These policies have been consistently applied to all periods presented, except as described in note 3 New standards and interpretations.

The consolidated financial statements of the Group for the year ended 30 June 2023 were authorised for issue in accordance with a resolution of the Directors on 7 September 2023.

1. Reporting entity

South32 Limited is a for-profit company limited by shares incorporated in Australia with a primary listing on the Australian Securities Exchange (ASX), a standard listing on the London Stock Exchange (LSE) and a secondary listing on the Johannesburg Stock Exchange (JSE).

The nature of the operations and principal activities of the Group are described in note 4 Segment information.

2. Basis of preparation

The consolidated financial statements are general purpose financial statements which:

- Have been prepared in accordance with the requirements of the *Corporations Act 2001*, Australian Accounting Standards and other authoritative pronouncements of the Australian Accounting Standards Board (AASB), International Financial Reporting Standards (IFRS) and other authoritative pronouncements of the International Accounting Standards Board (IASB);
- Have been prepared on a historical cost basis, except for post-retirement assets and obligations, derivative financial instruments and certain other financial assets and liabilities which are required to be measured at fair value;
- Are presented in US dollars, with all values rounded to the nearest million dollars (US$M or US$ million) unless otherwise stated, in accordance with *ASIC Corporations Instrument 2016/191*;
- Present reclassified comparative information where required for consistency with the current year's presentation;
- Adopt all new and amended accounting standards and interpretations issued by the AASB and IASB that are relevant to the operations of the Group and effective for reporting periods beginning on or after 1 July 2022. Refer to note 3 New standards and interpretations for further details; and
- Do not early adopt any accounting standards and interpretations that have been issued or amended but are not yet effective as described in note 3 New standards and interpretations.

(a) Basis of consolidation

The consolidated financial statements comprise the financial statements of the Group. A list of significant controlled entities (subsidiaries) at year end is contained in note 25 Subsidiaries.

The financial statements of subsidiaries are prepared for the same reporting period as the parent entity, using consistent accounting policies.

Changes in the Group's interest in a subsidiary that do not result in a loss of control are accounted for as equity transactions.

(b) Foreign currency translation

The functional currency of the majority of the Group's operations is the US dollar, as this is assessed to be the principal currency of the economic environments in which they operate.

Transactions denominated in foreign currencies are initially recorded in the functional currency using the exchange rate at the date of the underlying transaction. Monetary assets and liabilities denominated in foreign currencies are translated using the rate of exchange at year end. Exchange gains or losses on retranslation are included in the Consolidated Income Statement, with the exception of foreign exchange gains or losses on foreign currency provisions for closure and rehabilitation which are capitalised in property, plant and equipment for operating sites.

(c) Key estimates, assumptions and judgements

The preparation of the consolidated financial statements has required management to apply accounting policies and methodologies that are based on complex and subjective estimates, assumptions and judgements. Management based its estimates and judgements on historical experience and assumptions it believes to be reasonable and realistic based on the current environment. Actual results may differ from those reported in these statements due to the uncertainties that characterise the assumptions and conditions on which the estimates are based.

Specific sources of uncertainty identified by the Group are set out on the following pages and/or together with the applicable note, as follows:

Key estimates, assumptions and judgements	
Recognition of deferred taxes	note 6
Uncertain tax matters	note 6
Useful economic lives of assets	note 11
Impairment of non-financial assets	note 13
Closure and rehabilitation provisions	note 15
Expected credit loss on credit-impaired financial assets	note 19

In addition to the specific sources of uncertainty noted above, the following assumptions are considered pervasive to the financial statements as a whole:

Climate change-related risks and opportunities

The key estimates, assumptions and judgements made in these consolidated financial statements take into account the Group's expectations of, and approach to, climate change-related risks, and are consistent with the Group's reporting on climate-related matters.

These expectations may affect the Group's financial results and financial position in a number of ways, including the following:

- The useful lives of assets, and therefore the depreciation and amortisation charged in the Consolidated Income Statement, may be impacted by changes in operational plans (refer to note 11 Property, plant and equipment);
- Asset recoverable amounts may be affected due to changes in estimated future cash flows driven by, for example, changes in forecast commodity prices, operating costs, carbon prices and useful lives of assets (refer to note 13 Impairment of non-financial assets and note 19(b)(iii) Credit risk: Shareholder loan receivable from Sierra Gorda);
- The commercial viability of exploration areas of interest may impact the recoverability of exploration and evaluation assets (refer to note 13 Impairment of non-financial assets); and
- Timing and cost of closure and rehabilitation activities (refer to note 15 Provisions).

The carrying amount of the associated deferred tax assets/liabilities may change due to changes in estimates of the likely recovery of the related tax benefits.

2. **Basis of preparation** continued

(c) **Key estimates, assumptions and judgements** continued

Global transition to a low-carbon world

While we are committed to the goals of the Paris Agreement, current global signposts continue to point towards a probable trajectory of at least 2°C warming which forms our base case[1] for global transition to a low-carbon world. Our base case directly informs our commodity demand outlook, forecast commodity prices and carbon prices. Any change in our base case may in turn impact our Ore Reserve estimates, mine plans, production volumes and future costs.

The Group's key estimates, assumptions and judgements with respect to transition risks and opportunities are based on the Group's expectations and assessments at the date of this report, and actual results may differ. Government policies and market developments continue to drive uncertainty in commodity and carbon price outlooks, which may impact the Group's approach to climate change and assumptions and judgements, which may in turn result in material changes to financial results and the carrying values of assets and liabilities in future reporting periods.

Physical impacts of climate change

The Group's operations are located in regions that may experience extreme temperatures, bushfires, flooding and droughts. The Group has performed a baseline risk assessment of the physical impacts of climate change on its operated portfolio, with the assessment based on scenarios RCP4.5 and RCP8.5 as described by the Intergovernmental Panel on Climate Change (IPCC)[2].

Longer term assets (including those that move into closure) are likely to face more significant challenges due to the expected severity of climate risks manifesting over longer timeframes. Climate change is likely to exacerbate the risks to water supply, storage and usage that we currently manage, particularly for operations in areas of water scarcity and other sensitive environmental aspects.

The risk of the physical impacts of climate change were contemplated during the development of our life of operation plans (including closure estimates) and additional capital and/or increases to operating costs have been incorporated into our forward-looking estimates when deemed appropriate. The Group's ongoing analysis of reasonable alternative assumptions with respect to future climate conditions has not identified any additional indicator that the carrying value of assets cannot be recovered or that useful lives of assets will be shortened.

The Group's key estimates, assumptions and judgments with respect to the physical impacts of climate change are based on the Group's expectations and assessments as at the date of this report, and actual results may differ. The high degree of uncertainty around the nature, timing and magnitude of weather events and long-term changes in climate patterns, as well as the Group's continued physical risk assessment process and development of its direct adaptation and mitigation strategies, may result in material changes to financial results and carrying value of assets and liabilities in future reporting periods.

Mineral Resources and Ore Reserves

Estimating the quantity and/or grade of Mineral Resources requires the location, quantity, grade (or quality), continuity and other geological characteristics to be known, estimated or interpreted from specific geological evidence and knowledge, including sampling, in order to satisfy the requirement that there are reasonable prospects for eventual economic extraction. This process may require complex and difficult geological assessments to interpret the data.

An Ore Reserve is the economically mineable part of the Measured and/or Indicated Mineral Resource that can be legally extracted, or where there is a reasonable expectation that approvals for extraction will be granted. In order to estimate Ore Reserves, consideration is required for a range of modifying factors, including mining, processing, metallurgical, infrastructure, economic, marketing, legal, environmental, social and governmental. When reporting Ore Reserves, the relevant studies, to at least a pre-feasibility level, must demonstrate that, at the time of reporting, extraction could be reasonably justified, including a consideration of forecast sales prices.

With the exception of Sierra Gorda's mineral reserves, the Group reports Mineral Resources and Ore Reserves in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code), and the ASX Listing Rules (Chapter 5): Additional reporting on mining and oil and gas production and exploration activities. The Sierra Gorda estimates of mineral reserves are foreign estimates under the ASX Listing Rules and are not reported in accordance with the JORC Code. Refer to the Resources and Reserves section of this report for further information on the qualifying foreign estimates related to Sierra Gorda.

Because the economic assumptions used to estimate the Ore Reserves change from period to period, and because additional geological data is generated during the course of operations, estimates of the Mineral Resources and Ore Reserves may change from period to period. The Group's planning processes consider the impacts of climate change on its Ore Reserves, including assessments of operating costs and the impact of extreme weather events on the expectation of economic extraction.

The Group may also include Exploration Targets in determining the recoverable amount of a cash generating unit (CGU) or an exploration area of interest.

Similar to climate-change related risks and opportunities, changes in the Group's estimates of Mineral Resources and Ore Reserves, including estimates of exploration potential, may affect the Group's financial results and financial position in a number of ways, including asset recoverable amounts, useful lives of assets, commercial viability of exploration areas of interest, timing and cost of closure and rehabilitation activities and the recovery of any associated deferred tax assets.

(1) By contrast, our FY23 1.5°C scenario, which is primarily based on the International Energy Agency's Net Zero Emissions 2050 scenario (IEA NZE), is utilised by the Group to assess the resilience of our portfolio under a rapid global transition. The IEA NZE sets out one credible pathway to achieving a 1.5°C outcome by 2050, providing a set of general assumptions on commodity demand drivers, scrap availability, material efficiency and carbon prices.

(2) There are four Representative Concentration Pathways (RCPs) representing possible future greenhouse gas emissions and concentration scenarios. RCP4.5 equates to between 1.1°C and 2.6°C of warming by the end of the century. RCP8.5 equates to between 2.6°C and 4.8°C of warming by the end of the century.

3. New standards and interpretations

(a) New accounting standards and interpretations effective from 1 July 2022

The following new accounting standards and interpretations have been published and are effective for the year ended 30 June 2023:

- Amendments to AASB 137 – Onerous Contracts, Costs to Fulfil a Contract;
- Amendments to AASB 3 – Updating a reference to the Conceptual Framework;
- Amendments to AASB 116 – Property, Plant and Equipment, Proceeds before Intended Use; and
- Amendments to AASB 112 – International Tax Reform – Pillar Two Model Rules.

The Group has reviewed these amendments and concluded that none have a significant impact on the Group. Refer to note 6(f) for further details of the impact on the Group as a result of the international tax reform and the related amendments to AASB 112.

(b) New accounting standards and interpretations issued but not effective

The following new accounting standards and interpretations have been published but are not yet effective for the year ended 30 June 2023:

- Amendments to AASB 101 – Classification of Liabilities as Current or Non-current;
- Amendments to AASB 10 and AASB 128 – Sale or Contribution of Assets between an Investor and its Associate or Joint Venture;
- Amendments to AASB 7, AASB 101, AASB 108 and AASB 134 – Disclosure of Accounting Policies and Definition of Accounting Estimates;
- Amendments to AASB 1 and AASB 112 – Deferred Tax related to Assets and Liabilities arising from a Single Transaction;
- Amendments to AASB 16 – Lease Liability in a Sale and Leaseback; and
- AASB 17 *Insurance Contracts*.

The Group has reviewed these amendments and improvements and does not expect them to have a significant impact on the Group.

The Group does not intend to early adopt any of the new standards or interpretations. It is expected that where applicable, these standards and interpretations will be adopted on each respective effective date.

This section focuses on the financial performance of the Group, covering both profitability and the resulting return to shareholders via earnings per share.

4. Segment information

(a) Description of segments

The operating segments (also referred to as operations) are organised and managed separately according to the nature of products produced.

The Lead Team (the chief operating decision makers) and the Board of Directors monitor the segment results regularly for the purpose of making decisions about resource allocation and assessing performance.

The principal activities of each operating segment are summarised as follows:

Operating segment	Principal activities
Worsley Alumina	Integrated bauxite mine and alumina refinery in Australia
Brazil Alumina	Integrated bauxite mine and alumina refinery in Brazil
Brazil Aluminium	Aluminium smelter in Brazil
Hillside Aluminium	Aluminium smelter in South Africa
Mozal Aluminium	Aluminium smelter in Mozambique
Sierra Gorda	Copper mine in Chile
Cannington	Silver, lead and zinc mine in Australia
Hermosa	Base metals exploration and development options in the United States
Cerro Matoso	Integrated laterite ferronickel mine and smelting complex in Colombia
Illawarra Metallurgical Coal	Metallurgical coal mines in Australia
Australia Manganese	Manganese ore mine in Australia
South Africa Manganese	Manganese ore mines in South Africa

All operations are operated by the Group except Brazil Alumina, Brazil Aluminium and Sierra Gorda.

(b) Segment results

The segment information reflects the Group's interest in subsidiaries and joint operations, as well as material equity accounted joint ventures on a proportional consolidation basis. The segment information includes non-IFRS financial measures.

Segment performance is measured by Underlying EBIT and Underlying EBITDA. Underlying EBIT is profit before net finance income/(costs), income tax expense, royalty related tax expense and other earnings adjustment items. Underlying EBITDA is Underlying EBIT before depreciation and amortisation.

Reconciliations of the underlying segment information to the statutory information included in the Group's consolidated financial statements are set out in note 4(b)(i) Underlying results reconciliation, including joint venture adjustments which reconcile the proportional consolidation of the material equity accounted joint ventures back to their statutory equity accounting positions. The Group's material equity accounted joint ventures are Sierra Gorda, Australia Manganese and South Africa Manganese, refer to note 26 Equity accounted investments.

The Group separately discloses sales of group production from sales of third-party products and services because of the significant difference in profit margin earned on these sales.

It is the Group's policy that inter-segment transactions are made on an arm's length basis.

Group and unallocated items/eliminations represent group centre functions and consolidation adjustments.

Group financing and income taxes are primarily managed on a Group basis and are not allocated to operating segments.

Total assets and liabilities for each operating segment represent operating assets and liabilities which predominantly exclude the carrying amount of non-material equity accounted investments, cash, interest bearing liabilities, tax balances and certain other financial assets and liabilities.

Revenue recognition

Revenue is measured based on the consideration specified in the contract with a customer and excludes amounts collected on behalf of third parties. Revenue is not reduced for royalties and other taxes payable from Group production.

The following is a description of the principal activities from which the Group generates its revenue:

Revenue from the sale of commodities

The Group primarily sells the following commodities: alumina, aluminium, copper, silver, lead, zinc, ferronickel, metallurgical coal and manganese ore. The sales of these commodities are considered to be performance obligations as they are the contractual promises by the Group to transfer distinct goods to customers.

The transaction price allocated to each performance obligation is recognised as the performance obligation is satisfied. Satisfaction occurs when control of the promised commodity is transferred to the customer.

For the sale of commodities, revenue is therefore recognised at a point in time, net of treatment and refining charges (where applicable). The majority of the Group's sales agreements specify that title passes on the bill of lading date (the date the commodity is delivered to the shipping agent) and is assessed to be the point of time in which control over the commodity passes to the customer. For these sales, revenue is recognised on the bill of lading date. For certain sales, title passes and revenue is recognised when the goods have been delivered to the customer.

For certain commodities, the sales price is determined on a provisional basis at the date of sale and adjustments to the sales price subsequently occur based on movements in quoted market or contractual prices up to the date of final pricing. The period between provisional invoicing and final pricing is up to 180 days. Revenue on provisionally priced sales is recognised based on the estimated fair value of the total consideration receivable. The revenue adjustment mechanism embedded within provisionally priced sales arrangements has the characteristics of a commodity derivative. Accordingly, the fair value of the final sales price adjustment is re-estimated continuously and changes in fair value are disclosed separately as 'other' revenue. In all cases, fair value is estimated by reference to forward market prices.

Revenue from the provision of freight services

The Group sells most of its commodities on either Free On Board (FOB) or Cost, Insurance, and Freight (CIF) Incoterms. In the case of CIF Incoterms, the Group is responsible for shipping services after the date at which control of the commodities passes to the customer at the port of loading. The provision of shipping services in these types of arrangements are a distinct service (and therefore a separate performance obligation) to which a portion of the transaction price should be allocated and recognised over time as the shipping services are provided. The Group also provides third party freight services which are recognised as the shipping service is provided.

The Group does not separately disclose sales revenue from freight services as it does not consider this necessary in order to understand the impact of economic factors on the Group.

4. **Segment information** continued

(b) **Segment results** continued

FY23 US$M	Worsley Alumina	Brazil Alumina	Brazil Aluminium	Hillside Aluminium
Revenue from customers	**1,364**	**456**	**166**	**1,822**
Other[2]	**(1)**	**-**	**-**	**1**
Total underlying revenue	**1,363**	**456**	**166**	**1,823**
Comprising:				
Group production	**642**	**395**	**166**	**1,823**
Third party products and services[3]	**-**	**-**	**-**	**-**
Inter-segment revenue	**721**	**61**	**-**	**-**
Total underlying revenue	**1,363**	**456**	**166**	**1,823**
Underlying EBITDA	**251**	**7**	**(129)**	**257**
Underlying depreciation and amortisation	**(183)**	**(52)**	**(7)**	**(66)**
Underlying EBIT	**68**	**(45)**	**(136)**	**191**
Comprising:				
Group production	**68**	**(51)**	**(136)**	**191**
Exploration expensed	**-**	**-**	**-**	**-**
Third party products and services[3]	**-**	**-**	**-**	**-**
Share of profit/(loss) of equity accounted investments	**-**	**6**	**-**	**-**
Underlying EBIT	**68**	**(45)**	**(136)**	**191**
Underlying net finance costs				
Underlying income tax expense				
Underlying royalty related tax expense				
Underlying earnings				
Total adjustments to profit/(loss)[4]				
Profit/(loss) for the year				
Underlying exploration expenditure	**-**	**-**	**-**	**-**
Underlying capital expenditure[5]	**82**	**58**	**9**	**18**
Underlying equity accounted investments	**-**	**51**	**-**	**-**
Total underlying assets[6]	**3,578**	**880**	**91**	**1,156**
Total underlying liabilities[6]	**1,121**	**142**	**63**	**311**

(1) The segment information reflects the Group's interest in material equity accounted joint ventures and is presented on a proportional consolidation basis, which is the measure used by the Group's management to assess their performance. The Group's underlying results includes the proportional elimination of revenue and corresponding expenses relating to freight services provided by the Group to material joint ventures of US$128 million and third party product revenue of US$33 million included in Group and unallocated items/eliminations. Refer to note 4(b)(i) Underlying results reconciliation for the joint venture adjustments that reconcile the underlying proportional consolidation to the statutory equity accounting positions included in the Group's consolidated financial statements.

(2) Underlying other revenue relates to fair value movements on provisionally priced contracts.

(3) Underlying revenue on third party products and services sold comprises US$86 million for aluminium, US$25 million for alumina, US$140 million for coal, US$33 million for manganese, US$106 million for freight services and US$149 million for raw materials. Underlying EBIT on third party products and services sold comprises US$(1) million for aluminium, US$13 million for alumina, US$11 million for coal, US$(1) million for freight services and US$1 million for raw materials.

(4) Represents the total of all adjustments made to Profit from operations, Net finance income/(costs) and Income tax expense. Refer to note 4(b)(i) Underlying results reconciliation for further details.

(5) Underlying capital expenditure excludes the purchase of intangibles and capitalised exploration expenditure.

(6) Total underlying assets and liabilities for each operating segment represent operating assets and liabilities which predominantly exclude the carrying amount of non-material equity accounted investments, cash, interest bearing liabilities, tax balances and certain other financial assets and liabilities.

Mozal Aluminium	Sierra Gorda[1]	Cannington	Hermosa	Cerro Matoso	Illawarra Metallurgical Coal	Australia Manganese[1]	South Africa Manganese[1]	Group and unallocated items/ eliminations	Group underlying results[1]
888	**682**	**554**	**-**	**698**	**1,664**	**720**	**369**	**(236)**	**9,147**
(2)	**2**	**(12)**	**-**	**-**	**(21)**	**(32)**	**(25)**	**(7)**	**(97)**
886	**684**	**542**	**-**	**698**	**1,643**	**688**	**344**	**(243)**	**9,050**
886	**684**	**542**	**-**	**698**	**1,643**	**688**	**344**	**-**	**8,511**
-	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**539**	**539**
-	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**(782)**	**-**
886	**684**	**542**	**-**	**698**	**1,643**	**688**	**344**	**(243)**	**9,050**
108	**358**	**213**	**(15)**	**246**	**833**	**369**	**66**	**(30)**	**2,534**
(52)	**(141)**	**(71)**	**(4)**	**(57)**	**(141)**	**(103)**	**(21)**	**(20)**	**(918)**
56	**217**	**142**	**(19)**	**189**	**692**	**266**	**45**	**(50)**	**1,616**
56	**221**	**148**	**(19)**	**191**	**696**	**266**	**46**	**(31)**	**1,646**
-	**(4)**	**(6)**	**-**	**(2)**	**(9)**	**-**	**(1)**	**(42)**	**(64)**
-	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**23**	**23**
-	**-**	**-**	**-**	**-**	**5**	**-**	**-**	**-**	**11**
56	**217**	**142**	**(19)**	**189**	**692**	**266**	**45**	**(50)**	**1,616**
									(188)
									(457)
									(55)
									916
									(1,089)
									(173)
-	**7**	**8**	**20**	**2**	**17**	**1**	**1**	**51**	**107**
17	**196**	**61**	**256**	**38**	**248**	**58**	**25**	**3**	**1,069**
-	**-**	**-**	**-**	**-**	**7**	**-**	**-**	**-**	**58**
778	**1,811**	**575**	**1,095**	**581**	**1,275**	**660**	**326**	**2,709**	**15,515**
200	**223**	**403**	**96**	**218**	**506**	**421**	**183**	**2,253**	**6,140**

4. **Segment information** continued

(b) **Segment results** continued

FY22 US$M	Worsley Alumina	Brazil Alumina	Brazil Aluminium	Hillside Aluminium
Revenue from customers	1,626	522	-	2,257
Other[2]	(1)	2	-	(3)
Total underlying revenue	1,625	524	-	2,254
Comprising:				
Group production	818	523	-	2,254
Third party products and services[3]	-	-	-	-
Inter-segment revenue	807	1	-	-
Total underlying revenue	1,625	524	-	2,254
Underlying EBITDA	571	150	(43)	730
Underlying depreciation and amortisation	(185)	(61)	(1)	(64)
Underlying EBIT	386	89	(44)	666
Comprising:				
Group production	386	92	(44)	666
Exploration expensed	-	-	-	-
Third party products and services[3]	-	-	-	-
Share of profit/(loss) of equity accounted investments	-	(3)	-	-
Underlying EBIT	386	89	(44)	666
Underlying net finance costs				
Underlying income tax expense				
Underlying royalty related tax expense				
Underlying earnings				
Total adjustments to profit/(loss)[4]				
Profit/(loss) for the year				
Underlying exploration expenditure	-	-	-	-
Underlying capital expenditure[5]	55	51	1	24
Underlying equity accounted investments	-	40	-	-
Total underlying assets[6]	3,571	805	67	1,284
Total underlying liabilities[6]	1,000	109	21	357

(1) The segment information reflects the Group's interest in material equity accounted joint ventures and is presented on a proportional consolidation basis, which is the measure used by the Group's management to assess their performance. The Group's underlying results includes the proportional elimination of revenue and corresponding expenses relating to freight services provided by the Group to material joint ventures of US$187 million and third party product revenue of US$40 million included in Group and unallocated items/eliminations. Refer to note 4(b)(i) Underlying results reconciliation for the joint venture adjustments that reconcile the underlying proportional consolidation to the statutory equity accounting positions included in the Group's consolidated financial statements.

(2) Underlying other revenue relates to fair value movements on provisionally priced contracts.

(3) Underlying revenue on third party products and services sold comprises US$110 million for aluminium, US$25 million for alumina, US$115 million for coal, US$40 million for manganese, US$145 million for freight services and US$165 million for raw materials. Underlying EBIT on third party products and services sold comprises US$8 million for aluminium, US$8 million for alumina, US$7 million for coal and US$(3) million for freight services.

(4) Represents the total of all adjustments made to Profit from operations, Net finance income/(costs) and Income tax expense. Refer to note 4(b)(i) Underlying results reconciliation for further details.

(5) Underlying capital expenditure excludes the purchase of intangibles and capitalised exploration expenditure.

(6) Total underlying assets and liabilities for each operating segment represent operating assets and liabilities which predominantly exclude the carrying amount of non-material equity accounted investments, cash, interest bearing liabilities, tax balances and certain other financial assets and liabilities.

Mozal Aluminium	Sierra Gorda[(1)]	Cannington	Hermosa	Cerro Matoso	Illawarra Metallurgical Coal	Australia Manganese[(1)]	South Africa Manganese[(1)]	Group and unallocated items/ eliminations	Group underlying results[(1)]
925	280	771	-	927	2,336	833	418	(205)	10,690
(1)	(39)	(35)	-	2	2	15	1	(3)	(60)
924	241	736	-	929	2,338	848	419	(208)	10,630
924	241	736	-	929	2,338	848	419	-	10,030
-	-	-	-	-	-	-	-	600	600
-	-	-	-	-	-	-	-	(808)	-
924	241	736	-	929	2,338	848	419	(208)	10,630
305	133	388	(12)	529	1,507	488	78	(69)	4,755
(34)	(58)	(73)	(2)	(66)	(119)	(86)	(20)	(19)	(788)
271	75	315	(14)	463	1,388	402	58	(88)	3,967
271	76	317	(14)	463	1,396	402	59	(82)	3,988
-	(1)	(2)	-	-	(9)	-	(1)	(26)	(39)
-	-	-	-	-	-	-	-	20	20
-	-	-	-	-	1	-	-	-	(2)
271	75	315	(14)	463	1,388	402	58	(88)	3,967
									(155)
									(1,151)
									(59)
									2,602
									67
									2,669
-	2	3	19	-	11	1	1	37	74
11	81	45	97	37	189	62	19	12	684
-	-	-	-	-	2	-	-	-	42
764	1,614	555	2,098	592	1,277	645	331	3,666	17,269
149	212	414	67	243	491	387	196	2,844	6,490

4. **Segment information** continued

(b) **Segment results** continued

(i) Underlying results reconciliation

The following tables reconcile the underlying segment information to the statutory information included in the Group's consolidated financial statements:

US$M	FY23	FY22
Underlying EBIT	**1,616**	3,967
Significant items[1]	**186**	77
Sierra Gorda joint venture adjustments[2][3]	**(144)**	(44)
Manganese joint venture adjustments[2][4]	**(147)**	(216)
Gains on the consolidation of interests in operations[5]	**-**	9
Exchange rate gains/(losses) on restatement of monetary items[6]	**62**	50
Net impairment (loss)/reversal of financial assets[6][7]	**(71)**	(26)
Net impairment (loss)/reversal of non-financial assets[6][8]	**(1,300)**	(145)
Gains/(losses) on non-trading derivative instruments, contingent consideration and other investments measured at FVTPL[6]	**(4)**	52
Profit from operations	**198**	3,724
Underlying net finance costs	**(188)**	(155)
Sierra Gorda joint venture adjustments[2]	**167**	62
Manganese joint venture adjustments[2]	**28**	22
Exchange rate variations on net cash/(debt)	**8**	40
Net finance income/(costs)	**15**	(31)
Underlying income tax expense	**(457)**	(1,151)
Underlying royalty related tax expense	**(55)**	(59)
Tax effect of significant items[1]	**(23)**	(26)
Sierra Gorda joint venture adjustments relating to income tax expense[2]	**11**	1
Sierra Gorda joint venture adjustments relating to royalty related tax expense[2]	**12**	4
Manganese joint venture adjustments relating to income tax expense[2]	**85**	153
Manganese joint venture adjustments relating to royalty related tax expense[2]	**43**	55
Tax effect of other adjustments to Underlying EBIT	**(3)**	32
Tax effect of other adjustments to Underlying net finance costs	**(3)**	(13)
Exchange rate variations on tax balances	**4**	(20)
Income tax expense	**(386)**	(1,024)
Underlying earnings	**916**	2,602
Total adjustments to profit/(loss)	**(1,089)**	67
Profit/(loss) for the year	**(173)**	2,669

(1) Refer to note 4(b)(ii) Significant items.

(2) The segment information reflects the Group's interest in material equity accounted joint ventures and is presented on a proportional consolidation basis, which is the measure used by the Group's management to assess their performance. Joint venture adjustments reconcile the proportional consolidation to the statutory equity accounting positions, recognised in share of profit/(loss) of equity accounted investments in the Consolidated Income Statement.

(3) The Group's investment in the Sierra Gorda operation is represented by the carrying value of an equity accounted investment of US$101 million (FY22: US$30 million) and the carrying value of a purchased credit-impaired receivable of US$1,711 million (FY22: US$1,648 million) classified as a loan to an equity accounted investment within trade and other receivables on the Consolidated Balance Sheet. The earnings adjustments include a revaluation gain of US$71 million (FY22: gain of US$26 million) relating to the shareholder loan payable that was eliminated from the Group's Underlying EBIT upon proportional consolidation.

(4) Includes earnings adjustments of US$(3) million (FY22: US$6 million) included in the Australia Manganese segment and US$12 million (FY22: US$8 million) included in the South Africa Manganese segment.

(5) FY22 gain relates to the acquisition of an additional 16.6 per cent shareholding and related rights in Mozal Aluminium, recognised in other income in the Consolidated Income Statement.

(6) Recognised in expenses excluding finance costs in the Consolidated Income Statement.

(7) Refer to note 19 Financial assets and financial liabilities.

(8) Refer to note 13 Impairment of non-financial assets.

4. **Segment information** continued

(b) **Segment results** continued

(i) Underlying results reconciliation continued

FY23 US$M	Group underlying results	Sierra Gorda joint venture adjustments	Manganese joint venture adjustments	Group statutory results
Total revenue	**9,050**	**(684)**	**(937)**	**7,429**
Depreciation and amortisation	**918**	**(141)**	**(124)**	**653**
Share of profit/(loss) of equity accounted investments	**11**	**71**	**164**	**246**
Exploration expenditure	**107**	**(7)**	**(2)**	**98**
Capital expenditure	**1,069**	**(196)**	**(83)**	**790**
Equity accounted investments	**58**	**101**	**340**	**499**
Total assets	**15,515**	**(450)**	**(501)**	**14,564**
Total liabilities	**6,140**	**(450)**	**(501)**	**5,189**

FY22 US$M	Group underlying results	Sierra Gorda joint venture adjustments	Manganese joint venture adjustments	Group statutory results
Total revenue	10,630	(241)	(1,120)	9,269
Depreciation and amortisation	788	(58)	(106)	624
Share of profit/(loss) of equity accounted investments	(2)	30	244	272
Exploration expenditure	74	(2)	(2)	70
Capital expenditure	684	(81)	(81)	522
Equity accounted investments	42	30	398	470
Total assets	17,269	(452)	(481)	16,336
Total liabilities	6,490	(452)	(481)	5,557

4. **Segment information** continued

(b) **Segment results** continued

(ii) Significant items

Significant items are those items, not separately identified in note 4(b)(i) Underlying results reconciliation, whose nature and amount are considered material to the Group's consolidated financial statements.

FY23 US$M	Gross	Tax	Net
Disposal of royalties	**189**	**(56)**	**133**
Assets write-off	**(51)**	**16**	**(35)**
Tax adjustments relating to the Sierra Gorda acquisition	**-**	**17**	**17**
Vendor indemnity relating to the Sierra Gorda acquisition	**48**	**-**	**48**
Total significant items	**186**	**(23)**	**163**

Disposal of royalties

On 19 July 2022, the Group divested four royalties to Ecora Resources PLC (formerly known as Anglo Pacific Group PLC) in exchange for consideration comprising an upfront cash payment of US$48 million, deferred cash consideration of US$55 million, US$78 million in equity and a variable consideration receivable valued at US$10 million. The equity in Ecora Resources PLC has been recognised as an investment in equity instruments designated at FVOCI. The variable consideration is payable if certain production and price-linked conditions are met prior to 2032, up to a maximum of US$15 million.

The royalties were recognised as intangible assets with a nominal carrying value. On completion the Group recognised other income, net of transaction costs, of US$189 million (US$133 million post-tax) in the Consolidated Income Statement and was included in Group and unallocated items.

Assets write-off

On 23 August 2022, the Group announced that it would not proceed with an investment in the Dendrobium Next Domain project at Illawarra Metallurgical Coal following its consideration of recently completed study work and extensive analysis of alternatives considered for the complex. As a result of the decision in August 2022, the Group wrote off US$51 million (US$35 million post-tax) of costs previously capitalised in relation to the project which were recognised within expenses excluding finance costs in the Consolidated Income Statement. The write-off related to capitalised exploration and evaluation assets previously included in property, plant and equipment on the Consolidated Balance Sheet.

Tax adjustments relating to the Sierra Gorda acquisition

During the year, the Group recognised an income tax benefit of US$31 million relating to tax liabilities recognised on the acquisition of Sierra Gorda during FY22. The US$31 million benefit comprises a reassessment of US$17 million and a foreign exchange gain of US$14 million which is separately reported as part of exchange variations of tax balances. The tax adjustments relating to the Sierra Gorda acquisition have been excluded from the Group's Underlying income tax expense on the basis that they do not relate to assessable income earned during its ownership.

Vendor indemnity relating to the Sierra Gorda acquisition

On 17 May 2023, Chilean Mining Tax reforms were passed by the Chilean Congress and subsequently enacted in August 2023. As part of the Group's acquisition of Sierra Gorda during FY22, the Group has the right to claim an indemnity from the vendors for any mining tax changes enacted prior to December 2025. As a result of these changes the Group has recognised other income of US$48 million in the Group's Consolidated Income Statement and a corresponding receivable of US$48 million from the vendors on the Group's Consolidated Balance Sheet in relation to the indemnity.

FY22 US$M	Gross	Tax	Net
Recognition of indirect tax assets	77	(26)	51
Total significant items	77	(26)	51

Recognition of indirect tax assets

Following the Group's decision to participate in the restart of Brazil Aluminium, the Group recognised indirect tax assets of US$77 million that were previously expensed since the smelter was placed on care and maintenance in 2015. The recognition of the indirect tax assets has resulted in a significant one-off amount of US$77 million (US$51 million post-tax) being recognised as other income in the Consolidated Income Statement.

4. **Segment information** continued

(c) Geographical information

The geographical information below analyses statutory Group revenue and non-current assets by location. Revenue is primarily presented by the geographical destination of the product and non-current assets are presented by the geographical location of the operations.

	Revenue from external customers		Non-current assets	
US$M	FY23	FY22	FY23	FY22
Australia	**765**	1,013	**5,239**	5,099
China	**728**	776	**-**	-
India	**304**	581	**-**	-
Japan	**434**	523	**-**	-
Middle East	**326**	283	**-**	-
Mozambique	**346**	458	**488**	497
Netherlands[(1)]	**1,079**	1,255	**1,604**	1,648
Brazil	**192**	125	**765**	695
Russia	**-**	44	**-**	-
South Africa	**495**	633	**882**	933
South Korea	**411**	692	**-**	-
United States of America	**419**	439	**1,193**	2,185
Rest of Asia	**850**	967	**100**	102
Rest of Europe	**776**	1,079	**1**	1
Rest of North America	**234**	278	**1**	1
Rest of Oceania	**70**	92	**-**	-
Rest of South America	**-**	31	**544**	477
Unallocated assets[(2)]	**-**	-	**508**	458
Total	**7,429**	9,269	**11,325**	12,096

(1) Non-current assets include the non-current portion of the shareholder loan receivable from Sierra Gorda.
(2) Comprises other financial assets and deferred tax assets.

5. Expenses excluding finance costs

US$M	Note	FY23	FY22
Changes in inventories of finished goods and work in progress		**(60)**	(133)
Raw materials and consumables used		**2,761**	2,309
Wages, salaries and redundancies		**690**	657
Pension and other post-retirement obligations		**65**	60
External services (including transportation)		**1,175**	1,111
Third party commodity purchases		**600**	718
Depreciation and amortisation		**653**	624
Exchange rate (gains)/losses on restatement of monetary items		**(62)**	(50)
(Gains)/losses on derivative instruments, contingent consideration and other investments measured at FVTPL		**(6)**	(29)
Government and other royalties paid and payable		**286**	295
Exploration expenditure incurred and expensed		**59**	37
Net impairment of financial assets	19	**71**	26
Net impairment of non-financial assets	13	**1,300**	145
Short-term, low-value and variable lease rentals		**69**	77
All other operating expenses		**221**	153
Total		**7,822**	6,000

6. Tax

Income tax expense comprises current and deferred tax and is recognised in the Consolidated Income Statement except to the extent that it relates to items recognised directly in the Consolidated Statement of Comprehensive Income.

(a) Income tax expense

US$M	FY23	FY22
Current income tax (expense)/benefit	**(476)**	(1,006)
Deferred income tax (expense)/benefit	**90**	(18)
Total income tax expense	**(386)**	(1,024)

Income tax expense

Income tax expense for the period is the tax payable on the current period's taxable income based on the applicable income tax rate for each jurisdiction adjusted for changes in deferred tax assets and liabilities attributable to temporary differences and unused tax losses. Current and deferred tax is calculated using the tax rates enacted or substantively enacted at period end and includes any adjustment to tax payable in respect of previous years.

(b) Reconciliation of prima facie tax expense to income tax expense

US$M	FY23	FY22
Profit before tax	**213**	3,693
Deduct: Share of profit/(loss) of equity accounted investments	**246**	272
Profit/(loss) subject to tax	**(33)**	3,421
Income tax on profit/(loss) calculated at 30 per cent	**10**	(1,026)
Tax rate differential on non-Australian income	**1**	72
Exchange variations and other translation adjustments	**4**	(20)
Withholding tax on distributed earnings	**(36)**	(54)
Derecognition of future tax benefits(1)	**(55)**	(7)
Non-deductible impairment charges(1)	**(333)**	-
Non-deductible Colombian royalty	**(24)**	-
Tax adjustments relating to the Sierra Gorda acquisition(2)	**31**	-
Change in tax rates	**-**	(3)
Prior year adjustments	**4**	(5)
Other	**12**	19
Total income tax expense	**(386)**	(1,024)

(1) Primarily relates to the impairment of the Taylor Deposit at Hermosa, which resulted in the Group derecognising US$53 million of deferred tax assets and incurring US$315 million of non-deductible tax expenses. Refer to note 13 Impairment of non-financial assets.

(2) Refer to note 4(b)(ii) Significant items.

Profit from equity accounted investments has been taxed in companies other than South32 Limited, being the companies whose results are disclosed as equity accounted investments in the consolidated financial statements.

Refer to note 26 Equity accounted investments for further details of the Group's equity accounted investments.

6. **Tax** continued

(c) Movement in deferred tax balances

The composition of the Group's net deferred tax assets and liabilities recognised in the Consolidated Balance Sheet and the deferred tax expense (charged)/credited to the Consolidated Income Statement is as follows:

	Deferred tax assets		Deferred tax liabilities		Deferred tax (charged)/credited to the Consolidated Income Statement	
US$M	FY23	FY22	FY23	FY22	FY23	FY22
Type of temporary difference						
Depreciation	**253**	295	**261**	305	**2**	(29)
Employee benefits	**49**	49	**(12)**	(11)	**1**	(3)
Closure and rehabilitation	**234**	208	**(59)**	(51)	**34**	27
Other provisions	**-**	-	**(13)**	(13)	**-**	(4)
Deferred charges	**(52)**	(60)	**-**	-	**8**	7
Non tax-depreciable fair value adjustments, revaluations and mineral rights	**(95)**	(94)	**11**	12	**-**	29
Tax-effected losses	**15**	6	**(54)**	(7)	**57**	-
Brazil deferral incentive[1]	**-**	-	**70**	64	**(6)**	(8)
Leases	**(1)**	-	**(1)**	(1)	**(1)**	(10)
Other	**(13)**	(10)	**7**	9	**(5)**	(27)
Total	**390**	394	**210**	307	**90**	(18)

(1) Our Brazilian subsidiary has received a 75 per cent corporate income tax deferral due to the reinvestment of capital in the North East regions of Brazil. The tax is deferred until earnings are repatriated from Brazil.

Deferred tax is provided using the balance sheet liability method, providing for the tax effect of temporary differences between the carrying amount of assets and liabilities for financial reporting purposes and the amounts used for tax assessment or deduction purposes. The tax effect of certain temporary differences is not recognised, principally with respect to:

- Temporary differences arising on the initial recognition of assets or liabilities (other than those arising in a business combination or in a manner that initially impacted accounting or taxable profit);
- Temporary differences relating to investments and undistributed earnings in subsidiaries, joint ventures and associates to the extent that the Group is able to control its reversal and it is probable that it will not reverse in the foreseeable future; and
- Goodwill.

To the extent that an item's tax base is solely derived from the amount deductible under capital gains tax legislation, deferred tax is determined as if such amounts are not deductible in determining future assessable income.

A deferred tax asset is recognised only to the extent that it is probable that future taxable profits will be available against which the asset can be utilised. Deferred tax assets are reviewed at each balance sheet date and amended to the extent that it is no longer probable that the related tax benefit will be realised. Deferred tax assets and liabilities are offset when they relate to income taxes levied by the same tax authority and the Group has both the right and the intention to settle its current tax assets and liabilities on a net or simultaneous basis.

(d) Unrecognised deferred tax assets and liabilities

The composition of the Group's unrecognised deferred tax assets and liabilities is as follows:

US$M	FY23	FY22
Unrecognised deferred tax assets		
Tax-effected losses[1]	**58**	21
Mineral rights	**617**	589
Impairment of investments in subsidiaries	**949**	945
Closure and rehabilitation	**48**	50
Depreciable assets	**32**	8
Other temporary differences	**1**	-
Total unrecognised deferred tax assets	**1,705**	1,613
Unrecognised deferred tax liabilities		
Taxable temporary differences associated with investments and undistributed earnings in subsidiaries	**33**	39
Total unrecognised deferred tax liabilities	**33**	39

(1) Represents tax losses that have no expiry.

6. **Tax** continued

(e) Tax consolidation

South32 Limited and its 100 per cent owned Australian resident subsidiaries have formed a tax consolidated group with effect from 25 May 2015. South32 Limited is the head entity of the tax consolidated group. Members of the group have entered into a tax sharing agreement in order to allocate income tax expense to the wholly-owned subsidiaries on a stand-alone basis. The tax sharing arrangement provides for the allocation of income tax liabilities between the entities should the head entity default on its tax payment obligations. The possibility of such a default is considered remote at the date of this report.

Members of the tax consolidated group have also entered into a tax funding agreement. The group has applied its allocation approach in determining the appropriate amount of current taxes to allocate to members of the tax consolidated group. The tax funding agreement provides for each member of the tax consolidated group to pay or receive a tax equivalent amount to or from the head entity in accordance with their notional current tax liability or current tax asset. Such amounts are reflected in amounts receivable from or payable to the head entity in their accounts and are settled as soon as practicable after lodgement of the consolidated return and payment of the tax liability.

(f) Future tax developments

The Group continues to monitor the Organisation for Economic Co-operation and Development's Two Pillar Solution in all countries in which the Group operates.

Pillar One measures currently apply only to multinational enterprises that have a global turnover exceeding €20 billion and profitability exceeding 10%, and therefore does not apply to the Group. Pillar Two measures seek to introduce a 15% global minimum tax and will apply to the Group given its annual turnover exceeds the €750 million threshold. The Group notes that the UK Government has substantively enacted Pillar Two legislation in June 2023 and the Australian Government has committed to enacting the rules, however draft legislation is yet to be released.

The Group has adopted the guidance contained in the IASB issued International Tax Reform - Pillar Two Model Rules, which amended IAS 12 Income Taxes, released in May 2023 and applied the mandatory temporary exception to recognise and disclose information about deferred tax assets and liabilities related to Pillar Two income taxes. The Group is currently evaluating the cash tax implications and other impacts of the Pillar Two model rules, and does not expect the impact on the Group to be significant.

(g) Tax transparency report

More detail of the Group's tax outcomes, including country-by-country reporting is included in the 2023 Transparency and Payments to Government Report.

Key estimates, assumptions and judgements

Deferred tax

Judgement is required in assessing whether deferred tax assets and certain deferred tax liabilities are recognised in the Consolidated Balance Sheet. Deferred tax assets are recognised only where it is considered more likely than not that they will be recovered, which is dependent on the generation of sufficient future taxable profits. Deferred tax liabilities arising from temporary differences in investments, caused principally by retained earnings held in foreign tax jurisdictions, are recognised unless repatriation of retained earnings can be controlled and are not expected to occur in the foreseeable future.

Assumptions about the generation of future taxable profits and repatriation of retained earnings depend on management's estimates of future cash flows. These depend on estimates of future production and sales volumes, commodity prices, climate change-related impacts, Mineral Resources and Ore Reserves, operating costs, closure and rehabilitation costs, capital expenditure, dividends and other capital management transactions.

Uncertain tax matters

Judgements are required about the application of the inherently complex income tax legislation in Colombia and Brazil. These judgements are subject to risk and uncertainty, hence there is a possibility that changes in circumstances will alter expectations, which may impact the amount of deferred tax assets and deferred tax liabilities recognised in the Consolidated Balance Sheet and the amount of other tax losses and temporary differences not yet recognised.

Where the final tax outcomes are different from the amounts that were initially recorded, these differences impact the current and deferred tax provisions in the period in which the determination is made. Measurement of uncertain tax and royalty matters considers a range of possible outcomes, including assessments received from tax authorities. Where management is of the view that potential liabilities have a low probability of crystallising, or it is not possible to quantify them reliably, they are disclosed as contingent liabilities.

7. Dividends

US$M	FY23	FY22
Prior year final dividend[1]	**646**	163
Prior year special dividend[1]	**138**	93
Interim dividend[2]	**223**	404
Total dividends declared and paid during the year	**1,007**	660

(1) On 25 August 2022, the Directors resolved to pay a fully franked final dividend of US 14.0 cents per share (US$648 million) and a fully franked special dividend of US 3.0 cents per share (US$139 million) in respect of the 2022 financial year. The dividends were paid on 13 October 2022. In addition to the ESOP Trusts receiving dividends from South32 Limited, a total of 9,665,568 shares were bought back between the declaration and the ex-dividend dates, therefore reducing the dividends paid externally to US$784 million.

(2) On 16 February 2023, the Directors resolved to pay a fully-franked interim dividend of US 4.9 cents per share (US$224 million) in respect of the 2023 financial half year. The dividend was paid on 6 April 2023. In addition to the ESOP Trusts receiving dividends from South32 Limited, a total of 3,292,746 shares were bought back between the declaration and the ex-dividend dates, therefore reducing the dividend paid externally to US$223 million.

Franking account

US$M	FY23	FY22 Restated[1]
Franking credits at the beginning of the year	**678**	344
Credits arising from tax paid/payable by South32 Limited[2]	**243**	559
Credits arising from the receipt of franked dividends	**68**	71
Utilisation of credits arising from the payment of franked dividends	**(426)**	(266)
Exchange rate variations	**(25)**	(30)
Total franking credits available at the end of the year[3]	**538**	678

(1) FY22 comparatives have been restated to allow for foreign exchange rate variations, consistent with current year presentation.

(2) Includes the Australian FY23 income tax liability of US$16 million due in December 2023.

(3) The payment of the final franked FY23 dividend declared after 30 June 2023 will decrease the franking account balance by US$62 million. Refer to note 31 Subsequent events.

8. Earnings per share

Basic earnings per share (EPS) amounts are calculated based on profit or loss attributable to equity holders of South32 Limited and the weighted average number of shares outstanding during the year.

Dilutive EPS amounts are calculated based on profit or loss attributable to equity holders of South32 Limited and the weighted average number of shares outstanding after adjustment for the effects of all dilutive potential shares.

The following reflects the profit or loss and share data used in the basic and diluted EPS computations:

Profit/(loss) attributable to equity holders US$M	FY23	FY22
Profit/(loss) attributable to equity holders of South32 Limited (basic)	**(173)**	2,669
Profit/(loss) attributable to equity holders of South32 Limited (diluted)	**(173)**	2,669

Weighted average number of shares Million	FY23	FY22
Basic EPS denominator[1]	**4,572**	4,647
Shares contingently issuable under employee share ownership plans[2]	**-**	32
Diluted EPS denominator	**4,572**	4,679

(1) The basic EPS denominator is the aggregate of the weighted average number of shares after deduction of the weighted average number of treasury shares outstanding and shares permanently cancelled through the on-market share buy-back program.

(2) The diluted EPS calculation excludes 26,994,090 (FY22: nil) rights which are considered anti-dilutive and are subject to service and performance conditions.

Earnings per share US cents	FY23	FY22
Basic EPS	**(3.8)**	57.4
Diluted EPS	**(3.8)**	57.0

This section shows the assets used to generate the Group's trading performance and the liabilities incurred. Assets and liabilities relating to the Group's financing activities are addressed in the capital structure and financing section, notes 16 to 20.

9. Trade and other receivables

US$M	FY23	FY22
Current		
Trade receivables	**395**	643
Loans to equity accounted investments[1][2]	**114**	7
Other receivables	**269**	194
Total current trade and other receivables[3]	**778**	844
Non-current		
Loans to equity accounted investments[1][2]	**1,790**	1,793
Other receivables	**133**	110
Total non-current trade and other receivables[3]	**1,923**	1,903

(1) Refer to note 29 Related party transactions.
(2) Includes a purchased credit-impaired receivable which is classified as current of US$107 million and non-current of US$1,604 million (FY22: non-current of US$1,648 million). Refer to note 19 Financial assets and financial liabilities.
(3) Net of allowances for expected credit losses of US$2 million (FY22: US$2 million).

Trade receivables generally have terms of up to 30 days. Trade and other receivables which are not held at FVTPL are recognised initially at fair value and subsequently at amortised cost using the effective interest method, less an allowance for expected credit losses.

10. Inventories

US$M	FY23	FY22
Current		
Raw materials and consumables	**519**	455
Work in progress	**333**	338
Finished goods	**250**	189
Total current inventories	**1,102**	982
Non-current		
Raw materials and consumables	**57**	55
Work in progress	**25**	21
Total non-current inventories	**82**	76

The value of inventories carried at net realisable value as at 30 June 2023 was US$222 million (FY22: US$31 million). Inventory write-downs of US$18 million (FY22: US$17 million) were recognised in the year.

Inventories are valued at the lower of cost and net realisable value. Cost is determined primarily on the basis of average cost. For processed inventories, cost is derived on an absorption costing basis. Cost comprises the cost of purchasing raw materials and the cost of production, including attributable overheads.

11. Property, plant and equipment

FY23 US$M	Land and buildings Right-of-use assets	Land and buildings Owned assets	Plant and equipment Right-of-use assets	Plant and equipment Owned assets	Other mineral assets	Assets under construction	Exploration and evaluation	Total
Cost								
At the beginning of the year	**37**	**2,352**	**943**	**13,204**	**4,547**	**815**	**212**	**22,110**
Additions	**6**	**-**	**91**	**133**	**-**	**815**	**84**	**1,129**
Foreign exchange movements in closure and rehabilitation provisions[1]	**-**	**-**	**-**	**(68)**	**-**	**-**	**-**	**(68)**
Disposals	**-**	**(3)**	**-**	**(112)**	**(140)**	**-**	**(51)**	**(306)**
Transfers and other movements	**-**	**64**	**17**	**251**	**63**	**(395)**	**-**	**-**
At the end of the year	**43**	**2,413**	**1,051**	**13,408**	**4,470**	**1,235**	**245**	**22,865**
Accumulated depreciation and impairments								
At the beginning of the year	**15**	**1,438**	**316**	**9,239**	**2,050**	**51**	**13**	**13,122**
Depreciation	**3**	**78**	**64**	**402**	**94**	**-**	**-**	**641**
Net impairments[2]	**-**	**-**	**-**	**-**	**1,049**	**119**	**132**	**1,300**
Disposals	**-**	**-**	**-**	**(108)**	**(140)**	**-**	**-**	**(248)**
At the end of the year	**18**	**1,516**	**380**	**9,533**	**3,053**	**170**	**145**	**14,815**
Net book value at 30 June 2023[3]	**25**	**897**	**671**	**3,875**	**1,417**	**1,065**	**100**	**8,050**

(1) Refer to note 15 Provisions.
(2) Refer to note 13 Impairment of non-financial assets.
(3) Includes US$98 million of land and buildings, US$37 million of plant and equipment, US$580 million of other mineral assets, US$328 million of assets under construction and US$51 million of exploration and evaluation expenditure that relates to the Hermosa project.

Capital expenditure commitments as at 30 June 2023 were US$193 million (FY22: US$114 million).

FY22 US$M	Land and buildings Right-of-use assets	Land and buildings Owned assets	Plant and equipment Right-of-use assets	Plant and equipment Owned assets	Other mineral assets	Assets under construction	Exploration and evaluation	Total
Cost								
At the beginning of the year	50	2,299	906	13,061	4,468	594	153	21,531
Additions	9	-	57	152	-	547	59	824
Acquisition of subsidiaries and joint operations[1]	-	22	1	95	-	5	-	123
Foreign exchange movements in closure and rehabilitation provisions[2]	-	-	-	(127)	-	-	-	(127)
Disposals	(22)	(2)	(21)	(171)	(25)	-	-	(241)
Transfers and other movements	-	33	-	194	104	(331)	-	-
At the end of the year	37	2,352	943	13,204	4,547	815	212	22,110
Accumulated depreciation and impairments								
At the beginning of the year	28	1,396	274	9,001	1,894	-	-	12,593
Depreciation	7	67	51	415	79	-	-	619
Net impairments[3]	-	(15)	7	(17)	102	51	13	141
Disposals	(20)	(2)	(17)	(167)	(25)	-	-	(231)
Transfers and other movements	-	(8)	1	7	-	-	-	-
At the end of the year	15	1,438	316	9,239	2,050	51	13	13,122
Net book value at 30 June 2022[4]	22	914	627	3,965	2,497	764	199	8,988

(1) Relates to the acquisition of an additional 16.6 per cent shareholding and related rights in Mozal Aluminium in FY22.
(2) Refer to note 15 Provisions.
(3) Refer to note 13 Impairment of non-financial assets.
(4) Includes US$77 million of land and buildings, US$37 million of plant and equipment, US$1,629 million of other mineral assets, US$230 million of assets under construction and US$122 million of exploration and evaluation related expenditure that relates to the Hermosa project.

11. Property, plant and equipment continued

(a) Property, plant and equipment

Property, plant and equipment is held at cost less accumulated depreciation and impairment charges. Cost is the fair value of consideration given to acquire the asset at the time of its acquisition or construction and includes the direct cost of bringing the asset to the location and condition necessary for operation and its estimated future cost of closure and rehabilitation.

(b) Assets under construction

When Ore Reserves are estimated and development of commercial production is approved, capitalised exploration and evaluation expenditure is reclassified to assets under construction. All subsequent development expenditure is capitalised and classified as assets under construction, provided commercial viability conditions continue to be satisfied.

All assets included in assets under construction are reclassified to other categories in property, plant and equipment when the asset is available and ready for use in the location and condition necessary for it to be capable of operating in the manner intended.

(c) Exploration and evaluation expenditure

Exploration is defined as the search for potential mineralisation after the Group has obtained legal rights to explore in a specific area and includes topographical, geological, geochemical and geophysical studies and exploratory drilling, trenching and sampling.

Evaluation is defined as the determination of the technical feasibility and commercial viability of a particular prospect. Activities conducted during the evaluation phase include the determination of the tonnage and grade and/or quality of the deposit, examination and testing of extraction methods and metallurgical or treatment process, surveys of transportation and infrastructure requirements, and market and finance studies.

Exploration and evaluation expenditure (including amortisation of capitalised licence and lease costs) is charged to the Consolidated Income Statement as incurred except in the following circumstances, in which case the expenditure may be capitalised:

- The existence of a commercially viable mineral deposit has been established as a result of a reasonable prospect for the eventual economic extraction; or
- The exploration and evaluation activity is within an area of interest which was previously acquired as an asset acquisition or in a business combination and was measured at fair value on acquisition.

In addition, drilling costs incurred at a producing mine for the purpose of improving confidence of the existing resource may be capitalised when the following criteria are satisfied:

- The drilling occurs within the existing physical boundaries of the area defined as the resource; and
- The drilling costs are incurred in resources which are economically recoverable.

Capitalised exploration and evaluation expenditure considered to be a tangible asset is recognised as a component of property, plant and equipment at cost less impairment charges. Otherwise, it is recognised as an intangible asset (such as certain licence and lease arrangements). In determining whether the purchase of an exploration licence or lease is an intangible asset or a component of property, plant and equipment, consideration is given to the substance of the item acquired and not its legal form. Licences or leases purchased which allow exploration over an extended period of time meet the definition of an intangible exploration lease asset where they cannot be reasonably associated with a known Mineral Resource.

(d) Other mineral assets

Other mineral assets comprise:

- Capitalised exploration and evaluation expenditure for areas now in production;
- Development expenditure for areas now in production; and
- Mineral rights acquired.

In underground mines, when production and development activity occur concurrently, development activity is separated from production activity, and is capitalised as development expenditure in other mineral assets. Underground mine development activity includes the cost associated with gaining access to an ore deposit which gives rise to a substantive change in the future productive capacity of the mine.

11. **Property, plant and equipment** continued

(e) Leases

At inception of a contract, the Group assesses whether a contract is, or contains, a lease. A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration.

The Group recognises a right-of-use (ROU) asset and a lease liability at the lease commencement date. The ROU asset is initially measured at cost, which comprises the initial amount of the lease liability, plus any initial direct costs incurred and estimated future cost of closure or rehabilitation, less any lease incentives received. The ROU asset is subsequently measured at cost less accumulated depreciation, impairment and any adjustments for remeasurement of the lease liability.

The corresponding lease liability is included within interest bearing liabilities. The lease liability is initially measured based on the value of lease payments not yet paid at the commencement date, discounted to present value using the interest rate implicit in the lease or, if that rate cannot be readily determined, the lessee's incremental borrowing rate. The lessee's incremental borrowing rate is the rate of interest that a lessee would have to pay to borrow over a similar term, and with similar security, the funds necessary to obtain an asset of a similar value to the ROU asset in a similar economic environment.

The lease liability is subsequently measured at amortised cost using the effective interest method. It is remeasured when there is a change in future lease payments arising from a change in a rate or an index or if the Group changes its assessment of whether it will exercise a purchase, extension or termination option. When the lease liability is remeasured, a corresponding adjustment is made to the carrying amount of the ROU asset, or is recognised in the Consolidated Income Statement if the carrying amount of the ROU asset has been reduced to nil.

The nature of the Group's leases predominantly relates to mining equipment and assets supporting the operations in line with the Group's principal activities.

Leased assets are pledged as security for the related lease liabilities.

Short-term, low-value and variable leases

The Group has elected not to recognise ROU assets and lease liabilities for short-term and low-value leases. Short-term leases are leases with a lease term of 12 months or less, while low-value leases are leases where the underlying asset is considered low value. Variable leases are leases with lease payments which are variable but do not depend on a rate or an index. The Group recognises the lease payments associated with these leases as an expense in the Consolidated Income Statement on a straight-line basis over the lease term. If variable leases have a fixed component, these would be recognised in the Consolidated Balance Sheet.

Total cash outflows for lease obligations consist of US$98 million (FY22: US$99 million) for lease liabilities recognised in the Consolidated Balance Sheet and US$69 million (FY22: US$77 million) for short-term, low-value and variable leases recognised in the Consolidated Income Statement.

(f) Depreciation and amortisation

The carrying amounts of property, plant and equipment are depreciated to their estimated residual values over the estimated useful lives of the specific assets concerned. Estimates of residual values and useful lives are reassessed annually and any change in estimate is taken into account in the determination of remaining depreciation charges. Depreciation commences on the date of commissioning. The major categories of property, plant and equipment are depreciated on a units of production or straight-line basis using the estimated lives indicated below. However, where assets are dedicated to an operation or lease and are not readily transferable, the below useful lives are subject to the lesser of the asset category's useful life and the life of the operation or lease.

Category	Useful life
Buildings	25 to 40 years straight-line
Land	not depreciated
Plant and equipment	3 to 30 years straight-line
ROU assets	based on the shorter of the useful life or the lease term (straight-line)
Mineral rights	based on Ore Reserves on a units of production basis
Capitalised exploration, evaluation and development expenditure	based on Ore Reserves on a units of production basis

Key estimates, assumptions and judgements

Useful economic lives of assets

The useful lives of our property, plant and equipment are often dependent, either directly or indirectly, on the reserve life of the orebody to which they relate. Changes in economic assumptions used to estimate Ore Reserves and/or the timing of closure of operations, including the Group's expectations with respect to climate change-related risks, may impact the estimated useful lives of the specific assets concerned.

Refer to note 2(c) Key estimates, assumptions and judgements for further details regarding climate change-related risks and opportunities, and Mineral Resources and Ore Reserves as sources of estimation uncertainty.

12. Intangible assets

FY23 US$M	Goodwill	Other intangibles	Total
Cost			
At the beginning of the year	**139**	**284**	**423**
Additions	**-**	**69**	**69**
Disposals	**-**	**(25)**	**(25)**
At the end of the year	**139**	**328**	**467**
Accumulated amortisation and impairments			
At the beginning of the year	**-**	**237**	**237**
Amortisation charge for the year	**-**	**13**	**13**
Disposals	**-**	**(25)**	**(25)**
At the end of the year	**-**	**225**	**225**
Net book value at 30 June 2023	**139**	**103**	**242**

FY22 US$M	Goodwill	Other intangibles	Total
Cost			
At the beginning of the year	139	278	417
Additions	-	4	4
Acquisition of subsidiaries and joint operations(1)	-	2	2
At the end of the year	139	284	423
Accumulated amortisation and impairments			
At the beginning of the year	-	228	228
Amortisation charge for the year	-	5	5
Impairments for the year	-	4	4
At the end of the year	-	237	237
Net book value at 30 June 2022	139	47	186

(1) Relates to the acquisition of an additional 16.6 per cent shareholding and related rights in Mozal Aluminium in FY22.

(a) Goodwill

Where the fair value of consideration paid for a business combination exceeds the fair value of the Group's share of the identifiable net assets acquired, the difference is treated as purchased goodwill. Where the fair value of the Group's share of the identifiable net assets acquired exceeds the fair value of consideration paid, the difference is immediately recognised in the Consolidated Income Statement. Goodwill is not amortised, however, its carrying amount is assessed annually against its recoverable amount.

(b) Other intangible assets

Amounts paid for the acquisition of identifiable intangible assets, such as software, licences and contract based intangible assets are capitalised at the fair value of consideration paid and are recognised at cost less accumulated amortisation and impairment charges. Identifiable intangible assets with a finite life are amortised on a straight-line basis over their expected useful life from when the asset is ready for use. The useful lives are as follows:

Category	Useful life
Software and licences	5 years
Contract based intangible assets	up to 35 years

The Group has no identifiable intangible assets for which the expected useful life is indefinite.

13. Impairment of non-financial assets

In testing for indications of impairment and performing impairment calculations, assets are considered as collective groups and referred to as CGUs. Impairment tests are carried out annually for CGUs containing goodwill and when there is an indication of impairment or impairment reversal for all other CGUs. The Group uses discounted cash flow valuation ranges to assess whether there is an indicator of impairment or impairment reversal for its CGUs. For any resulting impairment testing, and for CGUs containing goodwill, the Group uses the higher of fair value less cost of disposal (FVLCD) and its value in use to assess the recoverable amount.

If the carrying value of the CGU exceeds its recoverable amount, the CGU is impaired and an impairment loss is charged to the Consolidated Income Statement. Previously impaired CGUs are reviewed for possible reversal of impairment at each reporting date. Impairment reversals cannot exceed the carrying value that would have been determined (net of depreciation) had no impairment loss been recognised for the CGU. Goodwill is not subject to impairment reversal.

For areas not yet in production, any mineral rights acquired, together with subsequent capitalised exploration and evaluation expenditure, are reviewed to determine the appropriateness of continuing to carry forward costs in relation to that area of interest. Once the technical feasibility and commercial viability of an area of interest are demonstrated, exploration and evaluation assets attributable to that area of interest are tested for impairment.

The Group recognised the following net impairment for the year ended 30 June 2023:

US$M	Note	FY23	FY22
Impairment			
Property, plant and equipment[1]	11	**1,300**	176
ROU assets[1]	11	**-**	7
Intangible assets	12	**-**	4
Impairment reversal			
Property, plant and equipment[2]	11	**-**	(42)
Total net impairment		**1,300**	145

(1) FY23 relates to a US$1,300 million impairment of the Taylor Deposit within the Hermosa segment. FY22 relates to a US$183 million impairment included in Group and unallocated items in respect of Eagle Downs. This includes a US$176 million impairment of property, plant and equipment and a US$7 million impairment of ROU assets.

(2) FY22 relates to a US$42 million impairment reversal included within the Brazil Aluminium segment.

(a) Recognised impairments - 30 June 2023

Hermosa – Taylor Deposit

In August 2018, the Group completed its acquisition of the Hermosa project located in Arizona, United States. The Hermosa project comprises the zinc-lead-silver sulphide deposit (Taylor Deposit), the manganese-zinc-silver oxide deposit (Clark Deposit) and a land package with the potential for further polymetallic and copper mineralisation (Land Package). In FY23, the Group advanced the feasibility study for the Taylor Deposit, completed a pre-feasibility selection study for the Clark Deposit and announced that the US Federal Permitting Improvement Steering Council, an independent federal agency, had confirmed the Hermosa project as the first mining project added to the FAST-41 process. Since acquisition, the fair value of the Taylor Deposit has been negatively impacted by delayed first production as a result of COVID-19 related restrictions and significant dewatering requirements, as well as capital cost escalation in line with industry-wide inflation.

Recently completed study work confirmed that the Taylor Deposit and the Clark Deposit can be developed independently. As a result, the Group identified three separate areas of interest within the Hermosa project: the Taylor Deposit, the Clark Deposit and the Regional Land Package. On separation into three separate areas of interest, the Group allocated the carrying value of the previous single Hermosa area of interest to each of the newly identified and separate areas of interest.

As a result of the study work to date, the Group identified an impairment indicator for the Taylor Deposit and recognised a resulting impairment of property, plant and equipment of US$1,300 million in FY23 within expenses excluding finance costs in the Consolidated Income Statement. The impairment of US$1,300 million includes US$1,049 million recognised in other mineral assets, US$119 million recognised in assets under construction and US$132 million recognised in exploration and evaluation. The recoverable amount of the Taylor Deposit was determined as US$482 million based on its FVLCD.

13. Impairment of non-financial assets continued

(a) Recognised impairments - 30 June 2023 continued

Hermosa – Taylor Deposit continued

The fair value measurement was categorised as a Level 3 fair value based on the inputs in the discounted cashflow valuation model (refer to note 19 Financial assets and financial liabilities). The recoverable amount was informed by inputs from the feasibility study in progress for the Taylor Deposit, including the expected technical performance of the deposit as well as expected capital and operating costs for the life of the operation. The determination of FVLCD was most sensitive to:

- Zinc, lead and silver prices;
- Pre-production capital expenditure;
- Mineral Resource estimation;
- Development approvals; and
- Discount rate

Zinc, lead and silver prices - The long-run zinc, lead, and silver prices, in real terms, used in the FVLCD determinations were within the following ranges:

FY23	Assumptions used
Zinc (US$/t)	2,700 to 3,200
Lead (US$/t)	2,000 to 2,100
Silver (US$/oz)	20 to 22

Pre-production capital expenditure – The calculation of FVLCD includes an estimate of pre-production capital to support the development of the Taylor Deposit to its nameplate capacity of up to 4.3 million tonnes per annum. Key inputs including steel, cement and electrical components are subject to uncertainties, including industry-wide inflation.

Mineral Resource estimation - The Mineral Resource estimate of the Taylor Deposit is reported in accordance with the JORC Code, and the ASX Listing Rules (Chapter 5): Additional reporting on mining and oil and gas production and exploration activities. Refer to the Mineral Resources and Ore Reserves section of note 2(c) for further information on these estimates.

Development approvals – Construction is planned to commence in late FY24, subject to a final investment decision for the Taylor Deposit. The addition of the Hermosa project to the FAST-41 process has reduced the expected timing of Federal environmental approvals and permits by approximately two years. A Record of Decision (RoD) to permit surface disturbance and additional tailings storage on unpatented land will require completion of the National Environmental Policy Act process with the United States Forest Service. The ramp-up to planned nameplate production could be impacted if the RoD is delayed as production will have to be slowed due to tailings capacity restrictions on patented lands.

Discount rate - In determining the FVLCD, a real US$ post tax discount rate range of between 6 and 8 per cent was applied to discount future cash flows expressed in real terms.

The following table illustrates the sensitivity of the recoverable amount of the Taylor Deposit based on a reasonably possible change in key assumptions. Owing to the complexity of the relationships between each key assumption, the analysis was performed for each assumption individually (all other assumptions held constant).

FY23	Change in key	Impact on profit/(loss) after tax	
US$M	assumption	Favourable	Unfavourable
Zinc prices	10%	**235**	**(235)**
Lead prices	10%	**200**	**(200)**
Silver prices	10%	**120**	**(120)**
Pre-production capital expenditure	10%	**205**	**(205)**
Discount rate	100 basis points	**335**	**(275)**

13. Impairment of non-financial assets continued

(b) Recognised impairments - 30 June 2022

Eagle Downs Metallurgical Coal

In October 2021, the Group announced the commencement of a process to investigate the potential divestment of our interest in the Eagle Downs Metallurgical Coal development option. In December 2021, as part of the negotiation for sale, the Group received non-binding offers from external parties which, in combination with the long-term market outlook for metallurgical coal demand and prices, resulted in the recognition of an impairment of US$79 million for the Eagle Downs area of interest. The impairment was recognised within expenses excluding finance costs in the Consolidated Income Statement.

In April 2022, a preferred bidder withdrew from the negotiations and the Group revised its recoverable amount of the Eagle Downs area of interest to US$nil, bringing the total impairment recognised for the Eagle Downs area of interest in FY22 to US$183 million.

The long-run metallurgical coal prices and exchange rates, in real terms, used as part of the Group's FVLCD determinations at 30 June 2022 were within the following ranges as published by market commentators:

FY22	Assumptions used
Metallurgical coal (US$/t)	135 to 175
Foreign exchange rates (A$ to US$)	0.71 to 0.80

The fair value measurement was categorised as a Level 3 fair value based on the inputs in the discounted cashflow valuation model in combination with the use of the market approach (refer to note 19 Financial assets and financial liabilities). In determining the FVLCD, a real US$ post tax discount rate range of between six and eight per cent was applied to discount future cash flows expressed in real terms.

In addition to the impairment of ROU assets of US$7 million, the impairment of US$176 million for property, plant and equipment of Eagle Downs includes US$3 million recognised in land and buildings, US$7 million recognised in plant and equipment, US$102 million recognised in other mineral assets, US$51 million recognised in assets under construction, and US$13 million recognised in exploration and evaluation.

Brazil Aluminium

On 6 January 2022, the Group announced its decision to participate in a restart of the Brazil Aluminium smelter. The Group assessed the implications of the restart decision and reviewed the impact on the carrying value of the Brazil Aluminium CGU as at 31 December 2021.

At 31 December 2021, the Group reversed the full impairment that was recognised when the smelter was placed on care and maintenance in 2015, limited to the carrying amount that would have been determined (net of amortisation and depreciation) had no impairment loss been recognised at such time. The recoverable amount remains significantly higher than the carrying amount recorded.

The recoverable amount was based on the smelter's FVLCD and was informed by the Group's production profile and cost profile which were consistent with the Group's commitments to long-term power agreements. The key assumptions used for commodity prices were comparable to market consensus forecasts and foreign exchange rates were aligned with forward market rates.

The fair value measurement was categorised as a Level 3 fair value based on the inputs in the discounted cashflow valuation model (refer to note 19 Financial assets and financial liabilities). In determining the FVLCD, a real US$ post tax discount rate range of between six and eight per cent, and a country risk premium of two per cent, was applied to discount future cash flows expressed in real terms.

The impairment reversal of US$42 million includes US$18 million recognised in land and buildings and US$24 million recognised in plant and equipment, both within property, plant and equipment. The impairment reversal was recognised within expenses excluding finance costs in the Consolidated Income Statement. In addition, the Group recognised indirect tax assets of US$77 million that had been expensed since the smelter was placed on care and maintenance in 2015. Refer to note 4(b)(ii) Significant items.

13. Impairment of non-financial assets continued

(c) Impairment test for CGUs containing goodwill

For the purpose of impairment testing, goodwill has been allocated to CGUs that are expected to benefit from the synergies of the business combination and which represent the level at which management will monitor and manage the goodwill.

The carrying amount of goodwill has been allocated to the following CGU:

US$M	Note	FY23	FY22
Hillside Aluminium		**139**	139
Total goodwill	12	**139**	139

The goodwill arose from the acquisition of Alusaf in Hillside Aluminium (Pty) Ltd and has been allocated to the Hillside Aluminium CGU which comprises the Hillside aluminium smelter. The recoverable amount of the Hillside Aluminium CGU was determined based on a FVLCD calculation and was categorised as a Level 3 fair value based on the inputs in the valuation technique (refer to note 19 Financial assets and financial liabilities). The impairment test for the Hillside Aluminium CGU indicated that no impairment was required. The determination of FVLCD was most sensitive to:

- Production volumes;
- Aluminium and alumina prices;
- Foreign exchange rates;
- Carbon pricing and timing; and
- Discount rate.

Production volumes – estimated production volumes are based on the life of the smelter as determined by management as part of its long-term planning process. Production volumes are influenced by production input costs such as electricity prices, jurisdiction based carbon pricing, and the selling price of aluminium.

Aluminium and alumina prices, and foreign exchange rates – the ranges of aluminium prices, alumina prices and exchange rates, in real terms, used in the FVLCD determinations, together with the potential effect of using reasonably possible alternative assumptions on the recoverable amount, based on unfavourably changing these assumptions by 10 per cent whilst holding all other variables constant, are shown in the table below:

FY23	Assumptions used	Impact on recoverable amount (US$M)
Aluminium prices (US$/t)	2,238 to 2,510	(683)
Alumina prices (US$/t)	343 to 426	(214)
Foreign exchange rates (US$ to ZAR)	16.1 to 19.1	(304)

Carbon pricing and timing – in determining the FVLCD, the current jurisdiction enacted carbon price, in real terms, of ZAR186 to ZAR474 per tonne CO_2-e (FY22: ZAR143 to ZAR150 per tonne CO_2-e) is applied for the life of operation for Scope 1 and 2 emissions, net of operation specific abatement allowances.

Discount rate – in determining the FVLCD, a real US$ post tax discount rate range of between six and eight per cent (FY22: range of between six and eight per cent), and a country risk premium of two per cent (FY22: two per cent) was applied to discount future cash flows expressed in real terms.

The impairment test for the Hillside Aluminium CGU indicated that no impairment was required. At 30 June 2023 the carrying value approximates its recoverable amount. As such any material long-term unfavourable change in the aforementioned key assumptions could lead to the carrying value exceeding the recoverable amount. The relationships between each key assumption are complex, such that a change in one may cause a change in several other inputs.

13. **Impairment of non-financial assets** continued

Key estimates, assumptions and judgements

An assessment as to whether there is any indication of impairment and the calculation of a CGU's recoverable amount requires management to make estimates and assumptions about expected production and sales volumes, commodity prices, foreign exchange rates, Mineral Resources and Ore Reserves, regulatory approvals, operating costs, closure and rehabilitation costs, future capital expenditure, allocation of corporate costs, jurisdiction-specific carbon prices and global carbon pricing. These estimates and assumptions are subject to risk and uncertainty. There is a possibility that changes in circumstances will alter these projections, which may impact the recoverable amount. In such circumstances, some or all of the carrying amount may be impaired or a previously recognised impairment charge may be reversed with the impact recognised in the Consolidated Income Statement.

The key estimates and assumptions used in the assessment of impairment indicators are as follows:

Future production	Life of operation plans based on Mineral Resource and Ore Reserve estimates, economic life of smelters and refineries and, in certain cases, Exploration Targets and expansion projects, including future cost of production. Refer to note 2(c) Key estimates, assumptions and judgements for further details regarding Mineral Resources and Ore Reserves as sources of estimation uncertainty.
Commodity prices and market traded consumables	Forward market and contract prices, and longer-term price estimates which includes an assessment of the impact carbon price assumptions might have.
Exchange rates	Forward market foreign exchange rates, and longer-term price protocol estimates.
Discount rates	Risk-adjusted cost of capital and appropriate to the resource.
Regulatory approvals	Life of operation plans include assumptions associated with the successful application, and timing thereof, of ongoing and future regulatory approvals.
Carbon prices	Actual enacted schemes less allowable abatements, where applicable, and a long-term base case estimate of US$64 per tonne CO_2-e (real) applied to all Scope 1 and 2 emissions from FY40 onwards.

Where impairment testing is undertaken, a range of external sources are considered as further input to the above assumptions.

Exploration and evaluation expenditure

For areas not yet in production, acquired mineral rights, together with subsequent capitalised exploration and evaluation expenditure, require judgement to determine the likelihood of future economic benefits from future development, and whether sufficient data exists to indicate that, although a development in the specific area is likely to proceed, the carrying amount of the exploration and evaluation asset is unlikely to be recovered in full. When facts and circumstances suggest that the carrying amount exceeds the recoverable amount, an impairment test is required which may result in an adjustment to the carrying value of acquired mineral rights together with subsequent capitalised exploration and evaluation expenditure.

At or before the final investment decision for a given area of interest, and once technical feasibility and commercial viability has been demonstrated, the Group assess the carrying value of that area of interest for impairment or, for an area of interest previously impaired, impairment reversal.

13. Impairment of non-financial assets continued

Key estimates, assumptions and judgements continued

Climate change-related risks and opportunities

The Group's forecast commodity prices and other key assumptions represent management's expectations on likely outcomes, with a base case estimation of at least 2°C warming. When assessing whether there is any indication of impairment or impairment reversal, management performs a sensitivity analysis by considering a range of possible scenarios, with no one scenario being conclusive in isolation. Our sensitivity analysis shows that our FY23 1.5°C scenario would result in an increased risk of impairment at the Hillside Aluminium and Illawarra Metallurgical Coal CGUs.

The full costs and benefits of decarbonisation projects are included in the Group's valuations when it has a high degree of confidence that a project will achieve an emissions reduction, which typically aligns with the related capital project being internally approved, or when it is critical for meeting regulatory licensing requirements. The Group's valuations include the cost and benefit of initiatives necessary to meet its medium-term target to halve its operational greenhouse gas (GHG) emissions by 2035 compared to its FY21 baseline. 'Target' is defined as an intended outcome in relation to which we have identified one or more pathways for delivery of that outcome, subject to certain assumptions or conditions. The decarbonisation pathway to meet our goal of net zero GHG emissions by 2050 is not yet fully defined and, as such, the cost and benefit of all associated initiatives are not included in the Group's valuations. 'Goal' is defined as an ambition to seek an outcome for which there is no current pathway(s), but for which efforts will be pursued towards addressing that challenge, subject to certain assumptions or conditions.

The Group utilises an internal price on carbon to inform decision-making and valuations, based on actual enacted schemes less allowable abatements, where applicable, and a long-term base case estimate of US$64 per tonne CO_2-e (real) applied to all Scope 1 and 2 emissions from FY40 onwards. In developing forecast global carbon prices, the Group considers policy and market-driven carbon prices as well as abatement costs, weighted across developed and developing countries.

When assessing for impairment indicators, the Group has considered the sensitivity of operations to changes in carbon prices. The Group's operations are not uniformly impacted by carbon prices. The impact is influenced by the amount of Scope 1 and 2 emissions the operation generates and the jurisdiction in which it operates, in combination with the respective life of operation plans. The Group's CGUs with a higher carbon sensitivity include Worsley Alumina, Hillside Aluminium, Mozal Aluminium and Illawarra Metallurgical Coal.

Previously impaired areas of interest and CGUs

When assessing for impairment reversal indicators, the fundamental characteristics of previously impaired areas of interest and CGUs are relevant to their sensitivity to key estimates and assumptions. For previously impaired areas of interest and CGUs these include:

- Areas of interest that are subject to ongoing study and evaluation, for example the Taylor Deposit at Hermosa;
- CGUs with higher operating margins and with life of operation plans longer than 10 years which are less sensitive to short-term commodity prices and foreign exchange rates, for example Worsley Alumina;
- CGUs with lower operating margins which are highly sensitive to movements in commodity prices and foreign exchange rates, for example South Africa Manganese; and
- CGUs with higher operating margins, shorter life of operation plans and exposure to commodities that display greater price volatility, for example Australia Manganese.

Mozal Aluminium

The Group jointly controls Mozal Aluminium together with the Industrial Development Corporation of South Africa Limited and the Government of the Republic of Mozambique. Electricity supplied to Mozal Aluminium is generated by Hidroeléctrica de Cahora Bassa, a hydro-electric power generator, and supplied via Eskom, the South African state-owned entity which owns and operates South Africa's national electricity grid. Eskom also provides back-up energy to Mozal Aluminium for periods when Hidroeléctrica de Cahora Bassa produces less than its contractual minimum supply of hydro-electric power.

The Group is working with key stakeholders to extend the supply of power from Hidroeléctrica de Cahora Bassa for Mozal Aluminium beyond 2026. Although an extension and pricing of the existing arrangement with Eskom is uncertain, the Group has made a reasonable assumption that an extension to 2030 can be achieved on mutually acceptable commercial terms. Failure to extend the supply of power from Hidroeléctrica de Cahora Bassa will have a material impact on the recoverable amount of Mozal Aluminium.

14. Trade and other payables

US$M	FY23	FY22
Current		
Trade creditors	**854**	813
Other creditors	**131**	176
Total current trade and other payables	**985**	989
Non-current		
Trade creditors	**18**	7
Other creditors	**1**	1
Total non-current trade and other payables	**19**	8

Trade and other payables generally represent liabilities for goods and services provided to the Group prior to the end of the year which were unpaid at the end of the year. These amounts are unsecured. Trade and other payables are included in current liabilities, except for those liabilities where payment is not due within 12 months from the reporting date, which are classified as non-current liabilities.

Trade and other payables, other than financial liabilities held at FVTPL, are stated at their amortised cost and are non-interest bearing. The carrying value of these trade and other payables is considered to approximate fair value due to the short-term nature of the payables.

15. Provisions

US$M	Note	FY23	FY22
Current			
Employee benefits		**177**	171
Closure and rehabilitation		**7**	8
Other		**10**	7
Total current provisions		**194**	186
Non-current			
Employee benefits		**6**	4
Closure and rehabilitation		**1,931**	1,785
Post-retirement employee benefits	22	**33**	34
Other		**16**	12
Total non-current provisions		**1,986**	1,835

15. **Provisions** continued

FY23 US$M	Employee benefits	Closure and rehabilitation	Post-retirement employee benefits	Other	Total
At the beginning of the year	**175**	**1,793**	**34**	**19**	**2,021**
Charge/(credit) for the year to the Consolidated Income Statement:					
Underlying	**167**	**16**	**5**	**7**	**195**
Discounting	**-**	**91**	**-**	**-**	**91**
Net interest expense	**-**	**-**	**3**	**-**	**3**
Exchange rate variations	**(7)**	**(15)**	**(3)**	**1**	**(24)**
Released during the year	**(1)**	**(7)**	**-**	**-**	**(8)**
Amounts capitalised for change in costs and estimates	**-**	**149**	**-**	**-**	**149**
Amounts capitalised for change in discount rate	**-**	**(16)**	**-**	**-**	**(16)**
Foreign exchange amounts capitalised	**-**	**(68)**	**-**	**-**	**(68)**
Amounts taken to retained earnings	**-**	**-**	**(3)**	**-**	**(3)**
Utilisation	**(151)**	**(5)**	**(3)**	**(1)**	**(160)**
At the end of the year	**183**	**1,938**	**33**	**26**	**2,180**

FY22 US$M	Employee benefits	Closure and rehabilitation	Post-retirement employee benefits	Other	Total
At the beginning of the year	201	1,717	41	39	1,998
Charge/(credit) for the year to the Consolidated Income Statement:					
Underlying	156	3	1	6	166
Discounting	-	67	-	-	67
Change in discount rate	-	(2)	-	-	(2)
Net interest expense	-	-	3	-	3
Exchange rate variations	(14)	(19)	(4)	(3)	(40)
Released during the year	(8)	(8)	-	(19)	(35)
Amounts capitalised for change in costs and estimates	-	167	-	-	167
Amounts capitalised for change in discount rate	-	(15)	-	-	(15)
Foreign exchange amounts capitalised	-	(127)	-	-	(127)
Amounts taken to retained earnings	-	-	(3)	-	(3)
Utilisation	(160)	(9)	(4)	(4)	(177)
Acquisition of subsidiaries and joint operations[1]	-	19	-	-	19
At the end of the year	175	1,793	34	19	2,021

(1) Relates to the acquisition of an additional 16.6 per cent shareholding and related rights in Mozal Aluminium in FY22.

(a) Employee benefits

Liabilities for unpaid wages and salaries are recognised in other creditors. Current entitlements to annual leave and accumulating sick leave accrued for services up to the reporting date are recognised in the provision for employee benefits and are measured at the amounts expected to be paid. Entitlements to non-accumulated sick leave are recognised when the leave is taken.

The current liability for long service leave (for which settlement within 12 months of the reporting date cannot be deferred) is recognised in the current provision for employee benefits and is measured in accordance with annual leave described above.

(b) Closure and rehabilitation

The mining, extraction and processing activities of the Group normally give rise to obligations for site closure or rehabilitation. Closure and rehabilitation works can include facility decommissioning and dismantling, removal or treatment of waste materials, site and land rehabilitation.

Provisions for the cost of each closure and rehabilitation program are recognised at the time that environmental disturbance occurs. When the extent of disturbance increases over the life of an operation, the provision is increased accordingly. Costs included in the provision encompass all closure and rehabilitation activity expected to occur progressively over the life of the operation and at, or after, the time of closure, for disturbance existing at the reporting date. Routine operating costs that may impact the ultimate closure and rehabilitation activities, such as waste material handling conducted as an integral part of a mining or production process, are not included in the provision. Costs arising from unforeseen circumstances, such as the contamination caused by unplanned discharges, are recognised as an expense and liability when the event gives rise to an obligation which is probable and capable of reliable estimation.

The timing of the actual closure and rehabilitation expenditure is dependent upon a number of factors such as: the life and nature of the asset; the operating licence conditions; and the environment in which the operation operates. Expenditure may occur before and after closure, and can continue for an extended period of time depending on closure and rehabilitation requirements.

15. Provisions continued

(b) Closure and rehabilitation continued

Closure and rehabilitation provisions are measured based on the expected value of future cash flows, discounted to their present value and determined according to the probability of alternative estimates of cash flows occurring for each operation.

Discount rates used are risk-free interest rates specific to the country in which the operations are located and the expected timing of the closure and rehabilitation expenditure. Material changes in country specific risk-free interest rates may affect the discount rates applied. The Group reviews its discount rates used periodically, with any corresponding change in the provision as a result of revising discount rates capitalised as an asset in the case of open sites or charged/(credited) to the Consolidated Income Statement in the case of closed sites.

When provisions for closure and rehabilitation are initially recognised, the corresponding cost is capitalised as an asset, representing part of the cost of acquiring the future economic benefits of the operation. The capitalised cost of closure and rehabilitation activities is recognised in property, plant and equipment and depreciated accordingly. The value of the provision is progressively increased over time due to the effect of discounting unwind and inflation, creating an expense recognised in finance costs.

Closure and rehabilitation provisions are also adjusted for changes in costs and estimates. Those adjustments are accounted for as a change in the corresponding capitalised cost, except where a reduction in the provision is greater than the depreciated capitalised cost of the related assets, in which case the carrying value is reduced to nil and the remaining adjustment is recognised in the Consolidated Income Statement. In the case of closed sites, changes to estimated costs are recognised immediately in the Consolidated Income Statement. Changes to the capitalised cost result in an adjustment to future depreciation. Adjustments to the estimated amount and timing of future closure and rehabilitation cash flows are a normal occurrence in light of the significant judgements and estimates involved.

(c) Post-retirement employee benefits

This relates to the provision for post-employment defined benefit pension and medical schemes. Refer to note 22 Pension and other post-retirement obligations.

Key estimates, assumptions and judgements

The recognition of closure and rehabilitation provisions requires judgement and is based on significant estimates and assumptions such as:

- The requirements of the relevant local legal and regulatory framework;
- The magnitude of possible contamination;
- The timing, extent and cost of required closure and rehabilitation activity; and
- Potential changes in physical and climate conditions.

These uncertainties may result in future actual expenditure differing from the amounts currently provided.

The Group's expectations and approach in relation to climate change-related risks and opportunities are reflected in the estimates and assumptions noted above. For example, our base case estimation of at least 2°C climate-related warming impacts our life of operations plans, which in turn impacts assumptions regarding timing and cost of closure and rehabilitation activities. Physical impacts of climate change have been considered in the estimation of closure and rehabilitation costs, including timing of relinquishment based on the Group's assessment to date. These estimates will continue to be refined as the Group progresses its assessment of physical risks and development of direct adaptation and mitigation strategies.

The provision recognised for each site is periodically reviewed and updated based on the facts and circumstances available at the time.

In addition to the uncertainties noted above, certain closure and rehabilitation activities may be subject to legal disputes and depending on the ultimate resolution of these disputes, the final liability for such matters could vary.

If risk-free interest rates were decreased by 0.5 per cent (in real terms), the provision would increase by approximately US$261 million.

This section outlines how the Group manages its capital and related financing activities.

16. Cash and cash equivalents

Cash and cash equivalents include cash at bank and on hand as well as short-term deposits.

US$M	FY23	FY22
Cash	**611**	763
Short-term deposits	**647**	1,602
Cash and cash equivalents[1][2]	**1,258**	2,365

(1) Cash and cash equivalents include US$6 million (FY22: US$4 million) which is restricted by legal or contractual arrangements.
(2) Cash and cash equivalents include US$287 million (FY22: US$335 million) consisting of short-term deposits and cash managed by the Group on behalf of its equity accounted investments. The corresponding amount payable is included in note 17 Interest bearing liabilities.

17. Interest bearing liabilities

US$M	FY23	FY22
Current		
Lease liabilities	**51**	40
Unsecured loans from equity accounted investments[1]	**287**	335
Unsecured other	**27**	27
Total current interest bearing liabilities	**365**	402
Non-current		
Lease liabilities	**623**	610
Senior unsecured notes	**690**	689
Unsecured other	**63**	126
Total non-current interest bearing liabilities	**1,376**	1,425

(1) Refer to note 16 Cash and cash equivalents and note 29 Related party transactions.

On 14 April 2022, the Group completed the issuance of US$700 million of senior unsecured notes pursuant to Rule 144A and Regulation S of the *United States Securities Act of 1933*. The Group utilised the cash proceeds from the offering, together with cash on hand, for the repayment in full of the amounts drawn down under its acquisition bridge facility used to partly fund the acquisition of a 45 per cent interest in Sierra Gorda in FY22. The notes will pay interest on 14 April and 14 October each year at a rate of 4.35 per cent per annum and mature in 2032.

All borrowings are initially recognised at their fair value net of directly attributable transaction costs. Subsequent to initial recognition, interest bearing liabilities are measured at amortised cost using the effective interest method. Gains and losses are recognised in the Consolidated Income Statement when the liabilities are derecognised. Interest bearing liabilities are classified as current liabilities, except when the Group has an unconditional right to defer settlement for at least 12 months after the reporting date, in which case the liabilities are classified as non-current.

17. Interest bearing liabilities continued

A reconciliation of movements in interest bearing liabilities to cash flows arising from financing activities is set out below:

FY23 US$M	Lease liabilities	Other interest bearing liabilities	Total interest bearing liabilities
At the beginning of the year	**650**	**1,177**	**1,827**
Cash movements:			
Repayment of interest bearing liabilities	**(46)**	**(87)**	**(133)**
Interest paid	**(52)**	**(57)**	**(109)**
Non-cash movements:			
Interest expense	**52**	**59**	**111**
Net increase/(decrease) in interest bearing liabilities[1]	**93**	**(41)**	**52**
Effect of foreign exchange rate changes	**(23)**	**16**	**(7)**
At the end of the year	**674**	**1,067**	**1,741**

(1) The non-cash decrease in other interest bearing liabilities relates to an agreement with a subsidiary of Seriti Resources Holdings Pty Ltd (Seriti) to settle the vendor loan facility, previously recognised within other financial assets, against the related rehabilitation fund liability. Both facilities were originally provided to Seriti as part of the divestment of South Africa Energy Coal. Refer to note 19(a)(iv) Measurement of fair value.

FY22 US$M	Lease liabilities	Other interest bearing liabilities	Total interest bearing liabilities
At the beginning of the year	687	520	1,207
Cash movements:			
Proceeds from interest bearing liabilities	-	1,527	1,527
Repayment of interest bearing liabilities	(46)	(886)	(932)
Interest paid	(53)	(17)	(70)
Non-cash movements:			
Interest expense	53	24	77
Net increase/(decrease) in interest bearing liabilities	66	-	66
Effect of foreign exchange rate changes	(57)	9	(48)
At the end of the year	650	1,177	1,827

18. Net finance income/(costs)

US$M	FY23	FY22
Finance income		
Interest on loans to equity accounted investments	**162**	63
Other interest income	**60**	16
Total finance income	**222**	79
Finance costs		
Interest on borrowings	**(68)**	(31)
Interest on lease liabilities	**(52)**	(53)
Discounting on provisions and other liabilities	**(92)**	(65)
Change in discount rate on closure and rehabilitation provisions	**-**	2
Net interest expense on post-retirement employee benefits	**(3)**	(3)
Exchange rate variations on net cash/(debt)	**8**	40
Total finance costs	**(207)**	(110)
Net finance income/(costs)	**15**	(31)

19. Financial assets and financial liabilities

The following table presents the financial assets and liabilities by class at their carrying amounts:

FY23 US$M	Note	Held at FVTPL	Designated as FVOCI	Amortised cost	Total
Financial assets					
Cash and cash equivalents	16	**-**	**-**	**1,258**	**1,258**
Trade and other receivables[1]	9	**105**	**-**	**532**	**637**
Other financial assets:					
Derivative contracts		**1**	**-**	**-**	**1**
Total current financial assets		**106**	**-**	**1,790**	**1,896**
Trade and other receivables[1]	9	**-**	**-**	**1,802**	**1,802**
Other financial assets:					
Investments in equity instruments designated as FVOCI		**-**	**108**	**-**	**108**
Contingent consideration receivable		**10**	**-**	**-**	**10**
Total non-current financial assets		**10**	**108**	**1,802**	**1,920**
Total financial assets		**116**	**108**	**3,592**	**3,816**
Financial liabilities					
Trade and other payables[2]	14	**6**	**-**	**962**	**968**
Interest bearing liabilities	17	**-**	**-**	**365**	**365**
Total current financial liabilities		**6**	**-**	**1,327**	**1,333**
Trade and other payables[2]	14	**-**	**-**	**18**	**18**
Interest bearing liabilities	17	**-**	**-**	**1,376**	**1,376**
Other financial liabilities:					
Contingent consideration payable		**37**	**-**	**-**	**37**
Total non-current financial liabilities		**37**	**-**	**1,394**	**1,431**
Total financial liabilities		**43**	**-**	**2,721**	**2,764**

(1) Excludes current input taxes of US$141 million and non-current input and other taxes of US$121 million included in other receivables. Refer to note 9 Trade and other receivables.
(2) Excludes current input taxes of US$17 million and non-current input and other taxes of US$1 million included in other creditors. Refer to note 14 Trade and other payables.

FY22 US$M	Note	Held at FVTPL	Designated as FVOCI	Amortised cost	Total
Financial assets					
Cash and cash equivalents	16	-	-	2,365	2,365
Trade and other receivables[1]	9	143	-	561	704
Other financial assets:					
Derivative contracts		1	-	-	1
Total current financial assets		144	-	2,926	3,070
Trade and other receivables[1]	9	-	-	1,806	1,806
Other financial assets:					
Investments in equity instruments designated as FVOCI		-	25	-	25
Vendor loan facility		39	-	-	39
Total non-current financial assets		39	25	1,806	1,870
Total financial assets		183	25	4,732	4,940
Financial liabilities					
Trade and other payables[2]	14	20	-	929	949
Interest bearing liabilities	17	-	-	402	402
Other financial liabilities:					
Derivative contracts		6	-	-	6
Total current financial liabilities		26	-	1,331	1,357
Trade and other payables[2]	14	-	-	7	7
Interest bearing liabilities	17	-	-	1,425	1,425
Other financial liabilities:					
Contingent consideration payable		84	-	-	84
Total non-current financial liabilities		84	-	1,432	1,516
Total financial liabilities		110	-	2,763	2,873

(1) Excludes current input taxes of US$140 million and non-current input and other taxes of US$97 million included in other receivables. Refer to note 9 Trade and other receivables.
(2) Excludes current input taxes of US$40 million and non-current input and other taxes of US$1 million included in other creditors. Refer to note 14 Trade and other payables.

19. Financial assets and financial liabilities continued

(a) Accounting classification and fair value

(i) Financial assets

Financial assets are held at FVTPL, amortised cost or designated as FVOCI based on the business model for managing the financial assets and the contractual terms of the cashflows.

Classification	Initial recognition and subsequent measurement
Held at FVTPL	Financial assets held at FVTPL, including derivative financial assets, are initially recognised at fair value, with transaction costs recognised immediately in the Consolidated Income Statement. Financial assets held at FVTPL are subsequently remeasured through the Consolidated Income Statement, including any interest income, dividend income and foreign exchange gains and losses, unless hedge accounting is applied.
Amortised cost	At initial recognition, trade receivables that do not have a significant financing component are recognised at their transaction price. Other financial assets held at amortised cost are initially recognised at fair value plus related transaction costs. Financial assets subsequently measured at amortised cost are measured using the effective interest method and reduced by any impairment losses. Interest income, foreign exchange gains and losses, impairments and any gain or loss on derecognition, are recognised in the Consolidated Income Statement.
Designated as FVOCI	For certain investments in equity instruments, the Group has made an irrevocable election to present fair value changes in other comprehensive income. Investments in equity instruments designated as FVOCI are subsequently remeasured through other comprehensive income and are not reclassified to the Consolidated Income Statement. Dividends are recognised as other income in the Consolidated Income Statement unless the dividend clearly represents a recovery of part of the cost of the investment.

(ii) Financial liabilities

Financial liabilities are held at FVTPL or amortised cost.

Classification	Initial recognition and subsequent measurement
Held at FVTPL	Financial liabilities held at FVTPL, including derivative financial liabilities, are initially recognised at fair value, with transaction costs recognised immediately in the Consolidated Income Statement. Financial liabilities held at FVTPL are subsequently remeasured through the Consolidated Income Statement, including any interest expense and foreign exchange gains and losses, unless hedge accounting is applied.
Amortised cost	Financial liabilities held at amortised cost are recognised initially at fair value, net of transaction costs incurred. Financial liabilities held at amortised cost are subsequently measured using the effective interest method. Interest expense and foreign exchange gains and losses are recognised in the Consolidated Income Statement. Any gain or loss on derecognition is also recognised in the Consolidated Income Statement.

(iii) Embedded derivatives

A derivative embedded within a hybrid contract, with a financial liability or non-financial host, is separated from the host and accounted for as a separate derivative if:

- the economic characteristics and risks are not closely related to the host;
- a separate instrument with the same terms as the embedded derivative would meet the definition of a derivative; and
- the hybrid contract is not measured at FVTPL.

Embedded derivatives are measured at fair value with changes in fair value recognised in the Consolidated Income Statement.

A derivative embedded within a hybrid contract containing a financial asset host is not accounted for separately. The financial asset host together with the embedded derivative is required to be classified in its entirety as a financial asset held at FVTPL.

19. Financial assets and financial liabilities continued

(a) Accounting classification and fair value continued

(iv) Measurement of fair value

The carrying values of the Group's financial assets and liabilities measured at amortised cost are equal to or approximate their respective fair values, except for senior unsecured notes, which have a fair value of US$617 million (FY22: US$650 million), and lease liabilities, for which a fair value has not been determined. The fair value of the Group's senior unsecured notes is estimated based on quoted market prices at the reporting date and are classified as Level 1 on the fair value hierarchy as shown below.

For financial assets and liabilities measured at fair value, the Group uses quoted marked prices in active markets for identical assets where available. Where no price information is available from a quoted market source, alternative market mechanisms or recent comparable transactions, the fair value is estimated based on the Group's views on relevant future prices, net of valuation allowances to accommodate liquidity, modelling, credit and other risks implicit in such estimates.

The following table shows the Group's financial assets and liabilities carried at fair value with reference to the nature of valuation inputs used:

Level 1 Valuation is based on unadjusted quoted prices in active markets for identical financial assets and liabilities.

Level 2 Valuation is based on inputs (other than quoted prices included in Level 1) that are observable for the financial asset or liability, either directly (i.e. as unquoted prices) or indirectly (i.e. derived from prices).

Level 3 Valuation includes inputs that are not based on observable market data.

FY23 US$M	Level 1	Level 2	Level 3	Total
Financial assets and liabilities				
Trade and other receivables	**-**	**105**	**-**	**105**
Trade and other payables	**-**	**(6)**	**-**	**(6)**
Derivative contract assets	**1**	**-**	**-**	**1**
Investments in equity instruments designated as FVOCI	**101**	**-**	**7**	**108**
Contingent consideration receivable	**-**	**-**	**10**	**10**
Contingent consideration payable	**-**	**-**	**(37)**	**(37)**
Total	**102**	**99**	**(20)**	**181**

FY22 US$M	Level 1	Level 2	Level 3	Total
Financial assets and liabilities				
Trade and other receivables	-	143	-	143
Trade and other payables	-	(20)	-	(20)
Derivative contract assets	1	-	-	1
Derivative contract liabilities	(6)	-	-	(6)
Investments in equity instruments designated as FVOCI	25	-	-	25
Vendor loan facility	-	-	39	39
Contingent consideration payable	-	-	(84)	(84)
Total	20	123	(45)	98

The following table shows the movements in the Group's Level 3 financial assets and liabilities:

US$M	FY23	FY22
At the beginning of the year	**(45)**	52
Addition of financial assets/(liabilities)	**15**	(97)
Reclassification of financial asset from level 3 to level 2(1)	**(39)**	-
Derecognition of financial assets/(liabilities)	**-**	(5)
Unrealised gains/(losses) recognised in the Consolidated Income Statement(2)	**47**	52
Unrealised gains/(losses) recognised in the Consolidated Statement of Comprehensive Income(3)	**2**	(47)
At the end of the year	**(20)**	(45)

(1) The valuation of the vendor loan facility provided to Seriti as part of the Group's divestment of South Africa Energy Coal no longer included inputs that are based on unobservable market data. This financial asset was subsequently settled through agreement with the vendor to offset this facility against the related rehabilitation fund liability, recognised within unsecured other interest bearing liabilities. Refer to note 17 Interest bearing liabilities.

(2) Recognised in expenses excluding finance costs in the Consolidated Income Statement.

(3) Recognised in the financial assets reserve in the Consolidated Statement of Comprehensive Income.

19. Financial assets and financial liabilities continued

(b) Financial risk management objectives and policies

The Group is exposed to market, liquidity and credit risk. These risks are managed in accordance with the Group's portfolio risk management strategy which supports the delivery of the Group's financial targets while protecting its future financial security and flexibility by taking advantage of the natural diversification of the Group's operations and activities. A Cash Flow at Risk (CFaR) framework is used to capture the benefits of diversification and to measure the aggregate impact of financial risks on those financial targets. CFaR is measured on a portfolio basis and is defined as the expected reduction from projected business plan cash flows over a one-year horizon in a pessimistic case. In addition to the CFaR framework, deterministic analysis of a range of operational, commodity price and foreign exchange rate scenarios is also used to measure the potential impact on financial targets.

(i) Market risk

Market risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate because of changes in market prices. Market risk comprises interest rate risk, foreign currency risk and other price risk, such as equity price risk and commodity price risk.

The Group's activities expose it to market risks associated with movements in interest rates, foreign currencies and commodity prices. The Group predominantly manages currency impacts, input costs and commodity prices on a floating or index basis. This strategy gives rise to a risk of variability in earnings which is measured under the CFaR framework.

In executing the Group's strategy, financial instruments may be employed for risk mitigation purposes within a strict Board of Directors approved mandate, or to align the total Group exposure to the relevant index target in the case of commodity sales, operating costs or debt issuances.

Interest rate risk

The Group had the following exposure to interest rate risk:

US$M	FY23	FY22
Financial assets		
Cash and cash equivalents	**1,218**	2,306
Trade and other receivables	**153**	102
Other financial assets	**-**	39
Financial liabilities		
Interest bearing liabilities	**(286)**	(334)
Net exposure	**1,085**	2,113

The following table demonstrates the sensitivity to a reasonably possible change in interest rates on that portion of financial assets and liabilities affected. With all other variables held constant, the Group's profit/(loss) after tax would increase/(decrease) as follows:

	Impact on profit/(loss) after tax	
US$M	FY23	FY22
Increase of 100 basis points	**8**	16
Decrease of 100 basis points	**(8)**	(13)

The sensitivity analysis assumes that the change in interest rates is effective from the beginning of the year and the fixed/floating mix and balances are constant over the year. However, interest rates and the profile of the Group's financial assets and liabilities may not remain constant over the coming year and therefore such sensitivity analysis should be used with care.

19. **Financial assets and financial liabilities** continued

(b) **Financial risk management objectives and policies** continued

(i) Market risk continued

Foreign currency risk

The Group's potential currency exposures comprise:

- Translational exposure in respect of non-functional currency monetary items; and
- Transactional exposure in respect of non-functional currency expenditure and revenues.

The functional currency of the Group's operations is primarily the US dollar. Certain operating and capital expenditure is incurred by operations in currencies other than their functional currency. To a lesser extent, certain sales revenue is earned in currencies other than the functional currency of the operation, and certain exchange control restrictions may require funds to be maintained in currencies other than the operations functional currency. When required, the Group may enter into forward exchange contracts.

The following table shows the principal foreign currency risk arising from financial assets and liabilities by currency of denomination:

US$M	FY23	FY22
Australian dollar	**(946)**	(860)
Brazilian real	**(103)**	(63)
Colombian peso	**(70)**	(47)
South African rand	**74**	98

Based on the Group's net financial assets and liabilities as at 30 June, a weakening of the US dollar against these currencies as illustrated in the table below, with all other variables held constant, would increase/(decrease) the Group's profit/(loss) after tax, as follows:

	Impact on profit/(loss) after tax	
US$M	FY23	FY22
10% movement in Australian dollar	**(67)**	(60)
10% movement in Brazilian real	**(10)**	(6)
10% movement in Colombian peso	**(7)**	(5)
10% movement in South African rand	**7**	10

The Group's other comprehensive income is not exposed to any significant fluctuations as a result of foreign exchange risk arising from financial assets and liabilities.

Commodity price risk

Contracts for the sale and physical delivery of commodities are executed whenever possible on a pricing basis intended to achieve a relevant index target. Where pricing terms deviate from the index, the Group may choose to use derivative commodity contracts to realise the index price. Contracts for the physical delivery of commodities are not typically financial instruments and are not recognised in the Consolidated Balance Sheet.

19. **Financial assets and financial liabilities** continued

(b) **Financial risk management objectives and policies** continued

(i) Market risk continued

Provisionally priced commodity sales and purchases contracts

Provisionally priced sales or purchases contracts are those for which price finalisation, referenced to the relevant index, is outstanding at the reporting date. Provisional pricing mechanisms embedded within these sales and purchases arrangements have the character of a commodity derivative and are carried at FVTPL as part of trade receivables or trade creditors. Fair value movements on provisionally priced sale contracts are disclosed as other revenue in the Group's segment results, refer to note 4(b) Segment results. The Group's exposure at 30 June 2023 to the impact of movements in commodity prices on provisionally invoiced sale and purchase volumes was predominantly around nickel, silver, lead, zinc, metallurgical coal and aluminium.

The Group had 3.7kt of nickel, 2.6Moz of silver, 24.4kt of lead, 5.4kt of zinc, 30.0kt of metallurgical coal, 10.0kt of aluminium and 31.5kt of alumina exposure at 30 June 2023 (FY22: 2.3kt of nickel, 1.8Moz of silver, 30.0kt of lead, 5.7kt of zinc, 27.1kt of aluminium) that was provisionally priced. The final price of these sales or purchases will be determined during the first half of FY24. A 10 per cent change in the realised price of these commodities, with all other factors held constant, would increase or decrease profit/(loss) after tax by US$19 million (FY22: US$18 million). The relationship between commodity prices and foreign currencies is complex and foreign exchange rates and commodity prices may move concurrently in response to market conditions. These sensitivities should therefore be used with care.

(ii) Liquidity risk

The Group's liquidity risk arises from the possibility that it may not be able to settle or meet its obligations as they fall due. Operational, capital and regulatory requirements are considered in the management of liquidity risk, in conjunction with short and long-term forecast information.

In line with the Group's policy on counterparty credit exposure, the Group only uses counterparties of a high credit standing for the investment of any excess cash.

The entities in the Group are funded by a combination of cash generated by the Group's operations, working capital facilities and intercompany loans provided by the Group. Intercompany loans may be funded by a combination of cash, short and long-term debt. Details of the Group's major standby arrangement are as follows:

FY23 US$M	Available	Used	Unused
Revolving credit facility[1]	**1,400**	**-**	**1,400**

(1) The Group has an undrawn revolving credit facility which was extended in December 2022 by one year to December 2027, with the size of the facility in the final year reduced to US$1,200 million.

Maturity profile of financial liabilities

The maturity profiles of financial liabilities, based on the contractual amounts, are as follows:

FY23 US$M	Carrying amount	Total	On demand or less than 1 year	1 to 5 years	More than 5 years
Trade and other payables[1]	**986**	**986**	**968**	**-**	**18**
Senior unsecured notes	**690**	**974**	**30**	**122**	**822**
Lease liabilities	**674**	**1,148**	**102**	**331**	**715**
Other interest bearing liabilities	**377**	**383**	**315**	**68**	**-**
Other financial liabilities – contingent consideration payable	**37**	**48**	**-**	**48**	**-**
Total	**2,764**	**3,539**	**1,415**	**569**	**1,555**

(1) Excludes current input taxes of US$17 million and non-current input and other taxes of US$1 million included in other creditors. Refer to note 14 Trade and other payables.

FY22 US$M	Carrying amount	Total	On demand or less than 1 year	1 to 5 years	More than 5 years
Trade and other payables[1]	956	956	949	7	-
Senior unsecured notes[2]	689	1,004	30	122	852
Lease liabilities	650	1,149	90	314	745
Other interest bearing liabilities	488	507	362	85	60
Other financial liabilities – contingent consideration payable	84	109	-	109	-
Other financial liabilities – derivative contracts	6	6	6	-	-
Total	2,873	3,731	1,437	637	1,657

(1) Excludes current input taxes of US$40 million and non-current input and other taxes of US$1 million included in other creditors. Refer to note 14 Trade and other payables.
(2) The maturity profile of senior unsecured notes was restated to include future coupon payments, consistent with current year presentation.

19. **Financial assets and financial liabilities** continued

(b) **Financial risk management objectives and policies** continued

(iii) Credit risk

Credit risk management

The Group has credit risk management policies in place covering the credit analysis, approvals and monitoring of counterparty exposures. As part of these processes the ongoing creditworthiness of counterparties is regularly assessed. Credit limits are established for customers and reviewed annually or with the release of new information materially impacting the customer's creditworthiness.

Mitigation methods are defined and implemented for higher-risk counterparties to protect revenues, with more than half of the Group's sales of physical commodities occurring via secured payment terms including prepayments, letters of credit, guarantees and other risk mitigation instruments. Mitigation methods include credit exposure management and overdue accounts monitoring. In addition, leading key risk indicators are actively monitored for all customers to identify any emerging risks.

There are no material concentrations of credit risk, either with individual counterparties or groups of counterparties, by industry or geography. The carrying amounts of financial assets represent the maximum credit exposure.

Expected credit losses

Impairment allowances are based on a forward-looking expected credit loss model. For trade receivables, the Group uses the simplified approach to recognise impairments based on the lifetime expected credit loss. For other receivables, the Group applies the general approach and recognises impairments based on a 12-month expected credit loss. Where there has been a significant increase in credit risk, a loss allowance for lifetime expected credit losses is recognised.

Exposures are grouped by external credit rating and security options and an expected credit loss rate is calculated accordingly. Where applicable, actual credit loss experience is also taken into account. For remaining receivables without an external credit rating or security option, a rating of BB (S&P Global Ratings) is used, on the basis that there is no support that it is investment grade, nor is there any evidence of default.

Shareholder loan receivable from Sierra Gorda

Purchased credit-impaired financial assets are initially recognised at fair value. They are subsequently measured at amortised cost using the credit-adjusted effective interest method, less an allowance for changes in lifetime expected credit losses since initial recognition. The credit-adjusted effective interest rate is determined at initial recognition and not amended for subsequent changes to lifetime expected credit losses since acquisition. Changes in lifetime expected credit losses are recognised as impairment and reversals of impairment of financials assets.

The Group's investment in the Sierra Gorda operation is represented by the carrying value of an equity accounted investment of US$101 million (FY22: US$30 million), and the carrying value of a purchased credit-impaired receivable of US$1,711 million (FY22: US$1,648 million) classified as a loan to an equity accounted investment within trade and other receivables on the Consolidated Balance Sheet.

The loan has a contractual interest rate of 8 per cent and the repayment of the loan by the Sierra Gorda operation is dependent on its financial performance. At 30 June 2023, the Group updated its estimated timing of the loan repayments and as a result recognised an impairment of US$71 million (FY22: impairment of US$26 million) which is included in expenses excluding finance costs in the Consolidated Income Statement. The net present value of the expected future cash flows of the loan was determined as US$1,711 million (FY22: US$1,648 million) using a measurement methodology consistent with a Level 3 fair value based on the inputs in the valuation technique.

The following table shows the movement in the carrying amount of this receivable:

US$M	FY23	FY22
At the beginning of the financial year	**1,648**	-
Acquisition	**-**	1,687
Interest accrued	**148**	55
Net impairment	**(71)**	(26)
Repayments	**(14)**	(68)
At the end of the financial year	**1,711**	1,648

The future loan repayments were informed by a production profile and costs based on management's planning processes. Refer to the Mineral Resources and Ore Reserves section of note 2(c) for further information on the estimates which underpin the production profile.

An effective interest rate of nine per cent, as determined on the date of acquisition, was applied to discount the future loan repayments.

Determining the net present value requires management to make certain key estimates, assumptions and judgements, which are consistent with those outlined in note 13 Impairment of non-financial assets.

19. Financial assets and financial liabilities continued

(b) Financial risk management objectives and policies continued

(iii) Credit risk continued

Shareholder loan receivable from Sierra Gorda continued

The net present value of the expected future cash flows of the loan is most sensitive to the Group's copper price assumption, with a range of US$3.81/lb to US$4.11/lb used, in real terms. The potential effect of using a reasonably possible alternative copper price assumption on the carrying value of the loan, based on changing this assumption by 10 per cent while holding all other variables constant, is shown in the following table:

FY23			Impact on profit/(loss) after tax	
US$M	Face value	Carrying value	Favourable	Unfavourable
Trade and other receivables				
Loans to equity accounted investments	**2,185**	**1,711**	**90**	**(164)**

(c) Capital management

The Group allocates capital in line with its strategy and capital management framework. The Group's priorities for cash flow are to:

- Maintain safe and reliable operations and an investment grade credit rating through the cycle;
- Distribute a minimum of 40 per cent of Underlying earnings as dividends to shareholders following each six-month reporting period; and
- Maximise total shareholder returns through other alternatives including special dividends, share buy-backs and high return investment opportunities which compete for capital.

20. Share capital

	FY23		FY22	
	Shares	US$M	Shares	US$M
Share capital				
At the beginning of the year	**4,628,431,584**	**13,469**	4,674,538,013	13,597
Shares bought back and cancelled	**(83,017,889)**	**(218)**	(46,106,429)	(128)
At the end of the year	**4,545,413,695**	**13,251**	4,628,431,584	13,469
Treasury shares				
At the beginning of the year	**(11,467,507)**	**(32)**	(11,676,185)	(22)
Purchase of shares by ESOP Trusts	**(11,676,773)**	**(33)**	(6,379,586)	(22)
Employee share awards vested	**5,880,807**	**14**	6,588,264	12
At the end of the year	**(17,263,473)**	**(51)**	(11,467,507)	(32)

Shares entitle the holder to participate in dividends and the proceeds on winding up of the Group in proportion to the number of shares held. On a show of hands every holder of shares present at a meeting in person or by proxy, is entitled to one vote, and upon a poll each share is entitled to one vote. Incremental costs directly attributable to the issuance of shares, net of any income tax effects, are recognised as a deduction from equity.

21. Auditor's remuneration

The auditor of the Group is KPMG.

US$'000	FY23	FY22
Fees payable to the Group's auditor for assurance services		
Audit and review of financial statements	**4,207**	4,448
Other assurance services[1]	**705**	625
Total auditor's remuneration	**4,912**	5,073

(1) Primarily comprises assurance services in respect of the Group's sustainability and tax reporting.

22. Pension and other post-retirement obligations

The Group operates or participates in a number of pension and medical (including superannuation) schemes throughout the world. The funding of the schemes complies with local regulations. The assets of the schemes are generally held separate from those of the Group and are administered by trustees or management boards. Full actuarial valuations are prepared for the schemes.

Defined contribution pension schemes

The Group contributed US$60 million (FY22: US$59 million) to defined contribution plans and multi-employer defined contribution plans. These contributions are expensed as incurred.

Defined benefit pension schemes (closed schemes)

At 30 June 2023, the Group had defined benefit obligations of US$61 million (FY22: US$57 million) and defined benefit scheme assets with a fair value of US$45 million (FY22: US$46 million) with a net liability recognised in the Consolidated Balance Sheet of US$16 million (FY22: US$11 million).

The fair value of scheme assets by major asset class is as follows:

US$M	FY23	FY22
Bonds[1]	**32**	31
Equities	**5**	6
Cash and cash equivalents	**2**	3
Other[2]	**6**	6
Total	**45**	46

(1) Comprises Fixed Interest Government bonds of US$7 million (FY22: US$6 million), Index Linked Government bonds of US$21 million (FY22: US$20 million) and Corporate bonds of US$4 million (FY22: US$5 million).
(2) Primarily comprises property and alternative investments in Australia.

Defined benefit post-retirement medical schemes (closed schemes)

At 30 June 2023, the Group had post-retirement medical scheme obligations of US$17 million (FY22: US$23 million). The post-retirement medical scheme is unfunded.

Weighted average maturity profile of schemes

The weighted average duration of the defined benefit obligations is eight years (FY22: seven years) and nine years (FY22: 10 years) for the defined benefit pension schemes and post-retirement medical scheme respectively.

Risks associated with defined benefit pension and post-retirement medical schemes

The Group's defined benefit pension and post-retirement medical schemes expose the Group to the risks pertaining to asset value volatility, uncertainty in future benefit payments and uncertainty in future contribution requirements.

23. Employee share ownership plans

At 30 June 2023, the Group had the following employee share ownership plans:

Awards granted to Lead Team members[1]	
Long-Term Incentive Plan[2]	FY20, FY21, FY22, FY23
Deferred Short-Term Incentive Plan[3]	FY21, FY22
Executive Transitional Award Plan[2]	FY21, FY22
Management Share Plan[2][4]	FY21

(1) Awards granted on 6 December 2019, 4 December 2020, 6 December 2021 and 8 December 2022.
(2) Awards subject to performance and service conditions.
(3) Awards subject to service conditions only.
(4) During FY21, Jason Economidis, as acting Chief Operating Officer, participated in the Management Share Plan and not the Long-Term Incentive Plan.

Awards granted to eligible employees[1]	
Management Share Plan[2]	FY20, FY21, FY22, FY23
AllShare Plan[3]	2020, 2021, 2022
Management Transitional Award Plan[2]	FY20

(1) Awards granted on 6 December 2019, 15 May 2020, 4 December 2020, 7 December 2020, 6 May 2021, 6 December 2021, 9 May 2022, 8 December 2022 and 15 May 2023.
(2) Awards subject to performance and service conditions.
(3) Awards subject to service conditions only.

All awards take the form of rights to receive one share in South32 Limited for each right granted, subject to performance and/or service conditions being met. Performance conditions include total shareholder return relative to peer groups and, for FY22 and FY23 Long-Term Incentive Plan and Management Share Plan awards, climate change and portfolio management performance hurdles. Further information on the vesting conditions of performance rights granted in FY23 is disclosed in the Remuneration report. A portion of the 2020, 2021 and 2022 AllShare Plan awards (participants located in Colombia and Mozambique) take the form of rights to receive a cash payment equivalent to the value of South32 Limited shares at the time of payment. Employees in Africa are granted rights on the JSE and all other employees are granted rights on the ASX.

Awards do not confer any dividend or voting rights until they convert into shares at vesting. In addition, the awards do not confer any rights to participate in a share issue, however, there is discretion under the plans to adjust the awards in response to a variation in South32 Limited's share capital.

The AllShare JSE plan is eligible to receive a payment equal to the dividend amount that would have been earned on the underlying shares awarded to those participants (Dividend Equivalent Payment). The Dividend Equivalent Payment is made to participants once the underlying shares are issued or transferred to them. No Dividend Equivalent Payment is made in respect of awards that have lapsed or have been forfeited. No other awards are eligible for a Dividend Equivalent Payment.

23. Employee share ownership plans continued

(a) Description of share-based payment arrangements

(i) Recurring share-based payment plans

The awards listed below are subject to the general conditions noted above and may be granted annually subject to approval by shareholders at the annual general meeting for awards to the Chief Executive Officer and by the Board of Directors for all other awards.

FY20, FY21, FY22 and FY23 Long-Term Incentive Plan

The Long-Term Incentive Plan is the Group's long-term incentive plan for Lead Team members.

Awards have a four-year performance period from 1 July 2019 to 30 June 2023, 1 July 2020 to 30 June 2024, 1 July 2021 to 30 June 2025 and 1 July 2022 to 30 June 2026 respectively.

The FY21 Long-Term Incentive Plan award granted to the Chief Executive Officer is subject to a specific vesting cap imposed by the Board of Directors. For other Lead Team members, the Board of Directors retains the discretion to apply a vesting cap to limit the value of the rights which may vest in the ordinary course.

FY21 and FY22 Deferred Short-Term Incentive Plan

The Deferred Short-Term Incentive Plan is the Group's short-term incentive plan for Lead Team members. Awards vest in August 2023 and August 2024 respectively, provided participants remain employed by the Group.

FY20, FY21, FY22 and FY23 Management Share Plan

The Management Share Plan is the Group's long-term incentive plan for eligible employees below the Lead Team. The Management Share Plan comprises two elements:

- Retention rights vesting in August 2023, August 2024 and August 2025 provided participants remain employed by the Group; and
- Performance rights vesting in August 2023, August 2024, August 2025 and August 2026 subject to performance conditions and provided participants remain employed by the Group.

For the FY21 Management Share Plan awards, the Board of Directors retains the discretion to apply a vesting cap to limit the value of the rights which may vest in the ordinary course.

2020, 2021 and 2022 AllShare Plan

The AllShare Plan is the Group's employee share plan for employees not eligible to participate in the other employee share plans. Awards to the value of at least US$1,250 per employee are granted annually. Awards will vest provided participants remain employed by the Group. The vesting period depends on the participants' location at the grant date:

- Participants in Africa: August 2023, August 2024 and August 2025; and
- Participants elsewhere: August 2023 and August 2024.

(ii) Transitional share-based payment plans

The awards listed below are subject to the general conditions noted above and are either one-off or will not be granted on an ongoing basis.

FY21 and FY22 Executive Transitional Award Plan

The Executive Transitional Award Plan is a one-off grant made to Lead Team members in recognition of their adjustment from the Management Share Plan (three year retention rights and four year performance rights) to the four year plan at the Group. Awards have a three year performance period from 1 July 2020 to 30 June 2023 and 1 July 2021 to 30 June 2024 respectively.

FY20 Management Transitional Award Plan

The Management Transitional Award Plan is a grant made to certain eligible employees to bridge the gap between their total target reward at BHP and their total target reward at the Group. The Management Transitional Award Plan has the same conditions as the Management Share Plan and comprises both service and performance conditions.

23. Employee share ownership plans continued

(b) Employee Share Ownership Plan Trusts

The South32 Limited Employee Incentive Plans Trust (the Australian Trust) and the South32 South African AllShare Trust (the South African Trust) are discretionary trusts for the benefit of employees of South32 Limited and its subsidiaries.

The trustee for the Australian Trust (CPU Share Plans Pty Ltd) is an independent company, resident in Australia. The trustees for the South African Trust are made up of employer and employee representatives per the Broad-Based Black Economic Empowerment (B-BBEE) requirements under South African law. The Trusts use funds provided by South32 Limited and/or its subsidiaries to acquire shares to enable awards to be made or satisfied under the Group employee share ownership plans.

The shares may be acquired by purchase in the market or by subscription at not less than nominal value.

(c) Measurement of fair values

The fair value at grant date of equity-settled share awards is charged to the Consolidated Income Statement, net of tax, over the period for which the benefits of employee services are expected to be derived. The corresponding accrued employee entitlement is recorded in the employee share awards reserve.

Where awards are forfeited because non-market based vesting conditions are not satisfied, the expense previously recognised is proportionally reversed. If awards do not vest due to a market performance condition not being met, the expense is recognised in full, and the share awards reserve is released to retained earnings. Where shares in South32 Limited are acquired by on-market purchases prior to settling the vested entitlement, the cost of the acquired shares is carried as treasury shares and deducted from equity. Where awards are satisfied by delivery of acquired shares, any difference between their acquisition cost and the cumulative remuneration expense recognised is charged directly to retained earnings, net of tax.

The fair value of market-based performance rights is measured using a Monte Carlo methodology. This model considers the following:

- Expected life of the award;
- Current market price of the underlying shares;
- Expected volatility (of the individual company and of each peer group);
- Expected dividends;
- Risk-free interest rate; and
- Market based performance hurdles.

The fair value of retention and other non-market-based performance rights is measured using a Black Scholes methodology. This model considers the following:

- Expected life of the award;
- Current market price of the underlying shares;
- Expected volatility;
- Expected dividends; and
- Risk-free interest rate.

23. Employee share ownership plans continued

(c) Measurement of fair values continued

The inputs used in the measurement of the fair values at grant date of the equity-settled share-based payments plans were as follows:

FY23	Fair value at grant date (US$)	Share price at grant date (US$)	Expected volatility (%)	Expected life (in years)	Risk-free interest rate based on government bonds (%)
Recurring plans					
FY23 Long-Term Incentive Plan	**1.74**	**2.76**	**35**	**4**	**3.14**
FY22 Deferred Short-Term Incentive Plan	**2.68**	**2.76**	**35**	**2**	**3.09**
FY23 Management Share Plan – Retention rights	**2.59 – 2.63**	**2.76 – 2.85**	**35**	**3**	**3.12 – 8.32**
FY23 Management Share Plan – Performance rights	**1.74 – 1.77**	**2.76 – 2.85**	**35**	**4**	**3.14 – 8.85**
2022 AllShare Plan	**2.68 – 2.90**	**2.76 – 2.85**	**35**	**2 - 3**	**3.09 – 8.32**

FY22	Fair value at grant date (US$)	Share price at grant date (US$)	Expected volatility (%)	Expected life (in years)	Risk-free interest rate based on government bonds (%)
Recurring plans					
FY22 Long-Term Incentive Plan	1.65	2.60	30	4	0.85
FY21 Deferred Short-Term Incentive Plan	2.36	2.60	30	2	0.01
FY22 Management Share Plan – Retention rights	2.25 - 2.26	2.34 - 2.60	30	3	0.43 - 5.17
FY22 Management Share Plan – Performance rights	1.65 - 1.66	2.34 - 2.60	30	4	0.85 - 5.61
2021 AllShare Plan	2.36 - 2.57	2.34 - 2.60	30	2 - 3	0.01 - 5.17
Transitional plan					
FY22 Executive Transitional Award Plan	1.68	2.60	30	3	0.43

The fair value at grant date, expected life, and risk-free interest rates shown represent the ranges based on the amounts of rights granted on the ASX or the JSE during the year, and the variations in offer terms and grant dates of each plan where applicable. Expected volatility is based on the historical South32 Limited share price volatility at the grant date. The risk-free interest rate and expected volatility does not materially impact service-based awards.

23. Employee share ownership plans continued

(d) Reconciliation of outstanding share awards

None of the awards listed below have an exercise price or are exercisable at 30 June 2023.

FY23 Number of rights	Rights at beginning of the year	Granted during the year	Vested during the year	Forfeited during the year	Lapsed during the year	Rights at end of the year
Recurring plans						
FY19 Long-Term Incentive Plan	**4,145,497**	**-**	**-**	**-**	**(4,145,497)**	**-**
FY20 Long-Term Incentive Plan	**4,765,759**	**-**	**-**	**(432,477)**	**-**	**4,333,282**
FY21 Long-Term Incentive Plan	**6,957,349**	**-**	**-**	**(673,913)**	**-**	**6,283,436**
FY22 Long-Term Incentive Plan	**3,743,629**	**-**	**-**	**(313,351)**	**-**	**3,430,278**
FY23 Long-Term Incentive Plan	**-**	**2,494,503**	**-**	**-**	**-**	**2,494,503**
FY20 Deferred Short-Term Incentive Plan	**851,180**	**-**	**(851,180)**	**-**	**-**	**-**
FY21 Deferred Short-Term Incentive Plan	**907,232**	**-**	**(178,242)**	**-**	**-**	**728,990**
FY22 Deferred Short-Term Incentive Plan	**-**	**949,257**	**-**	**-**	**-**	**949,257**
FY19 Management Share Plan - Performance rights	**4,313,892**	**-**	**-**	**-**	**(4,313,892)**	**-**
FY20 Management Share Plan - Retention rights	**1,502,428**	**-**	**(1,502,428)**	**-**	**-**	**-**
FY20 Management Share Plan - Performance rights	**5,124,843**	**-**	**-**	**(224,230)**	**-**	**4,900,613**
FY21 Management Share Plan - Retention rights	**2,702,433**	**-**	**(65,227)**	**(155,832)**	**-**	**2,481,374**
FY21 Management Share Plan - Performance rights	**7,366,059**	**-**	**-**	**(430,437)**	**-**	**6,935,622**
FY22 Management Share Plan - Retention rights	**2,224,932**	**-**	**(26,731)**	**(166,623)**	**-**	**2,031,578**
FY22 Management Share Plan - Performance rights	**3,599,229**	**-**	**-**	**(290,913)**	**-**	**3,308,316**
FY23 Management Share Plan - Retention rights	**-**	**1,907,751**	**(2,947)**	**(74,912)**	**-**	**1,829,892**
FY23 Management Share Plan - Performance rights	**-**	**3,198,587**	**-**	**(126,329)**	**-**	**3,072,258**
2019 AllShare Plan	**1,958,385**	**-**	**(1,942,655)**	**(15,730)**	**-**	**-**
2020 AllShare Plan	**6,115,200**	**-**	**(3,695,200)**	**(132,800)**	**-**	**2,287,200**
2021 AllShare Plan	**4,323,740**	**-**	**(59,360)**	**(276,660)**	**-**	**3,987,720**
2022 AllShare Plan	**-**	**4,610,840**	**(24,440)**	**(169,520)**	**-**	**4,416,880**
Transitional plans						
FY20 Executive Transitional Award Plan	**129,283**	**-**	**(43,094)**	**-**	**(86,189)**	**-**
FY21 Executive Transitional Award Plan	**154,702**	**-**	**-**	**-**	**-**	**154,702**
FY22 Executive Transitional Award Plan	**195,128**	**-**	**-**	**-**	**-**	**195,128**
FY19 Management Transitional Award Plan	**190,959**	**-**	**-**	**-**	**(190,959)**	**-**
FY20 Management Transitional Award Plan	**89,670**	**-**	**(14,209)**	**(543)**	**-**	**74,918**
Total awards	**61,361,529**	**13,160,938**	**(8,405,713)**	**(3,484,270)**	**(8,736,537)**	**53,895,947**

24. Contingent assets and liabilities

Contingent assets and liabilities not otherwise provided for in the consolidated financial statements are categorised as arising from:

US$M	FY23	FY22
Actual or potential litigation	**519**	427
Total contingent liabilities	**519**	427
Actual or potential litigation	**143**	156
Total contingent assets	**143**	156

Actual or potential litigation liabilities primarily relate to numerous tax assessments or matters relating to transactions in prior years in Colombia and Brazil.

There are a number of legal claims or potential claims against the Group, the outcome of which cannot be foreseen at present, and for which no amounts have been disclosed.

Actual or potential litigation assets primarily relate to potential recovery of pre-closing tax liabilities in respect of the Sierra Gorda acquisition, with allocation of liability for these pre-closing tax liabilities being disputed with the vendors.

The Group has entered into various counter-indemnities of bank and performance guarantees related to its own future performance which are in the normal course of business. Additionally, the Group has provided indemnities against certain liabilities as part of agreements for the disposal of business operations. Having taken appropriate legal advice, the Group believes that a material liability arising from the indemnities provided is remote.

25. Subsidiaries

Significant subsidiaries of the Group, which are those with the most significant contribution to the Group's profit/(loss) after tax or net assets, are as follows:

Significant subsidiaries	Country of incorporation	Principal activity	Effective interest % FY23	Effective interest % FY22
African Metals (Pty) Ltd	South Africa	Investment holding company	**100**	100
South32 Hermosa Inc.	United States	Exploration and development	**100**	100
Cerro Matoso SA	Colombia	Integrated laterite ferronickel mine and smelting complex	**99.9**	99.9
Dendrobium Coal Pty Ltd	Australia	Metallurgical coal mine	**100**	100
Endeavour Coal Pty Ltd	Australia	Metallurgical coal mine	**100**	100
Hillside Aluminium (Pty) Ltd	South Africa	Aluminium smelter	**100**	100
Illawarra Coal Holdings Pty Ltd	Australia	Investment holding company	**100**	100
Illawarra Services Pty Ltd	Australia	Coal washery, rail and road transportation	**100**	100
South32 Finance 1 B.V.	Netherlands	Financing company	**100**	100
South32 Finance 2 B.V.	Netherlands	Financing company	**100**	100
South32 Aluminium (Holdings) Pty Ltd	Australia	Investment holding company	**100**	100
South32 Aluminium (RAA) Pty Ltd	Australia	Interest in a joint operation	**100**	100
South32 Aluminium (Worsley) Pty Ltd	Australia	Interest in a joint operation	**100**	100
South32 Cannington Pty Ltd	Australia	Silver, lead and zinc mine	**100**	100
South32 Eagle Downs Pty Ltd	Australia	Interest in a joint operation	**100**	100
South32 Group Operations Pty Ltd	Australia	Administrative, management and support services	**100**	100
South32 Investment 1 B.V.	Netherlands	Interest in a joint operation	**100**	100
South32 Marketing Pte Ltd	Singapore	Sales, marketing and distribution	**100**	100
South32 Minerals SA	Brazil	Interest in a joint operation	**100**	100
South32 SA Investments Ltd	United Kingdom	Investment holding company	**100**	100
South32 SA Ltd	South Africa	Administrative, management and support services	**100**	100
South32 Sierra Gorda SpA	Chile	Investment holding company	**100**	100
South32 Treasury Ltd	Australia	Financing company	**100**	100
South32 USA Exploration Inc.	United States	Exploration	**100**	100

Subsidiaries are entities controlled by the parent entity. Control exists where the parent entity is exposed or has rights to variable returns from its involvement with the subsidiary and has the ability to affect those returns through its power over the subsidiary. A parent entity has power over the subsidiary when it has existing rights to direct the relevant activities of the subsidiary which are those which significantly affect the subsidiary's returns. The financial statements of subsidiaries are included in the consolidated financial statements for the period they are controlled.

26. Equity accounted investments

The Group's interests in equity accounted investments with the most significant contribution to the Group's net profit/(loss) after tax or net assets, are as follows:

Significant joint ventures	Country of incorporation	Principal activity	Acquisition date	Ownership interest % FY23	Ownership interest % FY22
Australia Manganese[(1)]	Australia	Manganese ore mine	8 May 2015	**60**	60
South Africa Manganese[(2)]	South Africa	Manganese ore mines	3 February 2015	**60**	60
Sierra Gorda[(3)]	Chile	Copper mine	22 February 2022	**45**	45

(1) Australia Manganese consists of an investment in Groote Eylandt Mining Company Pty Ltd (GEMCO).
(2) The Group holds a 60 per cent interest in Samancor Holdings (Pty) Ltd (Samancor). Samancor indirectly owns 74 per cent of Hotazel Manganese Mines (Pty) Ltd (HMM), which gives the Group its indirect ownership interest of 44.4 per cent. The remaining 26 per cent of HMM is owned by B-BBEE entities, of which 17 per cent of the interests were acquired using vendor finance with the loans repayable via distributions attributable to these parties, pro rata to their share in HMM. Until these loans are repaid, the Group's interest in HMM is accounted for at 54.6 per cent.
(3) Sierra Gorda consists of an investment in Sierra Gorda Sociedad Contractual Minera.

A reconciliation of the carrying amount of the equity accounted investments is set out below:

US$M	FY23	FY22
At the beginning of the year	**470**	380
Share of profit/(loss)	**246**	272
Share of other comprehensive income/(loss)	**6**	(3)
Dividends received from equity accounted investments	**(223)**	(224)
Acquisition of an equity accounted investment	**-**	45
At the end of the year	**499**	470

Carrying amount of equity accounted investments US$M	FY23	FY22
Australia Manganese	**95**	143
South Africa Manganese	**173**	180
Sierra Gorda	**101**	30
Individually immaterial[(1)]	**130**	117
Total	**499**	470

(1) Individually immaterial consists of investments in Samancor Marketing Pte Ltd (60 per cent), Mineração Rio do Norte (33 per cent) and Port Kembla Coal Terminal Ltd (16.7 per cent).

Share of profit/(loss) of equity accounted investments US$M	FY23	FY22
Australia Manganese	**120**	211
South Africa Manganese	**36**	31
Sierra Gorda	**71**	30
Individually immaterial[(1)]	**19**	-
Total	**246**	272

(1) Individually immaterial consists of investments in Samancor Marketing Pte Ltd (60 per cent), Mineração Rio do Norte (33 per cent) and Port Kembla Coal Terminal Ltd (16.7 per cent).

26. Equity accounted investments continued

The following table summarises the financial information relating to each significant equity accounted investment:

FY23 US$M	Joint ventures Australia Manganese	 South Africa Manganese	 Sierra Gorda
Reconciliation of the carrying amount of equity accounted investments			
Current assets	**351**	**231**	**590**
Non-current assets	**837**	**514**	**4,437**
Current liabilities	**(235)**	**(94)**	**(322)**
Non-current liabilities	**(794)**	**(255)**	**(4,481)**
Net assets – 100%	**159**	**396**	**224**
Net assets – the Group's share	**95**	**173**	**101**
Carrying amount of equity accounted investments	**95**	**173**	**101**
Reconciliation of share of profit/(loss) of equity accounted investments			
Revenue – 100%	**1,028**	**512**	**1,521**
Profit/(loss) after tax – 100%	**200**	**64**	**158**
Profit/(loss) after tax – the Group's share	**120**	**36**	**71**
Share of profit/(loss) of equity accounted investments	**120**	**36**	**71**
Other balances of equity accounted investments presented on a 100% basis			
Cash and cash equivalents[1]	**-**	**32**	**180**
Non-current financial liabilities (excluding trade and other payables and provisions)	**(263)**	**(8)**	**(4,331)**
Depreciation and amortisation	**(167)**	**(32)**	**(314)**
Interest income	**4**	**9**	**3**
Interest expense	**(39)**	**(11)**	**(385)**
Income tax (expense)/benefit (excluding royalty related tax)	**(127)**	**(37)**	**(62)**

(1) South Africa Manganese cash and cash equivalents includes US$32 million, on a 100 per cent basis, which is restricted by legal or contractual arrangements.

FY22 US$M	Joint ventures Australia Manganese	 South Africa Manganese	 Sierra Gorda
Reconciliation of the carrying amount of equity accounted investments			
Current assets	328	258	485
Non-current assets	836	516	4,252
Current liabilities	(260)	(81)	(367)
Non-current liabilities	(665)	(290)	(4,303)
Net assets – 100%	239	403	67
Net assets – the Group's share	143	180	30
Carrying amount of equity accounted investments	143	180	30
Reconciliation of share of profit/(loss) of equity accounted investments			
Revenue – 100%	1,239	602	535
Profit/(loss) after tax – 100%	351	59	67
Profit/(loss) after tax – the Group's share	211	31	30
Share of profit/(loss) of equity accounted investments	211	31	30
Other balances of equity accounted investments presented on a 100% basis			
Cash and cash equivalents[1]	-	27	154
Non-current financial liabilities (excluding trade and other payables and provisions)	(173)	(19)	(4,177)
Depreciation and amortisation	(136)	(26)	(129)
Interest income	-	3	-
Interest expense	(20)	(13)	(139)
Income tax (expense)/benefit (excluding royalty related tax)	(208)	(63)	(23)

(1) South Africa Manganese cash and cash equivalents includes US$27 million, on a 100 per cent basis, which is restricted by legal or contractual arrangements.

26. Equity accounted investments continued

The Group's share of contingent liabilities and capital expenditure commitments of significant equity accounted investments as at 30 June 2023 was US$3 million (FY22: US$6 million) and US$58 million (FY22: US$27 million) respectively.

The Group uses the term 'equity accounted investments' to refer to associates and joint ventures collectively.

Associates are entities in which the Group holds significant influence. If the Group holds 20 per cent or more of the voting power of an entity, it is presumed that the Group has significant influence, unless it can be clearly demonstrated that this is not the case. Significant influence can also arise when the Group has less than 20 per cent of the voting power but it can be demonstrated that the Group has the power to participate in the financial and operating policy decisions of the associate. Investments in associates are accounted for using the equity method.

Joint ventures are joint arrangements in which the parties with joint control of the arrangement have rights to the net assets of the arrangement. A separate vehicle, not the parties, will have the rights to the assets and obligations for the liabilities, relating to the arrangement. If more than an insignificant share of output from a joint venture is sold to third parties, this indicates that the joint venture is not dependent on the parties to the arrangement for funding and that the parties to the arrangement have no obligation for the liabilities of the arrangement. Joint ventures are accounted for using the equity method.

Equity accounted investments are initially recorded at cost, including the value of any goodwill on acquisition. In subsequent periods, the carrying amount of the investment is adjusted to reflect the share of post-acquisition profit or loss and other comprehensive income. After application of the equity method, including recognising the Group's share of the investees' results, the value of the investment will be assessed for impairment if there is objective evidence that an impairment of the investment may have occurred.

27. Interests in joint operations

Significant joint operations of the Group, which are those with the most significant contributions to the Group's net profit/(loss) after tax or net assets, are as follows:

				Effective interest %	
Significant joint operations	Country of operation	Principal activity	Acquisition date	FY23	FY22
Ambler Metals	United States	Base metals exploration and development options	11 February 2020	**50**	50
Brazil Alumina	Brazil	Integrated bauxite mine and alumina refinery	3 July 2014	**36**	36
Brazil Aluminium	Brazil	Aluminium smelter	3 July 2014	**40**	40
Eagle Downs Metallurgical Coal	Australia	Metallurgical coal exploration and development option	14 September 2018	**50**	50
Mozal Aluminium(1)	Mozambique	Aluminium smelter	27 March 2015(2)	**63.7**	63.7
Worsley Alumina(1)	Australia	Integrated bauxite mine and alumina refinery	8 May 2015	**86**	86

(1) While the Group holds a greater than 50 per cent interest in Worsley Alumina and Mozal Aluminium, participants jointly approve certain matters and are entitled to receive their share of output from the arrangement.
(2) The Group initially acquired a 47.1 per cent interest on 27 March 2015 and subsequently acquired a further 16.6 per cent interest on 31 May 2022.

Joint operations are joint arrangements in which the parties with joint control have rights to the assets and obligations for the liabilities relating to the arrangement. The activities of a joint operation are primarily designed for the provision of output to the parties to the arrangement, indicating that:

- The parties have the rights to substantially all the output and economic benefits of the assets of the arrangement; and
- All liabilities are satisfied by the joint participants through their purchases of that output. This indicates that, in substance, the joint participants have an obligation for the liabilities of the arrangement.

The consolidated financial statements of the Group include its share of the assets and liabilities, revenues and expenses arising jointly or otherwise from those operations and its revenue derived from the sale of its share of the output from the joint operation. All such amounts are measured in accordance with the terms of each arrangement, which are usually in proportion to the Group's interest in the joint operation.

The assets in these joint operations are restricted to the extent that they are only available to be used by the joint operation itself and not by other operations of the Group. For certain joint operations, the Group has also either pledged, mortgaged or provided a cross charge to joint operation partners over assets within the joint operation.

28. Key management personnel

(a) Key management personnel compensation

US$'000	FY23	FY22
Short-term employee benefits	**5,419**	6,321
Post-employment benefits	**128**	137
Other long-term benefits	**276**	293
Termination benefits	**-**	428
Share-based payments	**4,246**	4,764
Total	**10,069**	11,943

(b) Transactions with key management personnel

There were no transactions with key management personnel during the year ended 30 June 2023 (FY22: US$nil).

(c) Loans to key management personnel

On 22 June 2021, the Group made an interest free loan of US$620 thousand to Mike Fraser in relation to his South African income tax payable on his Group remuneration. The final instalment to repay the loan in full was made on 24 November 2021. There were no other loans with any key management personnel as at 30 June 2023 (FY22: US$nil).

(d) Transactions with key management personnel related entities

There were no transactions with entities controlled or jointly controlled by key management personnel and there were no outstanding amounts with those entities as at 30 June 2023 (FY22: US$nil).

29. Related party transactions

(a) Parent entity

The ultimate parent entity of the Group is South32 Limited, which is domiciled and incorporated in Australia.

(b) Subsidiaries, joint ventures and associates

The interests in subsidiaries, joint ventures and associates are disclosed in note 25 Subsidiaries and note 26 Equity accounted investments.

(c) Key management personnel

The compensation of, and loans to, key management personnel are disclosed in note 28 Key management personnel.

(d) Pension and other post-retirement obligations

The pension and other post-retirement obligations are disclosed in note 22 Pension and other post-retirement obligations.

(e) Transactions with related parties

Transactions with related parties	Joint ventures		Associates	
US$'000	FY23	FY22	FY23	FY22
Sales of goods and services	**271,141**	360,674	**3,863**	3,961
Purchases of goods and services	**531**	-	**163,096**	53,107
Interest income	**160,288**	60,661	**-**	-
Dividend income	**223,468**	224,424	**-**	-
Interest expense	**14,977**	2,109	**-**	-
Increase/(decrease) in short-term financing arrangements	**(47,726)**	49,530	**-**	-
Increase/(decrease) in loans with related parties	**113,587**	1,619,366	**(9,117)**	(17,237)

Outstanding balances with related parties	Joint ventures		Associates	
US$'000	FY23	FY22	FY23	FY22
Trade and sundry amounts owing to related parties	**928**	748	**18,393**	973
Other amounts owing to related parties(1)	**286,804**	334,530	**-**	-
Trade and sundry amounts owing from related parties	**29,993**	30,114	**312**	769
Loan amounts owing from related parties(2)(3)(4)	**1,863,753**	1,750,166	**40,302**	49,419

(1) Other amounts owing to joint ventures relate to short-term deposits and cash managed by the Group on behalf of its equity accounted investments. Interest was paid based on the three-month London Inter-Bank Offer Rate (LIBOR) less a margin of 0.05 per cent and the one-month Johannesburg Inter-Bank Agreed Rate. From 1 July 2023 the three-month LIBOR was replaced by the three-month Chicago Mercantile Exchange Term Secured Overnight Financing Rate (CME Term SOFR) plus a margin of 0.21 per cent.

(2) Loan amounts owing from GEMCO include an interest bearing loan which is repayable by 2 January 2026. Interest was paid based on the three-month LIBOR plus a margin of three per cent. From 1 July 2023 the three-month LIBOR was replaced by the three-month CME Term SOFR plus a margin of 3.26 per cent.

(3) Loan amounts owing from Sierra Gorda include a purchased credit-impaired loan which has a face value of US$2,185 million (FY22: US$2,073 million) and incurs interest at a contractual rate of eight per cent per annum. The loan is repayable by 15 December 2024, subject to review and agreement between the joint venture parties. Refer to note 19 Financial assets and financial liabilities.

(4) Loan amounts owing from Port Kembla Coal Terminal include an interest free loan which is repayable by 30 June 2030.

Sales to, and purchases from, related parties are transactions at market prices and on commercial terms, or under terms and prices that are no less favourable to the Group than those arranged with third parties.

Outstanding balances at year end are unsecured and settlement mostly occurs in cash.

29. Related party transactions continued

(e) Transactions with related parties continued

South32 Limited has guaranteed its equivalent 45 per cent share of the repayment of a US$700 million revolving credit facility entered into by Sierra Gorda. At the end of the year, the facility was drawn down by US$400 million (FY22: US$400 million). The facility extends to 30 September 2024. No other guarantees are provided for or have been received from any related party.

30. Parent entity information

(a) Summary financial information

The individual financial statements for the parent entity, South32 Limited, show the following aggregate amounts:

US$M	FY23	FY22
Result of parent entity		
Profit/(loss) after tax for the year	**(995)**	3,879
Total comprehensive income/(loss)	**(995)**	3,879
Financial position of parent entity at year end		
Current assets	**445**	652
Total assets	**12,056**	13,006
Current liabilities	**(1,375)**	(100)
Total liabilities	**(1,383)**	(108)
Net assets	**10,673**	12,898
Total equity of the parent entity		
Share capital	**13,251**	13,469
Treasury shares	**(47)**	(28)
Other reserves	**32**	24
Profit reserve[1]	**3,816**	4,823
Accumulated losses	**(6,379)**	(5,390)
Total equity	**10,673**	12,898

(1) Prior year profits, net of dividends paid, have been appropriated to a profit reserve for future dividend payments.

(b) Parent company guarantees

The parent entity and South32 SA Investments Ltd have jointly and severally, fully and unconditionally guaranteed the payment of the principal and premium, if any, and interest, including certain additional amounts that may be payable in respect of the notes issued by South32 Treasury Ltd, a 100 per cent owned finance subsidiary of the parent entity. The parent entity and South32 SA Investments Ltd have guaranteed the payment of such amounts when they become due and payable, whether on an interest payment date, at the stated maturity of the notes, by declaration or acceleration, call for redemption or otherwise. At 30 June 2023, the guaranteed liabilities in respect of the notes amounted to US$690 million (FY22: US$689 million).

The parent entity has also guaranteed a US commercial paper program and a Group revolving credit facility of US$1,400 million. The Group revolving credit facility remains undrawn as at 30 June 2023, refer to note 19 Financial assets and financial liabilities for further details.

The parent entity is party to a Deed of Support with the effect that the Company guarantees debts in respect of South32 Group Operations Pty Ltd.

31. Subsequent events

Capital management

On 24 August 2023, the Directors resolved to pay a fully-franked final dividend of US 3.2 cents per share (US$145 million) in respect of the 2023 financial year. The dividends will be paid on 12 October 2023. The dividends have not been provided for in the consolidated financial statements and will be recognised in the 2024 financial year.

On 24 August 2023, the Group also announced an increase to the existing capital management program, announced in March 2017, of US$50 million to a total of US$2.4 billion. This leaves US$133 million expected to be returned by 1 March 2024.

No other matters or circumstances have arisen since the end of the year that have significantly affected, or may significantly affect, the operations, results of operations or state of affairs of the Group in subsequent accounting periods.

DIRECTORS' DECLARATION

In accordance with a resolution of the Directors of the Company, we state that:

1. In the opinion of the Directors:
   (a) The consolidated financial statements and notes that are set out on pages 105 to 161 of the Annual Report are in accordance with the Corporations Act, including:
      (i) Giving a true and fair view of the Group's financial position as at 30 June 2023 and of its performance for the year ended on that date; and
      (ii) Complying with Australian Accounting Standards and Corporations Regulations 2001.
   (b) There are reasonable grounds to believe that the Company will be able to pay its debts as and when they become due and payable.
2. The Directors have been given the declarations required by Section 295A of the Corporations Act from the Chief Executive Officer and Chief Financial Officer for the year ended 30 June 2023.
3. The Directors draw attention to note 2 to the financial statements on page 110, which includes a statement of compliance with International Financial Reporting Standards.

Signed in accordance with a resolution of the Board of Directors.

Karen Wood
Chair

Graham Kerr
Chief Executive Officer and Managing Director

Dated 7 September 2023

LEAD AUDITOR'S INDEPENDENCE DECLARATION
UNDER SECTION 307C OF THE CORPORATIONS ACT 2001

To the Directors of South32 Limited

I declare that, to the best of my knowledge and belief, in relation to the audit of South32 Limited for the financial year ended 30 June 2023 there have been:

i. no contraventions of the auditor independence requirements as set out in the *Corporations Act 2001* in relation to the audit; and

ii. no contraventions of any applicable code of professional conduct in relation to the audit.

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Graham Hogg
Partner

Perth
7 September 2023

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INDEPENDENT AUDITOR'S REPORT

To the shareholders of South32 Limited

Report on the audit of the Financial Report

Opinion

We have audited the ***Financial Report*** of South32 Limited (the Company).

In our opinion, the accompanying Financial Report of the Company is in accordance with the *Corporations Act 2001*, including:

- Giving a true and fair view of the ***Group's*** financial position as at 30 June 2023 and of its financial performance for the year ended on that date; and
- Complying with *Australian Accounting Standards* and the *Corporations Regulations 2001*.

The ***Financial Report*** comprises:

- Consolidated balance sheet as at 30 June 2023;
- Consolidated income statement, Consolidated statement of comprehensive income, Consolidated statement of changes in equity and Consolidated cash flow statement for the year then ended;
- Notes including a summary of significant accounting policies; and
- Directors' Declaration.

The ***Group*** consists of the Company and the entities it controlled at the year-end or from time to time during the financial year.

Basis for opinion

We conducted our audit in accordance with *Australian Auditing Standards*. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Our responsibilities under those standards are further described in the *Auditor's responsibilities for the audit of the Financial Report* section of our report.

We are independent of the Group in accordance with the *Corporations Act 2001* and the ethical requirements of the *Accounting Professional and Ethical Standards Board's APES 110 Code of Ethics for Professional Accountants (including Independence Standards)* (the Code) that are relevant to our audit of the Financial Report in Australia. We have fulfilled our other ethical responsibilities in accordance with these requirements.

Key Audit Matters

The ***Key Audit Matters*** we identified are:

- Asset valuation; and
- Closure and rehabilitation provision.

Key Audit Matters are those matters that, in our professional judgement, were of most significance in our audit of the Financial Report of the current period.

These matters were addressed in the context of our audit of the Financial Report as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

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Asset valuation (Property, plant and equipment US$8,050m, Intangible assets US$242m and Equity accounted investments US$499m)

Refer to Note 13 *Impairment of non-financial assets* and Note 26 *Equity Accounted Investments* to the Financial Report

The key audit matter

The assessment of the existence of impairment or reversal indicators and the Group's impairment testing of Cash Generating Units (CGU) and Areas of Interest (AOI), where required, was a key audit matter. This is due to the size of property, plant and equipment, intangible assets and equity accounted investments, and the sensitivity of valuations to certain assumptions.

The Group had previously impaired the carrying value of several CGUs to equate to their recoverable amount, as required by accounting standards. Combined with the volatility in both commodity and foreign exchange markets, this increases the sensitivity of the current carrying values of these CGUs to potential impairment or reversal.

The Group has recorded an impairment charge of US$1,300m in the Hermosa – Taylor deposit AOI resulting from identification of an impairment indicator.

This further increased our audit effort in this key audit area.

The Group uses sophisticated models to perform their assessment of impairment or reversal indicators and fair value less cost of disposal for impairment testing, where required.

The Group's models use life of operation and project plans, approved budgets, and a range of external sources as inputs to the assumptions. Modelling using forward-looking assumptions tends to be prone to greater risk for potential bias, error and inconsistent application. These conditions necessitate additional scrutiny by us to address the objectivity of inputs and their consistent application.

We focused on the significant forward-looking assumptions the Group applied in their models, including:

- Forecast commodity prices and foreign exchange rates – the current economic climate has resulted in significant volatility in forecast commodity prices across the Group. The Group's models are sensitive to small changes in these price assumptions, as well as changes to foreign exchange rates, particularly the South African Rand, which increases forecasting risk.
- Forecast operating cash flows, production volumes, capital expenditure and reserve and resource estimates – these are determined by the Group based on historical performance adjusted for expected changes or plans for development, including consideration of regulatory approvals. This drives additional audit effort specific to the feasibility of the forecasts and consistency with the Group's strategy.
- Discount rates - these are complicated in nature and vary according to the conditions and environment the CGUs are subject to from time to time.
- Carbon price – the Group incorporates carbon price assumptions in its modelling based on enacted local schemes and assumptions of longer-term pricing and timing in the jurisdictions they operate and transact in.

We involved valuation specialists to supplement our senior audit team members in assessing this key audit matter.

How the matter was addressed in our audit

Our procedures included:

- We considered the appropriateness of the fair value less cost of disposal method applied by the Group to perform the annual test for impairment against the requirements of the accounting standards.
- We assessed the integrity and consistency of the models used for impairment testing and assessment of impairment or reversal indicators on a sample basis, including the accuracy of the underlying formulas and consistency of modelling to the prior year.
- We assessed the Group's view of the indicators leading to impairment testing for the Hermosa – Taylor deposit AOI. We recalculated the impairment charge and compared to the amounts recognised.
- We compared the forecast operating cash flows, production volumes, capital expenditure and reserve and resource estimates contained in the models to the life of operation plans incorporated in the approved budgets and study estimates incorporated in project plans. We assessed the accuracy of the Group's previous forecasts to assist with this assessment.
- We considered the sensitivity of the models by varying key assumptions, such as forecast commodity prices, foreign exchange rates, carbon pricing, discount rates, pre-production capital expenditure and risking applied to future development projects for probability, within a reasonably possible range. We did this to identify those CGUs at higher risk of impairment or reversal and to focus our further procedures.
- We assessed the scope, objectivity and competence of the Group's internal experts responsible for preparation of key resource and reserve estimates and compared these estimates to those incorporated in the life of operation and project plans where applicable.
- We checked the preparation of key resource and reserve estimates against key requirements of the JORC code, including testing controls over the appointment of Competent Person and checking declarations made.
- We challenged the Group's significant forecast operating cash flow, capital expenditure and production volume assumptions. We compared key events to the Board approved plan and strategy. We applied increased scepticism to forecasts in the areas where previous forecasts were not achieved. We compared key forecast expenditure to published studies of industry trends and expectations, and considered differences for the Group's operations. We used our knowledge of the Group, their past performance, business and customers, and our industry experience.
- Working with our valuation specialists, and considering the risk factors specific to the Group, we compared the discount rates to publicly available market data for comparable entities. We also compared forecast foreign exchange rates to published views of market commentators.
- We compared forecast commodity prices to published views of market commentators on future trends and long-term supply agreements.
- We involved our sustainability specialists and inquired of key members of the Group's climate team on their progress of climate-related strategy. We compared those areas identified by the Group having an impact on asset valuation to our knowledge of their industry and business. We tested key climate-related assumptions incorporated into the financial modelling of carbon pricing assumptions against locally enacted country specific schemes and longer term published industry views.
- We assessed the disclosures in the Financial Report using our understanding obtained from our testing and against the requirements of the accounting standards.

Closure and rehabilitation provision (US$1,938m)

Refer to Note 15 *Provisions* to the Financial Report.

The key audit matter

Closure and rehabilitation provisioning was a key audit matter due to the size of the provision and the judgement we used to audit the provision estimates across multiple sites the Group operates.

Closure and rehabilitation activities are governed by Group policies based on legal and regulatory requirements, which differ across multiple jurisdictions.

We focused on the following assumptions the Group applied in determining the provisions using their closure and rehabilitation plans:

- Nature and extent of activities required at sites, including the magnitude of possible contamination and disturbance, which are inherently challenging to assess.
- Timing of when closure and rehabilitation will take place, which increases estimation uncertainty given the unique nature of each site and long timeframes involved.
- Forecast cost estimates incorporating historical experience, which may not be a reliable predictor of such costs particularly in an inflationary economy, and risk adjustments. The Group engages external experts periodically to assist in their determination of these estimates.
- Economic assumptions, including country specific discount rates, which are complicated in nature.

How the matter was addressed in our audit

Our procedures included:

- Comparing the basis for recognition and measurement of the closure and rehabilitation provision for consistency with environmental and regulatory requirements and criteria in the accounting standards.
- Evaluating the methodology applied by the Company's expert in determining the nature and extent of closure and rehabilitation activities by comparison to industry practice.
- Evaluating key assumptions used in the closure and rehabilitation provision, relevant to the jurisdictions of the sites the Group operates, by:
  - Comparing the nature and extent of activities costed to a sample of the Group's closure and rehabilitation plans and relevant regulatory requirements.
  - Comparing the timing of closure and rehabilitation activities to the Group's resources and reserve estimates and the expected production profile contained in the life of operation plans.
  - Assessing the scope, objectivity and competence of the Group's internal and external experts to provide closure and rehabilitation cost estimates.
  - Comparing a sample of cost estimates of the activities, incorporating allowance for uncertainties, to historical experience and underlying documentation, the Group's external expert estimates, and our knowledge of the Group, forecast economic conditions and its industry.
  - Involving our sustainability closure specialists, we tested key climate and environment-related assumptions incorporated into the financial modelling of closure cost activities against environmental laws and regulations and industry guidelines.
  - Working with our valuation specialists, comparing country specific discount rate assumptions to market observable data, including risk free rates.
- Assessing the disclosures in the Financial Report using our understanding obtained from our testing against the requirements of the accounting standard.

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INDEPENDENT AUDITOR'S REPORT

Other Information

Other Information is financial and non-financial information in South32 Limited's annual reporting which is provided in addition to the Financial Report and the Auditor's Report. The Directors are responsible for the Other Information.

Our opinion on the Financial Report does not cover the Other Information and, accordingly, we do not express an audit opinion or any form of assurance conclusion thereon, with the exception of the Remuneration Report and our related assurance opinion.

In connection with our audit of the Financial Report, our responsibility is to read the Other Information. In doing so, we consider whether the Other Information is materially inconsistent with the Financial Report, or our knowledge obtained in the audit, or otherwise appears to be materially misstated.

We are required to report if we conclude that there is a material misstatement of this Other Information, and based on the work we have performed on the Other Information that we obtained prior to the date of this Auditor's Report we have nothing to report.

Responsibilities of the Directors for the Financial Report

The Directors are responsible for:

- Preparing the Financial Report that gives a true and fair view in accordance with *Australian Accounting Standards* and the *Corporations Act 2001*;
- Implementing necessary internal control to enable the preparation of a Financial Report that gives a true and fair view and is free from material misstatement, whether due to fraud or error; and
- Assessing the Group and Company's ability to continue as a going concern and whether the use of the going concern basis of accounting is appropriate. This includes disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless they either intend to liquidate the Group and Company or to cease operations, or have no realistic alternative but to do so.

Auditor's responsibilities for the audit of the Financial Report

Our objective is:

- To obtain reasonable assurance about whether the Financial Report as a whole is free from material misstatement, whether due to fraud or error; and
- To issue an Auditor's Report that includes our opinion.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with *Australian Auditing Standards* will always detect a material misstatement when it exists.

Misstatements can arise from fraud or error. They are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the Financial Report.

A further description of our responsibilities for the audit of the Financial Report is located at the *Auditing and Assurance Standards Board* website at: *https://www.auasb.gov.au/admin/file/content102/c3/ar1_2020.pdf*. This description forms part of our Auditor's Report.

Report on the Remuneration Report

Opinion

In our opinion, the Remuneration report of South32 Limited for the year ended 30 June 2023, complies with *Section 300A* of the *Corporations Act 2001*.

Directors' responsibilities

The Directors of the Company are responsible for the preparation and presentation of the Remuneration report in accordance with *Section 300A* of the *Corporations Act 2001*.

Our responsibilities

We have audited the Remuneration Report included in pages 83 to 103 of the Directors' report for the year ended 30 June 2023.

Our responsibility is to express an opinion on the Remuneration report, based on our audit conducted in accordance with *Australian Auditing Standards*.

KPMG

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Graham Hogg
Partner

Perth
7 September 2023

RESOURCES AND RESERVES

As required by Chapter 5 of the Australian Securities Exchange (ASX) Listing Rules, we report Mineral Resources and Ore Reserves (including Coal Resources and Coal Reserves) in accordance with the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code).

In this report, information relating to Mineral Resources and Ore Reserves is based on, and fairly represents, information and supporting documentation prepared by our Competent Persons.

A Competent Person is defined in the JORC Code. They must have a minimum of five years of relevant experience in the style of mineralisation or type of deposit under consideration and the activity being undertaken.

Each of our Competent Persons have given consent to the inclusion of the information in this report in the form and context in which it appears. You can find more details on each of their professional affiliations, employer and areas of accountability on page 170. Unless we state otherwise, all Competent Persons listed are full-time employees at South32, or at one of our related entities.

We report Mineral Resources and Ore Reserves in 100 per cent terms and represent estimates as at 30 June 2023. Our Mineral Resource estimations include Measured and Indicated Mineral Resources which, after the application of all Modifying Factors, and development of a mine plan, have been classified as Ore Reserves.

We report all quantities as dry metric tonnes, unless stated otherwise.

It is important to note that Mineral Resources and Ore Reserves are estimations, not precise calculations. We have rounded tonnes and grade information to reflect the relative uncertainty of the estimate, which is why minor computational differences may be present in the totals.

Our long-range forecasts are the basis for the commodity prices and exchange rates used to estimate the economic viability of Ore Reserves. Our planning processes consider the impacts of climate change on our Ore Reserves estimates, including assessments of operating costs and the impact of extreme weather events on the expectation of economic extraction.

Our Ore Reserves are within existing permitted mining tenements. Our mineral leases are of sufficient duration, or convey a legal right to renew the tenure, to enable all Ore Reserves on the leased properties to be mined in accordance with the current production schedules. These Ore Reserves may include areas where additional approvals are required, and it is expected that such approvals will be obtained within the timeframe needed for the current production schedule.

At a glance - Resources and Reserves (as at 30 June 2023)

Operations and development options	Total Ore/Coal Reserve (Mt)	Reserve Life Years[1]	Total Mineral/ Coal Resource (Mt)
Worsley Alumina	217	13	1,100
Brazil Alumina (MRN)	39	4.0	448
Sierra Gorda			1,890
Cannington	15	6.0	73
Taylor			153
Clark			55
Peake			3.3
Arctic			37
Bornite			148
Cerro Matoso	33	9.0	316
Australia Manganese	49	4.7	140
South Africa Manganese[2]	99	41	201
Illawarra Metallurgical Coal[2][3]	99	23	1,190
Eagle Downs			1,140

(1) Scheduled extraction period in years for the total Ore Reserves in the approved Life of Operation Plan.
(2) Reserve life for Illawarra Metallurgical Coal and South Africa Manganese is reported as the life of scheduled Coal/ Ore Reserves for Bulli and Wessels respectively. The Reserve life for each of the remaining operations is stated in the detailed disclosures that follow.
(3) Coal Reserves in this table are presented as Marketable Coal Reserves. Process recoveries are reported in the detailed disclosures that follow for each coal operation.

Foreign estimate

In the market announcement "South32 to Acquire a 45 per cent Interest in the Sierra Gorda Copper Mine" dated 14 October 2021, we reported on the estimates of mineral resources and mineral reserves for the Sierra Gorda copper mine. These estimates of mineral resources and mineral reserves are foreign estimates under the ASX Listing Rules and are not reported in accordance with the JORC Code. We completed the acquisition on 22 February 2022 and in accordance with ASX Listing Rule 5.14.1, our technical team has been reviewing available information in collaboration with the Sierra Gorda operational team to verify the foreign resource and reserve estimates, with the intention of enabling these estimates to be reported in accordance with the JORC Code.

Following review of all information, we have updated the Mineral Resource estimate in accordance with the JORC Code and it is included in page 172.

With respect to the mineral reserve estimate, we are not in possession of any new information or data relating to the foreign estimate that materially impacts on the reliability of the estimates or our ability to verify the foreign mineral reserve estimates as Ore Reserves in accordance with the JORC Code. We confirm that the information contained in our 14 October 2021 market announcement in relation to the mineral reserve foreign estimates continues to apply and has not materially changed. The Competent Person has not done sufficient work to classify the foreign estimates as Ore Reserves in accordance with the JORC Code and it is uncertain at this time whether, following evaluation and further exploration, the foreign estimates will be able to be reported as Ore Reserves in accordance with the JORC Code.

Our governance arrangements and internal controls

We have internal standards and governance arrangements that cover regulatory requirements for public reporting. To ensure correct and accurate public reporting with respect to Mineral Resources and Ore Reserves, our governance processes are managed by the Resource and Reserve Governance function in coordination with the Company Secretariat function.

Our comprehensive review and audit program is aimed at assuring our Mineral Resource and Ore Reserve estimates. This includes:

- Annual review of Mineral Resources and Ore Reserves declarations and reports;
- Annual review of reconciliation performance metrics for operating mines;
- Periodic internal mine planning and Ore Reserve audits; and
- Independent audits of Exploration Results, Mineral Resources or Ore Reserves that are new or have materially changed.

In FY23, we undertook two independent assurance audit of Exploration Results, Mineral Resource or Ore Reserve estimates and three internal mine planning and Ore Reserve assurance audits. The frequency and scope of the audits are generally a function of the perceived risks and uncertainties associated with a particular Mineral Resource and Ore Reserve.

The accompanying tables, on pages 171 to 176, outline our Mineral/Coal Resources and Ore/Coal Reserves holdings.

Our exploration, research and development

Our operations carry out exploration, research and development necessary to support our activities. Our brownfield exploration activities target the delineation and categorisation of mineral deposits connected or adjacent to our existing operations. Our greenfield exploration activities focus on the discovery and delineation of opportunities outside of our operational footprint, with a bias to base metals.

During FY23 we continued to expand our global exploration footprint. We funded greenfield exploration in Australia, Peru, Argentina, Ireland, Canada and the United States of America. Our exploration expenditure for FY23 was US$107 million (FY22: US$74 million) of which US$36 million related to brownfield and US$71 million related to greenfield (FY22: US$18 million and US$56 million respectively).

Competent Persons

Mineral Resources

Worsley Alumina: P Soodi Shoar, MAusIMM

Brazil Alumina:
Mineração Rio Do Norte (MRN): R Aglinskas, MAusIMM, employed by Projel Engenharia Especializada

Sierra Gorda: Omar Cortès, MAusIMM, employed by Sierra Gorda SCM;
Ian Glacken, FAusIMM (CP) employed by Snowden Optiro

Cannington: P Soodi Shoar, MAusIMM

Hermosa:
Taylor, Clark and Peake: P Richardson, SME

Ambler Metals Joint Venture:
Arctic: D F Machuca Mory, PEng., employed by SRK Consulting (Canada);
T Fouet, MAusIMM (CP)
Bornite: S Khosrowshahi, MAusIMM (CP) employed by WSP Global;
T Fouet, MAusIMM (CP)

Cerro Matoso: I Espitia, MAusIMM (CP)

Australia Manganese:
Groote Eylandt Mining Company (GEMCO): J Harvey, MAusIMM

South Africa Manganese:
Wessels and Mamatwan: L Lautze, Pr. Sci. Nat., SACNASP, employed by SRK Consulting

Ore Reserves

Worsley Alumina: G Burnham, MAusIMM

Brazil Alumina:
MRN: J P M Franco, MAusIMM, independent consultant

Cannington: R Muller, MAusIMM

Cerro Matoso: R Perez, MAusIMM

Australia Manganese:
GEMCO: M Bryant, MAusIMM, employed by The Minserve Group

South Africa Manganese:
Wessels and Mamatwan: D Takalani, SAIMM, employed by Consulting Evolution Mining

Coal Resources

Illawarra Metallurgical Coal:
Bulli and Wongawilli: M Krejci, MAusIMM

Eagle Downs: M Blaik, MAusIMM, employed by JB Mining Services

Coal Reserves

Illawarra Metallurgical Coal:
Bulli and Wongawilli: M Rose, MAusIMM

Alumina

Mineral Resources

As at 30 June 2023															As at 30 June 2022		
		Measured Mineral Resources			Indicated Mineral Resources			Inferred Mineral Resources			Total Mineral Resources			South32 Interest	Total Mineral Resources		
Deposit[1]	Material Type	Mt	% $A.Al_2O_3$	% $R.SiO_2$	Mt	% $A.Al_2O_3$	% $R.SiO_2$	Mt	% $A.Al_2O_3$	% $R.SiO_2$	Mt	% $A.Al_2O_3$	% $R.SiO_2$	%	Mt	% $A.Al_2O_3$	% $R.SiO_2$
Worsley	Laterite	303	28.5	1.6	411	28.9	2.1	386	28.3	2.1	1,100	28.6	1.9	86	1,090	28.7	1.9
MRN[2]	MRN Washed	279	49.7	4.4	37	48.7	5.1	132	49.9	3.6	448	49.6	4.2	33	458	49.6	4.2

Ore Reserves

As at 30 June 2023														As at 30 June 2022			
		Proved Ore Reserves			Probable Ore Reserves			Total Ore Reserves			Reserve Life	South32 Interest	Total Ore Reserves			Reserve Life
Deposit[1][5]	Ore Type	Mt	% $A.Al_2O_3$	% $R.SiO_2$	Mt	% $A.Al_2O_3$	% $R.SiO_2$	Mt	% $A.Al_2O_3$	% $R.SiO_2$	Years	%	Mt	% $A.Al_2O_3$	% $R.SiO_2$	Years
Worsley[3]	Laterite	182	28.1	1.6	35	27.9	1.6	217	28.1	1.6	13	86	227	28.1	1.6	13
MRN[2][4]	MRN Washed	32	48.8	4.6	7.4	48.5	5.1	39	48.7	4.8	4.0	33	50	48.8	4.7	4.0

(1) Cut-off grade

	Mineral Resources	Ore Reserves
Worsley	Variable ranging from 22-25% $A.Al_2O_3$, ≤3% $R.SiO_2$ for mineralised material and ≥28% $A.Al_2O_3$, ≤3-5% $R.SiO_2$ for blend material and ≥1m thickness.	Variable ranging from 22.5-29% $A.Al_2O_3$, <3-5% $R.SiO_2$ and variable thickness ≥1-2m.
MRN	≥46% $A.Al_2O_3$, ≤7% $R.SiO_2$, ≥1m thickness and ≥30% recovery on weight per cent basis.	≥46% $A.Al_2O_3$, ≤7% $R.SiO_2$, ≥1m thickness and ≥30% recovery on weight per cent basis.

(2) MRN Washed tonnes and grades represent the expected product based on forecast beneficiation yield.
(3) Ore delivered to Worsley alumina refinery.
(4) Ore delivered to Alumar alumina refinery.
(5) Metallurgical recovery:
Worsley 92.9%
Alumar 92.3%

RESOURCES AND RESERVES CONTINUED

Base Metals

Mineral Resources

As at 30 June 2023																		As at 30 June 2022			
		Measured Mineral Resources				Indicated Mineral Resources				Inferred Mineral Resources				Total Mineral Resources				South32 Interest	Total Mineral Resources			
Deposit[1][6]	Material Type	Mt	% TCu	g/t Au	% Mo	Mt	% TCu	g/t Au	% Mo	Mt	% TCu	g/t Au	% Mo	Mt	% TCu	g/t Au	% Mo	%	Mt	% TCu	g/t Au	% Mo
Sierra Gorda[2]	OC Sulphide	418	0.39	0.07	0.024	562	0.33	0.06	0.013	906	0.37	0.06	0.013	1,890	0.36	0.06	0.016	45%	-	-	-	-

As at 30 June 2023																		As at 30 June 2022			
		Measured Mineral Resources				Indicated Mineral Resources				Inferred Mineral Resources				Total Mineral Resources				South32 Interest	Total Mineral Resources			
Deposit[1]	Material Type	Mt	g/t Ag	% Pb	% Zn	Mt	g/t Ag	% Pb	% Zn	Mt	g/t Ag	% Pb	% Zn	Mt	g/t Ag	% Pb	% Zn	%	Mt	g/t Ag	% Pb	% Zn
Cannington[3]	UG Sulphide	43	161	4.55	3.03	3.9	96	3.41	2.17	0.6	73	3.32	2.11	48	155	4.44	2.94	100	40	172	4.93	3.14
	OC Sulphide	20	98	3.09	2.22	3.8	66	2.38	1.93	1.0	36	2.19	1.36	25	90	2.94	2.14		29	101	3.18	2.38

Ore Reserves

As at 30 June 2023																As at 30 June 2022				
		Proved Ore Reserves				Probable Ore Reserves				Total Ore Reserves				Reserve Life	South32 Interest	Total Ore Reserves				Reserve Life
Deposit[1][4][5]	Ore Type	Mt	g/t Ag	% Pb	% Zn	Mt	g/t Ag	% Pb	% Zn	Mt	g/t Ag	% Pb	% Zn	Years	%	Mt	g/t Ag	% Pb	% Zn	Years
Cannington	UG Sulphide	13	174	5.21	3.15	1.8	251	6.21	3.12	15	183	5.33	3.02	6.0	100	17	176	5.26	3.07	7.0

(1) Cut-off grade

	Mineral Resources	Ore Reserves
Cannington	Net smelter return in A$/t	Net smelter return in A$/t
UG Sulphide	130	145
OC Sulphide	58	
Sierra Gorda	Net smelter return in US$/t	
OC Sulphide	>0	

(2) First time reporting of Mineral Resources.
(3) Change to Mineral Resource due to updated price protocol and mine optimisation.
(4) Ore delivered to process plant.
(5) Metallurgical recoveries: 85.8% Ag, 87.6% Pb and 83% Zn.
(6) Process recoveries: 85% Cu, 55% Mo and 39% Au.

Base Metals continued

Mineral Resources

As at 30 June 2023																											As at 30 June 2022					
		Measured Mineral Resources						Indicated Mineral Resources						Inferred Mineral Resources						Total Mineral Resources						South32 Interest	Total Mineral Resources					
Deposit[1]	Material Type	Mt	% Cu	% Zn	% Pb	% Mn	g/t Ag	Mt	% Cu	% Zn	% Pb	% Mn	g/t Ag	Mt	% Cu	% Zn	% Pb	% Mn	g/t Ag	Mt	% Cu	% Zn	% Pb	% Mn	g/t Ag	%	Mt	% Cu	% Zn	% Pb	% Mn	g/t Ag
Hermosa																										100						
Taylor[2]	UG Sulphide	41		4.22	4.25		67	83		3.38	3.91		76	28		2.96	2.97		93	153		3.53	3.83		77		133		3.74	4.26		82
	UG Transition[3]							-		-	-		-	-		-	-		-	-		-	-		-		5.1		5.95	4.13		61
Clark	UG Oxide	0.4		1.77		8.11	56	35		2.40		9.49	58	20		1.61		8.33	115	55		2.11		9.07	78		55		2.31		9.08	78
Peake[4]	UG Sulphide													3.3	1.64	0.32	0.61		49	3.3	1.64	0.32	0.61		49		-	-	-	-		-

As at 30 June 2023																											As at 30 June 2022					
		Measured Mineral Resources						Indicated Mineral Resources						Inferred Mineral Resources						Total Mineral Resources						South32 Interest	Total Mineral Resources					
Deposit[1]	Material Type	Mt	% Cu	% Zn	% Pb	g/t Ag	g/t Au	Mt	% Cu	% Zn	% Pb	g/t Ag	g/t Au	Mt	% Cu	% Zn	% Pb	g/t Ag	g/t Au	Mt	% Cu	% Zn	% Pb	g/t Ag	g/t Au	%	Mt	% Cu	% Zn	% Pb	g/t Ag	g/t Au
Ambler																										50						
Arctic	OC Sulphide							33	3.14	4.43	0.80	49	0.63	4.7	2.55	3.34	0.57	37	0.38	37	3.06	4.30	0.77	47	0.6		37	3.06	4.30	0.77	47	0.60
Bornite	OC Sulphide							40	1.06					38	1.03					78	1.04						78	1.04				
	UG Sulphide													70	2.29					70	2.29						70	2.29				

(1) Cut-off grade

	Mineral Resources
Taylor	Net smelter return in US$/t
UG Sulphide	80
Clark	Net smelter return in US$/t
UG Oxide	175
Peake	Net smelter return in US$/t
UG Sulphide	80
Arctic	Net smelter return in US$/t
OC Sulphide	63.4
Bornite	
OC Sulphide	0.5% Cu
UG Sulphide	1.5% Cu

(2) Change to Mineral Resource classification due to additional drilling.
(3) UG Transition no longer reported separate from UG Sulphide due to change in model methodology.
(4) First time reporting of Mineral Resource.

RESOURCES AND RESERVES CONTINUED

Nickel

Mineral Resources

As at 30 June 2023		Measured Mineral Resources		Indicated Mineral Resources		Inferred Mineral Resources		Total Mineral Resources		South32 Interest	As at 30 June 2022 Total Mineral Resources	
Deposit[1]	Material Type	Mt	% Ni	Mt	% Ni	Mt	% Ni	Mt	% Ni	%	Mt	% Ni
Cerro Matoso	Laterite	101	0.9	149	0.8	13	0.8	263	0.9	99.9	270	0.9
	Stockpile	17	1.0	36	0.8			53	0.9		52	0.9

Ore Reserves

As at 30 June 2023		Proved Ore Reserves		Probable Ore Reserves		Total Ore Reserves		Reserve Life	South32 Interest	As at 30 June 2022 Total Ore Reserves		Reserve Life
Deposit[1][2][3]	Ore Type	Mt	% Ni	Mt	% Ni	Mt	% Ni	Years	%	Mt	% Ni	Years
Cerro Matoso[4]	Laterite	14	1.1	2.7	1.2	17	1.2	9.0	99.9	15	1.3	7.0
	Stockpile	6.0	1.1	10	0.9	16	1.0			12	1.1	

(1) Cut-off grade

	Mineral Resources	Ore Reserves
Laterite	0.6% Ni	0.6% Ni
SP	0.6% Ni	0.6% Ni

(2) Ore delivered to process plant.
(3) Global recovery: 80%.
(4) Change to Ore Reserves and Reserve Life due to grant of mining right extension.

Manganese

Mineral Resources

As at 30 June 2023															As at 30 June 2022		
		Measured Mineral Resources			Indicated Mineral Resources			Inferred Mineral Resources			Total Mineral Resources			South32 Interest	Total Mineral Resources		
Deposit[1]	Material Type	Mt	% Mn	% Yield	Mt	% Mn	% Yield	Mt	% Mn	% Yield	Mt	% Mn	% Yield	%	Mt	% Mn	% Yield
Australia Manganese														60			
GEMCO	ROM[2]	66	44.7	48	35	41.0	47	26	44.2	45	127	43.6	47		138	43.6	47
	Sands[3][4]				13	20.0					13	20.0			9.0	19.5	
		Mt	% Mn	% Fe	Mt	% Mn	% Fe	Mt	% Mn	% Fe	Mt	% Mn	% Fe		Mt	% Mn	% Fe
South Africa Manganese[3]														44.4			
Wessels	Lower Body	29	42.9	12.2	13	44.0	16.3	3.5	45.2	15.1	46	43.4	13.6		50	43.1	13.4
	Upper Body	6.9	41.9	17.6	70	41.0	18.7	11	40.7	21.6	88	41.0	19.0		91	41.0	18.9
Mamatwan	M, C, N Zones	33	36.8	4.5	14	36.7	4.6				47	36.8	4.5		50	36.8	4.5
	X Zone	2.6	36.8	4.6	0.6	35.9	4.6				3.2	36.7	4.6		3.7	36.7	4.6
	Top Cut (balance I&O)	12	29.8	6.1	4.8	29.4	6.1				17	29.7	6.1		18	29.7	6.1

Ore Reserves

As at 30 June 2023													As at 30 June 2022			
		Proved Ore Reserves			Probable Ore Reserves			Total Ore Reserves			Reserve Life	South32 Interest	Total Ore Reserves			Reserve Life
Deposit[1][8]	Ore Type	Mt	% Mn	% Yield	Mt	% Mn	% Yield	Mt	% Mn	% Yield	Years	%	Mt	% Mn	% Yield	Years
Australia Manganese												60				
GEMCO[5][6]	ROM	26	42.9	58	16	42.2	53	42	42.6	56	4.7		35	43.0	59	3.9
	Sands				7.0	40.0	22	7.0	40.0	22			5.8	40.0	19	
		Mt	% Mn	% Fe	Mt	% Mn	% Fe	Mt	% Mn	% Fe			Mt	% Mn	% Fe	
South Africa Manganese[7]												44.4				
Wessels	Lower Body	7.0	43.6	10.3	7.6	44.2	16.9	15	43.9	13.8	41		15	43.0	13.3	42
	Upper Body	3.9	42.1	17.6	39	41.4	18.7	43	41.2	18.6			42	41.2	18.4	
Mamatwan	M, C, N Zones	24	36.7	4.5	17	36.4	4.6	41	36.6	4.6	13		45	36.2	4.5	14

(1) Cut-off grade

		Mineral Resources	Ore Reserves
GEMCO	ROM	≥35% Mn washed product.	≥40% average Mn washed product per ore mining block.
	Sands	No cut-off grade applied.	No cut-off grade applied.
Wessels		≥37.5% Mn	≥ 37.5% Mn
Mamatwan	M, C, N Zones	No cut-off grade applied.	No cut-off grade applied.
	X Zone	≥35% Mn	
	Top Cut (balance I&O)	≥28% Mn	

(2) Mineral Resources tonnes are stated as in-situ, manganese grades are stated as per washed ore samples and should be read together with their respective mass recovery expressed as yield.
(3) Mineral Resource tonnes and manganese grades are stated as in-situ.
(4) Change to Mineral Resources due to additional drilling and updated model.
(5) Ore Reserves tonnes are stated as delivered to process plant, manganese grades are stated as expected product and should be read together with their respective mass yields.
(6) Change to Ore Reserves due to approval of Eastern Lease South life extension project.
(7) Ore delivered to process plant.
(8) Metallurgical/Plant recoveries:

GEMCO	See yield in Ore Reserves Table.
Wessels	93%
Mamatwan	95%

RESOURCES AND RESERVES CONTINUED

Metallurgical Coal

Coal Resources

As at 30 June 2023			Measured Coal Resources				Indicated Coal Resources				Inferred Coal Resources				Total Coal Resources				South32 Interest	As at 30 June 2022 Total Coal Resources			
Deposit[1]	Mining Method	Coal Type	Mt	% Ash	% VM	% S	Mt	% Ash	% VM	% S	Mt	% Ash	% VM	% S	Mt	% Ash	% VM	% S	%	Mt	% Ash	% VM	% S
Illawarra Metallurgical Coal[2]																			100				
Bulli	UG	Met/Th	171	11.4	24.0	0.36	293	12.2	23.6	0.35	305	13.4	23.0	0.35	769	12.5	23.5	0.36		774	12.5	23.5	0.36
Wongawilli	UG	Met/Th	65	29.2	23.0	0.58	225	29.8	22.1	0.57	129	30.0	22.3	0.57	419	29.8	22.2	0.57		427	29.7	22.4	0.58
Eagle Downs[3]	UG	Met	759	29.4	15.0	0.46	201	28.7	14.7	0.48	183	30.0	14.8	0.47	1,140	29.4	14.9	0.47	50	1,140	29.4	14.9	0.47

Coal Reserves

As at 30 June 2023			Proved Coal Reserves	Probable Coal Reserves	Total Coal Reserves	Proved Marketable Coal Reserves				Probable Marketable Coal Reserves				Total Marketable Coal Reserves				Reserve Life	South32 Interest	As at 30 June 2022 Total Marketable Coal Reserves				Reserve Life
Deposit[1][4][6][7]	Mining Method	Coal Type	Mt	Mt	Mt	Mt	% Ash	% VM	% S	Mt	% Ash	% VM	% S	Mt	% Ash	% VM	% S	Years	%	Mt	% Ash	% VM	% S	Years
Illawarra Metallurgical Coal																			100					
Bulli[5]	UG	Met	16	88	104	14	8.9	24.2	0.36	74	8.9	24.7	0.35	88	8.9	24.6	0.35	23		95	8.9	24.6	0.35	24
Wongawilli	UG	Met/Th	9.5	4.8	14													8.9						4.2
	UG	Met				4.6	10.8	23.0	0.58	2.3	10.8	23.4	0.59	6.9	10.8	23.1	0.58			6.2	10.8	23.2	0.60	
	UG	Th				2.5	28.0			1.2	28.0			3.7	28.0					2.4	28.0			

(1) Cut-off grade

Coal Resources
No seam thickness cut-off applied, minimum thickness is economic.

Coal Reserves
No seam thickness cut-off applied, minimum thickness within the mine layout is economic.

(2) Coal Resources tonnes are reported on an in-situ moisture basis, Ash is reported as raw, VM and S are reported as potential product on air-dried basis.
(3) Coal Resources tonnes are reported on an in-situ moisture basis, Ash, VM and S reported as raw.
(4) Total Coal Reserves are at the moisture content when mined (6% Bulli, 8% Wongawilli), Total Marketable Coal Reserves are the tonnes of coal available at moisture content (8.5% Bulli, 15.2% Wongawilli Met, 5.9% Wongawilli Th) and air-dried qualities after the beneficiation of the Total Coal Reserves.
(5) Change to Coal Reserve due to updated modifying factors.
(6) Coal delivered to wash plant.
(7) Process recoveries:
Bulli 84%
Wongawilli 75%

INFORMATION

Voting rights for shares

South32 Limited ordinary shares carry voting rights of one vote per share.

Shareholders may hold a beneficial entitlement to South32 Limited dematerialised ordinary shares, UK Depositary Interests and American Depositary Shares (ADS) through the Central Securities Depositories of Strate (Strate), CREST and the Depository Trust Company, respectively. Each share held dematerialised in Strate, or as a Depositary Interest held in CREST, entitles the holder to one vote. Each ADS is represented by five ordinary shares, with ADS voting managed by South32 Limited's ADS Depositary.

Substantial shareholders

As of 4 August 2023, South32 Limited has two substantial shareholders who, together with their associates, hold five per cent or more of the voting rights in South32 Limited, as notified to South32 Limited under the Corporations Act.

Name	Date notice received	Number of shares in notice	Percentage of capital in notice
BlackRock Group	8 December 2021	318,403,413	6.84
Vanguard Group	23 June 2022	235,364,454	5.077

Distribution of shareholdings and number of shareholders

The following table shows the distribution of South32 Limited shareholders by size of shareholding and number of shareholders and shares as of 4 August 2023.

Size of holding	Number of shareholders	Number of shares	Percentage of capital
1 – 1,000	120,611	57,870,635	1.27
1,001 – 5,000	89,096	218,585,330	4.81
5,001 – 10,000	25,806	189,469,549	4.17
10,001 – 100,000	23,306	532,516,783	11.72
100,001 and over	773	3,546,971,398	78.03
Total	259,592	4,545,413,695	100.00

Distribution of rights holdings and number of rights holders

The following table shows the distribution of rights holders in South32 Limited by size of rights holding and number of rights holders and rights as of 4 August 2023.

Size of holding	Number of rights holders	Number of rights	Percentage of rights on issue
0 - 1,000	813	422,770	0.83
1,001 - 5,000	5,769	7,636,640	14.94
5,001 - 10,000	26	194,403	0.38
10,001 - 100,000	114	5,536,194	10.83
100,001 and over	72	37,328,051	73.02
Total	6,794	51,118,058	100.00

Twenty largest shareholders in South32 Limited

The following table sets out the 20 largest shareholders of ordinary shares listed on the South32 Limited share register and the details of their shareholding as of 4 August 2023.

Name		Number of fully paid shares	Percentage of capital
1	HSBC Custody Nominees (Australia) Limited	1,246,770,087	27.43
2	J P Morgan Nominees Australia Pty Limited	746,119,979	16.41
3	Citicorp Nominees Pty Ltd	389,982,815	8.58
4	South Africa Control A/C\C	256,286,669	5.64
5	Computershare Clearing Pty Ltd <Ccnl Di A/C>	135,083,433	2.97
6	National Nominees Limited	113,192,678	2.49
7	BNP Paribas Noms Pty Ltd <DRP>	106,439,505	2.34
8	Citicorp Nominees Pty Limited <Citibank NY ADR Dep A/C>	88,211,690	1.94
9	BNP Paribas Nominees Pty Ltd <Agency Lending DRP A/C>	80,477,054	1.77
10	HSBC Custody Nominees (Australia) Limited <NT–Comnwlth Super Corp A/C>	31,183,864	0.69
11	HSBC Custody Nominees (Australia) Limited	19,162,986	0.42
12	CPU Share Plans Pty Ltd <S32 ASP Unallocated A/C>	16,074,527	0.35
13	Citicorp Nominees Pty Limited <Colonial First State Inv A/C>	14,979,445	0.33
14	HSBC Custody Nominees (Australia) Limited - A/C 2	13,766,925	0.30
15	HSBC Custody Nominees (Australia) Limited <Euroclear Bank SA NV A/C>	12,790,017	0.28
16	BNP Paribas Nominees Pty Ltd ACF Clearstream	11,046,007	0.24
17	Netwealth Investments Limited <Wrap Services A/C>	9,360,817	0.21
18	Neweconomy Com Au Nominees Pty Limited <900 Account>	8,290,529	0.18
19	BNP Paribas Nominees Pty Ltd Hub24 Custodial Serv Ltd <DRP A/C>	7,083,756	0.16
20	Merrill Lynch (Australia) Nominees Pty Limited	6,356,721	0.14
Total		3,312,659,504	72.88

Restricted and escrowed securities

As of 4 August 2023, South32 Limited does not have any restricted securities or securities subject to voluntary escrow on issue.

Shareholders with less than a marketable parcel

As of 4 August 2023, there were 9,907 shareholders on the Australian South32 Limited register holding less than a marketable parcel (A$500) based on the closing market price of A$3.94.

On-market purchases of South32 Limited securities for employee incentive plans

The Group purchases South32 Limited ordinary shares on-market through the Company's employee share plan trusts for the purposes of the South32 Equity Incentive Plans. During FY23, 11,620,000 shares were purchased on-market for the Australian ESOP Trust. The average price at which the shares were purchased was A$4.08. No shares were purchased for the South African ESOP Trust during FY23.

In addition, 56,768 shares were purchased on-market and immediately distributed to Canadian based employees on vesting of rights. The average price at which the shares were purchased was A$4.35.

Dividend policy

Our dividend policy is determined by the Board at its discretion. Our priorities for cash flow are to maintain safe and reliable operations and an investment grade credit rating through the cycle.

Our current dividend policy is that South32 Limited intends to distribute a minimum of 40 per cent of Underlying earnings as ordinary dividends to our shareholders following each six-month reporting period. South32 Limited intends to distribute dividends with the maximum practicable franking credits for the purposes of the Australian dividend imputation system.

Dividend determination and payment

Our dividends are determined in US dollars.

Dividends for shareholders of South32 Limited on the Australian register are paid by direct credit into their nominated bank account in Australian dollars, UK pounds sterling, New Zealand dollars or US dollars, provided direct credit details and currency election information is submitted no later than close of business on the dividend record date as stated in the relevant Australian Securities Exchange (ASX) announcement.

Dividends for shareholders of South32 Limited on the South African branch register and UK Depositary Interest holders are paid by direct credit in South African rand and UK pounds sterling, respectively.

Refer to the Investors section at *www.south32.net* for further information about dividends.

Capital management program(1)

In August 2022, we expanded our capital management program by US$156 million and in February 2023, we expanded our capital management program again by a further US$50 million to US$2.3 billion, comprising a US$1.8 billion on-market share buy-back and special dividends of US$154 million (paid in 2018), US$85 million (paid in 2019), US$53.5 million (paid in 2020), US$93 million (paid in 2021) and US$139 million (paid in 2022).

As of 30 June 2023, we had returned a total value of US$2.2 billion to our shareholders under our capital management program. Subsequent to 30 June 2023, the Board has expanded the capital management program by a further US$50 million to US$2.4 billion and extended the execution window for the remaining program by six months to 1 March 2024.

The on-market share buy-back was initially announced on 27 March 2017 and purchasing commenced on 19 April 2017. During the year ended 30 June 2023, South32 Limited purchased 83 million shares under the on-market share buy-back, which represented two per cent of share capital at the beginning of the financial year. Total consideration paid for these shares was US$218 million. The shares have no par value.

(1) Numbers in this section are subject to rounding.

Between the commencement of purchasing under the on-market share buy-back on 19 April 2017 and 30 June 2023, South32 Limited has purchased a total of 778 million shares, which represented 15 per cent of share capital at the commencement of the program. The total consideration paid for the shares bought back up to 30 June 2023 was US$1.7 billion.

The shares purchased by South32 Limited under the on-market share buy-back have been cancelled.

Annual General Meeting (AGM)

Our 2023 AGM is scheduled to be held on Thursday 26 October 2023 at 12.00pm (midday) Australian Western Standard Time as a hybrid meeting, providing shareholders with the opportunity to attend physically or online. If it becomes necessary or appropriate to make alternative or supplementary arrangements, we will provide an update. Further details regarding the AGM will be made available in September 2023, and shareholders are encouraged to monitor securities exchange releases and *www.south32.net* for information and updates.

Addresses delivered at the AGM, together with the results of voting, will be provided to all stock exchanges and will be available at *www.south32.net*.

Stock exchanges

As of 4 August 2023, South32 Limited has a primary listing on the ASX, a secondary listing on the Johannesburg Stock Exchange, is admitted to the standard segment of the Official List of the UK Listing Authority and its ordinary shares are traded on the London Stock Exchange.

South32 Limited also has a Level 1 American Depositary Receipts (ADR) program, which trades in the United States over-the-counter market.

Shareholder enquiries

Shareholders can access their current holding details as well as their transaction history, view dividend statements and payments made, download statements and documents, change their address, update their communication preferences and banking details, and check their tax details online via Computershare's Investor Centre at *www.computershare.com*.

Alternatively, refer to the following contacts:

Share registries

Australia

Computershare Investor Services Pty Limited
Yarra Falls 452 Johnston Street
Abbotsford Victoria 3067
Australia

Telephone (Australia): 1800 019 953
Telephone (International): +61 3 9415 4169
Facsimile: +61 3 9473 2500

South Africa

Computershare Investor Services (Pty) Limited
Rosebank Towers, 15 Biermann Avenue
Rosebank, 2196
South Africa

Telephone: +27 11 373 0033
Facsimile: +27 11 688 5217
Email enquiries:
web.queries@computershare.co.za

Holders of shares dematerialised into Strate should contact their Central Securities Depository Participant or stockbroker.

United Kingdom

Computershare Investor Services PLC
The Pavilions, Bridgwater Road
Bristol BS99 6ZZ
United Kingdom

Telephone: +44 370 873 5884
Facsimile: +44 370 703 6101
Email enquiries:
web.queries@computershare.co.uk

ADR

ADR holders should deal directly with Citibank Shareholder Services.

Citibank Shareholder Services
PO Box 43077 Providence,
Rhode Island 02940-3077

Telephone: +1 877 248 4237
(+1-877-CITIADR) (toll-free within US)
+1 781 575 4555 (outside of US)

Facsimile: +1 201 324 3284
Email enquiries:
citibank@shareholders-online.com
Website: *www.citi.com/dr*

Branches

In accordance with DTR 4.1.11R(5), South32 Limited, through various subsidiaries, has established branches in different jurisdictions in which the business operates.

Registered office

South32 Limited's Registered Office is Level 35, 108 St Georges Terrace, Perth WA 6000, Australia. Information regarding South32's other office locations is included in the Corporate directory on page 188.

Electronic communications

Shareholders are encouraged to access all South32 communications electronically. Shareholders that wish to receive electronic communications can update their preferences online or by telephoning the relevant Computershare Investor Centre. Refer to the Investors section at *www.south32.net* for further details on how to receive shareholder communications.

Mining related terms

Alumina

Aluminium oxide (Al_2O_3). Alumina is produced from bauxite in the Bayer refining process. It's then converted (reduced) in an electrolysis cell to produce aluminium metal.

Ash

Inorganic material remaining after combustion of coal.

ASX Listing Rules (Chapter 5)

This chapter of the ASX Listing Rules sets out additional reporting and disclosure requirements for mining entities, oil and gas entities, as well as other entities reporting on mining and oil and gas activities.

Bauxite

Principal commercial ore of aluminium.

Beneficiation

The process of physically separating ore from gangue to produce a mineral concentrate prior to subsequent processing.

Brownfield

An exploration or development project located within an existing mineral province, which can share infrastructure and management with an existing operation.

Coal Reserve

The same meaning as Ore Reserve, but specifically concerning coal.

Coal Resource

The same meaning as Mineral Resource, but specifically concerning coal.

Coking coal

Used in the manufacture of coke, which is used in the steelmaking process by virtue of its carbonisation properties. Coking coal is a form of, and may also be referred to as, metallurgical coal.

Competent Person

A minerals industry professional who is a Member or Fellow of The Australasian Institute of Mining and Metallurgy, or of the Australian Institute of Geoscientists, or of a 'Recognised Professional Organisation', as included in a list available on the JORC and ASX websites. These organisations have enforceable disciplinary processes, including the powers to suspend or expel a member.

A Competent Person must have a minimum of five years' relevant experience in the style of mineralisation or type of deposit under consideration and in the activity that the person is undertaking (JORC Code).

Cut-off grade

The lowest grade, or quality, of mineralised material that qualifies as economically mineable and available in a given deposit. It may be defined on the basis of economic evaluation, or on physical or chemical attributes that define an acceptable product specification (JORC Code).

Energy attributes

Energy attributes represent information about the energy generated, such as its GHG emissions factor, but not the energy itself. Attributes may be conveyed in the form of certificates, tags, credits, generator declarations or other contractual instruments.

Energy coal

Used as a fuel source in electrical power generation, cement manufacture and various industrial applications. Energy coal may also be referred to as steaming or thermal coal.

Exploration Results

Exploration Results include data and information generated by mineral exploration programs that might be of use to investors but which do not form part of a declaration of Mineral Resources or Ore Reserves (JORC Code).

Exploration Target

An Exploration Target is a statement or estimate of the exploration potential of a mineral deposit in a defined geological setting where the statement or estimate, quoted as a range of tonnes and range of grade (or quality), relates to mineralisation for which there has been insufficient exploration to estimate a Mineral Resource.

FAusIMM (CP)

Fellow of the Australasian Institute of Mining and Metallurgy. Accredited Chartered Professional status of members of the AusIMM. These members have undergone an assessment of their competencies, which are maintained through continuing professional development activities.

Flotation

A method of selectively recovering minerals from finely ground ore using a froth created in water by specific reagents. In the flotation process, certain mineral particles are induced to float by becoming attached to bubbles of froth and the unwanted mineral particles sink.

Foreign Estimate

An estimate of quantity and grade of mineralisation that was prepared using a mineral resources classification and reporting standard from another jurisdiction prior to an entity acquiring, or entering into an agreement to acquire, an interest in a mining tenement that contains the deposit, and which the entity has not verified as mineral resources or ore reserves in accordance with JORC Code. (ASX Listing Rules).

Grade

Any physical or chemical measurement of the characteristics of the material of interest in samples or product (JORC Code).

Greenfield

An exploration or development project that refers to a new venture or operation, without any association or proximity to a current operation.

Indicated Mineral Resource

That part of a Mineral Resource for which quantity, grade (or quality), densities, shape and physical characteristics are estimated with sufficient confidence. This allows the application of Modifying Factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit (JORC Code).

Inferred Mineral Resources

That part of a Mineral Resource for which quantity and grade (or quality) are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade (or quality) continuity (JORC Code).

JORC

Joint Ore Reserves Committee comprising representatives of The Australasian Institute of Mining and Metallurgy (AusIMM), Australian Institute of Geoscientists (AIG) and Minerals Council of Australia (MCA) as well as the Australian Securities Exchange (ASX), the Financial Services Institute of Australasia (FinSIA) and the accounting profession.

JORC Code

The Australasian Code for reporting of Exploration Results, Mineral Resources and Ore Reserves 2012 Edition prepared by the JORC.

Laterite

A residual soil or deposit formed by the leaching of silica from rocks under specific climatic conditions.

Leaching

The process by which a soluble metal can be economically recovered from minerals in ore by dissolution.

Life of Operation Plan

The combination of an Optimised Base Plan and incremental opportunities available to the operation for maximising value.

Mining related terms continued

Marketable Coal Reserves

Represents beneficiated or otherwise enhanced coal product where modifications due to mining, dilution and processing have been considered (JORC Code).

MAusIMM

Member of the Australasian Institute of Mining and Metallurgy.

MAusIMM (CP)

Accredited Chartered Professional status of members of the AusIMM. These members have undergone an assessment of their competencies, which are maintained through continuing professional development activities.

Measured Mineral Resource

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 (JORC Code).

Metallurgical coal

A broader term than coking coal that includes all coals used in steelmaking, such as coal used for the pulverised coal injection process.

Mineral reserve

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 pre-feasibility 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. (CIM Standard)

Mineral Resource

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 (or quality), continuity and other geological characteristics of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge, including sampling. Mineral Resources are sub-divided, in order of increasing geological confidence, into Inferred, Indicated and Measured categories (JORC Code).

Mineralisation

Any single mineral or combination of minerals occurring in a mass, or deposit, of economic interest (JORC Code).

Modifying Factors

Considerations used to convert Mineral Resources to Ore Reserves. These include, but are not restricted to, mining, processing, metallurgical, infrastructure, economic, marketing, legal, environmental, social and governmental factors (JORC Code).

Net smelter return

An estimate of revenue derived from the sale of products and concentrates following the application of metallurgical recoveries and deducting transport costs, treatment and refining charges, penalties and royalties. For Sierra Gorda, mining cost is also included in the calculation.

Ore Reserve

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 (JORC Code).

PEng

A licenced member of Professional Engineers of Ontario (PEO).

Probable Ore Reserve

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 Ore Reserve is lower than that applying to a Proved Ore Reserve (JORC Code).

Proved Ore Reserve

The economically mineable part of a Measured Mineral Resource. A Proved Ore Reserve implies a high degree of confidence in the Modifying Factors (JORC Code).

Pr.Sci.Nat.

Professional Natural Scientist of the South African Council for Natural Scientific Professions.

Reserve Life

The scheduled extraction period in years for the Total Ore Reserves in the approved Life of Operation Plan.

ROM (Run of Mine product)

Product mined in the course of regular mining activities.

SACNASP

South African Council for Natural Scientific Professions

SAIMM

Member of the Southern African Institute of Mining and Metallurgy.

Sands

Tailings produced as a by-product during beneficiation of ore.

SME

Registered member of the Society for Mining, Metallurgy and Exploration.

Stockpile (SP)

An accumulation of ore or mineral built up when demand slackens or when the treatment plant or beneficiation equipment is incomplete or temporarily unable to process the mine output; any heap of material formed to create a buffer for loading or other purposes, or material dug and piled for future use.

Tailings

The left-over materials that remain after the target mineral is extracted from ore.

TSF

Tailings Storage Facility

Total Mineral Resources

The sum of Inferred Mineral Resources, Indicated Mineral Resources and Measured Mineral Resources.

Total Ore Reserves

The sum of Proved Ore Reserves and Probable Ore Reserves.

UG

Underground working in which the working area is below the surface of the earth.

Yield

The percentage of material of interest that is extracted during mining and/or processing. A measure of mining or processing efficiency (JORC Code). When used in reference to the Mineral Resource estimate yield refers to the sample mass recovery following beneficiation.

Finance, marketing and general terms

AASB
Australian Accounting Standards Board.

Adjusted return on invested capital (ROIC)
Calculated as Underlying EBIT, adjusted for uncontrollable and one-off impacts in the current financial year, less the discount on rehabilitation provisions included in net finance cost, tax effected by the Group's prior period Underlying effective tax rate (ETR) including our material equity accounted investments on a proportional consolidated basis, divided by the sum of fixed assets (excluding any rehabilitation assets, the impairment reversal of Brazil Aluminium, and unproductive capital) and inventories. Underlying EBIT is adjusted by excluding the current period impacts of foreign currency on revenue and cost, and commodity prices on revenue and associated price-linked costs, less the discount on rehabilitation provisions included in net finance cost, and tax effected by the Group's prior period Underlying effective tax rate.

AGM
Annual General Meeting.

AO
Officer of the Order of Australia.

ASX
ASX Limited or Australian Securities Exchange.

ASX Listing Rules
The rules governing the listing of an entity and the quotation of its securities on the ASX.

Australian Securities and Investments Commission (ASIC)
The independent Australian Government body that is Australia's integrated corporate, markets, financial services and consumer credit regulator.

B-BBEE
Broad-Based Black Economic Empowerment.

BHP
BHP, formerly known as BHP Billiton, is the group of companies headed by, and including, BHP Group Ltd and BHP Group plc.

Biodiversity
Refers to the variety of life on Earth – the different animals, plants and micro-organisms, their genetic diversity and the ecosystems of which they are a part.

Black People
As defined in the *Broad-Based Black Economic Empowerment Amendment Act 2013* (South Africa), a generic term meaning Africans, Coloureds and Indians who are citizens of the Republic of South Africa by birth or descent; or who become citizens of the Republic of South Africa by naturalisation before 27 April 1994 or on or after 27 April 1994 and who would have been entitled to acquire citizenship by naturalisation prior to that date.

Board
The Board of Directors of South32 Limited.

Catchment
The area of land from which all surface runoff and subsurface water flows through a sequence of streams, rivers, aquifers and lakes into the sea or another outlet at a single river mouth, estuary, or delta. Catchments include associated groundwater areas and might include portions of waterbodies (such as lakes or rivers). In different parts of the world, catchments are also referred to as 'watersheds' or 'basins' (or sub-basins).

CCAP
Climate Change Action Plan contained in the 2022 Sustainable Development Report available at *www.south32.net*.

CEO
Chief Executive Officer.

CFO
Chief Financial Officer.

CO_2-e
Carbon dioxide equivalent.

Contextual water target
A contextual water target is a specific timebound target that is set to deliver an intended outcome based on the environmental and social context of the local catchment.

Contractor
A contractor is an employee of a company contracted by the employer to do work on its behalf and under its control with respect to location, work practices and application of health and safety standards.

COO
Chief Operating Officer.

Copper equivalent production
Copper equivalent production is calculated by accumulating revenue using average realised prices for all operations and dividing by the average realised price of copper.

Corporations Act
Corporations Act 2001 (Cth).

Cost, Insurance, and Freight (CIF)
A contractual term defining responsibilities and division of cost and risk between buyer and seller, in which the seller is responsible for clearing the goods for export and bears the cost of freight and insurance to the named port of destination. The buyer assumes all risks and costs for unloading the goods and clearing the goods for import. Risk passes from seller to buyer once the goods are on board the vessel at the port of shipment.

COVID-19
Coronavirus disease (COVID-19) is an infectious disease caused by the SARS-CoV-2 virus.

CTO
Chief Technical Officer.

Decarbonisation
Avoiding or reducing the greenhouse gas emissions associated with an activity.

Demerger
The separation of assets from BHP effected in May 2015 to create a separate entity South32 Limited, listed on the ASX, LSE and JSE.

Dewatering
Aquifer interception and removal of water from beneath the earth's surface. Does not include the removal of sea water.

DND
Dendrobium Next Domain.

DTR
UK Financial Conduct Authority's Disclosure Guidance and Transparency Rules. A reference to DTR followed by a number is a specific rule under the DTR.

EBIT
Earnings before interest and tax.

EBITDA
Earnings before interest, tax, depreciation and amortisation.

Effective tax rate (ETR)
Income tax expense/benefit divided by profit/loss subject to tax.

Employee
Any person in full-time, part-time or casual employment engaged by South32 on a temporary or permanent basis pursuant to a contract of service.

Employee Share Ownership Plan (ESOP) Trusts
The trusts which purchase and hold South32 Limited shares for the purpose of the South32 Equity Incentive Plans. South32 has an Australian ESOP Trust and South African ESOP Trust.

Finance, marketing and general terms continued

Environmental incident

Any event with an impact to land, biodiversity, ecosystem services, water resources or air.

ESG

Environmental, social and governance.

EthicsPoint

A 24/7 confidential reporting hotline that is serviced by an independent provider.

Executive KMP

Lead Team members who are classified as KMP.

External Auditor

KPMG.

Fatality

A health or safety event where an injury or occupational illness has caused the death of one or more person(s).

Free cash flow

Free cash flow represents operating cash flows including distributions received from equity accounted investments, and after interest (paid)/received, tax (paid)/received and capital expenditure.

Free On Board (FOB)

A contractual term defining responsibilities and division of cost and risk between buyer and seller, in which the seller is responsible for clearing the goods for export and loading them on board the vessel at the named port of shipment. The buyer assumes all risks and costs for goods from this moment forward Including the cost of freight and insurance.

FX

Foreign exchange.

FYXX

Refers to the financial year ending 30 June 20XX, where XX is the two-digit number for the year.

Gearing

The ratio of (net debt/(cash)) to (net debt/(cash)) plus net assets.

GEMCO

Groote Eylandt Mining Company.

GHG

Greenhouse gas.

Global Reporting Initiative (GRI)

GRI is an international independent organisation that has established an international framework and standards for sustainability reporting. South32 prepares our Group-level annual Sustainable Development Report in accordance with the GRI Sustainability Reporting Standards.

Goal

The use of this term in the context of climate change in this report means an aspiration to deliver an outcome for which we have not identified a pathway for delivery, but for which efforts will be pursued towards achieving that outcome, subject to certain assumptions or conditions.

Greenhouse gas (GHG) emissions

For our reporting purposes, GHG emissions are the combined anthropogenic emissions of carbon dioxide (CO_2), methane (CH4), nitrous oxide (N2O), perfluorocarbons (PFCs) and sulphur hexafluoride (SF6). They are measured in carbon dioxide equivalent (CO_2-e). Hydrofluorocarbons (HFCs) GHG emissions are currently not relevant for our reporting purposes.

- Scope 1 emissions - GHG emissions from our own operations, including the electricity we generate at our sites.
- Scope 2 emissions - Indirect GHG emissions from the generation of purchased electricity.
- Scope 3 emissions - GHG emissions in the value chain.

HMM

Hotazel Manganese Mines.

ICMM

ICMM, previously referred to as the International Council on Mining and Metals, is an international organisation that leads through collaboration to enhance the contribution of mining and metals to sustainable development. As a corporate member, South32 commits to implementing and reporting on the ICMM Mining Principles and its Performance Expectations, which define environmental, social and governance requirements.

IMC

Illawarra Metallurgical Coal.

Indigenous, Traditional and Tribal Peoples

We use the defined term 'Indigenous, Traditional and Tribal Peoples' as per the definition and guidance set out in the Indigenous and Tribal Peoples Convention, 1989 (No. 169). We use this term inclusively to encompass the diversity of worldwide Indigenous, Traditional and Tribal Peoples, including but not limited First Nations, Native Americans, Traditional Owners, Aboriginal and Torres Strait Islander Peoples and other land connected communities. We recognise that no single definition can fully capture the diversity of Indigenous, Traditional and Tribal Peoples.

Injury

An occupational injury occurs during a single work shift or a single exposure to an agent(s) causing an acute toxic effect, which can be identified by time and place resulting from direct contact with an object following an instantaneous event. Examples include cut, puncture, laceration, abrasion, fracture, bruise, contusion, chipping tooth, amputation, insect bite, electrocution, or a thermal, chemical, electrical or radiation burn. Sprain and strain injuries to muscles joints connective tissue are classified as injuries when they result from a slip, trip, fall or other similar accidents.

International Financial Reporting Standards (IFRS)

Accounting standards as issued by the IASB (International Accounting Standards Board).

JSE

Johannesburg Stock Exchange.

Just transition

A fair, equitable and inclusive social transition towards a low-carbon economy.

KMP

Key management personnel are people who have authority and responsibility for planning, directing and controlling the activities of South32 either directly or indirectly.

LBMA

London Bullion Market Association.

Lead Team

All Chief positions within South32.

LME

London Metal Exchange.

Local procurement

Local procurement is the direct purchase of goods and services within the local communities in which South32 operates. Suppliers are deemed as local based on their proximity to our local communities, including boundaries defined by local government areas, provinces and states.

Lost time injury

The sum of work-related (fatalities + injuries that caused permanent impairment >30 per cent of body + lost time injuries). Lost time injuries include injuries that result in one or more lost work day after the day of the event.

Lost Time Injury Frequency (LTIF)
The sum of (Lost Time injuries x 1,000,000) ÷ exposure hours, for employees and contractors. This is stated in units of per million hours worked for employees and contractors. We adopt the United States Government Occupational Safety and Health Administration (OSHA) guidelines for the recording and reporting of occupational injuries and illnesses.

Low-carbon
Refers to lower levels of GHG emissions when compared to the current state. Where used in relation to South32's products or portfolio, it refers to enhancement of existing methods, practices and technologies to substantially lower the level of embodied GHG emissions as compared to the current state.

Low-carbon aluminium
Aluminium produced in a process that results in less than 4t CO_2-e Scope 1 and Scope 2 GHG emissions per tonne of aluminium produced.

LSE
London Stock Exchange.

LTI
Long-term incentive.

Management Roles
Management roles are leaders with an identified job grading of 13 or higher based on the requirements of their role.

Margin on third party products
Comprises Underlying EBIT on third party products and services, divided by underlying revenue on third party products and services.

Material Health Exposures
Material health exposures include potential exposure to carcinogens and airborne contaminants.

Material sustainability topic
Topic that reflects a reporting organisation's significant economic, environmental, and social impacts or that substantively influences the assessments and decisions of stakeholders.

Modern slavery
The term modern slavery is used to describe situations where coercion, threats or deception are used to exploit victims and undermine or deprive them of their freedom.

As defined by the *Australian Modern Slavery Act 2018* (Cth) modern slavery include eight types of serious exploitation: trafficking in persons; slavery; servitude; forced marriage; forced labour; debt bondage; deceptive recruiting for labour or services; and the worst forms of child labour. The worst forms of child labour means situations where children are subjected to slavery or similar practices, or engaged in hazardous work.

MRN
Mineração Rio do Norte.

Net cash
Comprises cash and cash equivalents less interest-bearing liabilities.**Net debt**

Comprises interest bearing liabilities less cash and cash equivalents.

Net operating assets
Represents operating assets net of operating liabilities which predominantly exclude the carrying amount of non-material equity accounted investments, cash, interest bearing liabilities, tax balances and certain other financial assets and liabilities.

Net zero
Net zero greenhouse gas emissions are reached when anthropogenic emissions of greenhouse gases to the atmosphere are balanced by anthropogenic removals over a specified period.

No net loss
The impacts on biodiversity caused as a result of a development project/activities are balanced (so that no net loss remains) by rigorous application of the mitigation hierarchy:

1) Avoid;
2) Minimise and mitigate negative impacts;
3) Rehabilitate or restore affected areas; and
4) Offset the residual impacts.

Occupational Exposure Limit (OEL)
The concentration of a substance or agent, exposure to which, according to current knowledge, should not cause adverse health effects nor cause undue discomfort to nearly all workers.

Occupational illness
An occupational illness is any abnormal condition or disorder, other than one resulting from an occupational injury, caused or aggravated by exposures to factors associated with employment. It includes acute or chronic illnesses or diseases which may be caused by inhalation, absorption, ingestion, or direct contact.

Operational GHG emissions
Scope 1 and 2 GHG emissions from our operated assets.

Operational Leadership Team
All General Managers and Managers reporting to Vice President Operations including Functional Managers such as Human Resources, Finance and Supply, etc. (limited to one per function).

Our people
As defined in our Code of Business Conduct, our people includes South32 Directors, executive management, employees and contractor staff.

Paris Agreement
A legally binding international treaty on climate change that aims to bring all nations into a common cause to undertake ambitious efforts to combat climate change and adapt to its effects, with enhanced support to assist developing countries to do so.

Recordable injuries
The sum of work-related (fatalities + injuries that caused permanent impairment >30 per cent of body + lost time injuries + restricted work injuries + medical treatment injuries).

Return on invested capital (ROIC)
Calculated as Underlying EBIT less the discount on rehabilitation provisions included in net finance costs, tax effected by the Group's Underlying effective tax rate (ETR) including our material equity accounted investments on a proportional consolidation basis, divided by the sum of fixed assets (excluding any rehabilitation assets, the impairment reversal of Brazil Aluminium, and unproductive capital) and inventories.

SAEC
South Africa Energy Coal.

'Safety guarantee'
Our 'safety guarantee' is our internal approach to creating a sense of chronic unease to enhance our safety culture. Every day, we ask our people to reflect on whether they can guarantee both their safety and that of their colleagues when executing their role. If the answer is no, then the challenge is to stop and ask what would need to be done differently to provide that guarantee.

Scope 1 emissions
GHG emissions from our own operations, including the electricity we generate at our sites.

Scope 2 emissions
Indirect GHG emissions from the generation of purchased electricity.

Scope 3 emissions
GHG emissions in the value chain.

Finance, marketing and general terms continued

Senior Leadership Team

Presidents and Vice Presidents reporting to members of the South32 Lead Team.

Shared value

The identification of opportunities that create economic value while also advancing the environmental and social outcomes of the communities and regions in which we operate.

SMMEs

Small, medium and micro enterprises.

Social investment

Contributions made to support communities where we operate or have an interest. Our contributions to community programs comprise direct investment, in-kind support and administrative costs.

South32 Equity Incentive Plan

An equity incentive plan that allows the Board to make offers to employees to acquire securities in South32 Limited and to otherwise incentivise employees.

South32, South32 Group or Group

Refers to South32 Limited and its controlled entities and joint arrangements, unless otherwise stated.

STI

Short-term incentive.

Supply Chain

The global network of suppliers that support South32's operations, development options and exploration programs through the flow of goods, services and information.

Sustainability, sustainable development, sustainably

Our approach to sustainability aims to balance environmental, social and economic considerations in a way that creates enduring value for our stakeholders. We recognise that in many cases these considerations will be interdependent or may compete or conflict with each other. In delivering our strategy we aim to understand and balance the environmental, social and economic impacts of our business in a way that seeks to create value overall. References to sustainability (including sustainable development and sustainably) in the suite or other disclosures do not mean that there will be no adverse impact, or an absolute outcome, in any one area.

Target

An intended outcome in relation to which we have identified one or more pathways for delivery of that outcome, subject to certain assumptions or conditions.

Taskforce on Climate-Related Financial Disclosures (TCFD)

The TCFD has issued climate-related financial disclosure recommendations designed to help companies provide better information to support informed capital allocation.

Taskforce on Nature-Related Financial Disclosures (TNFD)

A taskforce to develop and deliver a risk management and disclosure framework for organisations to report and act on evolving nature-related risks.

TEMCO

Tasmanian Electro Metallurgical Company

Total Recordable Injury Frequency (TRIF)

(The sum of recordable injuries x 1,000,000) ÷ exposure hours, for employees and contractors. This is stated in units of per million hours worked for employees and contractors. We adopt the United States Government Occupational Safety and Health Administration (OSHA) guidelines for the recording and reporting of occupational injuries and illnesses.

Total Recordable Illness Frequency (TRILF)

(The sum of recordable illnesses x 1,000,000) ÷ exposure hours, for employees and contractors. This is stated in units of per million hours worked for employees and contractors. We adopt the United States Government Occupational Safety and Health Administration (OSHA) guidelines for the recording and reporting of occupational injuries and illnesses.

Total Shareholder Return (TSR)

TSR measures the return delivered to shareholders over a certain period through the change in share price and any dividends paid. It is a measure used to compare our performance to that of relevant peer groups under the LTI.

Transformation

A national strategy in South Africa aimed at attaining national unity, promoting reconciliation through negotiated settlement and non-racism.

TSX

Toronto Stock Exchange.

Underlying earnings

Underlying earnings is profit after tax and earnings adjustment items. Earnings adjustments represent items that don't reflect our underlying operations. We believe that Underlying earnings provides useful information, but shouldn't be considered as an indication of, or an alternative to, profit or attributable profit as an indicator of operating performance.

Underlying EBIT

Underlying EBIT is profit before net finance costs, tax and after any earnings adjustment items, impacting profit. The underlying information reflects the Group's interest in material equity accounted joint ventures and is presented on a proportional consolidation basis. It is not an IFRS measure of profitability, financial performance or liquidity and may be defined and used in differing ways by different entities. We believe that Underlying EBIT provides useful information, but should not be considered as an indication of, or alternative to, profit or attributable profit as an indicator of operating performance.

Underlying EBIT margin

Comprises Underlying EBIT excluding third party product EBIT, divided by underlying revenue excluding third party product revenue.

Underlying EBITDA

Underlying EBIT before underlying depreciation and amortisation.

Underlying effective tax rate (ETR)

Underlying income tax expense/benefit divided by underlying profit/loss subject to tax.

Value Chain

The interrelated activities and systems involving the full lifecycle and added value of our products and processes, in which South32 explore and develop our commodities, through to processing, refining and smelting, and finally to sale and distribution to customers and closure of the mines.

Water scarcity

Water scarcity refers to the volumetric abundance, or lack thereof, of freshwater resources.

Water stress

Water stress refers to the ability, or lack thereof, to meet the human and ecological demand for freshwater. Stress comprises three primary components: availability, quality, and accessibility and is based on subjective elements and is assessed differently depending on societal values, such as the suitability of water for drinking or the requirements to be afforded to ecosystems.

Water use efficiency

Water use efficiency is calculated as the total water recycled and reused divided by the sum of total water recycled and reused and total operational inputs/withdrawal.

Terms used in resources and reserves

$A.Al_2O_3$
available alumina

Ag
Silver

Au
Gold

Cu/TCu
Copper/ total copper

Fe
iron

Met
metallurgical coal

Mn
manganese

Mo
molybdenum

Ni
nickel

OC
open-cut/open-pit/opencast

Pb
lead

$R.SiO_2$
reactive silica

S
sulphur

Th
thermal coal

VM
Volatile Matter

Zn
zinc

Units of measure

%
percentage or per cent

A$/t
Australian dollars per tonne

dmtu
dry metric tonne unit

g/t
grams per tonne

ha
hectare

Kcal/kg
thousand calories per kilogram

kdmt
thousand dry metric tonne

kL
kilolitre

km
kilometre

koz
thousand ounces

ktpa
kilotonnes per annum

kt
kilotonnes (metric)

kW
kilowatt

kwmt
thousand wet metric tonnes

ML
megalitre

m
metre

Moz
million ounces

Mt
million metric tonnes

Mtpa
Million metric tonnes per annum

oz
ounce

t
Metric tonne

tpa
Metric tonnes per annum

tpd
Metric tonnes per day

tph
Metric tonnes per hour

US$/lb
US dollars per pound

Units of measure continued

US$/oz
US dollars per ounce

US$/t
US dollars per tonne

Group Headquarters

108 St Georges Terrace
Perth WA 6000
Australia

Telephone: +61 8 9324 9000
Facsimile: +61 8 9324 9200
Email: *Company.Secretary@south32.net*

South Africa Office

39 Melrose Boulevard
Melrose Arch
Melrose, Johannesburg 2076
South Africa

PO Box 61820
Marshalltown 2107

Telephone: +27 11 376 2000

Singapore Marketing Office

16 Collyer Quay
#18-00, Collyer Quay Centre
Singapore 049318
Singapore

Telephone: +65 6679 2600
Facsimile: +65 6679 2500

London Marketing Office

Nova North
11 Bressenden Place
London SW1E 5BY
United Kingdom

Telephone: +44 20 7798 1700
Facsimile: +44 20 7798 1701

North America Office

1066 West Hastings Street
Vancouver V6E 3X1
British Colombia
Canada

Telephone: +1 604 915 5680

Share Registrars and Transfer Offices

Contact details for the Company's share registries in Australia, South Africa and the United Kingdom are included on page 180.

Information about the American Depositary Receipts Depositary, Transfer Agent and Registrar can also be found on page 180.

Printed copies of this Annual Report will only be posted to those shareholders who have requested a printed copy. Other shareholders are notified when the Annual Report becomes available and given details of where to access it electronically.

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