SOUTH32

SUSTAINABLE DEVELOPMENT REPORT 2022

About this report

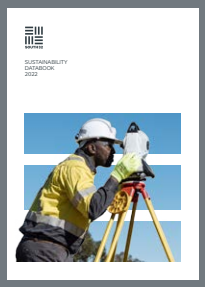
Sustainable Development Report 2022

This report is an overview of how our business-wide processes support our sustainability objectives and how we manage our key sustainability topics.

Our 2022 Annual Reporting Suite

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

Annual Report



Sustainability Databook

Corporate Governance Statement

Modern Slavery Statement

Tax Transparency and Payments to Governments Report

About this report

This report has been prepared by South32 Limited (ABN 84 093 732 597) (South32) for informational purposes only and is intended to assist its investors with understanding its policies and practices to support sustainable development. This report should be read in conjunction with South32's Annual Report and Sustainability Databook, together with other periodic and continuous disclosure announcements lodged with the ASX. These documents are available at *www.south32.net*

This report has been prepared in accordance with the Global Reporting Initiative (GRI) Sustainability Reporting Standards (Core option), the GRI Mining and Metals Sector Supplement and the ICMM Mining Principles.

Unless otherwise stated, (a) metrics describing health, safety, environment, people and community related performance in this report apply to 'operated operations' that have been wholly owned and operated by South32, or that have been operated by South32 in a joint arrangement[1][2] from 1 July 2021 to 30 June 2022 (FY22), (b) operations that we acquired or divested during the reporting period are shown for the period we had operational control of those operations and (c) monetary amounts in this report are expressed in US dollars.

Refer to page 14 for an explanation of how the divestment of South Africa Energy Coal and acquisitions of recent mines have been reflected in this report.

Refer to page 69 for information on what is covered by the metrics describing GHG emissions in the Climate Change Action Plan.

We engaged an independent external assurance organisation, KPMG, to provide the Directors of South32 Limited with assurance on select sustainability information, as explained in the independent assurance report in our Sustainability Databook.

Forward-looking statements and scenario analysis

This report contains forward-looking statements, including statements of current intention and expectation and statements of opinion. This includes statements regarding climate change and other environmental and energy transition scenarios. These forward-looking statements reflect South32's expectations at the date of this report, and they are not guarantees or predictions of future performance or outcomes, or statements of fact. They involve known and unknown risks and uncertainties, which may cause actual outcomes and developments to differ materially from those expressed in such statements. For further information regarding South32's approach to risk, see pages 26 to 35 of our Annual Report.

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.

There are also limitations with respect to scenario analysis which is discussed in this report, and it is difficult to predict which, if any, of the scenarios might eventuate. Scenario analysis is not an indication of probable outcomes and relies on assumptions that may or may not prove to be correct or eventuate.

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, particularly in light of the long time horizon which this report covers and the inherent uncertainty in possible policy, market and technological developments in the future.

Information prepared by third parties

Certain information contained in this report is based on information prepared by third parties. South32 does not make any representation or warranty that this third party material is accurate, complete or up-to-date.

(1) In this report, references to 'joint arrangements' mean operations that are not wholly owned by South32, such as joint ventures and joint operations. Joint arrangements are classified in accordance with IFRS 11 Joint Arrangements. Joint arrangements and entities that are not operated by South32 are not included in this report unless otherwise stated.

(2) This report refers to commodities 'we produce' and commodities in 'our portfolio', which include commodities such as bauxite, alumina, aluminum and copper that may form part of, or be produced by, entities not operated by South32. References in this report to commodities 'we produce' or in 'our portfolio' should be read in this context.

Cover: A community member and external affairs specialist near our Cerro Matoso operation in Colombia.

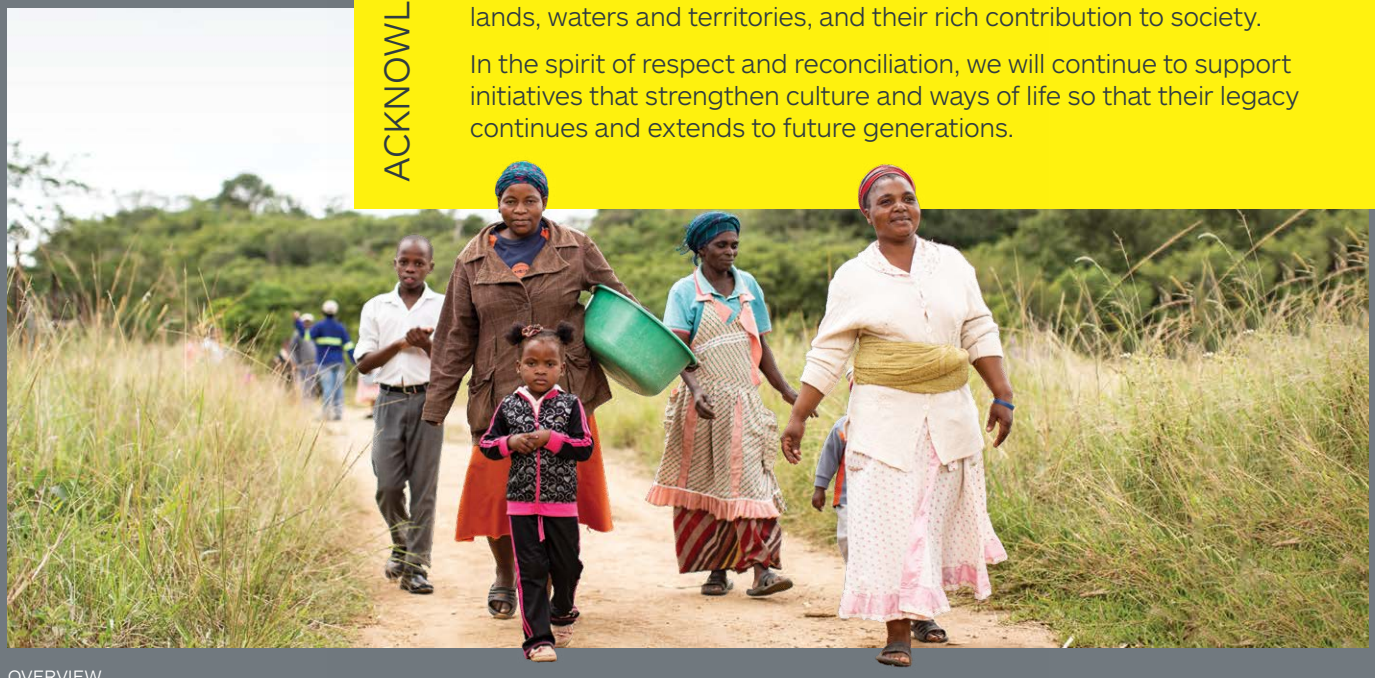
Below: Community members in KwaZulu-Natal province in South Africa.

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.



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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.

Making a difference

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.

Learn more about **how we improve people's lives** in our Annual Report at www.south32.net

Optimise | Unlock | Identify

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

Learn more about **our strategy** in our Annual Report at www.south32.net

Care | Trust | Togetherness | Excellence

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

Learn more about **our people** on page 15

OUR PERFORMANCE AT A GLANCE

Total Recordable Injury Frequency (TRIF)[1]

5.3

FY22	5.3
FY21	6.0

Total Recordable Illness Frequency (TRILF)[2]

1.3

FY22	1.3
FY21	1.8

Community investment[3]

US$31.1m

FY22	US$31.1m
FY21	US$22.2m

Local procurement[4]

US$907m

FY22	US$907m
FY21	US$856m

Women in our workforce

19.2%

FY22	19.2%
FY21	18.4%

Operational greenhouse gas (GHG) emissions

21.0 Mt CO_2-e

FY22	21.0 Mt CO_2-e
FY21[5]	20.7 Mt CO_2-e

Highlights

- Total Recordable Injury Frequency decreased by 12 per cent and we developed a three-year global Safety Improvement Program, designed to achieve a step-change in our safety performance.
- Set a new goal of net zero Scope 3 GHG emissions by 2050[6].
- Enterprise Supplier Development spend in South Africa more than tripled to US$17 million.
- Direct spend with Aboriginal and Torres Strait Islander businesses in Australia increased by 34 per cent.
- Developed and deployed a 'Living our Code' training and discussion series to over 5,500 employees creating conversation around our expected behaviours.
- Established a target for operations in baseline water stress to achieve at least a 10 per cent improvement in water use efficiency by FY27.

(1) TRIF baseline was adjusted at end FY21 to account for the removal of South Africa Energy Coal (SAEC) and Tasmanian Electro Metallurgical Company (TEMCO) from the portfolio, measuring our FY22 performance against a TRIF of 6.0.
(2) TRILF baseline was adjusted at end FY21 to account for the removal of SAEC and TEMCO from the portfolio, measuring our FY22 performance against a TRILF of 1.8.
(3) Community investment consists of direct investment, in-kind support and administrative costs.
(4) Local procurement is defined as the direct purchase of goods and services within the local communities in which South32 operates. Suppliers are determined as 'local' based on their proximity to the local communities, including boundaries defined by local government areas, provinces and states.
(5) FY21 emissions adjusted to exclude GHG emissions from SAEC and TEMCO, which were divested in FY21.
(6) 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 page 102 of this report.

DEVELOPING NATURAL RESOURCES SUSTAINABLY

In fulfilling our purpose, we aim to develop natural resources sustainably and with care, in a way that creates enduring social, environmental, and economic value to improve people's lives now and for generations to come.

It is my fundamental belief that when done sustainably, the development of natural resources can change people's lives for the better. Sustainability is at the heart of our purpose and underpins the delivery of our strategy, and we are committed to working with our stakeholders to create value and opportunities for people.

The most important commitment we make at South32 is that everyone goes home safe and well every day and it is devastating that we did not achieve that this year. We all feel the loss of one of our colleagues, Mr Desmin Mienies, a contractor who was fatally injured while undertaking electrical work at our Wessels Mine at South Africa Manganese on 30 November 2021. Our deepest sympathies are with Mr Mienies' family, friends and his immediate team, who we supported following the tragic incident. To understand and learn from what happened, we undertook a detailed investigation and discussed the learnings in 'stop for safety' conversations across our business.

We can only be truly successful when we eliminate fatalities and serious incidents. We are focusing our efforts on achieving this through the implementation of our Safety Improvement Program, a three-year global program of work designed to achieve a step-change in our safety performance.

Contractors play a critical role in helping us run our business and make up a significant proportion of our workforce. In line with our commitment to improving our safety performance, we developed our internal contractor management standard which we will continue to embed in FY23.

Creating a safe workplace is a responsibility we take very seriously, and we recognise all forms of workplace misconduct present a threat to the physical and psychological health and safety of our people. We have carefully considered the extent to which sexual harassment occurs in our industry, and in our business.

Over the last two years, we have undertaken a significant amount of work to make sure our people feel safe, included and respected at work. While there is more to do, we are working to understand and respond to risk factors for harassment as we do for other safety risks. Broader industry findings on this critical issue have also informed our work.

Strengthening our internal resilience is more important than ever in response to increasing external volatility. Global headwinds continue to impact national economies, disrupt supply chains and affect energy reliability. This year has brought many challenges – the prolonged impacts of COVID-19, extreme weather events and ongoing geopolitical conflicts – all of which have impacted many of our people, as well as our business. Markets face the challenges of rising interest rates, cost inflation, rapid technological change, a tight job market and a global shift towards a decarbonising economy. Against this backdrop, South32 is supporting the transition to a low-carbon world by producing the commodities essential for this transition.

This year we have developed our Climate Change Action Plan (the Plan), which will be the subject of a non-binding advisory resolution at our 2022 Annual General Meeting. The Plan describes the actions we are taking to address the risks and opportunities which climate change presents, including protecting and unlocking long-term value and producing the metals that support the transition to a low-carbon world in a way that minimises our impact.

Our reported Scope 1 and Scope 2 greenhouse gas (GHG) emissions for FY22 were 21.0 Mt CO_2-e, a 1.4 per cent increase from our adjusted FY21 GHG emissions[(1)]. Four of our operations accounted for 93 per cent of our Scope 1 and Scope 2 emissions and we are focused on achieving material reductions in our operational GHG emissions at these operations, consistent with our medium-term target to halve our operational GHG emissions by 2035 compared to our FY21 baseline. In FY22, we progressed efficiency initiatives at Hillside Aluminium, Worsley Alumina and Illawarra Metallurgical Coal as part of our near-term decarbonisation activities.

> "We are supporting the transition to a low-carbon world by producing the commodities essential for this transition."

(1) Excludes GHG emissions from South Africa Energy Coal and Tasmanian Electro Metallurgical Company, which were divested in FY21.

Recognising that we have a critical role to play in contributing to the decarbonisation of the value chain, in partnership with our customers and suppliers, we have set a new goal of net zero Scope 3 GHG emissions by 2050. Although we do not have direct operational control over activities in the value chain, we are committed to collaborating with our suppliers, customers, industry peers and other value chain partners to make a meaningful contribution to the actions and innovations required to reduce these emissions.

We have set a target for operations in baseline water stress to achieve at least a 10 per cent improvement in water use efficiency by FY27, reinforcing our commitment to environmental stewardship. We have also committed to delivering no net loss outcomes for all new projects and major expansions, with a near-term focus on the Worsley Mine Development and Groote Eylandt Mining Company Eastern Leases Project.

This ambition also applies to social outcomes. Our new internal social performance standard strengthens requirements for social performance across the business, enhances the approach to the identification and management of social impacts and risks and sets clear performance criteria.

We have an important role to play in preserving cultural heritage given our operations and projects intersect areas of cultural significance. This year, we completed cultural heritage reviews for our operations in the Americas and southern Africa to inform the development of our Approach to Indigenous, Traditional and Tribal Peoples Engagement, and our Approach to Cultural Heritage.

We also invested US$31.1 million in community initiatives, an increase of 40 per cent from FY21. Local procurement across our global operations increased by about six per cent to nearly US$907 million and we saw significant increases in spend on Enterprise Supplier Development in South Africa and procurement from Aboriginal and Torres Strait Islander businesses in Australia. These outcomes reflect the way we work with our communities to deliver results that benefit all of our stakeholders.

In December 2021, we announced the successful refinancing of our multicurrency revolving syndicated credit facility as a Sustainability-Linked Loan, providing continued access to substantial liquidity. It is one of the first in the mining sector to be directly linked to sustainability performance, aligning our actions with access to capital.

We measure our sustainability performance against international standards and initiatives, including the ICMM Mining Principles, United Nations Sustainable Development Goals (UN SDGs) and United Nations Global Compact (UNGC) Ten Principles, to which we reaffirm our commitment. We also support global efforts to align sustainability reporting standards and continue to participate in several international working groups.

We are committed to continuously improving our sustainability performance - minimising the adverse impacts of our operations, creating enduring social, environmental and economic value - and reporting transparently on our progress.

Graham Kerr
Chief Executive Officer

WORKING WITH INDIGENOUS, TRADITIONAL AND TRIBAL PEOPLES

We are committed to working with our local communities including Indigenous, Traditional and Tribal Peoples to achieve the best possible outcomes wherever we operate.

Hermosa

The Tohono O'Odham Nation, Gila River Indian Community, Salt River Pima-Maricopa Indian Community, the Ak-Chin Indian Community, Pueblo of Zuni, and the Hopi, Mescalero Apache, White Mountain Apache, and Pascua-Yaqui Tribes who have ties to the Hermosa project area.

Cerro Matoso

25 local communities surrounding Cerro Matoso including 11 Zenú Indigenous organisations and three Afro-Colombian communities.

Ambler Metals

Ambler Metals has a long-term agreement with NANA Regional Corporation, an Alaska Native Corporation owned by more than 14,500 Inupiaq shareholders.

South Africa and Mozambique

Many host communities have strong connections to the land with unique tangible and intangible cultural heritage. Traditional groups maintain distinct local customs, particularly near our operations in the Northern Cape province where local customs, traditions and living culture are evident.

Australia

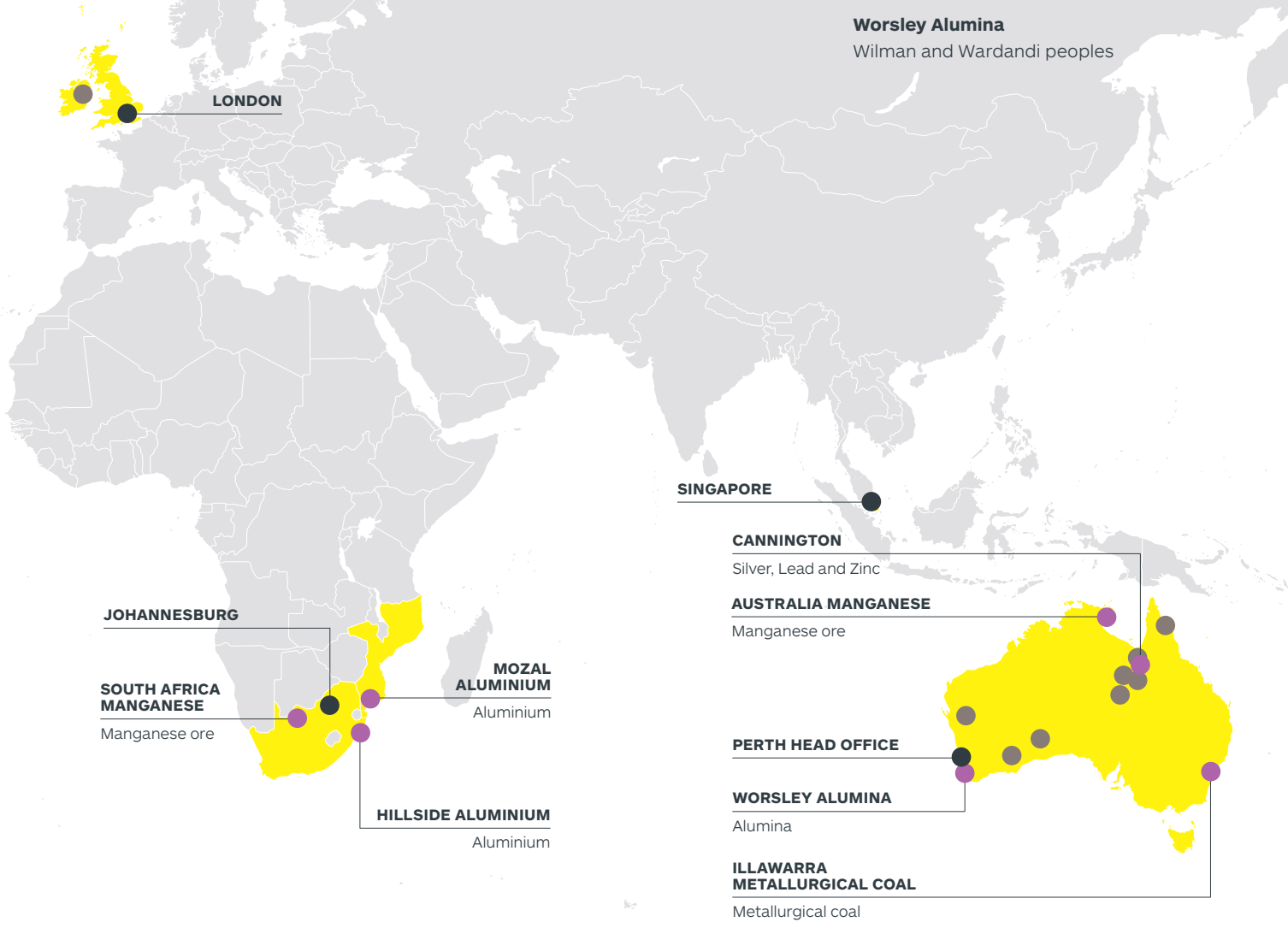
Perth Head Office
Whadjuk people

Cannington
Mitakoodi and Yulluna peoples
Bindal and Wulgurukaba peoples

Groote Eylandt Mining Company
Anindilyakwa people

Illawarra Metallurgical Coal
70+ Registered Aboriginal People groups – region is the Dharawal people

Worsley Alumina
Wilman and Wardandi peoples



CREATING LONG-TERM VALUE

As a global mining and metals company, we create value by producing commodities that are used in all aspects of modern life. 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 all of our stakeholders, at each stage of the mining lifecycle.

The resources we rely upon

People
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.

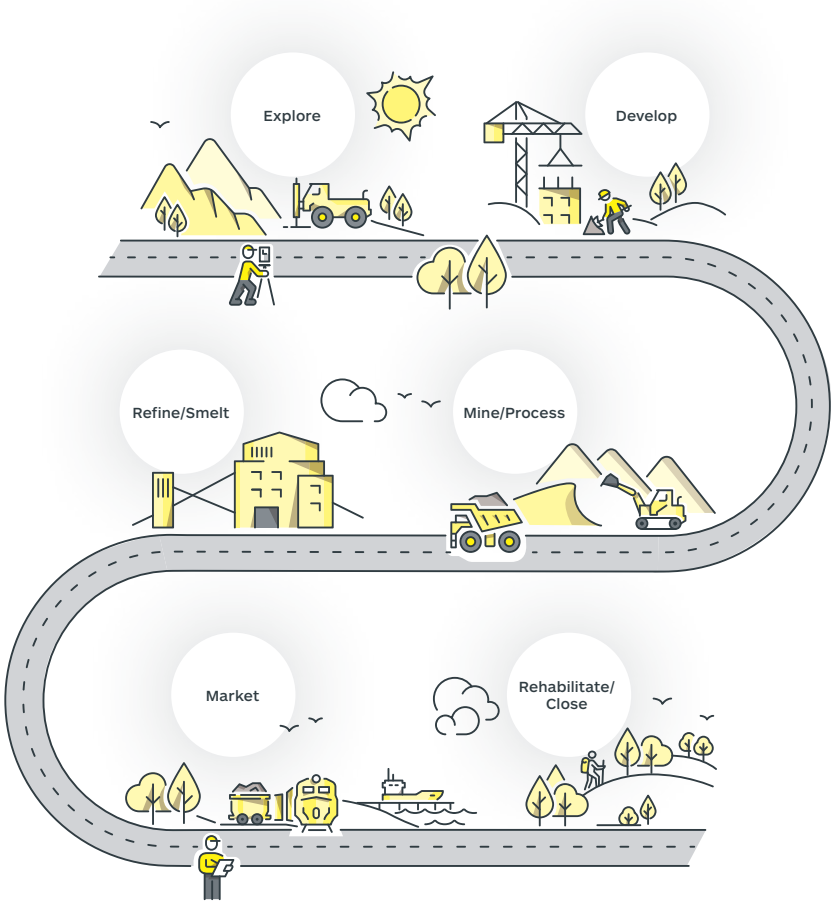
Physical
We have a suite of assets including open-cut and underground mines, refineries, smelters and associated infrastructure which we focus on running safely and reliably. We procure equipment from suppliers globally to support our operations, development options and exploration programs.

Environmental
The resources and reserves we access are the primary inputs for our business. Other inputs such as water and energy are also important for the operation of our facilities.

Economic
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.

Societal
We build strong relationships with our stakeholders based on trust and transparency and are entrusted to develop their resources.

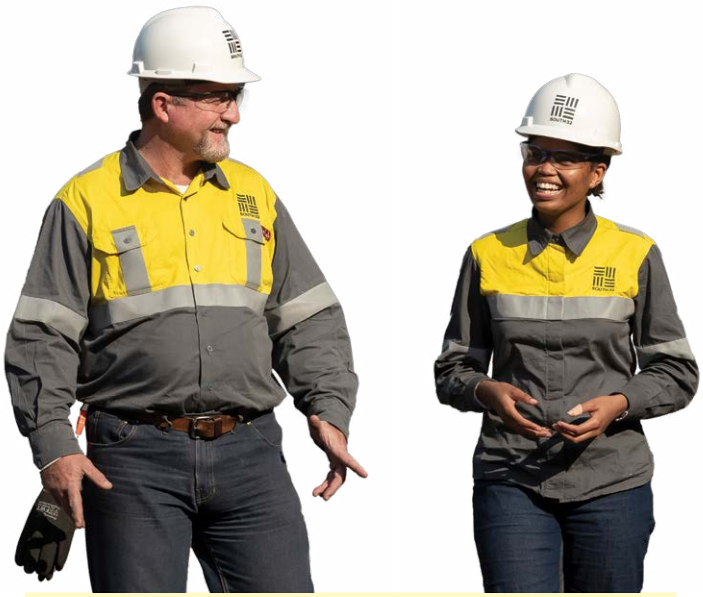
What we do



What guides us

Our **purpose**

Learn more about **our purpose** in our Annual Report at www.south.net



Explore
We have more than 25 active exploration programs across the globe to discover our next generation of mines.

Develop
Our development options have the potential to provide commodities which support the transition to a low-carbon world. We have a pipeline of brownfield and greenfield options in execution or study phases.

Mine
We mine and process bauxite, copper, silver, lead, zinc, nickel, metallurgical coal and manganese.

Refine/Smelt
We refine bauxite to produce alumina, we smelt alumina to produce aluminium, and we smelt nickel ore to produce ferronickel.

Market
Our marketing team generates revenue from the sale of our commodities to a global customer base and purchases raw materials from global markets. They also build a view of commodities and their markets to inform our strategic business planning and investment decisions.

Rehabilitate/Close
From exploration through to closure and beyond, we seek to minimise our adverse impacts on the surrounding environments. We undertake progressive rehabilitation where possible and aim to leave a lasting and positive legacy in our host communities.

The outcomes we create

People
We provide meaningful employment and career development opportunities for the people who work for us, who in turn support their families and the communities they live in.

Physical
We produce commodities that are used in all aspects of modern life and play a critical role in the transition to a low-carbon world.

Environmental
We seek to avoid, minimise, rehabilitate and offset to deliver enduring outcomes for the ecosystems and catchments in which we operate.

Economic
Our disciplined approach to capital management supports investment in our business and rewards shareholders as performance improves.

Societal
The contribution we make to society is multi-faceted and helps improve people's lives by providing the commodities the world needs. In doing so, we create employment, pay taxes and royalties which help fund essential infrastructure and services, invest in communities, develop supply chains, provide returns to shareholders and work hard to be responsible stewards of the environment.

Learn more about **our impact** in our Annual Report at www.south.net

Our **strategy**

Learn more about **our strategy** in our Annual Report at www.south.net

Our **values**

Learn more about **our values** in our Annual Report at www.south.net

DEVELOPING NATURAL RESOURCES TO CHANGE LIVES FOR THE BETTER

Sustainability is at the heart of our purpose and underpins the delivery of our strategy. In delivering our purpose, we seek to create enduring social, environmental and economic value.

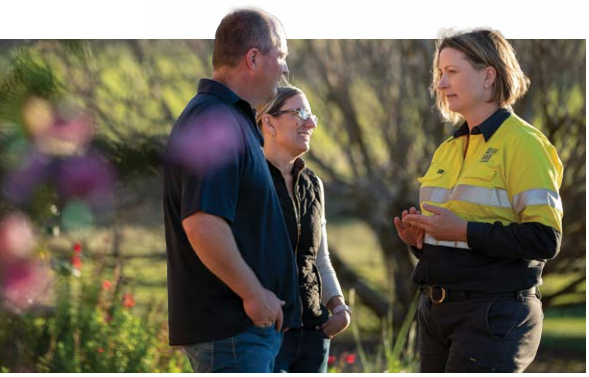
Our approach to sustainability comprises five interconnected pillars which focus on areas that are material to our business and stakeholders.

Protecting and respecting our people

The most important commitment we all make at South32 is that everyone goes home safe and well every day. We are committed to working together safely, creating an environment where our people are supported to speak up, and building an inclusive and diverse workforce.

Material topics: Health and safety | People and culture

Learn more about how we are **protecting and respecting our people** on page 15.



Delivering value to society

We are committed to making a meaningful contribution to people's lives by creating lasting social, environmental and economic value. We believe trust and transparency are essential to the way we operate, we listen to our stakeholders and work together to create shared value.

Material topics: Partnering with communities | Our societal contribution

Learn more about how we are **delivering value to society** on page 27.

Operating ethically and responsibly

Operating ethically and responsibly is fundamental to fulfilling our purpose, delivering on our strategy and achieving our aspiration of building strong, mutually beneficial and trusting relationships with our stakeholders. We respect human rights and apply responsible business practices across our value chain.

Material topics: Ethics and business integrity | Human rights | Responsible value chain

Learn more about how we are **operating ethically and responsibly** on page 40.

Managing our environmental impact

Effective environmental management is essential and we are committed to protecting natural resources including water, biodiversity, air and surrounding ecosystems. We work hard to be responsible stewards of the environment and treat natural resources with care so that they are available for future generations.

Material topics: Water | Biodiversity and land use | Tailings, waste, and other emissions

Learn more about how we are **managing our environmental impact** on page 51.

Addressing climate change

Our approach to climate change is designed to protect and unlock long-term value, build operational resilience, and enhance our competitiveness. We are responding to the risks and opportunities of climate change by producing metals that support the transition to a low-carbon world, in a way that seeks to minimise our impact.

Material topic: Climate change and greenhouse gas emissions

Learn more about how we are **addressing climate change** on page 68.

Our commodities are used in all aspects of modern life and we are actively repositioning our portfolio to increase our exposure to the metals critical in a low-carbon world. Key market sectors where our commodities have an important role to play include construction, energy and renewables, the automotive industry and consumer goods. We aim to develop natural resources sustainably and with care, to create value and opportunities for people today and into the future.

While our business has many positive impacts, we also recognise that our 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 by protecting and respecting our people, delivering value to society, operating ethically and responsibly, managing our environmental impact and addressing climate change.

Our Sustainability Policy, updated in FY22, reaffirms our commitment to sustainable development and outlines our commitment to governance and transparency on sustainability matters. Our Sustainability Policy is guided by international standards and initiatives, including the ICMM Mining Principles, United Nations Global Compact (UNGC) Ten Principles, United Nations Sustainable Development Goals (UN SDGs) and applicable legal requirements. Where domestic laws do not meet our sustainability commitment, we seek to go beyond the baseline expectation of legal compliance, to operate in alignment with our purpose.

Our sustainability commitment and principles, as outlined in our Sustainability Policy, form an integral part of our strategy, internal standards and procedures. Through the employment of responsible business practices at our operations, and throughout our value chain, we seek to optimise our positive contributions and minimise adverse impacts for stakeholders.

Our approach to sustainability supports the UN SDGs and we work with stakeholders to develop and implement actions that contribute to sustainable development.

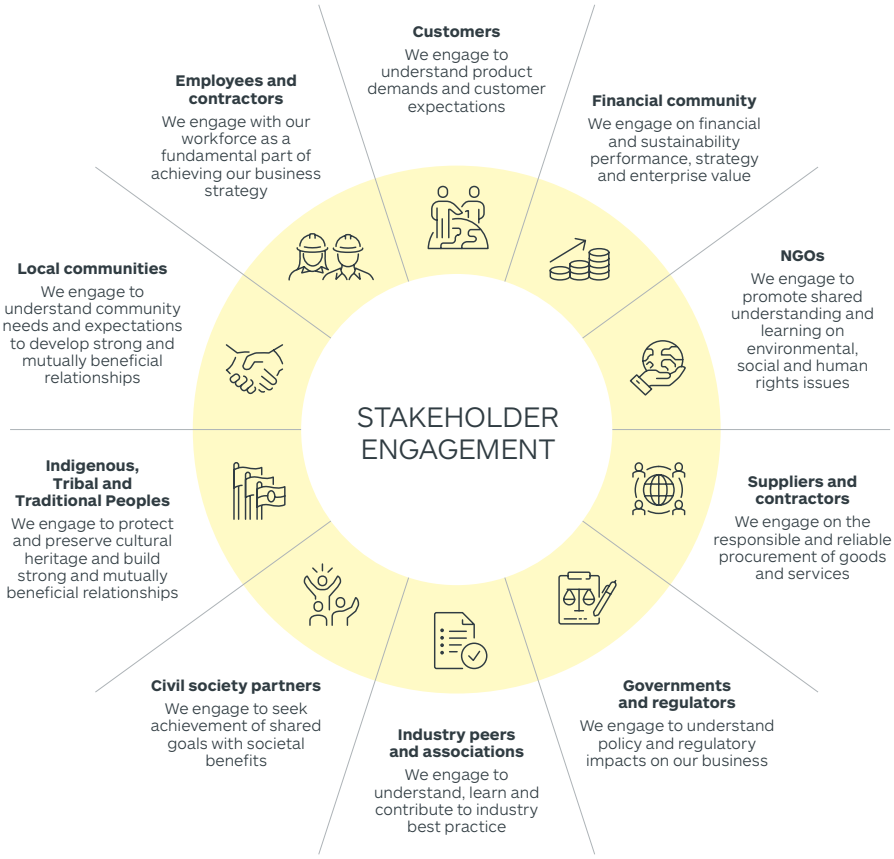
This financial year we have disclosed a more detailed alignment of South32's contribution to the UN SDGs and their associated targets. Out of the 169 UN SDG targets, we have identified 19 primary UN SDG targets which our activities contribute to.

Read more about **the UN SDGs that South32 contributes to** in the 2022 Sustainability Databook at www.south32.net

Stakeholders and collaboration

Respectful relationships with our stakeholders underpin the creation and protection of shared social, economic, and environmental value. The expectations of stakeholders and society more broadly are constantly evolving in response to global challenges that affect current and future generations – including the COVID-19 pandemic, climate change, conflict, social inequality, and water scarcity. Challenging ourselves to create social, environmental and economic value is intrinsic to our purpose and aligns with our values. We work to build positive, meaningful and respectful relationships, guided by the ICMM Mining Principles 9 – Social Performance and 10 – Stakeholder Engagement, as well as our Code of Business Conduct and internal standards. We hosted our first Sustainability Briefing in October 2021, providing a forum to discuss our approach to sustainability with our stakeholders.

Read more about **how we engage with stakeholders** in the 2022 Sustainability Databook at www.south32.net



Materiality assessment

We undertake annual sustainability materiality assessments to proactively anticipate, identify and assess the sustainability topics that matter most to our business and stakeholders. In FY22, we started to consider both the impact of our business and value chain on the external environment, economy and society (often referred to as 'impact materiality'); and the impact of the external environment, economy, and society on our enterprise value (often referred to as 'financial materiality').

In FY22, our materiality assessment was conducted by an external consultant, and consisted of desktop research, interviews with key external stakeholders, an internal survey, and a workshop. The desktop research considered a range of internal and external sources, such as sustainability reporting standards and frameworks, investor feedback, community engagement feedback, peer companies' sustainability disclosures, media reports, ESG rating agency reports, enterprise risk reports and industry publications, amongst others. Through the desktop research, relevant sustainability topics were identified and reviewed, with a frequency analysis used to undertake an initial prioritisation of topics. The desktop research was supplemented by a survey of South32's Senior Leadership Team, and interviews with a number of our investors, customers and suppliers, to identify and assess key sustainability topics for South32. A workshop was held with internal stakeholders to validate the findings, which were further prioritised into a list of material sustainability topics.

The process was aligned with guidance set out in the Global Reporting Initiative (GRI) Sustainability Reporting Standards. We use the results of this process to inform the focus and structure of our annual sustainability reporting as well as where to focus our future efforts.

While there were no new material sustainability topics identified in FY22 compared to the prior financial year, the prioritisation of material topics varied. In FY22, responsible value chain increased in priority, showing the growing importance of, and interest in, sustainability in the value chain. While cultural heritage remains a critical area of focus, we have included this within our Partnering with communities material topic.

Our FY22 material sustainability topics are shown on page 11.

Risk management

Risk management is fundamental to maximising the value of our business and informing our strategic direction.

Our System of Risk Management aligns with the principles of the International Standard for Risk Management AS/NZS ISO31000:2018. It applies to all employees, Directors, contractors, and subsidiaries. We identify, evaluate and manage sustainability risks in line with our Risk Management Framework.

Read more about **our approach to risk management and our strategic risks** in our 2022 Annual Report at www.south32.net

Corporate governance

Good governance is essential to the way we work – to our actions, decisions, communications, and behaviours. Our Corporate Governance Statement sets out our corporate governance policies and practices and is available at *www.south32.net*

Our Board continues to acknowledge the unique relationship between resource companies and the communities in which they operate, and the standards and expectations of our Company to act lawfully, ethically and responsibly.

The Board is supported to maintain effective governance, accountability and oversight of sustainability management and performance through its Sustainability Committee. The Committee oversees our approach to material sustainability-related risks and opportunities, including in relation to safety, health, environment, social performance, business ethics and climate change. Our Board is also assisted by the Risk and Audit Committee and Remuneration Committee, as appropriate.

Our Chief Executive Officer is accountable for the sustainability performance of our business. Under the supervision of our Chief Executive Officer, our Leadership Team works to deliver on our strategy in line with our values, Code of Business Conduct, the risk appetite set by the Board and our Sustainability Policy.

For more information about the Sustainability Committee and the Risk and Audit Committee, refer to *www.south32.net* for the:

- 2022 Corporate Governance Statement;
- Sustainability Committee Terms of Reference; and
- Risk and Audit Committee Terms of Reference.

Sustainability reporting

We are committed to transparently reporting our sustainability performance, in line with our Sustainability Policy and the ICMM Mining Principle 1 – Ethical Business. We welcome stakeholder feedback to help us to continue to improve our reporting.

Transparency in disclosing our sustainability performance and progress is essential to build trust and demonstrate delivery on our commitments. This report explains how our business-wide processes support our sustainability objectives, how we manage our most important sustainability topics, and the progress we have made during FY22. We prepare this report in accordance with the GRI Sustainability Reporting Standards (Core option) and the ICMM Mining Principles and Position Statements. In our 2022 Sustainability Databook we also demonstrate how we are pursuing alignment with the Value Reporting Foundation's SASB Standard for the Metals and Mining industry.

The divestment of South Africa Energy Coal on 1 June 2021 significantly impacted several of our FY21 sustainability metrics due to the size of that operation and its headcount relative to the rest of the group. These impacts, including associated comparisons to FY22 metrics, are noted where relevant in this report and in our 2022 Sustainability Databook. Sustainability performance data has been included for the Hermosa project for health, safety, environment, community and people as these reflect areas of the most material sustainability impact for FY22. Going forward, the material sustainability impacts relevant to the operational nature of the project will be measured and considered for future disclosures. In February 2022, we announced the completion of the acquisition of a 45 per cent interest in the Sierra Gorda copper mine in Chile. Due to the recent acquisition, we have only reported FY22 sustainability performance data related to Scope 3 GHG emissions (on an equity share basis) and workforce headcount. Going forward, we will work with the Sierra Gorda Sustainability Sub-Committee to consider the measurement and disclosure of further material sustainability performance information.

In May 2022, we announced the completion of our acquisition of an additional 18.2 per cent interest in the Mineração Rio do Norte (MRN) bauxite mine in northern Brazil, increasing our ownership of the mine to 33 per cent. Similar to previous years, Scope 3 GHG emissions includes a proportion of Brazil Alumina's Scope 1 and 2 GHG emissions and has been reported under Investments (category 15) on an equity share basis.

Subsequent to the end of the reporting period, we announced that we will not proceed with an investment in the Dendrobium Next Domain project at Illawarra Metallurgical Coal following our consideration of recently completed study work and extensive analysis of alternatives[1].

Our sustainability performance data is contained in our 2022 Sustainability Databook at *www.south32.net*

In accordance with our ICMM member requirements, we are implementing the ICMM Performance Expectations (PEs). During FY22, we undertook self-assessments against the PEs across our operations. The self-assessments show that of the 38 ICMM PEs, we have met 87 per cent (33 PEs), with 10 per cent (four PEs) partially met and three per cent (one PE) not applicable. South32 did not have any PEs assessed as not met.

In accordance with the ICMM assurance requirements, we have developed prioritisation criteria to identify operations subject to third party validation. We continue to embed the ICMM PEs throughout our operations, with third party validation over our self-assessments commencing in FY23.

Read more about **our ICMM PE self-assessments and our prioritisation criteria for third party validation** in our 2022 Sustainability Databook at www.south32.net

We support global efforts to align sustainability reporting standards. During the financial year, we participated in the ICMM Mining Standards Working Group and the ICMM ESG Reporting Working Group and contributed to feedback on the exposure drafts of the IFRS Sustainability Disclosure Standards, developed by the International Sustainability Standards Board (ISSB). South32 also has representation on the GRI Mining Sector Standard Working Group, appointed by the Global Sustainability Standards Board to develop the new Mining Sector Standard.

As a UNGC member, we also issue our Communication on Progress (COP), which we have integrated into this report with a UNGC COP index in our 2022 Sustainability Databook.

Our Addressing climate change pillar within this report has been prepared in accordance with the recommendations of the Task Force on Climate-Related Financial Disclosures.

Each financial year we produce one Modern Slavery Statement that responds to both the *Australian Modern Slavery Act 2018* (Cth) and the United Kingdom's *Modern Slavery Act 2015*. All our published statements are available at *www.south32.net*

In line with our ICMM membership requirements and transparency commitments, we obtain independent assurance over selected sustainability information.

Read more about **our FY22 Independent Assurance Report** in our 2022 Sustainability Databook at www.south32.net

Sustainability-Linked Loan

In December 2021, we announced that we had successfully refinanced our multicurrency revolving syndicated credit facility as a Sustainability-Linked Loan. Our new US$1.4billion revolving credit facility provides us with continued access to substantial liquidity and is one of the first in the mining sector to be directly linked to sustainability performance, aligning our actions with access to capital. The Sustainability-Linked Loan ties our continued access to substantial liquidity to measures including emissions reduction and improving energy and water use efficiency. South32 has obtained a Second Party Opinion from Sustainalytics, who evaluated and provided an independent opinion on the alignment of the Sustainability-Linked Loan's framework with the Sustainability-Linked Loan Principles 2021. The inclusion of specific measures on our sustainability performance demonstrates our commitment to make a difference by developing natural resources in a way that improves people's lives now and for generations to come.

(1) Refer to market release dated 23 August 2022 at *www.south32.net*

PROTECTING AND RESPECTING OUR PEOPLE

The most important commitment we all make at South32 is that everyone goes home safe and well every day. We are committed to working together safely and creating an environment where our people are encouraged and supported to speak up. We are building a workforce that is representative of the countries and communities where we operate and know that creating a safe and inclusive work environment is critical to unlocking our potential.

IN THIS SECTION

Health and safety	16
People and culture	22

Amanda Crehan was recognised for her work in championing gender diversity at the 2021 NSW Women in Mining Awards.

HEALTH AND SAFETY

Nothing is more important than the health, safety and wellbeing of our employees, contractors, visitors and communities. We are committed to working together safely, and continuously improving how we work by embedding safe and sustainable business practices every day.

FY22 AT A GLANCE

- Continued to respond to COVID-19, with a focus on keeping our people safe and well, maintaining safe and reliable operations and supporting our communities
- Total Recordable Injury Frequency decreased by 12 per cent, however we did not meet our target of a 20 per cent reduction
- Undertook various initiatives designed to achieve a step-change in our safety performance, including the development of our internal contractor management standard and a three-year Safety Improvement Program

FY23 FOCUS AREAS

- Delivering the second year of our three-year Safety Improvement Program
- Embedding our revised internal safety standard and new internal contractor management standard
- Identifying and implementing projects to reduce potential material health exposures

ICMM Principle

4 RISK MANAGEMENT

5 HEALTH AND SAFETY

South32 supports the UN SDG

3 GOOD HEALTH AND WELL-BEING

3.8

UNGC Principle

LABOUR

Our approach

Health and safety

Our approach to health and safety is guided by our Sustainability Policy and implemented through our internal health and safety standards and the procedures which embed these across our locations. The standards and their associated procedures are aligned to the International Organisation for Standardisation (ISO) 45001 Occupational Health and Safety Management System Standard 2018, and the ICMM Mining Principles 4 – Risk Management and 5 – Health and Safety and comply with local laws and regulations.

Our internal health and safety standards are approved by our Chief Technical Officer and apply to all South32 employees, contractors and visitors, covering all operations, functions, projects and exploration activities where South32 has operational control. They set minimum performance requirements and controls to manage fatality risks, and outline accountabilities across our business. Our Group Technical function is accountable for setting policies, standards, and key performance indicators, with operations and functions accountable for designing local systems of work to meet these standards and local requirements. Frontline leaders are accountable for leading and empowering their teams, verifying, reporting and improving performance. For more information on our health and safety approach, refer to *www.south32.net*

Workplace misconduct and sexual harassment are inconsistent with our values and are not acceptable. We recognise that all forms of workplace misconduct present a threat to the physical and psychological health and safety of our people. We have carefully considered the extent to which sexual harassment occurs in our industry, and in our business, and in FY22 we continued to undertake a significant amount of work so our people feel safe, included and respected. We know there is always more to do and we are working to understand and respond to the risk factors for harassment, just as we do for other safety risks. More recently, our work has also been informed by broader industry learnings following the publication of key reports on this critical issue. We manage sexual harassment as a material safety risk, which we assess through our risk management systems and processes. In FY22, we identified and implemented additional controls to mitigate this risk. This included reviewing the facilities across our operations and adding controls to improve physical and psychological safety. We also conducted independent security assessments at several of our operations and implemented additional controls where required. Assurance work is underway to further assess our physical controls, and learnings from this will guide further improvements across our locations.

Health and wellness

We actively promote health and wellbeing in our workplaces. We provide occupational health services to employees and contractors including health surveillance

to prevent and detect early-stage adverse health effects from exposures in the workplace. This is informed by our monitoring programs to assess and characterise exposures.

The potential material health risks at our operations and projects include exposure to airborne contaminants and hazardous substances, non-ionising radiation and communicable and infectious diseases. Other potential health exposures include noise and ergonomic stressors. We have defined the minimum controls for the management of these risks in the workplace in our internal health standard and we monitor developments in the management of material workplace and environmental exposures to inform our approach and occupational exposure trigger levels.

Through our occupational health services, we offer chronic disease management, education, and referral for non-occupational related conditions. This includes providing preventative health measures appropriate to the locations where we operate, including fitness facilities, influenza and COVID-19 vaccines, and malaria and HIV/AIDS programs.

We prioritise the mental health of our workforce, which has been brought into sharper focus following the onset of the COVID-19 pandemic. Services provided include our Employee Assistance Program and our mental wellness program, which are designed to help our employees stay healthy, connected and productive by providing access to resources that support mental wellbeing. Our mental health and wellbeing network connects our operations and enables them to support employee wellness within their local context. Our mental wellness program was originally established in FY20 in response to COVID-19, but due to its success we are embedding it as a business-as-usual activity.

Emergency preparedness

Our internal security, crisis and emergency management (SCEM) standard requires that SCEM plans are developed, implemented, resourced and routinely exercised to mitigate material risks and to respond to emergencies. SCEM plans are designed to help us deliver a well-coordinated emergency response, protecting our people while minimising our impact on the environment and surrounding communities. Along with detailed SCEM plans, each operation has well-resourced emergency response and incident management teams with business continuity planning in place to manage potential events.

Our performance and progress in FY22

Health and safety performance

We track our performance against measures in our annual Business Scorecard which is a key determinant of the short-term incentive payments we make to all eligible employees. For FY22, the following measures were in place:

Safety scorecard measures:

- Achieve a 20 per cent reduction in Total Recordable Injury Frequency against an adjusted FY21 baseline[1] plus completion of FY22 milestones for the Safety Improvement Program;
- Achieve a reported significant hazard frequency[2] of 53; and
- Ensure 90 per cent of significant event investigations are completed and signed off within the allocated timeframe and ensure that 90 per cent of significant event actions are completed on time.

Health scorecard measures:

- Achieve a 20 per cent reduction in potential material exposures against the FY21 baseline and in accordance with our internal health standard; and
- Develop and implement a project pipeline to continue to reduce potential material exposures in accordance with our internal health standard.

We track our performance against a range of key performance metrics, a summary of which is shown below. You can find our full list of safety metrics in the 2022 Sustainability Databook.

Performance metric	FY22	FY21	FY20	FY19	FY18
Fatalities from health and safety incidents – total[1]	**1**	1	1	0	1
Total recordable injuries[1]	**182**	210	225	263	268
Total recordable injury frequency (TRIF)[1][2]	**5.3**	4.3	4.2	4.5	5.1
Total recordable illnesses[1]	**45**	52	79	73	89
Total recordable illness frequency (TRILF)[1][2]	**1.3**	1.1	1.5	1.3	1.7
Total significant hazard frequency[2]	**72.0**	41.0	25.0	-	-
Total potential significant events[3]	**203**	287	331	297	194

(1) Incidents are included where South32 controls the work location or controls the work activity.
(2) Per million hours worked
(3) Total potential significant events is the sum of potential significant near misses and actual potential significant events.

We are deeply saddened by the loss of one of our colleagues, Mr Desmin Mienies, a contractor who was fatally injured while undertaking electrical work at our Wessels Mine at South Africa Manganese on 30 November 2021. Mr Mienies, an electrical assistant, was working on connecting a drill rig electrical box in the north block of Wessels mine at the time of event. Our deepest sympathies are with Mr Mienies' family, friends and colleagues. We provided them with our support following the tragic incident and undertook a detailed investigation to understand what happened. Learnings from the investigation were shared across our organisation. We have strengthened our minimum requirements for isolation and high-risk work, and we have progressed the implementation of our new internal contractor management standard across all our operations.

Our Total Recordable Injury Frequency (TRIF) decreased by 12 per cent to 5.3 compared to the adjusted FY21 baseline[1], however we did not meet our scorecard target of a 20 per cent reduction in TRIF. Performance highlights included a 51 per cent reduction in TRIF at Cerro Matoso and a 16 per cent reduction at Illawarra Metallurgical Coal during the financial year. We also met our scorecard measure by achieving 100 per cent of our FY22 Safety Improvement Program milestones. For more information on Our Safety Improvement Program, see page 18.

(1) TRIF baseline was adjusted at end FY21 to account for the removal of South Africa Energy Coal (SAEC) and Tasmanian Electro Metallurgical Company (TEMCO) from the portfolio, measuring our FY22 performance against a TRIF of 6.0.
(2) Number of hazards reported based on one million hours worked.

Our Total Recordable Illnesses Frequency (TRILF) improved by 28 per cent compared to the FY21 adjusted TRILF[3] and we have seen a decrease in eye disorders, heat-related illness, musculoskeletal illness, noise-induced hearing loss and allergic reactions.

Proactive hazard reporting remains key to our approach to safety, and we exceeded our target with a reported significant hazard frequency of 72. We also saw a 29 per cent decrease in total potential significant events, met our target of 90 per cent of significant event investigations signed off within the allocated time frame and exceeded our target of 90 per cent of significant event actions completed on time.

Potential material health exposures reduced by 34 per cent, which was above our target of a 20 per cent reduction. The disciplined execution of exposure-reduction projects supported a reduction in material exposures at Hillside Aluminium, Hotazel Manganese Mines and Groote Eylandt Mining Company. We continue to identify projects to further reduce potential exposures.

Our Safety Improvement Program

We recognise that we must continue to improve our safety performance. During the first half of FY22, we partnered with a leading safety consultant to undertake a review of our safety performance and identify areas for improvement. The review included an assessment of our internal safety systems, safety maturity field work at our operations and a safety perception survey completed by more than 7,500 employees and contractors. This captured important insights into how we think about safety – our attitudes, behaviours and mindsets – as well as our processes, systems and critical controls. The key areas identified as opportunities for improvement formed the foundation for our Safety Improvement Program – a three-year global program of work designed to achieve a step-change in our safety performance.

The Safety Improvement Program consists of four workstreams:

- Shifting mindsets through leadership;
- Empowering our people;
- Developing systems and metrics for success; and
- Reducing risk with effective controls.

In the second half of FY22, we moved into the implementation phase of the program, with a focus on the development of our safety leadership approach. This includes training and coaching for all levels of leadership and a risk reduction program featuring leader coaching and risk reviews.

Consistent with the review findings, in March 2022 we finalised our revised internal safety standard - an important foundational element in the implementation of our Safety Improvement Program. The standard introduces the Safety System of Work, new requirements for safety-critical equipment and process safety management, and expands the list of common fatal risks. Work is underway to embed the revised standard and associated controls across our business.

Focusing on contractors

Contractors make up a significant proportion of our workforce and over the last two years we have undertaken a substantial work program to improve contractor safety. Having completed the end-to-end design of a global contractor management process in FY21, this financial year we developed our internal contractor management standard. The standard describes the end-to-end process, core components and related performance requirements of our Contractor Management System of Work.

Read more about **how we've improved our approach to contractor management** on page 21.

Responding to COVID-19

COVID-19 continued to affect our people, operations, projects and offices, and we experienced periods of elevated case numbers and restrictions across all our locations. We continue to monitor employee and contractor infections and provide case management assistance so our people receive appropriate support if they are affected by the virus.

Vaccines play an important role in keeping our people and communities safe and well and supporting continuity of our operations. We support the use of regulatory approved vaccines and actively encourage vaccination for all our employees and contractors. Where possible, we have worked with local authorities for our employees and contractors, their families and our communities to access vaccines.

Our COVID-19 incident management teams remained in place during FY22 to monitor the global landscape and develop response plans to keep our people safe and well, maintain safe and reliable operations and support our communities. Over the past year, controls have included restricted workplace access and travel, physical distancing measures, heightened workplace hygiene practices, mandatory face masks, the use of respiratory protective equipment, testing of employees, health surveillance and case management. We have also leveraged our risk management system, Global360, to apply additional rigour and process to reviewing the effectiveness of our COVID-19 controls across all locations.

During the financial year, some aspects of our health surveillance programs, including close-contact testing such as spirometry were disrupted, however we have resumed our medical surveillance programs and are bringing our testing up to date.

The world remains vulnerable to pandemic events, so this year we commissioned an external review of our organisational resilience in light of our response to COVID-19. The review found that we navigated the impacts of COVID-19 with minimal disruption to our operations, and recommended process enhancements to lift business continuity capability from an operational to an enterprise level. These enhancements have since been addressed through a review of our internal SCEM standard and supporting procedures.

The pandemic continues to present mental health and wellbeing challenges for our people and their families, and we are employing a variety of tools and approaches to stay connected to each other, including virtual check-ins, question and answer sessions with our leaders and regular CEO updates. We provide our people with access to mental health and wellbeing support materials and encourage people to reach out to their leader or our Employee Assistance Program if they need support.

We remain committed to supporting our people and communities as the world continues to adapt to living with COVID-19.

(3) TRILF baseline was adjusted at end FY21 to account for the removal of SAEC and TEMCO from the portfolio, measuring our FY22 performance against a TRILF of 1.8.

Responding to COVID-19 at Mozal Aluminium

COVID-19 vaccination campaign

As part of our response to COVID-19, Mozal Aluminium supported the Government of Mozambique's Vaccination Plan by rolling out an internal vaccination program for our employees, contractors, and their household members.

Three vaccine doses were provided as part of the program, which included a focus on education, inspiring messaging and conversations to build vaccine confidence. Approximately 97 per cent of employees and contractors, and more than 65 per cent of their household members were vaccinated through the program, helping to protect our workforce and communities. This is a significant achievement against a backdrop of approximately 46 per cent of the total population of Mozambique being fully vaccinated.

Enhancing pre-shift health screening

Web-based pre-shift screening was introduced to enable our operations to detect the presence of COVID-19 infection risk before employees started their shifts, reducing the risk of spreading the infection amongst teams.

Not all employees and contractors at Mozal Aluminium had access to or own a smartphone, which meant that completing the global web-based pre-shift screening application became a challenge. For those who did not have access to web-based technology, the alternative involved a manual pre-shift screening process at the point of entry to the operation, which resulted in significant challenges including long queues, difficulty adhering to physical distancing and delays to the start of shifts.

To enhance pre-shift screening, the Mozal Aluminium team led the development of an Unstructured Supplementary Service Data pre-shift screening application that ran on basic mobile phones and was integrated with the current web-based application and the site access control system. This inclusive solution simplified the pre-shift screening process and ensured that we could continue to uphold an important COVID-19 control measure.

Prioritising health and wellness

In addition to our ongoing response to COVID-19, during FY22 we prioritised the implementation of controls associated with airborne and communicable diseases. In line with the requirements of our internal health standard, our operations continue to manage common health risks and mandated controls.

During the financial year, we made improvements to our monitoring, management and governance processes in relation to operational dust management and community health exposure across many of our operations, prioritising material health exposures. This has included:

- Deployment of additional real-time monitoring systems to quantify community dust exposure;
- Development of adaptive management processes and response plans;
- Development of performance dashboards which are integrated with operational review processes; and
- Enhanced engagement with nearby communities on monitoring data and effectiveness of operational controls.

Learn more about **our approach to non-greenhouse gas air emissions** on page 65.

In FY22, we also developed a more holistic wellness approach, including:

- Providing wellness awareness and leadership tools for the early identification of illnesses and mental wellness issues;
- Developing an online training module on psychosocial risk management for superintendents and managers;
- Introducing an opt-in wellbeing program based on regional event calendars; and
- Including a psychological safety metric into our annual 'Your Voice' employee survey.

Looking ahead

The most important commitment we all make at South32 is that everyone goes home safe and well, every day. In line with this, activities planned for FY23 and beyond include:

- Delivering the second year of our three-year Safety Improvement Program with a focus on safety leadership coaching;
- Embedding our revised internal safety standard and new internal contractor management standard across our business;
- Deploying a global safety communications campaign to keep our safety commitments front of mind for our employees and contractors;
- Improving our risk management for security related risks, using our risk management tool Global360 to steer the effective implementation of controls at those operations with material security risk exposures;
- Identifying and implementing projects to reduce potential material health exposures; and
- Strengthening our wellness programs to support new ways of working, including distributed and remote work, which were brought about for many of our people by COVID-19.

Reducing workplace health exposures at Worsley Alumina

During the past year, work has commenced at Worsley Alumina's multi-fuel co-generation power station to further reduce the potential exposure of the maintenance workforce to Respirable Coal Dust (RCD) and Respirable Crystalline Silica (RCS).

A range of additional engineering controls were put in place including the redesign and replacement of wet dust collectors, overhaul of coal slide gates and replacement of rotary valves and diverter gate seals. Dust sampling results obtained throughout FY22 have shown a decrease in worker exposure to RCD and RCS and this trend is expected to continue as further measures are implemented.

IMPROVING OUR APPROACH TO CONTRACTOR MANAGEMENT

Contractors play a critical role in helping us run our business and make up a significant proportion of our workforce, so it is essential that we provide them with a safe workplace.

Following the tragic death of a contractor in South Africa in FY20, we identified areas for improvement in the design and execution of our contractor management processes. In FY21, we established a cross-functional working group to deliver these improvements and in FY22 we completed the end-to-end design of our global Contractor Management System of Work.

The Contractor Management System of Work is applicable to all South32 operations, functions, projects and exploration activities. It defines the key phases of the contractor management value chain and outlines the performance requirements for each phase, including how we support our contractors to undertake work safely.

Underpinning the Contractor Management System of Work is the prior assessment of the exposure to potential material risks, including health and safety risks, associated with a scope of work. The outcome of this assessment is used to classify the scope of work into one of four risk tiers that determine the level of intensity associated with the management of the contractor.

The work to be performed by the contractor is also assessed to determine if the contractor is being engaged as a specialist or non-specialist contractor and if they are performing work on-site, off-site or on their own site, to identify the appropriate contractor management approach for that scope of work.

We put in place additional controls to enable our contractors to safely execute high risk work, including the verification of qualifications and licenses held by the people undertaking high risk work, as well as the tools and equipment that will be used to conduct the work.

We also exercise due diligence in the selection and engagement of our contractors to assess their competency and whether they have the necessary resources to undertake the work activities safely. Where we are unable to appoint a contractor with the necessary competencies or resources, we adjust our management approach to provide additional support.

The Contractor Management System of Work was piloted at our Hotazel Manganese Mines and Worsley Alumina operations in FY22, and was subsequently deployed to all operations, projects and exploration activities. In FY23 it will be deployed to all functions across the company.

In addition to providing the specialist skills and services we need, the use of contractors provides important benefits to local communities through employment and the development of local supply chains. We will continue to engage with contractors to continuously improve both their and our approach to safety.

Image caption: Members of the Worsley Alumina Contractor Management System of Work pilot team are pictured below.

PEOPLE AND CULTURE

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 culture is a product of our people and is reflected in the way we work, the decisions we take, the courage we show and the legacy we leave, and we are focused on building an inclusive, diverse and engaged workforce.

FY22 AT A GLANCE

- Finalised our internal inclusion and diversity standard, which establishes the minimum performance requirements across all elements of people management
- Developed and deployed our Living our Code training and discussion series to over 5,500 employees, creating conversation around our expected behaviours
- Delivered our Leadership Fundamentals Program to more than 800 people leaders

FY23 FOCUS AREAS

- Maturing our employee value proposition, which we call the South32 experience, enabling everyone to feel safe, included and respected at work
- Continuing to embed our internal inclusion and diversity standard at all locations
- Expanding the use of our employee perception survey tool to gather more data, guide conversations and respond to feedback from our workforce

ICMM Principle

3 HUMAN RIGHTS

South32 supports the UN SDGs

4 QUALITY EDUCATION 4.4 | 5 GENDER EQUALITY 5.1 | 8 DECENT WORK AND ECONOMIC GROWTH 8.5 | 10 REDUCED INEQUALITIES 10.2

UNGC Principle

HUMAN RIGHTS | LABOUR

Our approach

Workplace culture, inclusion and diversity

Our Lead Team, together with our Board, set the direction and tone for our workplace culture. Since 2015, when South32 was formed, we have been on a journey to instil a culture that aligns with our purpose, reflects our values and supports the delivery of our strategy. Our Code of Business Conduct and our Leadership Model further define our expected behaviours. Our Operating Model and Risk Management System provide our people with clarity by clearly defining expectations and accountabilities, including ownership and control of key risks, and enable us to routinely assess performance against objectives and identify areas for improvement.

Our approach to inclusion and diversity is a core element of our culture. We know that an inclusive, diverse and engaged workforce is safer and allows for greater collaboration, innovation and performance. We will only realise the full potential of our people and our business when everyone feels comfortable bringing their whole selves to work. Our internal inclusion and diversity standard, approved by our CEO, establishes the minimum inclusion and diversity requirements across all elements of people management, hardwiring inclusion and diversity into everything we do. Our inclusion and diversity measurable objectives steer behaviours and outcomes which support our desired culture.

Our short-term incentive program is designed to reward our employees not only for what they achieve in a year, but importantly how they achieved it in line with our values and leadership behaviours. Key performance indicators related to workplace culture and expected behaviours are cascaded through our business and assessed at year-end when determining incentive outcomes.

We align with the International Labour Organisation's Declaration of Fundamental Principles and Rights at Work, the UN SDG on Gender Equality and ICMM Mining Principle 3 – Human Rights. We have internal reporting mechanisms in place which assist leadership to monitor our culture and workplace behaviour and identify issues and areas for improvement.

Our annual employee survey, renamed in FY22 to Your Voice, provides us with the opportunity to engage directly with our people and understand how they experience all aspects of South32.

We are a signatory to HESTA 40:40 Vision, an investor-led initiative to achieve gender balance in executive leadership across all ASX300 companies by 2030. Our CEO is a founding member of the Champions of Change National 2021 Group, which is committed to driving gender equality and increasing the representation of women in leadership positions, and of CEOs for Gender Equity, a CEO-led membership organisation committed to achieve gender balanced workplaces.

Attracting, developing and retaining talent

As at 30 June 2022, our workforce comprised 9,096 employees in 10 countries.

Our ability to identify, attract, develop and retain talented people is fundamental to our success. We continue to confront labour challenges due to reduced mobility and increased competition in the tight labour markets that exist in many of the communities where we operate. Our workplace culture and approach to inclusion and diversity will be critical differentiators, improving our ability to attract and retain the diverse talent we need today and for the future.

Our talent management process is designed to promote movement of key talent within South32, align people's capabilities with challenging work and develop those with the potential to perform critical roles in the future.

We promote learning and support professional development, and this commitment to developing our people includes our Education Assistance Program, which supports eligible employees who wish to undertake further formal education and training.

Our employee benefits are also key to attracting and retaining talent. In addition to competitive salaries and our short-term incentive program, AllShare, our award-winning share plan, invites eligible employees to become owners of South32 and share in our growth and success. We also provide all our employees and their families with access to our Employee Assistance Program, which offers confidential counselling across a broad spectrum of personal wellbeing topics.

Our parental leave entitlements, which are market competitive in many locations, support eligible employees who are growing their families. In FY22, 421 employees, of which 160 were women and 261 were men, were provided with parental leave. We support our employees in their return to work through the provision of flexible work arrangements, graduated return to work plans and additional lump sum superannuation contributions for eligible employees.

Following the COVID-19 pandemic, we continue to evolve our approach to flexible and remote work, underpinned by our flexible work procedures, and supported by enhanced communications routines to help our people stay connected.

Employee relations

Our approach to managing employee and industrial relations is set out in our global employee relations framework. As a member of the International Labour Organisation, we respect international labour standards and comply with local labour laws and regulations.

Our approach to collective labour negotiations aims to achieve outcomes that balance the needs of our workforce and our business. As at 30 June 2022, 52 per cent of employees are covered by collective agreements. In FY22, we successfully concluded negotiations for collective agreements which apply to employees at Hotazel Manganese Mines, the Dendrobrium Coal Preparation Plant at Illawarra Metallurgical Coal and Groote Eylandt Mining Company. Negotiations also commenced at Illawarra Metallurgical Coal (Appin Mine and Dendrobium mining supervisors) and Worsley Alumina (refinery maintenance workers) and will continue into FY23. We experienced limited industrial action taken by electrical employees at Worsley Alumina in connection with our ongoing negotiations with refinery maintenance workers.

Our performance and progress in FY22

We track our performance against measures in our annual Business Scorecard which is a key determinant of the short-term incentive payments we make to all eligible employees.

For FY22, this included a measure to achieve FY22 inclusion and diversity measurable objectives.

In FY22, our performance either improved or remained consistent for seven of our eight inclusion and diversity measurable objectives.

Measurable objective	Performance
Demonstrate year-on-year improvement in the representation of women in the total workforce	Representation of women in the total workforce improved, increasing to 19.2 per cent as compared to 18.4 per cent in FY21
Maintain the representation of women on our Board at greater than 33 per cent	Composition of our Board was unchanged in FY22, with representation of women remaining at 37.5 per cent
Maintain the representation of women on our Lead Team at greater than 40 per cent	Refinement to the composition of our Lead Team in FY22 resulted in a reduction in the population of this group, which had an adverse impact on the representation of women, decreasing from 44.4 per cent to 37.5 per cent
Improve the representation of women in our Senior Leadership Team to 40 per cent	We improved representation of women on our Senior Leadership Team to 32.1 per cent. There is more work to do to meet our Senior Leadership Team target of 40 per cent
Improve the representation of women in our Operational Leadership Team to 20 per cent	We improved representation of women on our Operational Leadership Teams to 20.4 per cent
Demonstrate year-on-year improvement in the representation of Black People in South Africa	We demonstrated a year-on-year improvement in the representation of Black People in the total workforce in South Africa
Demonstrate year-on-year improvement in the representation of Black People in management roles in South Africa	We demonstrated a 9.5 per cent improvement in the representation of Black People in management roles in South Africa
Continue to target pay equity for our employees, with respect to gender and ethnicity	Our FY22 pay equity review, which assessed both gender and ethnicity, confirmed our pay equity gap continues to decrease, with approximately US$316,000 paid to address identified pay gaps across the organisation

Inclusion and diversity

Achieving a workforce that is inclusive, diverse and representative of the communities where we operate is a challenge which faces our industry collectively, particularly in relation to the representation of women in operational leadership roles. In FY21, we established an inclusion and diversity working group, who engaged extensively with our workforce, seeking to identify how we can make the desired step-change in our approach. Through these engagements, we identified the need to embed inclusion and diversity into everything we do, guided by an integrated program of work. This led to the formation of our inclusion and diversity action plan, which we have implemented throughout FY22.

A critical component of our inclusion and diversity action plan was the development of our new internal inclusion and diversity standard. This sets minimum inclusion and diversity requirements across all elements of people management, such as the development of global and local inclusion and diversity action plans; an inclusive and supportive workplace; and equitable employment practices for recruitment, induction, training, learning and succession. The standard also addresses the delivery of diversity and inclusion objectives beyond our workplace through supporting volunteering and community engagement activities.

We revised our inclusion and diversity measurable objectives to include tangible action input measures, set at the start of each year, alongside existing qualitative output measures. These new measurable objectives will take effect in FY23, and include actions targeted at improving inclusion and diversity in our workplace, such as establishing our local and global inclusion and diversity networks which will oversee the development and execution of our FY23 inclusion and diversity action plans. We also broadened our objectives for FY23 to align our female representation targets at all levels of the organisation to the 40:40 Vision by 2029. We appointed our first Inclusion and Diversity Manager, who is working with our leaders to embed the requirements of the standard and revised measurable objectives and promote continuous improvement.

Workplace misconduct and sexual harassment are inconsistent with our values and are not acceptable. We recognise all forms of inappropriate workplace conduct present a threat to the physical and psychological health and safety of our people. We manage sexual harassment as a material safety risk and have identified proactive and reactive control measures at a global level to mitigate this risk and assigned owners for each of these control measures. We will utilise our established assurance and stewardship processes to verify the effectiveness of these controls on an ongoing basis. To reinforce our expectations around acceptable and unacceptable behaviours, we developed the new Living our Code training and discussion series and began rolling this out in FY22.

We will maintain our focus on mitigating the risk of inappropriate workplace conduct, including sexual harassment, throughout FY23, and work to enhance controls and improve monitoring at each of our operations, offices and projects. We will also continue discussions with our people regarding appropriate workplace behaviour while further strengthening our investigation and response processes. We have recently appointed a Manager Workplace Relations who will partner with line leaders and steward this program of work.

Living our Code

To help embed our culture and reinforce our expectations around acceptable and unacceptable behaviours, we developed the new Living our Code training and discussion series in FY22.

This series extends upon our Code of Business Conduct training, and focuses on appropriate workplace behaviours, the critical role bystanders play in establishing a safe and inclusive workplace and the avenues available to our people to speak up if they witness, suspect or are a victim of inappropriate workplace conduct. Case studies are utilised to explore various forms of inappropriate workplace conduct, including sexual harassment, and highlight the impact of these behaviours on the health, safety and wellbeing of individuals. The sessions are leader-led small group discussions, providing participants with the opportunity to engage in conversation, share their experiences and ask questions.

In FY22, over 5,500 employees (approximately 62 per cent) participated in Living our Code discussions. These conversations will continue into FY23, and will evolve to address themes and trends emerging from our Your Voice survey results and workplace conduct case management outcomes.

As part of the Your Voice employee survey we asked our people to share their experience of bullying, discrimination, harassment, and sexual harassment in the last 12 months. While 82 per cent of respondents indicated that they felt workplace misconduct was not tolerated at South32, 10 per cent of respondents reported that they had experienced some form of bullying, harassment or sexual harassment in the prior 12-month period. Separately, eight per cent of respondents reported that they experienced some form of discrimination, with half of those respondents also having reported experiencing some form of bullying, harassment or sexual harassment. Of the respondents who reported experiencing inappropriate conduct, approximately 30 per cent said they had formally reported this conduct. These results demonstrate the importance of ongoing communication around our expectations regarding appropriate workplace conduct, and the fact that we must continue to create a workplace where our people, including bystanders, feel empowered and supported to speak up and report these behaviours so they can be addressed.

For more information on our Speak Up Policy, see page 41.

Focusing on leadership and development

Our frontline leaders play a critical role in embedding our values and culture, by modelling exemplary behaviours and fostering a safe and inclusive work environment. In FY22, we continued our investment in leadership capability through ongoing deployment of our Leadership Fundamentals Program.

We refreshed our global talent framework, identifying key talent across our organisation and developing succession plans for critical roles across our business. In FY22, 4,482 employees completed a performance review, against their career and development goals.

In support of our ongoing learning approach, we deployed a suite of core and common global training modules, such as cybersecurity, data privacy and risk management training. These are supplemented by individual training programs, customised to each employee's role, training and development requirements.

In FY22, we continued to build our pipeline of talent. As at 30 June 2022 we engaged 394 graduates, apprentices, trainees, learners, and vacation students. In line with our commitment to inclusion and diversity, 48 per cent of these were women.

Continuous improvement

We want to better understand the day-to-day lived experience of our employees, their perceptions of our culture and identify areas for improvement. In FY22, we enhanced the way we engage with our people via the introduction of a global, digitally enabled employee engagement tool. Through this platform our leaders, at all levels, have the ability to access real-time employee survey data and enhanced analytics, empowering them to have impactful conversations with their teams, driving local change in the employee experience.

We deployed this new tool for the first time in March 2022, when we conducted our annual Your Voice employee survey. Over four weeks, approximately 70 per cent of our employees, or 6,249 people, completed the survey, the highest participation rate since 2016.

The survey was designed to test five primary dimensions - safety, leadership, employee engagement, employee experience and workplace conduct.

Through the Your Voice survey we were able to validate the effectiveness of the work we have done over the past seven years to establish the solid foundations of our culture. The results highlighted our strong commitment to safety, the benefits of the investment we are making in leadership, and that the majority of survey participants believe in our values and are proud to work at South32.

Areas identified for improvement include the opportunity to further strengthen leadership capability, creating an environment where all of our people feel safe speaking up, and providing meaningful recognition in the workplace.

The Your Voice survey has provided a rich set of data from which we can continue to develop and enhance our culture. In addition to executing the Your Voice survey annually, we plan to utilise the platform across the employee lifecycle from recruitment to onboarding, leadership capability and exit interviews, creating continual feedback loops that enable ongoing engagement and cultural growth.

Female mine truck operator training at Cerro Matoso

As a global organisation, we are working to build an inclusive and diverse workforce that is representative of the countries and communities where we operate, where everyone's unique differences are valued and celebrated. To improve the representation of women in operational and leadership roles, our Cerro Matoso operation in Colombia has invested in several training, recruitment, and leadership initiatives.

One program is providing mine truck operator training to women from 25 local communities including members from rural community associations, Indigenous and Afro communities. This program aims to create economic benefits and employment opportunities in the region while at the same time increasing the diversity of Cerro Matoso's operational teams.

Over 40 women from neighbouring communities have completed the training so far, with half now working at Cerro Matoso.

After completing her course and starting work as an operator at Cerro Matoso, Daris Argumedo from Planeta Rica's Punta Verde Indigenous community said "Every day when I wake up, I tell myself I am going to be a great operator for my son. He is so happy to have a mother who drives a Scania mining truck."

Looking ahead

As we further embed a safe and inclusive culture, activities planned for FY23 and beyond include:

- Continuing to integrate our internal inclusion and diversity standard at all locations, by conducting a gap analysis and acting on identified areas for improvement;
- Reporting against new action oriented input metrics in our inclusion and diversity measurable objectives;
- Continuing to evolve our core people policies, processes and procedures, aligned to our culture and operating model;
- Maturing our employee value proposition, which we call the South32 experience, in the rapidly evolving workplace landscape; and
- Expanding the use of our employee perception survey tool, gathering more data and using this to guide conversations and makes changes where needed, in addition to conducting our annual Your Voice employee survey.

Leadership Fundamentals Program

In FY22, we continued to invest in developing our leaders through the ongoing deployment of our Leadership Fundamentals Program.

This tailored, in-house designed program comprises five modules, each addressing a critical component of leadership: Building Relationships; Lead Safely Every Day; Driving Performance and Workplace Behaviour; Plan and Execute; and Improve.

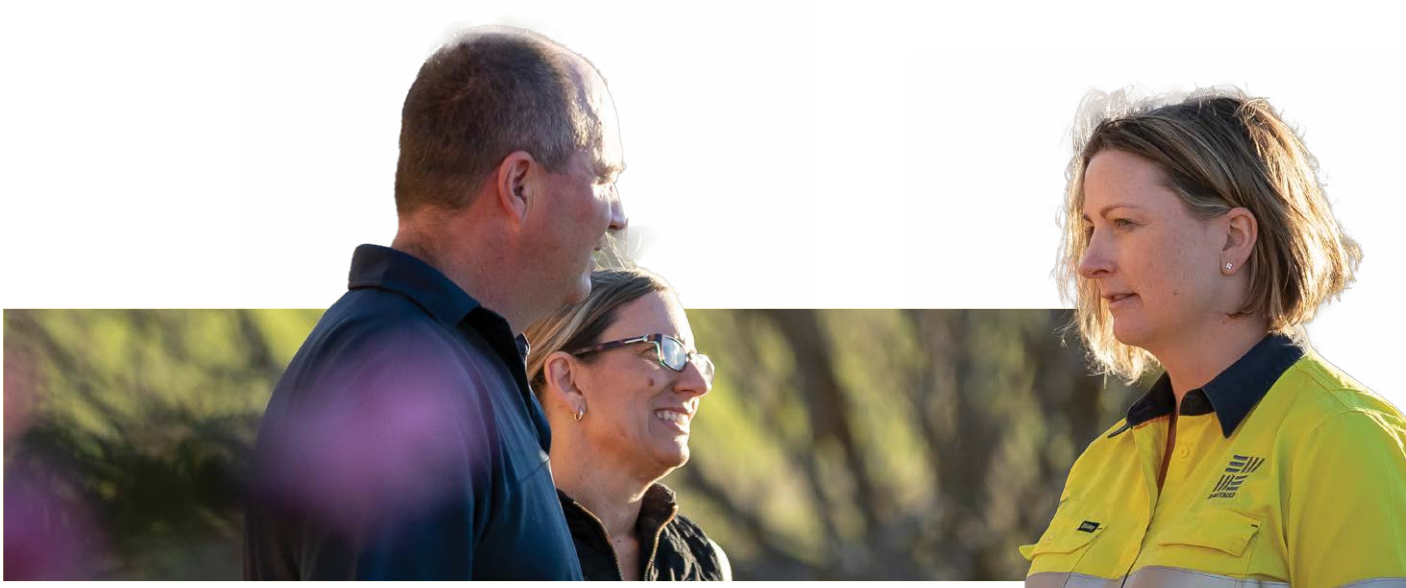
Through the program, we enrol our leaders in the impactful role they play in the business, developing a consistent language and approach to frontline leadership across South32, engaging them in the culture we are creating and developing shared beliefs, behaviours and experiences.

As part of the Your Voice employee survey we asked our people to provide feedback on their experience of leadership at South32. While there is always an opportunity to improve, Your Voice responses showed an enhanced experience of leadership, confirming the benefits of the investment we are making, at all levels of the organisation, through initiatives such as the Leadership Fundamentals Program.

To date, more than 800 frontline leaders have commenced the program and its rollout will continue in FY23.

DELIVERING VALUE TO SOCIETY

We are committed to making a meaningful contribution to people's lives by creating lasting social, environmental and economic value where we operate. We do this by providing jobs and business opportunities, paying taxes and royalties, developing local suppliers and supporting community programs. We believe trust and transparency are essential to the way we operate. We listen to our stakeholders to understand what's important to them and work together to create shared value.



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PARTNERING WITH COMMUNITIES

We are a global business with a local focus, and we are passionate about supporting and building meaningful relationships in the communities where we operate. We actively engage with stakeholders to understand their interests and aspirations and identify opportunities to work together to create shared value.

FY22 AT A GLANCE

- Strengthened the requirements for social performance across our business through enhancing our internal community standard into an internal social performance standard
- Completed cultural heritage reviews for our operations in the Americas and southern Africa
- Commenced implementation of the community requirements of the Global Industry Standard on Tailings Management

FY23 FOCUS AREAS

- Embedding our internal social performance standard
- Continuing to enhance the accessibility of the community complaint mechanism, including for Indigenous, Traditional and Tribal Peoples
- Developing our globally applicable approach to cultural heritage and our approach to Indigenous, Traditional and Tribal Peoples engagement

ICMM Principle

3 HUMAN RIGHTS
4 RISK MANAGEMENT
9 SOCIAL PERFORMANCE
10 STAKEHOLDER ENGAGEMENT

South32 supports the UN SDGs

10 REDUCED INEQUALITIES — 10.2
11 SUSTAINABLE CITIES AND COMMUNITIES — 11.4

UNGC Principle

HUMAN RIGHTS
LABOUR

Our approach

Engaging with communities

Being transparent and building relationships based on trust are essential to the way we operate. That means being in touch with the broader community – considering different perspectives and working together to create societal value. Our engagement with communities is guided by our purpose and driven by our values.

Our approach to community engagement is guided by our internal social performance standard and relevant ICMM Mining Principles and Performance Expectations, including Mining Principles 9 – Social Performance, and 10 – Stakeholder Engagement.

We follow a comprehensive process to understand the unique social, environmental and cultural context of local communities. We regularly complete and review social baseline studies, social impact and opportunity assessments, community perception surveys and undertake stakeholder identification and analysis to better understand who our stakeholders are and their views.

We facilitate regular, open and inclusive dialogue to understand the expectations, needs, concerns and interests of stakeholders. Through structured engagement forums, we provide a platform for two-way discussion on our activities, performance, community engagement, community investment and any other matters important to local communities. This is used to inform our stakeholder engagement plans, which help to build strong and mutually beneficial relationships.

We design our community investment programs with input from key stakeholders to reflect their needs and aspirations. Learn more about our approach to community investment on page 34. Our stakeholder engagement and community investment plans are updated annually.

Community complaints and grievances

We listen to and report community complaints or grievances we receive, anonymously or otherwise, through our complaints mechanisms and address them as a priority. Our community complaints and grievances process is aligned with the United Nations (UN) Guiding Principles on Business and Human Rights and the UN's Protect, Respect and Remedy Framework, specifically to:

- Acknowledge, investigate and document all complaints;
- Allow for anonymous reporting of complaints;
- Complete appropriate remedial action;
- Communicate transparently with complainants; and
- Be readily available to all members of local communities.

Community health

Our internal health standard incorporates requirements to identify and manage community health risk. Our operations have health monitoring programs which consider baseline and impact assessments and the potential impacts of operational exposures and emissions. We engage with community health providers and provide community health support and education through our community programs, including for health issues such as malaria, HIV/AIDS and the management of COVID-19.

Our membership of industry associations, such as ICMM and the International Manganese Institute (IMI), provides guidance and research into the best practice management of potential community health impacts.

Learn more about **our approach to health and safety** on page 16.

Cultural heritage and Indigenous, Traditional and Tribal Peoples

Many of our operations and projects intersect areas of cultural significance and we understand we have a critical role to play in preserving cultural heritage.

Cultural heritage is more than tangible material culture and includes intangible lore and law, song lines, practices and stories, and can also include landscapes.

We believe it is important for cultural heritage and mining to co-exist and we are committed to working with Indigenous, Traditional and Tribal Peoples, local communities, governments, investor groups and industry, to achieve the best possible outcomes wherever our activities have the potential to impact cultural heritage.

We continually work to strengthen and enhance our approach to preserving and perpetuating the cultural heritage of the living cultures with whom we work.

Consistent with the ICMM Position Statement on Indigenous Peoples and Mining, where impact to critical cultural heritage is unavoidable, we will work to obtain the free, prior and informed consent (FPIC) of the impacted Indigenous, Traditional and Tribal Peoples.

Wherever possible, we seek to avoid impacting cultural heritage. This can include changing our work practices, and the design of our work programs to consider areas of cultural significance and the views of Indigenous, Traditional and Tribal Peoples and local communities.

From exploration through to construction, operation and closure, we engage with and learn from Indigenous, Traditional and Tribal Peoples so we can understand their aspirations, interests and perspectives. We view culture and our associated engagement approach as dynamic and evolving.

We are committed to working together to build lasting, meaningful relationships with Indigenous, Traditional and Tribal Peoples based on our values. This can create mutually beneficial opportunities in areas such as employment, procurement, community investment and training.

Improving cultural heritage management and governance

In FY22, we continued to mature our approach to managing cultural heritage by facilitating a series of workshops with internal and external stakeholders to develop a risk profile for our Australian operations.

The workshops identified several common elements of risk that informed development of six overarching cultural heritage controls, which act as a minimum standard for risk management across all Australian operations. This will guide the planned implementation of the internal material risk management standard to operations outside of Australia, providing a consistent approach to cultural heritage management across South32.

These controls entrench the principles of FPIC in seeking to obtain and maintain agreed outcomes. This recognises that FPIC includes both processes and an objective of engagement with Indigenous, Traditional and Tribal Peoples. Engagement and communication are fundamental to creating an effective cultural heritage management system, where appropriate oversight is incorporated into risk management throughout the operational lifecycle.

We have also established a process for verifying controls with the operations, assessing their effectiveness and creating opportunities for continuous improvement. We are utilising our risk management tool, Global360, to improve governance of these risks.

Our minimum performance requirements for protecting and managing cultural heritage areas and engaging with Indigenous, Traditional and Tribal Peoples are set out in our internal social performance and environment standards. These are based on international standards and legal requirements and support the commitments in Our Approach to Aboriginal and Torres Strait Islander Peoples' Cultural Heritage and our Sustainability Policy.

Learn more about **Our Approach to Aboriginal and Torres Strait Islander Peoples' Cultural Heritage and our Sustainability Policy** at www.south32.net

Our Board has oversight of our relationships with Indigenous, Traditional and Tribal Peoples, through regular reporting to the Sustainability Committee, annual updates about the implementation of our Innovate Reconciliation Action Plan, annual review and approval of our Sustainable Development Report, on-country engagement with Traditional Owners and special briefings about material risks and issues.

Valuing reconciliation in Australia

As a significant employer and investor in Australia, we recognise the positive impact we can have on reconciliation in Australia. Our vision for reconciliation is for an Australia that embraces the histories and cultures of Aboriginal and Torres Strait Islander Peoples and that, as a nation, we work collectively towards supporting all Australians.

We developed our Reflect Reconciliation Action Plan (RAP) in 2018, which created a strong foundation for long-term change. We launched our next level Innovate RAP in 2020, which improves on our previous commitments as we embed reconciliation activities in our core business practices and decision-making.

Through our Innovate RAP we are striving to:

- Become an employer of choice for Aboriginal and Torres Strait Islander Peoples and growing our Aboriginal and Torres Strait Islander Peoples workforce by five per cent year-on-year;
- Increase our procurement of goods and services from Aboriginal and Torres Strait Islander businesses by 10 per cent year-on-year;
- Help our people become culturally aware and respectfully engage with Aboriginal and Torres Strait Islander Peoples in their day-to-day work; and
- Build and maintain strong relationships with Aboriginal and Torres Strait Islander Peoples in the communities where we operate.

Learn more about **our Innovate RAP** at www.south32.net

Enhancing relationships with Indigenous, Traditional and Tribal Peoples at Worsley Alumina

Worsley Alumina is located within the Gnaala Karla Booja region of the Noongar nation in the south-west of Western Australia. For the last three years, we have been working to deepen our relationship with the Wilman and Wardandi peoples of the Noongar nation, who are the Traditional Custodians of the lands, waters and territories on which Worsley Alumina is located.

As the relationship has matured, engagement has increased and Worsley Alumina now meets with Traditional Custodians on a quarterly basis to share information on proposed future activities in the area, discuss areas of common interest such as cultural heritage management, identify opportunities to work together for mutual benefit, as well as to provide a forum for further discussion.

In FY22, we worked with Traditional Custodians on a variety of items including Worsley Alumina's Cultural Heritage Management Plan, archaeological and ethnographic surveys, strengthening connection to Country, celebrating Noongar culture, identifying opportunities for community investment, and the development of Worsley Alumina's first Indigenous Participation Plan, which has provided additional focus on delivering improved employment and procurement outcomes.

In FY22, we announced an A$2 million commitment to support the creation of a new cultural centre that will preserve and showcase the rich history of the Noongar people of the Peel and south-west regions of Western Australia. The funding will be used to commence detailed planning for the cultural centre, which will showcase local artefacts, detail the long history of the Gnaala Karla Booja region and its people, and create economic opportunities.

Our performance and progress in FY22

We track our performance against measures in our annual Business Scorecard which is a key determinant of the short-term incentive payments we make to all eligible employees. For FY22, the following measures were in place:

- Updated internal community and social performance standard aligned with ICMM Mining Principles and integrated into all phases of the project lifecycle.
- Complete global reviews for cultural heritage in all our operating regions outside Australia and finalise our global Approach to Indigenous and Tribal Peoples Engagement.

We also track our performance against a range of key metrics, shown in full in the 2022 Sustainability Databook.

Updating our internal standards

Our internal community standard has been in place since 2015 and was updated in 2018. In line with our desire to continually improve our social performance, we reviewed the standard in FY22 considering our purpose, strategy, updates to the ICMM Mining Principles and rapidly evolving societal expectations, and enhanced it to become our internal social performance standard. It builds on the foundations of the community standard and strengthens the requirements for social performance across the business.

The standard improves the approach to identify and manage social impacts and risks and sets clear performance criteria regarding our engagement with Indigenous, Traditional and Tribal Peoples and our approach to cultural heritage, as well as land acquisition and resettlement. The standard also improves human rights due diligence requirements, builds on the recognition that our contribution to local communities extends beyond community investment and requires the development of economic development plans for our operations.

Cultural heritage

In July 2021, we published Our Approach to Aboriginal and Torres Strait Islander Cultural Heritage, informed through cultural heritage reviews of our Australian operations.

FY22 saw the completion of cultural heritage reviews for our operations and projects in the Americas and southern Africa. These reviews inform the ongoing development of Our Approach to Indigenous, Traditional and Tribal Peoples Engagement. The development of risk profiles and controls were also implemented to further embed cultural heritage management across our operations.

One of the challenges with cultural heritage management is the variation in legislation between countries and jurisdictions, and recognition that the definition of and self-identification for Indigenous, Traditional and Tribal Peoples is unique in every instance. To address the regional distinctions, we undertook a comprehensive program of engagement to identify and recognise Indigenous, Traditional and Tribal Peoples within the lands, waters, territories, and cultural landscape on which South32 is located and where we conduct our business. We seek to develop engagement plans that advance traditional forms of governance, sensitive to cultural protocols. Where differences exist between our approach and local laws, we apply the higher standard.

During the financial year, we worked on developing a more globally consistent approach to cultural heritage management across operations and regions. This work, which builds on our existing cultural heritage management, governance and risk processes, reinforces accountabilities and values by leveraging technology platforms and increasing engagement and will inform the future development of Our Approach to Cultural Heritage.

We continued to increase cultural awareness within our business with 719 employees completing Cultural Awareness training.

Our Innovate RAP

During FY22, we supported reconciliation by:

- Increasing our procurement of goods and services from Aboriginal and Torres Strait Islander businesses by 34 per cent year-on-year, exceeding our target of a 10 per cent increase;
- Increasing Traditional Owner representation on our RAP Working Groups;
- Increasing the number of community investment partnerships supporting social outcomes for Aboriginal and Torres Strait Islander Peoples;
- Participating in the Minderoo Employment Index to measure and identify practices to improve the quality and quantity of Aboriginal and Torres Strait Islander employment;
- Launching Indigenous Employee Networking groups at two of our operations;
- Holding Indigenous Supplier Open Days at two of our operations for the first time, where local Aboriginal and Torres Strait Islander businesses showcased their products and services to our teams and major contractors;
- Increased employee awareness and engagement relating to reconciliation through activation of National Aborigines and Islanders Day Observance Committee (NAIDOC) week and Reconciliation week activities at all Australian operations and offices; and
- Participating in Supply Nation First Step training to build skills and knowledge to increase Aboriginal and Torres Strait Islander supplier diversity.

During the financial year, we also commissioned an external review of progress on our Innovate RAP to identify opportunities for improvement. The review found that South32 is making progress in its reconciliation efforts, led through a strong governance structure. While progress has been made, further effort is needed to embed priorities into the business to enable delivery.

We will develop a new Innovate RAP in FY23 which targets areas identified in the review, including strengthening the application of Indigenous Participation Plans to foster local employment and procurement strategies, and elevating Aboriginal and Torres Strait Islander voices within the organisation.

Community complaints

In FY22, we received 120 complaints, compared with 343 in FY21 and closed out 95 per cent.

Forty-six per cent of the complaints were noise-related and of these, 56 per cent were recorded at Illawarra Metallurgical Coal (IMC). Improved complaint management processes at IMC, including increased proactive communication with potentially impacted stakeholders and working to resolve long held historic concerns, contributed to a year on year reduction of 62 per cent in noise complaints.

Eighteen per cent of complaints were dust-related. We received 22 dust complaints, down from 63 complaints last year. Most of the complaints (68 per cent) were at Hillside Aluminium and a system has been implemented to enable early identification and management of activity which may produce dust complaints.

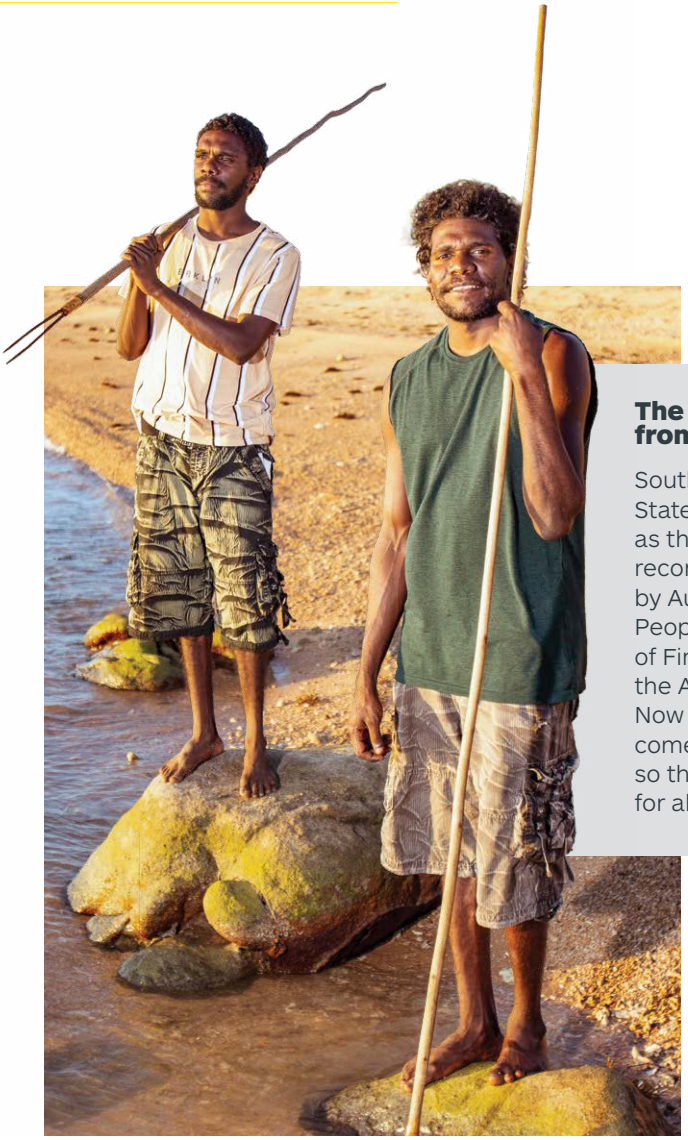
In FY22, we conducted a review of community complaints mechanisms (CCM) across all operations and the Hermosa project against the UN Guiding Principles on Business and Human Rights. Improvement opportunities included improving accessibility, inclusion of Indigenous, Traditional and Tribal Peoples' cultural requirements, developing standardised timeframes for investigation and close out, and seeking feedback on CCM effectiveness through operational stakeholder perception surveys.

Read more about **community complaints** in our 2022 Sustainability Databook at www.south32.net

Looking ahead

As we continue to partner with communities, activities planned for FY23 and beyond include:

- Embedding the internal social performance standard;
- Further integrating social risk management into our System of Risk Management, and Global360;
- Continuing to implement community requirements for compliance with the Global Industry Standard on Tailings Management;
- Continuing to enhance the community complaint mechanism accessibility, including for Indigenous, Traditional and Tribal Peoples, and updating our guidance to promote consistent practices across all operations;
- Continuing to embed the principles and processes of free, prior and informed consent into business decision-making;
- Developing our globally applicable approach to cultural heritage; and
- Developing a new Innovate RAP which addresses areas identified in the external RAP review.



The Uluru Statement from the Heart

South32 supports the Uluru Statement from the Heart as the pathway towards reconciliation put forward by Australia's First Nations Peoples to enshrine the voice of First Nations Peoples into the Australian constitution. Now is the time for Australia to come together and heal as one, so that we can truly be a nation for all.

Building empowerment and social transformation through community partnerships at Cerro Matoso

During FY22, our team at Cerro Matoso in Colombia celebrated eight years of positive dialogue with surrounding communities.

Two events were hosted at Cerro Matoso facilities, where traditional rituals were performed that highlighted cultural heritage and commemorated the empowerment and social transformation that we have created together.

This is the result of the continued focus and hard work of the Cerro Matoso team. The relationship has come a long way since the eight tribal communities, Indigenous and Afro Colombians initiated legal actions and protests under the operations previous owners in 2013. Since then, Cerro Matoso has worked closely with surrounding communities to reset the dialogue and build enduring, positive relationships.

After taking over the operation in 2015, by October 2019, we had successfully reached individual social investment agreements with all eight concerned tribal communities, as well as with the other tribal Afro community and the six rural community associations, for a total of 15 agreements covering the communities near Cerro Matoso's operation.

We then worked to implement different social programs within the community and, despite the challenges of COVID-19, the unwavering support of all parties led to the successful delivery and ongoing implementation of these programs.

We are very proud of the outcomes of this work. More than 900 houses have been built or improved, approximately 940 hectares of collective lands have been donated to the communities, 210 families have implemented agricultural projects, more than 190 youth have had access to higher education and 130 people over the age of 30 are completing or have completed elementary and high school.

These communities have seen a 10 per cent reduction in their overall poverty level since 2015. In line with our purpose, we will continue to work in partnership with them to improve their lives now, and for generations to come.

OUR SOCIETAL CONTRIBUTION

We create value in the communities where we operate and make a positive contribution to society more broadly by providing the commodities the world needs, paying taxes and royalties, providing jobs, developing local suppliers, investing in community programs and providing returns to shareholders.

FY22 AT A GLANCE

- Invested US$31.1 million in community initiatives, an increase of 40 per cent from FY21
- Completed construction of the new sustainable Kotulong Community Centre in Gauteng, South Africa, creating a safe place for vulnerable children to call home
- Applied the Community Investment Impact Measurement Framework to all strategic investments, with 97 per cent of projects measuring outcomes reaching their outcome targets

FY23 FOCUS AREAS

- Increasing community investment in natural resource resilience to support programs that address climate change, biodiversity conservation and restoration
- Increasing investment in economic participation to support just transition objectives aligned with community priorities
- Continuing to strengthen the effectiveness of the Community Investment Impact Measurement Framework

ICMM Principle

South32 supports the UN SDGs

5.1 8.5 10.2

UNGC Principle

LABOUR

Our approach

Investing in communities

We are proud to invest in local communities. We design our community investment programs with input from our key stakeholders to reflect their aspirations and needs. This knowledge, combined with other assessments and surveys, informs our investment decisions. Our community investment plans are developed by our community specialists in conjunction with operational leadership and are updated annually. Our Community Investment Impact Measurement Framework provides the evidence base to measure the impact of our community investment, inform future investment decisions and improve project design.

Our community investment approach is guided by our internal social performance standard, Code of Business Conduct and the ICMM Mining Principles, particularly Mining Principles 9 and 10. We pursue continuous improvement and contribute to the social, economic and institutional development of host countries and communities.

Our global community investment program is aligned to four key focus areas:

- Education and leadership – supporting lifelong learning and development, nurturing future leaders and promoting equal access to education, with a focus on science, technology, engineering and mathematics;
- Good health and social wellbeing – supporting community health and social wellbeing and promoting inclusion;
- Economic participation – supporting local employment, sustainable livelihoods and diversified local economies; and
- Natural resource resilience – supporting communities to thrive within their environments, conservation and restoration of the natural environment, and the use of natural resources in responsible and sustainable ways.

The increasing need to manage nature-related and climate-related risk has resulted in an increased focus on natural resource resilience.

By working together, we are building strong and lasting relationships to improve people's lives and help local communities thrive now and into the future.

Transformation in South Africa

The mining industry plays a critical role in South Africa's economic development as a major contributor to the economy, significant employer and attractor of foreign investment. The Broad-Based Socio-Economic Empowerment Charter for the Mining and Minerals Industry was implemented in 2004 to advance economic transformation and enhance the economic participation of Black People in the South African economy.

South Africa's transformation imperative aligns to South32's purpose. We recognise the role that we play in shaping a better future in South Africa through economic transformation and continue to focus on employment equity, Enterprise and Supplier Development (ESD), community investment, employment, skills development and local economic development.

Growing and developing small, medium, and micro enterprises (SMMEs) is fundamental to the transformation of the South African economy. We collaborate and work with SMMEs on ESD.

Learn more about **our approach to ESD** on page 47.

Employment

Employment is an important way in which we contribute to socio-economic development. We provide employment opportunities in all countries and jurisdictions where we operate or have a presence. We aim to be an employer of choice, providing an inclusive work environment and competitive remuneration to attract and retain great talent. Our internal human resources standard guides the management of our people.

Learn more about **our approach to people and culture** on page 22.

Procurement

Supporting local suppliers helps to develop and strengthen local value chains. We source goods and services within local communities, where possible, and set targets at many of our operations for local business spend that take into consideration legislative requirements. Our internal supply standard guides the sourcing of non-traded goods and services.

We are committed to providing genuine access and support to build the capability and capacity of Aboriginal and Torres Strait Islander businesses, to better enable them to work with South32.

Learn more about **procurement from Aboriginal and Torres Strait Islander suppliers** on page 48.

Tax transparency

The payment of taxes is a key mechanism where we contribute to the economies of the countries we operate in. Our approach is aligned with the ICMM Position Statement on Mineral Revenues and the Extractive Industries Transparency Initiative (EITI), which promotes open and accountable management of mineral resource wealth.

We contribute financially to the EITI through our membership of the ICMM. This supports the EITI's ongoing activities which goes towards promoting open and accountable management of mineral resource wealth. The EITI confirmed that South32 meets all the expectations for supporting companies.

We support the public disclosure of payments made to governments and communities, and the public disclosure by governments on contracts and licences for the exploitation of minerals and other natural resources.

Each year, we publish a Tax Transparency and Payments to Governments Report, which allows us to demonstrate that our tax affairs are conducted in accordance with our commitment to ethical business practices. This report outlines our approach to tax governance and dealing with tax authorities, details our tax payments to governments by country and by project, tax expense and international related party dealings on a country-by-country basis and our contracts for resource development.

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

Delivering returns to shareholders

We aim to maximise total shareholder returns over time. Our capital management framework guides our capital allocation priorities and returns excess capital efficiently.

Learn more about our **approach to financial management and returns to shareholders** in the Annual Report at www.south32.net

US$550,000 contributed to address domestic and family-based violence

Domestic and family-based violence is a serious issue globally, and sadly this violence intensified during the COVID-19 pandemic. To help address the causes and effects of domestic and family-based violence, we have worked closely with local communities to find ways to offer our support. During FY22, we committed over US$550,000 across a number of organisations to support the incredible work they do to prevent domestic and family-based violence and support those who are impacted.

In Western Australia, where our head office and Worsley Alumina operations are located, we provided A$70,000 to the Patricia Giles Centre for Non-Violence (PGCNV), which provides a range of services for families affected by or escaping domestic and family-based violence. As well as helping to raise awareness in the community, our funding will directly support women and children seeking refuge. PGCNV will also host team building days and educational sessions for our people in Western Australia.

In New South Wales, Australia, where our Illawarra Metallurgical Coal operation is located, we partnered with the Illawarra Women's Health Centre to establish the Illawarra Women's Trauma Recovery Centre – a community-led project, co-designed with women who have experienced domestic, family-based and sexual violence, professional experts and service providers. The centre will offer critical support services, including health, social support and legal services in a safe place. We provided A$250,000 to support the establishment of the recovery centre.

In South Africa, we committed ZAR1,759,240 to support LifeLine Zululand, who deliver vital psychosocial support and counselling services and raise awareness of gender-based violence, particularly in rural areas where services are limited.

In Mozambique, we committed more than US$200,000 to a local NGO to support the prevention of gender-based violence and educate on best-practice response in the Boane and Matola Districts, near our Mozal Aluminium smelter.

We are proud to work with communities to raise awareness of domestic and family-based violence and support initiatives that will address both the causes and effects of this unacceptable behaviour. Nothing is more important than our people, and by extension, our communities being safe and well.

Our performance and progress in FY22

Community investment

We track our performance against measures in our annual Business Scorecard which is a key determinant of the short-term incentive payments we make to all eligible employees. For FY22, the following measures were in place:

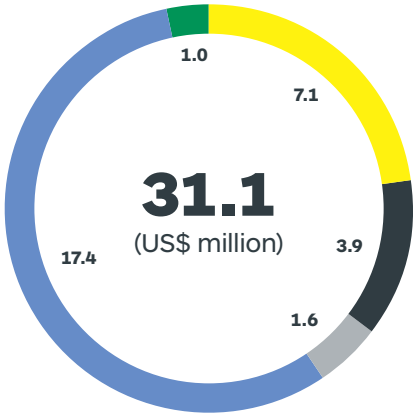
- Community investment impact measurement framework applied to all strategic community investments with 80 per cent of projects that are measuring outcomes reaching their FY22 outcome targets; and
- Implement Community Investment Plans on time and on budget.

Our Community Investment Impact Measurement Framework was developed in FY20. In FY22 we applied the framework to all strategic investments, with 97 per cent of projects measuring outcomes reaching their outcome targets, exceeding our scorecard measure. At the commencement of each strategic community investment, we work with our partners to finalise a report which forms part of the investment agreement. This documents the baseline, intent of the program, key milestones, output and outcome key performance indicators. Our partners report on performance against these indicators twice a year.

We also track our community performance against a range of key metrics, shown in full in the 2022 Sustainability Databook.

This year we invested US$31.1 million in community initiatives, an increase of 40 per cent from FY21. Our direct community investment spend was across our four key focus areas - education and leadership (34 per cent), economic participation (11 per cent), good health and social wellbeing (47 per cent), and natural resource resilience (eight per cent). A breakdown of spend by country is shown below.

Community investment by country[1]



(1) Community investment consists of direct investment, in-kind support and administrative costs. FY22 total investment includes a donation made by South32 in Brazil (US$45,851). The sum of the categories may vary to the total figure due to rounding.

We aim to invest meaningfully in the communities in which we operate in line with local priorities. In some countries and jurisdictions specific targets exist, including:

- In South Africa we report our annual progress against targets in the Mining Charter 2018 to the Department of Mineral Resources and Energy. We also have targets under the Broad-Based Black Economic Empowerment (B-BBEE) Codes of Good Practice of the Department of Trade, Industry and Competition. Targets include spending one per cent of net profit after tax (NPAT) on community investment and three per cent of NPAT on enterprise and supplier development.
- At our Cerro Matoso operation in Colombia, community agreements have annual commitments for community investment spend.
- As part of our community investment program at our Illawarra Metallurgical Coal (IMC) operation in Australia, community trusts receive A$0.03 per saleable tonne of metallurgical coal to focus on local community investment. Fund distribution is overseen by a board comprised of local community and IMC representatives.

We are continually reshaping our community investments to focus more on strategic community investments that aim to create long-term, meaningful change as opposed to delivering shorter term benefits. We plan to continue this shift as we further embed the Community Investment Impact Measurement Framework across our business. Our target for FY23 is to increase the proportion of community investment allocated to strategic investment by 10 per cent up to a maximum of 90 per cent.

A challenge common to community investment in infrastructure projects is sustainability beyond the construction phase. A risk with infrastructure projects is an over-emphasis on construction and commissioning and an underinvestment in participatory processes, skills building and the organisational development necessary to support the sustainability of the project. We are addressing this by building sustainability considerations into the project design, funding and impact measurement. For example, our Hotazel Manganese Mines team in South Africa are working closely with the Department of Education and the Rearata Primary School management team on improving the quality of learning at Rearata beyond the scope of simply building the school. The commissioning of the Kotulong Community Centre (KCC) by Metalloys which included the provision of capacity-building and governance training to the KCC Board and management team, also reflects the consideration of sustainability in our development projects. To read more about the KCC project refer to page 37.

Our broader societal contribution

In FY22, we continued to support the communities and governments in which we operate to respond to COVID-19. We invested in health and education initiatives, and social and economic recovery programs to support community resilience.

In May 2022, the new ICMM Social and Economic Reporting Framework was released, which commits ICMM member companies to a consistent approach to measuring and reporting social and economic activities from 2023 onwards. During the financial year, an internal gap assessment was undertaken against the requirements of the framework to identify opportunities for improved disclosure. Improvement areas include further disaggregation of core indicators by gender, ethnicity and other areas of diversity. We are working towards aligning our future disclosures with the ICMM Social and Economic Reporting Framework, which will allow a more comprehensive view of our societal contribution.

During FY22, we also undertook a gap assessment against the 2022 EITI updated expectations for EITI supporting companies.

Learn more in the **2022 Tax Transparency and Payments to Government Report** at www.south32.net

You can read more about our procurement activities during the year, including our Enterprise Supplier Development initiatives in South Africa and Indigenous procurement on pages 46 to 50.

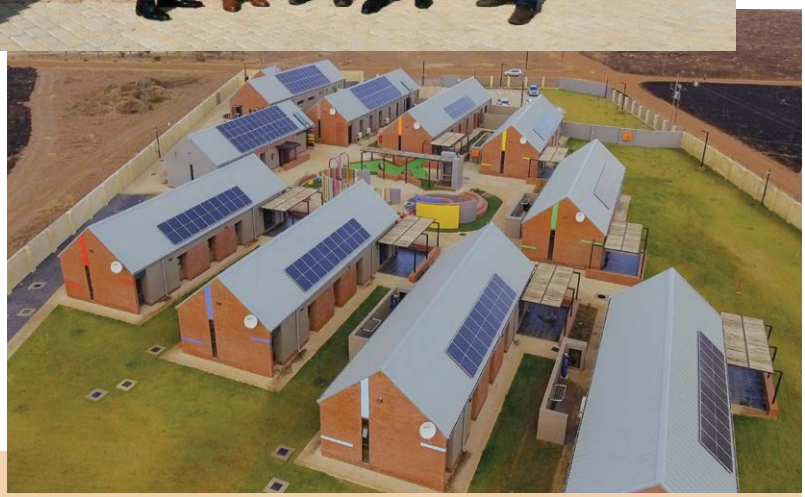
Looking ahead

We will continue to evolve our community investment program in FY23 and beyond, with planned activities including:

- Increasing investment in natural resource resilience to support programs that address climate change, biodiversity conservation and restoration;
- Increasing investment in economic participation to support just transition objectives aligned with community priorities; and
- Continuing to strengthen the effectiveness of the Community Investment Impact Measurement Framework.

We will also continue to align our reporting with the new ICMM Social and Economic Reporting Framework in line with the implementation timeframes and our ICMM member commitments.

Pictured is our CEO, Graham Kerr, visiting the new building shortly after it was handed over to KCC.



Kotulong Community Centre Relocation Project

Earlier this year, construction was completed of the new sustainable Kotulong Community Centre (KCC), a local Non-Government Organisation working with vulnerable children in Meyerton, Gauteng.

The ZAR44.7 million facility replaced the existing building which was co-located within the premises of Metalloys since 2004, and will benefit the community of De-Deur and surrounding communities. The relocation project was developed in consultation with the Department of Social Development as well as the KCC management and KCC Board.

The facility will provide the children with a safe place to call home in a more suitable environment. The new building has seven three-bedroom units, a kitchen and laundry area, administration block, library and social worker unit. It was built by a local company and created 26 temporary jobs for the local community during construction.

The sustainability of development projects is a priority for us and this is reflected in the design and low maintenance nature of the facility.

More than 75 per cent of the centre is powered by solar energy and it is equipped with energy-efficient technology including floor insulation and double-glazed windows.

It also includes a borehole capable of providing 7,200 litres of water per hour, which will go through a high-standard chlorination system to provide affordable and clean water.

Furthermore, the project included capacity-building for the KCC Board and management team through the provision of training on governance, fund-raising and strategy. A ZAR10 million endowment will further support the sustainability of the centre for the long-term.

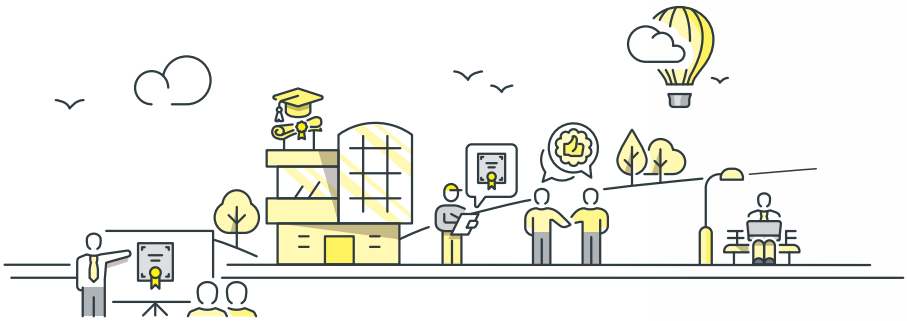
The project forms part of Metalloys' legacy and aligns with our purpose to make a difference by improving people's lives now and for generations to come.

INVESTING IN WHAT MATTERS

During FY22 we invested

US$31.1 million

in community programs, primarily focused on education and leadership, economic participation, good health and social wellbeing, and natural resource resilience.



Education and leadership

39,000+
students across **670** schools in **180** communities benefitted from investment in education and leadership[1].

5,000
students benefited from funding for the construction of the largest high school built in Mozambique since 1975.

US$1.3 million
provided for the construction of the Rearata Primary School in South Africa, which includes **14** classrooms, a library and a fully-equipped computer centre.

Economic participation

34,000+
people benefitted from investment in economic participation, with **1,700** jobs created[1].

55%
increase in sales for Bush Medijina, a Warningakalina women's business on Groote Eylandt in Australia.

1,040
jobs created through the AGROMOZAL program, which helps local farmers in Mozambique to farm more productively, sustainably and competitively.

Good health and social wellbeing

46,000+

people benefitted from investment in good health and social wellbeing, reaching **290** communities[1].

US$550,000

committed to support the prevention of domestic and family violence, and women and children who are impacted, in South Africa, Mozambique and Australia.

40

Indigenous people living with Machado Joseph Disease on Groote Eylandt in Australia benefitted from medical equipment and services to help improve their quality of life.

Natural resource resilience

30+

non-government organisations benefitted from investment in natural resource resilience to help deliver environmental projects in **30** communities[1].

2,645

hectares of land around our Cannington operation has been treated to reduce, eradicate and prevent weeds.

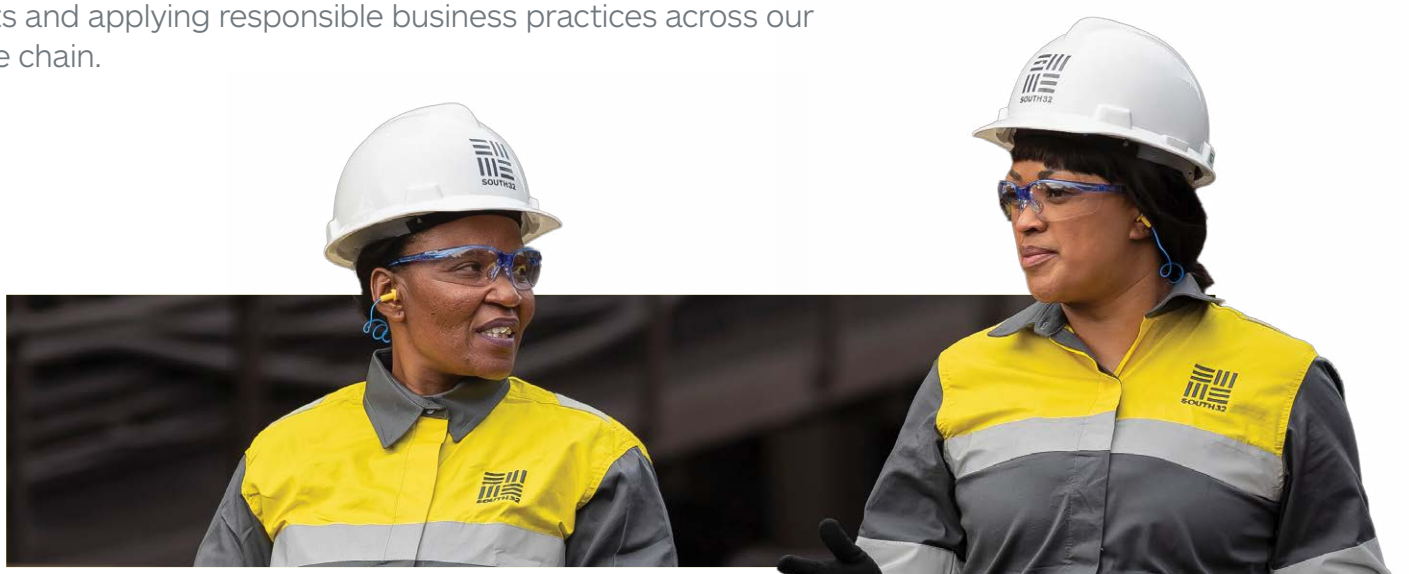
US$1.4 million

provided through our Disaster Relief Fund to support humanitarian and aid efforts in Ukraine, and flood response and recovery in South Africa and Australia.

(1) Actual impact is greater as these numbers are derived from our impact reporting which is only applied to strategic long term community investments, a subset of our overall community investment. Impacts from donations, disaster relief and enterprise development are not included.

OPERATING ETHICALLY AND RESPONSIBLY

Operating ethically and responsibly is essential to fulfilling our purpose and delivering on our strategy. More than this, it is the right thing to do. Transparency and high ethical standards are essential to how we operate and to achieving our aspiration of building strong, mutually beneficial and trusting relationships with our stakeholders. We are committed to respecting human rights and applying responsible business practices across our value chain.



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ETHICS AND BUSINESS INTEGRITY

We are committed to the highest standards of integrity and accountability. Our values and Code of Business Conduct (Code) guide how we act, work and communicate. Supported by our Speak Up Policy (our global whistleblower policy), we encourage our people to speak up when our values and standards of conduct are not being followed.

FY22 AT A GLANCE

- Continuing to enhance our Speak Up Policy and related business conduct response processes, including EthicsPoint, as part of our commitment to encourage our people to speak up
- Ongoing enhancement of our risk-based anti-bribery and corruption and competition law compliance programs
- Ongoing strengthening of our risk-based sanctions compliance program enabling us to quickly respond to an increasingly complex global sanctions landscape

FY23 FOCUS AREA

- As part of our commitment to operate ethically and responsibly, we will continue to manage and improve our anti-bribery and corruption, economic sanctions, anti-money laundering and competition law compliance programs. This allows us to adapt as our business and the global environment in which we operate changes

ICMM Principle

1 ETHICAL BUSINESS

2 DECISION-MAKING

South32 supports the UN SDGs

10 REDUCED INEQUALITIES — 10.2

16 PEACE, JUSTICE AND STRONG INSTITUTIONS — 16.5

UNGC Principle

ANTI-CORRUPTION

Our approach

Our Code of Business Conduct

Our Code sets the standards of conduct that we expect of our employees, Directors and executive management, contractors, suppliers and joint venture partners acting on our behalf in a South32 controlled or operated joint venture. It also represents our commitment to acting ethically, responsibly and lawfully. We take a breach of our Code seriously.

We provide regular reports to our Risk and Audit Committee (RAC) and Board on material business conduct concerns and material breaches of our Code, including data on EthicsPoint reports (a 24/7 confidential reporting hotline that is serviced by an independent provider) and other indicators of workplace conduct.

We also provide the RAC with ongoing updates on our anti-bribery and corruption (ABC), economic sanctions, and anti-money laundering compliance programs, including relevant legislative and regulatory developments.

We operate in many jurisdictions with complex regulatory frameworks. Although we endeavour to maintain robust governance and compliance processes, these do not guarantee the identification or prevention of misstatements or fraud, breaches of law, or accounting or governance practices.

A copy of our Code is available in multiple languages at *www.south32.net*

Speak Up

Our Code also contains our global whistleblower policy, known as our Speak Up Policy. It outlines how to report a business conduct concern, what happens when a report is made and how we protect the reporter. We do not tolerate any form of retaliation against anyone for reporting a business conduct concern.

Our people are supported and encouraged to speak up when our values and Code are not being followed. Anyone can report a business conduct concern, anonymously if preferred, using our confidential and independently administered EthicsPoint reporting hotline.

We respond to identified or reported breaches of our Code in line with our Speak Up Policy and related business conduct response processes and procedures. All reports received are initially provided to our Business Integrity team for confidential review and case allocation based on their nature, urgency and severity. In some cases, support or guidance is all that is required to resolve a concern. In other cases, where necessary, we will formally investigate the concern.

Our Business Conduct Committee, made up of senior leaders, provides guidance and oversight on material business conduct concerns. Such cases are reviewed by our Business Conduct Committee on a quarterly basis, with a focus on consistent application of our Code and disciplinary outcomes. Actions and behaviour misaligned to our expected behaviours and our Code of Business Conduct are carefully managed through our disciplinary processes which may, and has resulted in, disciplinary action up to and including dismissal.

We continue to enhance our Speak Up Policy and related business conduct response processes, including EthicsPoint, as part of our commitment to encourage our people to speak up. We also run an EthicsPoint user training program for our relevant trusted employees who have a case management role.

Anti-Bribery and Corruption Policy and Program

As part of our commitment to act ethically, responsibly and lawfully, we have an ABC Policy and operate a risk-based ABC compliance program. Our Business Integrity team leads the program design, implementation, risk assessments, monitoring, training, incident response and related continuous program improvement initiatives.

The program focuses on performing enhanced ABC due diligence on third party representatives who will interact with government officials on our behalf, before they are engaged to represent us. Our Business Integrity team is also required to review and pre-approve:

- Offering, giving or receiving above modest value gifts, entertainment and/or hospitality;
- Offering or giving community and charitable contributions, and sponsorships;
- Attending any paid political event or activity; and
- Offering or giving any other thing of value to a government official.

Our program includes ABC training for employees that are at higher risk of exposure to bribery and corruption. It also encourages people to speak up and report ABC concerns, including through our EthicsPoint reporting hotline.

We report to our RAC and Board on material breaches of our ABC Policy. Our ABC Policy is available in multiple languages at *www.south32.net*

Economic sanctions, anti-money laundering and competition law

We operate risk-based economic sanctions, anti-money laundering and competition law compliance programs.

Our Business Integrity team leads our sanctions compliance program enabling us to quickly respond to an increasingly complex global sanctions landscape.

Competition laws prohibit anti-competitive conduct by companies and individuals. We adopt governance measures aimed at us competing fairly, ethically and in compliance with applicable competition laws around the world. We also engage and co-operate with competition authorities, including with respect to their enquiries and investigations from time to time.

More information about our competition law compliance program is available at *www.south32.net*

Our performance and progress in FY22

We are not aware of any legal action commenced, continuing or completed against us in FY22 regarding breaches of anti-corruption, applicable sanctions or anti-money laundering laws. We are also not aware of any legal action commenced, continuing or completed against us in FY22 regarding breaches of competition laws.

During FY22, we undertook a number of ethics and business integrity related initiatives, including:

- Continuing the delivery of training (online and face-to-face) to relevant new and existing employees on our Code (including our Speak Up Policy), and key areas of compliance including ABC, economic sanctions, anti-money laundering and competition law;
- Continuing to strengthen our ABC, economic sanctions, anti-money laundering and competition law compliance programs to continue to meet or exceed applicable laws, taking account of regulatory guidance;
- Conducting ongoing focused ABC and sanctions risk assessments, testing the effectiveness of our critical controls at regular intervals, performing monitoring activities and implementing risk-based improvement actions where required;
- Our Business Integrity team performing risk-based due diligence and providing advisory support on higher ABC and sanctions risk acquisition and divestment transactions as well as marketing sales contracts; and
- Continuing to closely monitor evolving global sanctions and developments due to the conflict in Ukraine. Our established sanctions compliance program allows us to respond quickly to global changes as they emerge.

Looking ahead

As part of our commitment to operate ethically and responsibly, we will continue to manage and improve our compliance programs, adapting as our business and the global environment in which we operate change.

Response to increased sanctions on Russia and Russian parties

As the conflict in Ukraine continues, we stand united with those around the world who strongly condemn Russia's invasion, the resulting tragic loss of life and the heartbreaking displacement of many Ukrainian people.

In response to the situation in Ukraine, we made the values-based decision to not sell commodities to, or source products from, Russia or Russian entities.

Our Business Integrity team has been monitoring this rapidly evolving area and communicating key developments internally to maintain awareness and responsiveness. This has been complemented by further enhancements to our already established sanctions compliance program.

HUMAN RIGHTS

Our commitment to respecting human rights is at the core of our approach to sustainability, not only because it is the right thing to do, but because it is critical to the success and integrity of operating as a responsible business. Consistent with this belief, we take action to respect the rights of all stakeholders.

FY22 AT A GLANCE

- Commenced updated Human Rights Impact Assessments at four operations and conducted Human Rights Risk Self Assessment reviews at a further four operations
- Developed a new internal social performance standard to include minimum performance requirements for human rights and to embed the principles set out in Our Approach to Human Rights
- Established our Global Human Rights Working Group to enhance oversight and governance on human rights across the company

FY23 FOCUS AREAS

- Supporting the implementation of the principles in Our Approach to Human Rights and the minimum performance requirements in the internal social performance standard
- Developing action plans to address salient risks identified in Human Rights Impact Assessments
- Reviewing and revising our human rights training modules

ICMM Principle

2 DECISION-MAKING | 3 HUMAN RIGHTS | 4 RISK MANAGEMENT

South32 supports the UN SDGs

8 DECENT WORK AND ECONOMIC GROWTH | 16 PEACE, JUSTICE AND STRONG INSTITUTIONS

8.7 16.2

UNGC Principle

HUMAN RIGHTS | LABOUR

Our approach

We are committed to respecting all internationally recognised human rights as set out in the International Bill of Human Rights (comprising the Universal Declaration of Human Rights, the International Covenant on Civil and Political Rights and the International Covenant on Economic, Social and Cultural Rights) and the International Labour Organization Declaration on Fundamental Principles and Rights at Work. We take action to respect the rights of all stakeholders and focus our efforts on those people who are most vulnerable to harm, marginalised, or at-risk groups including Indigenous, Traditional and Tribal Peoples. Collaboration is crucial, and we are committed to working with rights-holders, peers, suppliers, host governments, non-profit organisations, and other stakeholders to respect human rights across our activities.

Last financial year we set out our commitment to respecting human rights in Our Approach to Human Rights. Our approach is guided by key international standards and initiatives including the UN Guiding Principles on Business and Human Rights, the UN Global Compact (UNGC) Ten Principles, the ICMM Mining Principles, and the Voluntary Principles on Security and Human Rights (VPSHR).

Our commitment to respecting human rights is also documented in our Sustainability Policy, Code of Business Conduct and Modern Slavery Statement. We expect suppliers to respect human rights as set out in our Sustainability and Business Conduct - Minimum Supplier Requirements. We aim to influence our non-controlled joint ventures to adopt standards of conduct which are consistent with ours. You can read Our Approach to Human Rights at *www.south32.net*

Identifying and addressing human rights risks

We have due diligence processes in place to identify, prevent, mitigate and account for how we address potential or actual adverse human rights impacts in our operations and value chain. We focus our efforts on identifying and addressing the most salient human rights-related risks to people and identifying opportunities to promote human rights. We are committed to providing accessible and safe grievance and redress channels for stakeholders to raise complaints about human rights, and where we identify that we have caused or contributed to an adverse human rights impact, we will provide for or cooperate in its remediation through legitimate processes.

Key areas of human rights risk include:

- Workplace health, safety and labour conditions, including freedom from slavery, rights to freedom of association and collective bargaining;
- Equality and non-discrimination, including gender equality, inclusion and diversity and transformation in South Africa;
- Access to water and sanitation;
- Impacts of security services on human rights; and
- Impacts on the rights of communities that live near our operations, including Indigenous, Traditional and Tribal Peoples.

Our human rights risks and impacts are regularly reviewed through processes such as Human Rights Impact Assessments (HRIAs), supplier human rights assessments and other tailored due diligence processes.

Awareness and training on human rights

Our Board is required to have a demonstrable understanding of issues related to human rights and to consider the potential human rights impact of our business on a range of stakeholders. We brief the Sustainability Committee about human rights risks and impacts, including in relation to Indigenous, Traditional and Tribal Peoples and modern slavery, to help our Directors promote ethical and lawful decision-making as set out in our Board Charter. The Sustainability Committee helps our Board assess the appropriateness and effectiveness of our sustainability frameworks and systems, the Sustainability Policy, and the Group's sustainability performance.

We run a human rights training program to help employees understand their responsibilities in relation to human rights in the context of their specific roles. This training program includes several components:

- Our Code of Business Conduct training, which is compulsory for all employees to complete annually, which covers human rights;
- Introductory human rights training, which is required for all new starters and to be refreshed for all employees every two years;
- Modern Slavery training, which is compulsory for our Commercial, Legal and External Affairs teams, and for all superintendents and contract owners;
- Training to support the VPSHR is compulsory for all Security and External Affairs teams, and all employees who work with security providers; and
- Indigenous, Traditional and Tribal People's cultural awareness and cultural heritage training for employees globally.

Partnerships and collaboration

We engage regularly on human rights through our membership associations, including the UNGC, the Minerals Council of Australia and ICMM.

In FY22, we also engaged with industry peers, Monash University and the Australian Council of Superannuation Investors on benchmarks released on the first year of reporting under the *Australian Modern Slavery Act 2018*.

Learn more in **our 2022 Modern Slavery Statement** at www.south32.net

Our performance and progress in FY22

We track our human rights performance against a range of key metrics, shown in full in the 2022 Sustainability Databook.

Undertaking human rights assessments

As part of our internal social performance standard, HRIAs and Human Rights Risk Self Assessments (HRRSA) are periodically required across our operations and projects.

In FY22, we commenced updated HRIAs for Hotazel Manganese Mines, Mozal Aluminium, Hillside Aluminium and Cerro Matoso. In FY23 we plan to complete the HRIAs, implement the analysis of the findings and prioritise recommendations and action plans.

In FY22, HRRSA reviews were conducted across Worsley Alumina, Cannington, Groote Eylandt Mining Company and Illawarra Metallurgical Coal. The most salient human rights related risks reported across the Australian operations include:

- Diversity and non-discrimination relating to gender and Indigenous, Traditional and Tribal Peoples;
- Workplace health and safety relating to air quality;
- Access to water for communities as a result of mining activities; and
- Cultural heritage including strengthening relationships with Indigenous stakeholders.

For these operations, the risks reported are existing risks currently managed through operational and Group-level controls. These controls were reviewed, and recommendations made to enhance their effectiveness.

For the Hermosa project, in FY22 we completed the field phase of an independent Social Impact and Opportunities Assessment that included human rights due diligence. In FY23, we plan to review the findings of this assessment and update the Hermosa HRRSA to include its recommendations.

The ongoing impacts of COVID-19 and escalation of conflict in Ukraine have exacerbated the risks of human rights violations to some of the world's most vulnerable people. We do not have operations in Russia or Ukraine, and we continue to monitor the evolving situation in Ukraine and its human rights related impacts. To learn about our response to the conflict in Ukraine see the Ethics and business integrity section on page 42.

Strengthening our human rights governance

Our Sustainability Committee was briefed twice during FY22 on external human rights trends, emerging issues, and legal and regulatory updates. Key themes included the growing global trend towards the introduction of corporate sustainability due diligence requirements for businesses and the increasing regulatory focus on supply chains, particularly on banning the importation of goods produced wholly or partly using forced labour. The recognition of the human right to a safe, clean, healthy, and sustainable environment was also included in a briefing, demonstrating the growing connection between the environment, climate change and human rights.

A new internal social performance standard was developed in FY22 to include minimum performance requirements for human rights and to embed the principles set out in Our Approach to Human Rights.

In FY22, we established our Global Human Rights Working Group (HRWG), to enhance oversight and governance on human rights across the Group, with representation from across the business. We also established a Modern Slavery Working Group (MSWG). You can read more about our HRWG below and you can find more information on our MSWG in our 2022 Modern Slavery Statement at *www.south32.net*

Collaborating on human rights initiatives

We participated in a number of collaborative human rights initiatives this year, including the Sustainable Shipping Initiative, the UN Global Compact Network Australia Modern Slavery Community of Practice, the Human Rights Resources and Energy Collective (formerly the WA Modern Slavery Collaborative Group) and relevant ICMM working groups.

Integrating human rights into our business

This year we completed reviews of Indigenous, Traditional and Tribal Peoples' cultural heritage, in the Americas and southern Africa, which inform the ongoing development of both Our Approach to Indigenous, Traditional and Tribal Peoples Engagement and Our Approach to Cultural Heritage. We increased our investment with Indigenous, Traditional and Tribal Peoples to support economic and social outcomes.

Supporting a just transition is a key consideration in our climate change work. In FY22, we developed a set of guiding principles, including consideration of human rights, which will be used to integrate just transition planning into our decarbonisation activities. This work will continue in FY23.

Our human rights due diligence activities within the supply chain and engagement with stakeholders across the value chain are described in our 2022 Modern Slavery Statement at *www.south32.net*

Looking ahead

As we continue to champion respecting human rights, activities planned for FY23 and beyond include:

- Continuing to build our understanding and integration of human rights risks across our business through engagement and collaboration;
- Continuing to increase engagement and collaboration with all functions through the HRWG;
- Developing action plans to address salient risks identified in HRIAs;
- Reviewing and revising our human rights training modules to align with Our Approach for Human Rights and our internal social performance standard; and
- Developing guidance to provide support for the implementation of the principles in Our Approach to Human Rights and the minimum performance requirements set out in the internal social performance standard.

Enhancing awareness of human rights across our business

In FY21 we committed to establishing an internal Global Human Rights Working Group (HRWG) to enhance and embed our approach to respecting human rights across South32. The HRWG brings together stakeholders from across our operations as well as functional representatives from Legal and External Affairs, Commercial, Human Resources, Corporate Development and Technical Stewardship.

Two meetings were held in FY22, allowing members to discuss the role of human rights within their operation or function and to identify ongoing or planned activities. Key areas of human rights risk as well as the results of human rights related due diligence activities were discussed, with a focus on further embedding human rights commitments into the business.

As the group matures, we aim to continue to challenge ourselves in how we respect and promote human rights across the business.

RESPONSIBLE VALUE CHAIN

We seek to apply responsible business practices throughout our value chain by sourcing responsibly and enhancing product stewardship. Our aim is to build strong, mutually beneficial relationships with stakeholders and to work with customers and suppliers whose values and conduct align with ours.

FY22 AT A GLANCE

- Local procurement across our global operations increased by six per cent to approximately US$907 million
- Enterprise Supplier Development spend in South Africa more than tripled to US$17 million
- Direct spend with Aboriginal and Torres Strait Islander businesses in Australia increased by 34 per cent

FY23 FOCUS AREAS

- Working to increase local and indigenous procurement spend
- Continuing and further enhancing modern slavery due diligence
- Developing an approach to Scope 3 GHG emissions tracking and reduction with suppliers and customers

ICMM Principle

1 ETHICAL BUSINESS · 2 DECISION-MAKING · 3 HUMAN RIGHTS · 8 RESPONSIBLE PRODUCTION · 10 STAKEHOLDER ENGAGEMENT

South32 supports the UN SDGs

4 QUALITY EDUCATION (4.4) · 8 DECENT WORK AND ECONOMIC GROWTH (8.7) · 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE (9.3) · 12 RESPONSIBLE CONSUMPTION AND PRODUCTION (12.6) · 16 PEACE, JUSTICE AND STRONG INSTITUTIONS (16.2) · 17 PARTNERSHIPS FOR THE GOALS (17.16)

UNGC Principle

HUMAN RIGHTS · LABOUR

Our approach

Responsible sourcing

Our approach to responsible sourcing relies on collaboration with our suppliers to minimise health, safety, environmental, human rights, and other social risks. We set out our expectations of suppliers in our Code of Business Conduct (Code) and Sustainability and Business Conduct - Minimum Supplier Requirements. As per our Code, we aim to work only with suppliers who have strong values and standards of conduct and share our commitment to lawful business practices. Any third parties who work at our locations or interact with others on our behalf must follow our Code, or their own code, provided that their standards of conduct are consistent with ours. We assess risks associated with our suppliers, support our teams to align with our internal standards through stewardship activities and track the effectiveness of our joint efforts.

To partner effectively with our suppliers, we apply a risk assessment and tiering tool to identify and proactively manage supplier risk. Risk may be associated with the supplier's scope of work or the supplier profile and may relate to safety, security of supply, business integrity, modern slavery, or liquidity risks, amongst others. We work with our Business Integrity team and draw on other expertise when identifying key supplier risks and opportunities across the lifecycle of supplier management. Once risks are identified, evaluation and due diligence criteria are established, together with risk-based control activities. These inform our management approach, with specific requirements agreed with suppliers and integrated into supplier management plans.

Suppliers of services are inducted through our contractor management process. This process was established to improve both the safety and performance of our contracting partners. Within the process, there are clear supervision, accountability, and performance requirements. This program of work has now reached a state of maturity whereby our operations are routinely audited through our stewardship program against our internal contractor management standard.

You can read more about **our approach to contractor management** on page 21.

Product stewardship

Our approach to the stewardship of our commodities is based on accepted best practice for their handling, transportation and use. As part of our commitment to the safe stewardship of our traded commodities, we have carried out a comprehensive review and update of our safety data sheets based on the latest available criteria and test work. We are guided by ICMM Mining Principle 8 – Responsible Production, and advice from industry bodies and commodity associations relevant to our products. These include the International Manganese Institute, the International Lead Institute, the International Zinc Institute, the International Aluminium Institute, Aluminium Stewardship Initiative, Australian Coal Industry Research Program and most recently the National Alliance for Advanced Transportation Batteries.

Enterprise Supplier Development

Growing and developing small, medium, and micro enterprises (SMMEs) is fundamental to the transformation of the South African economy. We collaborate and work with SMMEs on Enterprise Supplier Development (ESD). In line with South Africa's transition towards fair economic distribution and the alleviation of poverty, we aim to do business with an ever-increasing percentage of Black-owned suppliers. We support suppliers as they transform to Black ownership and encourage them to progress beyond the 51 per cent level of Black ownership defined by South African legislation.

Our approach focuses on identifying existing and potential suppliers based in local communities.

To support socio-economic development in local communities, we comply with our operational Social and Labour Plans, the *Broad-Based Black Economic Empowerment Act, 2003*, Mining Charter III and the *Minerals and Petroleum Resources Development Act, 2002*.

We provide development programs, assisting small businesses to become procurement ready, increase sales, build competitiveness, and enter the value chain of large companies, including South32. This has expanded to include the areas of health and safety, COVID-19 protocols, anti-corruption, corporate governance, human resources, labour law, financial-record keeping, anti-modern slavery and self-development. Support is also provided through essential equipment, such as laptops, printers, small tools, and accounting software packages.

Hillside ESD Exhibition at the City of uMhlathuze Business Exposition

Our Hillside Aluminium operation took part in a three-day business expo at the Zululand Chamber Business Forum Centre hosted by the City of uMhlathuze, in partnership with the Richards Bay Industrial Development Zone. The expo brought together large industry, local small businesses, and various government departments to exhibit their products and services, engage in dialogue and share ideas. Over 320 delegates, including fellow exhibitors, visited our ESD exhibition stand to learn about our program, supplier development opportunities and how to join our supplier database. The business expo was a great opportunity to engage with various stakeholders and to increase visibility of our ESD program, which supports the transformation and growth of the business environment in South Africa.

Hillside Aluminium partners with Solana Energy to boost local renewable energy

In June 2022, Hillside Aluminium launched a partnership with Solana Energy to bring solar energy to one of South Africa's most important commercial hubs.

The multi-phased project involves the establishment of solar power infrastructure in the Richard's Bay and King Cetshwayo District (KCD) economic regions, which is expected to add between 2 to 2.5MW of renewable energy capacity to the local grid within 12 months. This will help businesses that supply Hillside Aluminium to start seeing the benefits of renewable electricity.

Through the project, a Solar Training Academy will be developed to upskill young electricians in the fields of Solar Photovoltaic (PV) technology. Ten potential candidates from KCD will also be identified to run five new micro-franchises, which will conduct Solar PV installations for households and SMMEs on an innovative monthly payment basis.

The partnership is an important example of our ESD work in action, providing local economic opportunities through a combination of skills, jobs, economic participation and equitable access to renewable energy, driving investment that supports the region's transition to a lower carbon economy.

Procurement from Aboriginal and Torres Strait Islander suppliers

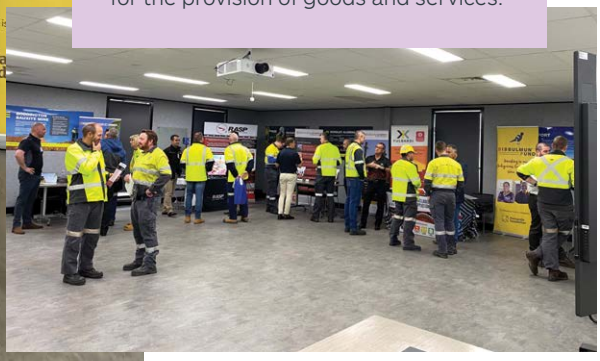
Supporting Aboriginal and Torres Strait Islander businesses is fundamental to achieving our purpose. We do this by engaging directly with Aboriginal and Torres Strait Islander suppliers, but also through engaging at different levels of our supply chain.

Our local sourcing teams provide additional coaching to explain our procurement processes and how to work with South32. We are committed to providing genuine access and support to build capability and the capacity of Aboriginal and Torres Strait Islander businesses, to better enable them to work with South32.

We work closely with our key contractors to facilitate relationships with Aboriginal and Torres Strait Islander suppliers. In FY22, at Illawarra Metallurgical Coal and Worsley Alumina, we hosted multiple open days to provide a platform for indigenous suppliers to directly access senior leaders, budget holders and key contractors. In addition to monitoring operational spend, we have introduced performance metrics into our contracts to align contractors with our internal expectations. Now, we can measure our wider supply chain impact through contractor workforce participation and indirect utilisation of Indigenous businesses in delivery of goods and services to South32 via our contractors.

Indigenous Supplier Open Days at Worsley Alumina

In August and October 2021, we hosted Indigenous Supplier Open Days at Worsley Alumina. To give potential suppliers an opportunity to showcase their capabilities, we held speed networking and expo style events. We also hosted two commercial coaching sessions with the supplier group to share information about South32. As a result, we pre-qualified 17 suppliers and have since engaged eight of those for the provision of goods and services.



Our performance and progress in FY22

We track our performance against a range of key performance metrics and targets, shown in full in the 2022 Sustainability Databook.

Metric	Unit of Measure	Target	FY22	FY21	FY20	FY19
Enterprise Supplier Development spend	Spend in US$ million	3% of NPAT[1]	**17.5**[2]	5.3	5.6	8.7
Business development support	No. of SMMEs[3] participating	No target[4]	**60**	37	172	59
Funding support	No. of SMMEs[3] participating	No target[4]	**170**	60	27	35
Procurement from Aboriginal and Torres Strait Islander businesses (Reconciliation Action Plan commitment)	Spend in US$ million	10% Growth Year on Year[5]	**18.7**	14.0	12.0	12.0
Local procurement[5]	Spend in US$ million	No target	**906.9**	855.8	862.1	Not available
Proportion of spending on local suppliers[6]	Percentage of procurement spend	No target	**28.9**	20.7	22.7	Not available

(1) Targets for South African Enterprise Supplier Development spend based on 3 per cent net profit after tax (NPAT) measured in US$ million: FY22: 10.71; FY21: 4.73; FY20: 5.62; FY19: 9.34
(2) ESD consists of two activities, Enterprise Development and Supplier Development. The Enterprise Development component is captured in both the ESD total and the community investment total.
(3) SMME: Small, medium and micro-enterprises.
(4) Dependent on applications and ESD spend targets.
(5) Target set in FY21. FY22 performance exceeds target (of 10 per cent) with a 34 per cent year-on-year increase in procurement of goods and services from Aboriginal and Torres Strait Islander businesses.
(6) Local procurement is defined as the direct purchase of goods and services within the local communities in which South32 operates. Suppliers are determined as local based on their proximity to the local communities, including boundaries defined by local government areas, provinces and states.

We currently work with 212 customers and more than 5,600 direct suppliers across our value chain. During FY22, local procurement across our global operations continued to increase, comprising 28.9 per cent of non-traded procurement spend.

We support the growth of the business environment in South Africa through ESD. In FY22, we increased our target for ESD spend from US$4.73 million to US$10.71 million. By working with suppliers and local communities, we exceeded this target with FY22 ESD spend of US$17.5 million. In November 2021, the Hillside ESD Centre in Richards Bay reopened after almost two years of closure due to COVID-19. The centre continues to attract SMMEs, providing business and marketing support for entrepreneurs.

During FY22, we saw an increase in the number of SMMEs who were provided funding support, and an additional 60 businesses graduated from our Supplier Development Support program.

At our Australian operations, our direct spend with Aboriginal and Torres Strait Islander businesses increased by 34 per cent compared to FY21. This greatly exceeded our Reconciliation Action Plan target of increasing spend by 10 per cent year on year. Our increased spend is attributed to several initiatives, including the development of Aboriginal and Torres Strait Islander Peoples Participation Plans for each operation, supplier open days, delivery of training by Supply Nation, reduced payment terms (14 days for qualifying Aboriginal and Torres Strait Islander businesses) and an internal supplier portal of pre-qualified Aboriginal and Torres Strait Islander businesses.

These efforts resulted in some of the first contracts being awarded for goods and services by our operations to Aboriginal and Torres Strait Islander businesses.

Several external situations affected our responsible value chain work this year. We continued to establish key business routines to support and manage supply chain impacts and risk caused by the COVID-19 pandemic. This included a COVID-19 incident management team that sought to gain a deeper understanding of our critical suppliers and categories.

We continue to monitor and manage the global impact of the Russia-Ukraine conflict and we made the values-based decision to not procure goods or services from Russian entities. Our broader commodities sales exposure to Russia has historically been limited and we do not plan to enter any new transactions or business relationships with Russian entities, until current circumstances change. As a result of the conflict, we have noted many additional constraints for our suppliers and are working to more effectively plan key supply needs and allow suppliers more time to respond. Despite these global supply chain challenges, our efforts have meant there have been no material impacts on our operations.

In FY22, we focused on updating critical supply processes, including associated procedures and tools. Procedures were updated for contract management, contractor management, supplier management and purchasing. Our enhanced risk management system and the implementation of the supply stewardship program has brought further maturity across our critical processes.

During the year we continued to engage with customers and suppliers on various sustainability initiatives, including:

- Opportunities to partner on reducing value chain or Scope 3 GHG emissions. In a key raw material supply contract negotiated this year, we included requirements for Scope 3 GHG emissions reporting, a practice we look to replicate where appropriate in future key contracts;
- Obtaining provisional approval against the Aluminium Stewardship Initiative Performance Standard for our Mozal Aluminium operation;
- Supporting downstream aluminium beneficiation, with Hillside Aluminium providing ESD funding for secondary or tertiary grade aluminium for use in the local market;
- Both requesting customers and providing South32's Modern slavery and conflict mineral statements as part of our social risk due diligence activities; and
- Interviewing a select group of suppliers and customers as part of our FY22 materiality assessment on the sustainability topics that matter most to South32. This was used to inform the development of the 2022 Sustainable Development Report.

Learn more about **the 2022 sustainability materiality assessment** on page 13.

We continue to provide training to SMMEs to meet their specific needs, typically covering financial management, corporate governance, health and safety, human resources and modern slavery. Our modern slavery training module is designed to help SMMEs identify and respond to modern slavery risks and develop appropriate labour policies in ways that respect human rights. While COVID-19 restrictions limited site visits and onsite modern slavery audits for SMMEs in our ESD program, we were still able to undertake education and awareness sessions. You can learn more about the actions we are taking to address modern slavery in our 2022 Modern Slavery Statement at *www.south32.net*

Looking ahead

As we continue to apply responsible business practices throughout our value chain, activities planned for FY23 and beyond include:

- Establishing a Carbon Markets Team to manage our position in carbon markets;
- Continuing modern slavery due diligence with greater capacity to travel and engage, with the lifting of COVID-19 travel restrictions;
- Developing an approach to Scope 3 GHG emissions tracking and reduction with suppliers and customers;
- Working towards meeting London Metal Exchange certification requirements (including responsible sourcing) for our aluminium brands; and
- Driving local and indigenous procurement spend.

Security Services for Cannington site village

As part of the Supply Indigenous Participation Plan, which supports the South32 Innovate RAP, we are focused on providing opportunities for Indigenous businesses. At Cannington, we tendered village security services with a preference for an Indigenous vendor. We collaborated with the suppliers and where needed provided additional support to navigate South32's tender process and documentation requests. The selected vendor, based on the best commercial outcome, was an Indigenous vendor. The provision of security services since the onboarding of the vendor has been excellent.

MANAGING OUR ENVIRONMENTAL IMPACT

Effective environmental management is essential – not only for our business, but for all stakeholders. We are committed to protecting natural resources including water, biodiversity, air and surrounding ecosystems. We work hard to be responsible stewards of the environment and treat natural resources with care so that they are available for future generations. From exploration through to the closure of our operations and beyond, the preservation and rehabilitation of the surrounding landscapes is front of mind.

IN THIS SECTION

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Biodiversity and land use	57
Tailings, waste, and other emissions	64

WATER

Water is a valuable resource that we all share and a critical input for our operations. In many of the areas where we operate water is scarce, so we need to carefully manage our use. Water is vital for local communities and the environment, and we must take action to minimise and, where possible, avoid any negative impacts on its availability and quality.

FY22 AT A GLANCE

- Set contextual water targets at Illawarra Metallurgical Coal and Hotazel Manganese Mines
- Established a target for operations in baseline water stress, to achieve at least a 10 per cent improvement in water use efficiency by FY27, with a stretch target of more than 15 per cent improvement
- Commenced the 'value of water' project to improve our long-term water planning

FY23 FOCUS AREAS

- Working towards achieving our contextual water targets and our water efficiency target
- Introducing the framework developed by the 'value of water' project into our business planning process
- Refining our water accounting processes to align with the ICMM Guidance for Consistent Water Reporting and MCA Water Accounting Framework (V2.0)

ICMM Principle

4 RISK MANAGEMENT

6 ENVIRONMENTAL PERFORMANCE

South32 supports the UN SDGs

6 CLEAN WATER AND SANITATION — 6.4

12 RESPONSIBLE CONSUMPTION AND PRODUCTION — 12.2

UNGC Principle

ENVIRONMENT

Our approach

Our approach to water management is holistic, centred on promoting better water use, effective catchment management and improved water security. Water supply is important to running our operations and reducing operational risks. We also support local communities and work with them on water issues they may face, now and in the future.

We are guided by the ICMM Mining Principle 4 - Risk Management, and ICMM Mining Principle 6 - Environmental Performance, the ICMM Position Statement on Water Stewardship, as well as our own internal environment, social performance and closure standards. Our internal environmental standard is approved by our CEO. Management accountability for execution of the standard lies with the operations, while the Technical function is accountable for providing stewardship oversight over performance.

We report water-related data in accordance with the Minerals Council of Australia (MCA) Water Accounting Framework and support improvements in water management, disclosure and accounting practices through our involvement in the ICMM Water Working Group. Our reporting standards and internal standards form part of our comprehensive environmental management system.

To manage water effectively, we maintain water balances for all our operations, integrate water forecasts in our planning process and undertake water resource risk and opportunity assessments. Each operation and major project is required to undertake a risk and opportunity screening process at least every five years. Operations that face material water-related risks are required to assess the long-term social and economic consequences of water impacts and how we manage these, with consideration of the broader catchment and community needs. Consistent with our internal environment standard and ICMM requirements, operations that face material water-related risks also set contextual water targets.

Our internal standards also require fit-for-purpose criteria on water abstraction, dewatering, discharge volumes or water quality when government regulations are insufficient to adequately protect the key characteristics of the receiving environment. Additional requirements specific to our local contexts are included in our operational management plans and procedures.

Our contextual water targets

We have identified material water-related risks at Hillside Aluminium, Mozal Aluminium, Worsley Alumina, Hotazel Manganese Mines (HMM) and Illawarra Metallurgical Coal (IMC). This is due to challenges with long-term water security and access for both our operations and local communities. It also recognises the sensitive environments in which we operate, including tightening regulations.

We have set contextual water targets for each of these operations:

Operation	Water-related material risks	Contextual water target	Year set	FY22 progress
Hillside Aluminium	Variability of rainfall in the region means there is a risk of disruption to water supply to our smelter.	Improve catchment water balance knowledge by December 2022 to aid water-related collective action.	2019 (set) 2021 (revised)	We worked closely with the National Business Initiative of South Africa and its consultants supporting the uMhlathuze Water Stewardship Partnership initiatives to help enhance and sustain water security in the uMhlathuze River Catchment. This included the development and collaborative use of a real-time mobile monitoring application and upgrade of key water flow loggers within the uMhlathuze River Catchment of KwaZulu-Natal. The revised contextual water target remains on track with expected completion in FY23.
Mozal Aluminium	Drought in the region, water restrictions and extreme weather, all mean there is a risk of variability and disruptions to water supply to our smelter. These factors could also have the potential to impact local community through disruptions to the regional water supply.	Identify opportunities to improve community access to water of the Boane District by June 2022.	2019 (set) 2020 (revised)	We worked closely with a local consultancy to identify tangible water-related opportunities that could help to improve water security for communities in the Boane region. Up to 18 potential options were identified through significant stakeholder consultation, documentation review and multicriteria analysis. The contextual water target has been achieved, and we will now use the information to determine which of the opportunities may be pursued in collaboration with local authorities and communities.
Worsley Alumina	Insufficient water in the refinery catchment lake could result in water supply disruptions to the refinery. Oversupply of water in the refinery catchment lake resulting in overtopping of storage facilities leading to contamination of the site's fresh-water lake.	Work towards delivering a 10 per cent reduction in water demand at the refinery by FY28.	2019 (set)	Several studies were conducted and several progressed into varying stages of feasibility, with the most mature of these being the mud washing project which has moved from the pre-feasibility to feasibility phase. The project has the potential to make a material contribution to delivery of the contextual water target while also supporting our emissions reduction commitments. The contextual water target remains on track.
Hotazel Manganese Mines	Growing water scarcity, increasing competition for water resources and ageing distribution infrastructure in the region means there is a water supply risk to Wessels and Mamatwan mines, and the town of Hotazel.	Identify a sustainable community project that will give access to clean water and support the local municipalities water access plans, with an expectation to have this project implemented by end of FY26.	2022 (set)	We established the contextual water target. Delivery of the target will require consultation to identify the preferred project(s), with progressing internal studies and external engagements the key focus for the next 12 months.
Illawarra Metallurgical Coal	Operating in a sensitive water catchment where there is potential to cause damage as a result of subsidence from our underground mining operations. This potential could also impact our ability to secure new regulatory approvals. Inrush or inundation risk associated with our underground mining operations.	Support development of a framework for incorporating Traditional Custodian values into land and water stewardship in the Illawarra region by December 2024.	2022 (set)	We established the contextual water target. The target comprises a partnership between IMC and the Illawarra Local Aboriginal Land Council to co-develop an indigenous-led approach to regenerate and restore Country alongside local industry, government and community. It is focused on waterways in the upper catchment of Mount Kembla and upstream of the Princes Highway. The work will be facilitated by local Traditional Custodians and knowledge holders and is supported by the University of Wollongong and South32.

Hillside Contextual Water Target - Supporting Enhanced Water Security in the uMhlathuze River Catchment

The uMhlathuze River Catchment, in Richards Bay, KwaZulu-Natal is an important source of surface water for local agriculture and forestry businesses, as well as the wider community.

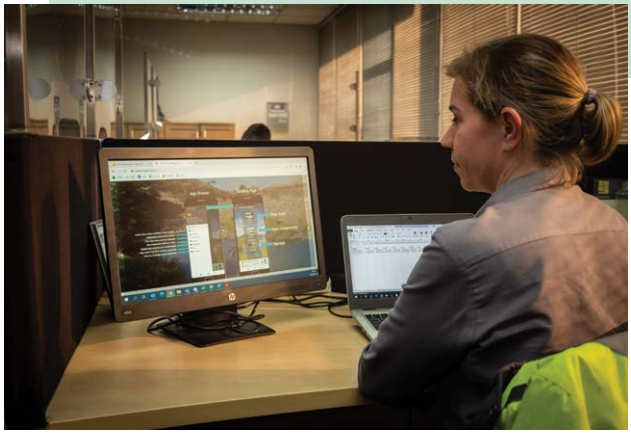
Given its importance to the region, improving catchment water knowledge will help water security.

To support this, we established a contextual water target to improve water-related data quality and associated decision-making in the uMhlathuze River catchment.

In partnership with the National Business Initiative, a South African industry group focusing on sustainable development, and the uMhlathuze Water Stewardship Partnership, mobile and desktop monitoring applications known as 'FlowTracker' and 'Inwards Lite' were developed to provide real time water-related data in the catchment.

The applications track river flow rates to help monitor water availability and flooding potential, as well as dam and rainfall levels from specific locations in the catchment. In addition, water flow gauges were installed and upgraded at strategic locations within the region to improve the quality of the data.

It could also help with flood prediction and disaster prevention, and provide vital information to the community so that it is well placed to respond to excess and deficits of water in the region.



Baseline water stress

We have processes in place to identify which of our operations are exposed to water stress, which we baseline annually. Currently, we have four operations and one development option in areas defined as having baseline water stress: Mozal Aluminium, Worsley Alumina, IMC, HMM and the Hermosa project. The classification is determined through assessment using the World Resources Institute's Aqueduct tool, which is then subject to internal verification that considers local context and catchment conditions.

For those operations in baseline water stress:

- A target has been set to achieve at least a 10 per cent improvement in water use efficiency by FY27, with a stretch target of more than 15 per cent improvement. This target was derived in recognition of our need to focus water management efforts in those regions that need it most. The target also forms part of our multicurrency revolving syndicated credit facility that was refinanced in FY22 as a Sustainability-Linked Loan. For more information about our Sustainability-Linked Loan, see page 14; and
- Opportunity assessments for the improvement of water efficiency were conducted in FY22, with relevant opportunities being integrated into business planning and reporting processes to achieve the milestones for the target in coming years.

Our performance and progress in FY22

We track and report our water performance in accordance with the Minerals Council of Australia Water Accounting Framework, which is shown in full in the 2022 Sustainability Databook.

Almost all of the water we source for operational use is groundwater or surface water, representing approximately 96 per cent of our total water inputs for FY22. We also source comparatively small volumes from third parties to support our process and potable water needs. In FY22, the volume sourced from third parties reduced by approximately 2,740ML. This was primarily associated with our Worsley Alumina refinery which was able to secure most of its supply requirements from onsite water dams. A small amount of sea water was also used to feed the desalination plant at Mozal Aluminium in the first half of FY22.

We continue to reuse or recycle as much water as we can to limit our dependency on shared water sources in the catchments where we operate. In FY22, we reused or recycled approximately 108,731ML, more than our total water input of 61,183ML. This represents an increase of approximately 17 per cent compared to the previous year, primarily associated with:

- Cerro Matoso where we saw a return to 'normal' reuse and recycling rates following three month refurbishment to one of the electric ovens;
- Groote Eylandt Mining Company where there was increase in mine dewatering and associated recirculation through the water management system; and
- An increased focus on reuse and recycling following the adoption of the water use efficiency target.

The volume of water consumed across our operations remained relatively stable[1] during the reporting period. The majority of our water consumption relates to evaporative losses associated with water storage and the Bayer process at our Worsley Alumina refinery. The remaining water is discharged to surface water, groundwater and sea water, or piped to third parties in line with regulatory requirements.

Improving water planning

In FY22, we commenced a project to improve our long-term water planning. Through our 'value of water' project, we are developing a framework to focus on security of supply, reduce environmental and social impacts, lower costs and enable the business to make more informed and proactive investment decisions.

We continue to support the ICMM Position Statement on Water Stewardship, actively participating in the ICMM Water Working Group, as well as the review and amendment of the ICMM Guidance for Consistent Water Reporting. Work to update our water reporting to include changes from both the ICMM and MCA Water Accounting Framework (V2.0) commenced in FY22.

We continued to enhance water governance via our internal Group-level Water Stewardship Working Group, comprised of representatives from relevant functions that have shared accountability with respect to water stewardship and governance.

Physical impacts of climate change assessments were conducted for all of our operations during FY22 to enhance operational resilience and inform investment planning. The water related impacts identified include acute risks from the increased frequency and/or severity of extreme weather events such as floods, as well as chronic risks from longer-term changes in climate patterns such as sustained higher temperatures and drought.

Learn more about **our approach to climate change** on page 72.

We continued to improve our life of operations planning in FY22, with a focus on strengthening our approach to water supply and demand forecasts while also considering the risks and opportunities that relate to the future water profile at each of our operations and projects.

We also launched the H_2O Opportunity Challenge to identify solutions that would deliver a beneficial use for the excess water that is anticipated to require management at the Hermosa project. Learn more about this on page 56.

One of the challenges we experienced in FY22 was delays for water management-related infrastructure due to problems with global supply chains, which in turn impacted our on-ground water management activities. An example of this has been delays in installing and commissioning additional water treatment infrastructure at IMC to support improvements in discharge water quality from our Appin North facilities.

In some locations, we also experienced tension between our need to access water for business continuity and the community's desire for water resources to be preserved and protected. We continue to proactively engage with our communities and other stakeholders to balance the needs of all who have an interest in this precious resource. An example of this has been the commissioning of a collaborative water study in the south-west of Western Australia with industry peers aimed at identifying initiatives, opportunities and impacts on future water access for operations in the region of Worsley Alumina.

(1) Decrease of approximately two per cent between FY22 and FY21 (excluding South Africa Energy Coal and Tasmanian Electro Metallurgical Company).

Looking ahead

Activities planned for FY23 and beyond include:

- Ongoing work towards achieving our contextual water targets, including study activity at HMM and Worsley Alumina and working with our partners at IMC and Hillside Aluminium;
- Planning and implementing activities to meet our FY27 water efficiency target for operations in baseline water stress, with a focus on integrating prioritised initiatives into our business planning process;
- Introducing the framework developed by the 'value of water' project into our business planning process, enabling improved decision making and investment planning;
- Refining our water accounting processes to align with the ICMM Guidance for Consistent Water Reporting and MCA Water Accounting Framework (V2.0);
- Working collaboratively with industry peers in the south-west of Western Australia with the aim to identify a climate independent regional water solution to support business continuity while recognising and supporting local, cultural and ecological values; and
- Linking our reward structures with the achievement of water targets.

Unearthing beneficial uses of excess groundwater at the Hermosa project

We recognise the value of working with experts to help achieve our sustainability commitment across our operations and projects.

At the Hermosa project, we identified a need to explore a beneficial use for the water that would be discharged from the project. Safe and sustainable access to Hermosa's ore will require large volumes of water to be dewatered in advance of mining.

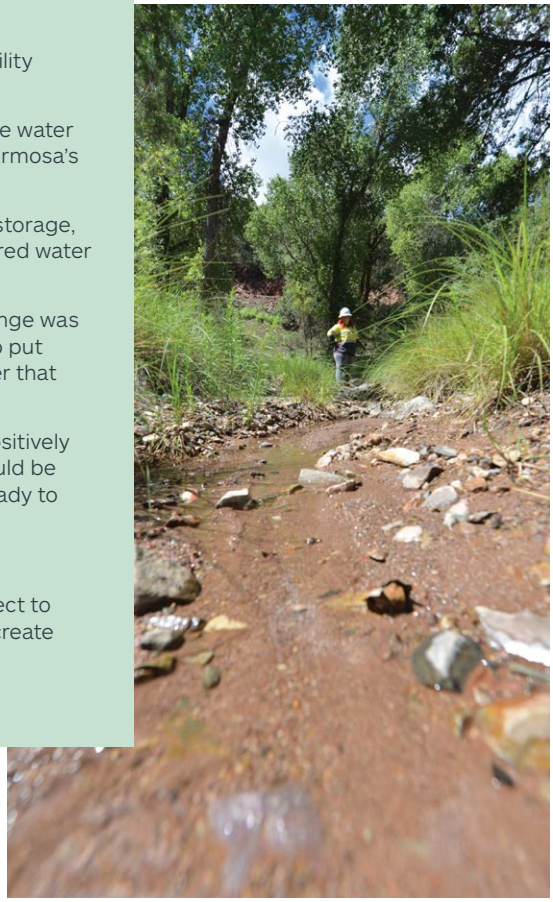
As Hermosa's surface footprint will be small, allowing limited space for water storage, treatment and off-site disposal of this water has been identified as the preferred water management method.

Working in partnership with consulting firm Unearthed, the Unearthed Challenge was launched inviting individuals, groups and companies from around the world to put forward new and innovative proposals for alternative uses for the excess water that could benefit the local community.

Proposals that offered an innovative approach for the use of the water and positively build on existing plans were considered. Viable solutions were sought that could be implemented immediately or showcase emerging technologies that will be ready to implement in the coming years.

At the end of FY22, submissions are closed and are currently being assessed.

We will continue to examine ways to optimise the design of the Hermosa project to minimise any potential impact on the environment, while using innovation to create additional value for the local community.



BIODIVERSITY AND LAND USE

We recognise the importance of protecting ecosystems and have committed to no net loss for all new projects and major expansions. It is our responsibility to minimise the impacts of land clearing and to rehabilitate land disturbed by our activities. We proactively manage contamination risks and undertake effective mine closure planning.

FY22 AT A GLANCE

- Continued to focus on identifying practical and sustainable biodiversity and environmental mitigation measures and offset strategies associated with the proposed Worsley Mine Development
- Continued to mature existing partnerships and establish new ones to promote improved and sustainable conservation outcomes in the regions where we operate
- Commenced the development of an overarching vision for closure

FY23 FOCUS AREAS

- Continuing to refine mitigation and conservation measures associated with new projects and major expansions
- Undertaking a preliminary gap assessment against the proposed Taskforce on Nature-related Financial Disclosure framework
- Increasing our focus on the use of innovative approaches to environmental monitoring

ICMM Principle

4 RISK MANAGEMENT | 6 ENVIRONMENTAL PERFORMANCE | 7 CONSERVATION OF BIODIVERSITY

South32 supports the UN SDGs

12 RESPONSIBLE CONSUMPTION AND PRODUCTION | 15 LIFE ON LAND

12.2 15.5

UNGC Principle

ENVIRONMENT

Our approach

Biodiversity and conservation

We recognise the various challenges related to biodiversity and conservation across the jurisdictions in which we operate, such as the continued decline of threatened species in the wild and subsequent elevation in conservation status. This has driven an increased focus from investors and wider stakeholders on managing the risks of biodiversity loss, leading to the development of initiatives such as the Taskforce of Nature-related Financial Disclosures (TNFD).

We are committed to supporting meaningful and sustainable initiatives that address key threats and promote improved conservation outcomes within the bioregions where we operate. Consistent with our Code of Business Conduct and our internal environment standard, we have committed to avoid exploring or mining in World Heritage Areas and to respect legally designated protected areas, while also delivering no net loss outcomes for all new projects and major expansions.

Our approach is guided by ICMM Mining Principle 7 – Conservation of Biodiversity, and the associated Position Statement on Mining and Protected Areas, as well as other relevant industry guidelines.

Our commitment to biodiversity and land management is outlined in our Sustainability Policy and managed through our internal environment and closure standards. When we develop our operational management plans and procedures, we take regional and local biodiversity needs and regulatory requirements into consideration. Our internal environment and closure standards are approved by our CEO. Management accountability for execution of the standards lies with the operations, while the Technical function is accountable for providing stewardship oversight of our performance.

We require all operations to undertake a risk and opportunity screening exercise at least every five years, including not only direct operational aspects but also the pressures on the surrounding bioregions, which could be influenced by factors such as the physical impacts of climate change and changes in land use. The process enables us to identify opportunities to promote improved biodiversity and conservation outcomes within the bioregions, which could include investing in regional conservation initiatives and collaborating with other stakeholders on biodiversity research.

Two of our operations, Groote Eylandt Mining Company (GEMCO) and Worsley Alumina, have identified material risks specific to biodiversity, while Illawarra Metallurgical Coal (IMC) has also identified biodiversity within its material risk register as part of a broader environmental approvals risk.

When developing controls to manage biodiversity risks, we require all operations to apply the mitigation hierarchy to minimise the impact of our operations through avoidance, minimisation, rehabilitation and offsets, where appropriate.

Contamination

The nature of our mining and processing activities can result in contamination. Our approach to managing contamination is informed by relevant laws and the ICMM Mining Principles 4 - Risk Management and 6 - Environmental Performance. Our internal environment standard includes performance requirements to identify, predict, and manage contamination risks. It also emphasises the need to understand the risks we face through formal risk assessments, identify actual or potential contamination quickly, and use effective control strategies to address potential impacts.

Closure

Effective mine closure planning and implementation considers the views, concerns, aspirations, efforts, and knowledge of internal and external stakeholders. Our closure plans are informed by the aspirations and expectations of our host communities and countries. We start planning for closure early by working to identify mutually beneficial closure outcomes that can be integrated into the design of our operations.

Our closure management activities support the UN Sustainable Development Goal 15 – Life on Land. We are guided by the ICMM Integrated Mine Closure Good Practice Guide and have developed an internal closure standard with specific performance requirements for our operations covering:

- Closure commitments, which start with planning and end with the clear identification of the next land use;
- Closure planning, which must be fit-for-purpose, fully integrated into the planning cycle and consistent with regulatory requirements and stakeholder expectations;
- Closure cost estimate/provision, which reflect the expected liability of closure;
- Progressive rehabilitation of ecosystems, which actively manages closure liabilities and demonstrates to stakeholders our commitment to environmental and social stewardship; and
- Closure execution, which commences at the end of an operation's life.

All of our operations have a closure plan, which is reviewed and updated regularly. These plans set out closure criteria and final land use options. They provide the basis on which we estimate closure and progressive rehabilitation costs. We work to align our closure planning approach with other industry leaders and are active participants in several industry forums, including the ICMM's Closure Working Group and the Cooperative Research Centre for Transformations in Mining Economies.

Our performance and progress in FY22

Biodiversity and conservation

We track our land, biodiversity and conservation performance against a range of key metrics, shown in full in the 2022 Sustainability Databook.

Around the world we have land holdings of 658,005 hectares, with approximately 96 per cent of these located in Australia. Cumulatively, we have disturbed less than three per cent (approximately 17,312 hectares) of our landholdings for operational reasons, of which 32 per cent (approximately 5,578 hectares) has been rehabilitated. At Cerro Matoso and IMC we have set aside over 1,947 hectares of land for conservation, which remains unchanged compared to the previous reporting period.

This year, we rehabilitated approximately 276 hectares of disturbed land across our operations, most of which was associated with the Boddington bauxite mine at Worsley Alumina in Western Australia and GEMCO manganese mine on Groote Eylandt in the Northern Territory. Rehabilitation at these operations is progressive, commences as soon as possible after the completion of mining activities, and generally includes:

- Backfilling, landscaping and re-contouring of mined areas to allow for adequate drainage of surface water;
- Re-spreading of overburden materials and topsoil, often directly returned from nearby new mining areas, minimising the need to stockpile these materials; and
- Preparing the topsoil and revegetating with local provenance species.

Rehabilitation is supported by extensive and ongoing monitoring programs, and where required, supported by the implementation of remediation plans to address performance issues. Our monitoring programs allow operations to measure rehabilitation success using 'end-state' criteria. They also identify ways to improve our performance and achieve greater ecological value, primarily through partnering with research institutions. Where rehabilitation is delayed due to operational requirements, full closure value is provisioned to enable rehabilitation at a future date as per our internal closure planning processes.

Our internal environment standard was updated in FY21, with changes aimed at continuing to strengthen management of biodiversity and rehabilitation across our operations. In FY22, we continued to embed these requirements with a focus on:

- Broadening our understanding and application of the mitigation hierarchy in relation to achieving our no net loss commitment for all new projects and major expansions;
- Strengthening the integration of land and progressive rehabilitation aspects into our business planning processes and undertaking research to close biodiversity knowledge gaps and support better performance and outcomes; and
- Progressing discussions in relation to establishment of strategic conservation partnerships in the regions where we operate.

We progressed a biodiversity risk and opportunity screening process for our Hermosa project. This review identified a number of potential opportunities within the region which are currently subject to further assessment and evaluation. We plan to undertake similar screening processes across other operations, with GEMCO, Worsley Alumina and Cerro Matoso planned for FY23.

In line with our commitment to no net loss for all new projects and major expansions, this year we continued to focus on identifying practical and sustainable biodiversity and environmental avoidance, minimisation, mitigation and offset measures associated with the proposed Worsley Mine Development. These proposed measures include:

- Avoidance focused on conservation benefit to threatened species including avoiding identified areas of sensitive habitat;
- Establishing ecological linkages enabling connectivity of remnant vegetation and habitat across the development footprint to support fauna movement and focus on specific threatened species, supported by an integrated feral predator management program;
- Committing to increased rehabilitation volumes to reduce the current deficit between disturbed and rehabilitation areas to less than 35 per cent within 10 years and adopting protection measures to restrict re-clearing to maintain security of rehabilitation;
- Applying feral predator control mechanisms; and
- Supporting research and establishing a conservation reserve for the Woylie, a small kangaroo-like marsupial that is listed as endangered under Commonwealth and critically endangered under State legislation. The reserve is intended to eliminate the threatening process of invasive predators and would also benefit other threatened fauna species.

In FY22, we reviewed our approach to the GEMCO Eastern Leases Project to identify additional mitigation and conservation measures that will complement existing biodiversity offset commitments and support delivery of the no net loss commitment for this project. This has involved consultation and collaboration with a range of experts to identify practical, meaningful and sustainable initiatives. These range from operational and mine planning mitigations to minimise potential for near-term impact through to research studies and conservation initiatives designed to promote improved outcomes for the threatened species over the medium to long-term. Over the coming 12 months, we will continue to engage and collaborate with our key stakeholders to assess, prioritise and implement the additional measures.

Creating habitat for local fauna

The Broad-headed Snake is found only along the coast and within the ranges in an area within approximately 250 kilometres of Sydney and is listed as endangered in New South Wales, Australia.

The local Broad-headed Snake population within the vicinity of our Appin North mine at IMC is considered to be of national conservation significance. Strategies for the protection and conservation of the Broad-headed Snake form part of the management plan for the area, detailing the measures to avoid, mitigate and manage impacts on the Broad-headed Snake and its habitat as a result of Appin North mine operations.

As part of our biodiversity management program at Appin North, we have recently installed habitat for the Broad-headed Snake within the Appin North surface lease area, specifically in the coal wash emplacement area rehabilitation. The habitat consists of pavers that attempt to replicate sandstone habitat such as rocky outcrops and crevices in areas that have previously been cleared for coal wash emplacement.

It is anticipated that the habitat will be utilised by the velvet gecko, which is a significant food source for the Broad-headed Snake, thus increasing the prospects of the new habitat being frequented. Ongoing monitoring of the habitat will be incorporated into business-as-usual activities.

One of the key challenges with biodiversity and conservation is the continued and increasing rate of change of conservation status of listed threatened species. A growing number of species are at risk of extinction due to factors such as urbanisation, industrialisation, feral predators and the physical impacts of climate change. We monitor changes in the conservation status of threatened species in proximity to our operations, and where appropriate put in place additional mitigation measures or conservation initiatives. This adaptive management approach is a key part of delivering our commitment to no net loss for all new projects and major expansions.

Collaboration and partnerships are a key part of our approach to biodiversity and conservation, and this year we continued to mature existing partnerships and establish new ones designed to promote improved and sustainable conservation outcomes in the regions where we operate, including:

- Hotham-Williams Warlang Boodja (Hotham-Williams Healthy Country), a five-year strategic environmental partnership with Peel-Harvey Catchment Council signed in FY21 to protect, preserve and rejuvenate the local environment in Western Australia's Peel and Wheatbelt regions;
- A partnership with Southern Gulf Natural Resource Management focused on strategic weed management in the McKinlay and Gilliat River catchments in north-west Queensland;
- The South West Sustainability Partnership, a proactive industry-led partnership within the Northern Jarrah Forest of Western Australia that is aimed at improving research and knowledge sharing across the region, along with investment in initiatives to address regional threatening processes and promote improved conservation outcomes; and
- Partnerships with communities at Cerro Matoso on native tree nurseries, planting of seedlings, and semi-annual monitoring of fauna and flora.

Contamination and remediation

As part of the update to our internal environment standard in FY21, we introduced performance requirements to promote improved management and governance of areas potentially subject to contamination, inclusive of land, surface water and groundwater, to seek to prevent negative impacts on human health and sensitive environmental receptors. In FY22 we worked to embed these requirements with a focus on:

- Understanding self-assessments against the performance requirements across all operations and closing out identified actions to address gaps;
- Progressing remediation activities at GEMCO consistent with the agreed Remediation Action Plan and progressing contamination reviews at Hillside Aluminium and IMC; and
- Developing and deploying a standardised contamination land register for use by our operations and working with the operations to strengthen management processes in relation to contamination identification and control.

In collaboration with Australia's CSIRO, we have continued research to improve the effectiveness of bioremediation processes to address legacy contamination associated with GEMCO that occurred approximately 30 years ago. The program aims to identify ways to enhance natural bioremediation in the area near GEMCO's port facility, Milner Bay in Groote Eylandt, so that it can be restored to acceptable environmental standards as quickly as possible, without the need for extensive and evasive ground disturbance activities. The work with CSIRO is part of a broader Milner Bay remediation strategy and action plan, both of which were developed through consultation with the Anindilyakwa Land Council. In FY22, we achieved several milestones including the conclusion of laboratory trials, additional in-ground testing and analysis and preparation for pilot deployment of the preferred enhanced bioremediation process.

Closure

We identified the need for an overarching vision for closure that aligns to our purpose and strategy, and protects and creates shareholder value. While still in development, the draft vision and closure objectives focus on future generations benefitting from the transition of South32 operations to safe, stable, and productive land uses. A key focus is undertaking meaningful stakeholder engagement to identify transition options with local communities and implementing progressive rehabilitation and closure.

During FY22, we strengthened governance over our closure activities by developing a procedure to support the internal closure standard, supporting closure planners and operations to meet the performance requirements of the standard. We also reviewed and updated our management controls associated with our material closure risk and entered a multi-year research partnership with the University of Queensland's Centre for Social Responsibility in Mining to assist us with incorporating the social aspects of closure into our closure plans.

Some of the other closure activities undertaken during the financial year include:

- Completing conceptual final landform designs for Cannington, GEMCO and Worsley Alumina, aligned with the Global Industry Standard on Tailings Management (GISTM) requirements;
- Updating closure plans and cost estimates for Cannington, IMC and GEMCO, as well as updating cost estimates for all operations; and
- Developing rehabilitation plans to meet new regulatory requirements for Cannington and IMC.

For more information about **our Tailings** see page 64.

Looking ahead

As we continue to champion effective biodiversity, conservation management and land use, activities planned for FY23 and beyond include:

- Embedding the requirements of our internal environment standard regarding on-ground management of biodiversity and rehabilitation across our operations, as well as continuing to mature processes in relation to contamination management and closure planning;
- Continuing to refine mitigation and conservation measures associated with new projects and major expansions, and explore further partnership opportunities that will promote enhanced conservation and social outcomes within the regions where we operate;
- Undertaking a preliminary gap assessment against the proposed Taskforce on Nature-related Financial Disclosure (TNFD) framework. We will also participate in the TNFD pilot program through the ICMM;
- Increasing our focus on the use of innovative approaches to environmental monitoring techniques, such as environmental DNA, as we look to continuously improve the effectiveness and efficiency of our monitoring programs and performance outcomes; and
- Progressing remediation activities near GEMCO's port facility, Milner Bay, consistent with the agreed Remediation Action Plan.

GEMCO team win Australian Biosecurity Award

Our GEMCO team, in partnership with the Anindilyakwa Land Council (ALC), won the 2021 Australian Biosecurity Award in the category Best Environmental Biosecurity program, for their work keeping Groote Eylandt free of introduced and invasive plant and animal species such as cane toads.

The island has a unique environment and is recognised nationally and internationally for its outstanding ecological and conservation values. The quarantine and biosecurity program protects the many threatened and endangered species that call Groote Eylandt home.

The program, now in its fifth year, is fully funded by South32 and has resulted in the appointment of a full-time quarantine and biosecurity coordinator, and a specially trained sniffer dog named Edna.

One of the strategies of the program is to develop biosecurity champions within the ALC's Land and Sea Ranger team, who manage an Indigenous Protected Area of 10,000 square kilometres of islands, reef and ocean. These champions work alongside the team, undertaking freight inspections and biosecurity work across the archipelago.

This initiative has demonstrated the benefits of collaboration between all stakeholders on Groote Eylandt to protect the environmental, economic, social, and cultural values for future generations.

COMMITTING TO NO NET LOSS

Worsley Alumina is an integrated bauxite mining and alumina refining operation in the south-west of Western Australia with a proud track record spanning more than 35 years. The Worsley Mine Development, which is currently subject to a State and Commonwealth environmental approvals process, would unlock the next phase of bauxite mining which, if approved, would provide access to future reserves and resources to sustain production for approximately the next 15 years.

The project is a key enabler for Worsley Alumina to continue to deliver benefits to the Peel and south-west regions, and Western Australia more broadly.

As part of our commitment to no net loss outcomes for all new projects and major expansions, we have applied the mitigation hierarchy to the project to avoid, minimise and rehabilitate, with biodiversity offsets only considered after those measures have been applied.

The proposed clearing associated with the project has been designed to avoid identified areas of high environmental value(1). Applying the mitigation hierarchy to the clearing requirements for the project has resulted in the additional avoidance of approximately 2,700 hectares of native vegetation compared with the original proposal.

In addition to comprehensive internal procedures which guide our approach, we have revised and updated our Biodiversity and Forest Management Plan to reflect the new commitments we are making as part of the approvals process. The overarching purpose of the plan is to avoid and minimise the impact of mining and transport activities on biodiversity.

As part of our approach to avoidance and minimisation, we have also committed to establish identified ecological linkages across our development footprint. Ecological linkages are essentially corridors that promote fauna movement, and they enhance biodiversity values by connecting isolated or remnant vegetation and provide passageways for fauna movement.

Rehabilitation remains a critical part of our existing and future mining activities. We maintain a progressive rehabilitation program for disturbed areas and have completed approximately 3,200 ha of rehabilitation since operations commenced in the 1980s, which is approximately 54 per cent of the total mined area. As part of the project we will reduce the rehabilitation deficit associated with past mining from approximately 45 per cent to a maximum of 35 per cent by 1 January 2033. Rehabilitated areas are then subject to a rigorous long-term monitoring and reporting program over a period of 30 years.

(1) For further information on areas of high environmental value, see table 4-2 of the Worsley Mine Development Environmental Review Document, which is available on the Western Australian Environmental Protection Authority website at *www.epa.wa.gov.au*

Offsets will only be implemented once all reasonable avoidance, mitigation and rehabilitation measures have been exhausted and where a significant residual impact to conservation of significant flora and fauna remains.

We have developed a Biodiversity Offset Plan (BOP) for the Worsley Mine Development. While the BOP is still in development with the relevant regulatory agencies, we have provided the following offset options which we will implement subject to acceptance by the regulatory agencies:

- Conserving and securing Worsley Alumina land for habitat protection (land that has not previously been cleared);
- Undertaking ecological restoration on Worsley Alumina land (land that has previously been cleared for non-mining purposes);
- Installation of artificial hollows in priority locations;
- The establishment of a new conservation reserve; and
- Targeted research projects and partnerships.

We look forward to continuing to engage with State and Commonwealth regulatory agencies, the communities near Worsley Alumina and other interested parties as the approvals process progresses. Information and updates regarding the Worsley Mine Development can be found at *www.south32.net*

TAILINGS, WASTE, AND OTHER EMISSIONS

The safe management of tailings, waste, and other emissions from our operations and projects is essential to operating responsibly. We are committed to reducing waste generated from our operations, and managing other (non-GHG) emissions to minimise any impact on neighbouring communities and the environment.

FY22 AT A GLANCE

- Commenced implementation of the Global Industry Standard on Tailings Management (GISTM) at our operations
- Progressed the development of a circular economy roadmap for our Worsley Alumina operation, while also working with other industry partners to support the identification of broader regional opportunities.
- Continued to strengthen management and monitoring measures in relation to dust and noise management across several of our operations

FY23 FOCUS AREAS

- Refining and implementing the GISTM whole-of-life requirements for our tailings storage facilities
- Continuing to pursue opportunities that will maximise reuse and recovery of our tailings waste streams to minimise our environmental footprint
- Continuing to embed the requirements of our internal environment standard regarding management of non-greenhouse gas emissions and waste governance

ICMM Principle

4 RISK MANAGEMENT | 6 ENVIRONMENTAL PERFORMANCE | 8 RESPONSIBLE PRODUCTION

South32 supports the UN SDGs

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE | 12 RESPONSIBLE CONSUMPTION AND PRODUCTION

9.4 12.2

UNGC Principle

ENVIRONMENT

Our approach

Tailings

Management of tailings storage facilities (TSFs) and water retaining dams is an integral part of our mining and processing activities. We have 29 TSFs located across both our owned and operated sites and those that we operate on behalf of joint venture partners. Seventeen of these TSFs are active, ten are inactive and two are closed.

Our approach to tailings management is consistent with the ICMM Tailings Governance Framework and Position Statement on Preventing Catastrophic Failure of Tailings Storage Facilities, as well as the Australian National Committee on Large Dams guidelines. These requirements are embedded in our internal dam management standard.

Tailings are our highest volume waste stream and managing them requires a multi-faceted approach. This involves understanding more about the physical properties of specific tailings, reducing water contact at TSFs, and developing innovative construction techniques for these facilities. Our overarching tailings disposal philosophy is to achieve stable, dry and dense tailings.

Supporting research to improve tailings management

The management of TSFs is an integral part of our mining and processing activities and in line with our commitment to continually improve our sustainability performance, we are facilitating research on tailings in relation to our operations and for the benefit of the broader mining and resource industry.

In 2020, we gifted a state-of-the-art cyclic simple shear machine to the University of Western Australia so that its research teams could study tailings, with a particular focus on the brittle behaviour of tailings materials, a factor in potential failures.

The University of Western Australia conducted shear testing on samples of non-plastic, sandy silt lead, zinc and silver tailings from our Cannington operation, using differing gravimetric water content and sample preparation methods.

The research found that variances in sample preparation methods had a significant impact on their strength and behaviour during testing. These observations offer the chance to develop more representative strength profiles for geotechnically challenging tailings materials, which can be used to further develop engineering practices.

Waste and other emissions

Our other waste streams include rock, water, materials containing hazardous chemicals or with dangerous physical properties and non-hazardous waste.

We manage waste in line with the ICMM Mining Principle 8 – Responsible Production, and ICMM Mining Principle 6 - Environmental Performance. Our commitment to waste management is incorporated into our Sustainability Policy and managed through our internal environment standard, approved by the CEO. Management accountability for execution of the standard lies with the operations, while the Technical function is accountable for providing stewardship oversight over performance and for supporting the business and operations to identify technology that could materially reduce non-greenhouse gas (GHG) emissions or waste generation.

Learn more about **our greenhouse gas emissions** in Addressing Climate Change, starting on page 68.

Non-GHG air emissions from our operations include sulphur oxides (SOx), nitrogen oxides (NOx), particulates and noise. In line with local regulatory requirements and our internal environment standard, we are committed to reducing these emissions and the potential impact on the surrounding communities and ecosystem functionality. This commitment is delivered through our focus on process control, and application of technology to improve the stability and operating performance of our facilities. We also invest in real-time monitoring systems that enable operating performance and potential impact on surrounding receptors to be monitored, with adaptive management processes deployed where required.

Many of our operations run real-time telemetered air quality and noise monitoring programs and supplement these with high volume air samplers and dust deposition gauges, if necessary. We integrate data from these programs into our global environmental data management platform, EQuIS. We use EQuIS to analyse performance, identify trends to help us make the right decisions and take the right actions to improve performance, maintain compliance and most importantly, protect the health of people in local communities.

Our performance and progress in FY22

Tailings management

We track our performance against a range of key metrics, shown in full in the 2022 Sustainability Databook.

Tailings Waste	FY22	FY21
Total tailings waste (kilotonnes)	**18,421**	17,269
Total tailings recycled (kilotonnes)	**1,621**	1,130

Our total tailings waste has increased by 7 per cent compared to FY21. Due to the increased efficiency of processing technologies over time, some of our operations can recover or recycle economically viable historical tailings materials. Our total tailings recycled has increased by 43 per cent compared to FY21. At Groote Eylandt Mining Company (GEMCO), we recover tailings from historical tailings facilities for reprocessing into PC02 product, while at the Wessels mine at South Africa Manganese, recovered tailings are sold. At Illawarra Metallurgical Coal we also use dry rejects for internal operational purposes.

As an ICMM member company, we have committed to implement the Global Industry Standard on Tailings Management (GISTM) at all South32-operated locations. All tailings facilities with 'extreme' or 'very high' potential consequences are required to be in conformance with the Standard by August 2023. All other tailings facilities are required to be in conformance with the Standard by August 2025. We are using the ICMM-developed conformance protocols to help demonstrate our conformance.

In FY22 we began implementing GISTM at our operations. All required roles and responsibilities related to GISTM have been appointed or filled, including accountable executives, responsible tailings facility engineers (RTFEs), engineers of record and independent tailings review boards or independent reviewers. While the availability of skilled staff in the labour market presented an initial challenge, the appointments of RTFEs at every operation have added dedicated tailings resources and increased capacity and capability in relation to on-ground tailings management and governance.

We have undertaken additional geotechnical investigation and laboratory testing to revalidate tailings properties, including whether they are brittle or not, as per the requirements of GISTM.

We updated and refined the risk assessments for all active TSFs to inform the risk levels associated with our facilities. We also undertook physical impacts of climate change assessments at all our operations so that due consideration is given to projected changes in climatic conditions and the potential risk this poses to our current and future tailings facilities.

These two assessments have further informed design considerations and provided data for updated dam break assessments that were undertaken for all our high consequence category facilities. The updated assessments, together with our engineering work, enable us to work with our communities on emergency response procedures and the potential impacts of a dam break.

Our RTFEs and operations personnel routinely inspect and monitor dam and embankment performance. Additionally, safety reviews by independent experts were completed for Cannington and GEMCO in FY22.

We also enhanced dam monitoring and governance using the Decipher platform. The platform allows the centralisation of data from monitoring devices, interferometric synthetic aperture radar, drones, inspections and remote sensors for near real-time monitoring and reporting.

The continued tailings disposal management at GEMCO has resulted in increased slime densities being achieved in TSF 11. This has resulted in the upper two metres of the tailings being much denser, as evidenced by GISTM geotechnical investigations, resulting in an additional year's storage being gained within the TSF.

While COVID-19 led to travel restrictions during FY22, we were able to overcome some of these challenges by undertaking remote assurance activities, and engaging consultants who were either local to, or could travel to sites.

Management of other waste

Our internal environment standard was updated in FY21, with the changes aimed at continuing to strengthen management of waste across our operations to enable them to become even more effective at classifying, quantifying, managing and disposing of waste. In FY22 we worked to embed these requirements, with a focus on:

- Understanding self-assessments against the waste-related performance requirements (across all operations) and closing out identified actions to address gaps;
- Broadening our understanding of circular economy methodology, and associated waste reduction principles through a pilot at our Worsley Alumina operation; and
- Implementing risk-based governance processes to verify that the treatment, handling and disposal of waste is being undertaken in accordance with local laws and internal requirements.

Circular economy thinking

A circular economy is based on three key principles – eliminating waste and pollution, circulating products and materials at their highest value for as long as possible, and regenerating natural systems.

During FY22, we progressed the development of a circular economy roadmap for our Worsley Alumina operation, while also working with other industry partners to support the identification of broader regional opportunities.

Piloting the development of the approach at one of our operations is a first step in enabling the business to transition from the current linear approach to a more circular way of thinking. Looking ahead, we plan to rollout the circular economy methodology to a further two operations as we understand the strategic and operational value this can bring to South32.

End of life tyres are a significant waste stream for mining operations. In line with our circular economy efforts, South32 has signed letters of support for rubber recycling technology for our Cannington and Worsley Alumina operations, with opportunity for pilot plants to be located within the vicinity of these operations. The technology has the potential to process tyres and other rubber material from these operations to produce a range of useful outputs including scrap steel, rubber granules for use in playgrounds and road aggregate, through to tyre derived polymers for use in tyre manufacturing processes. This is another example of our continued commitment in reducing waste volumes going to landfill and creating value for local communities and other stakeholders through application of circular economy principles.

Other emissions

As part of the update to our internal environment standard in FY21, we aimed to strengthen management of non-GHG emissions across our operations with an emphasis on the use of the source-pathway-receptor methodology. In FY22 we worked to embed these requirements, with a focus on:

- Understanding self-assessments against the waste-related performance requirements across all operations and closing out identified actions to address gaps;
- Continuing to strengthen management and monitoring measures in relation to dust and noise management across several of our operations, including our Manganese mines and Worsley Alumina; and
- Designing and implementing enhanced controls, with legal compliance as a minimum, to protect ambient air quality for the benefit of local communities and the natural environment.

The reduction of particulates, primarily dust and diesel, is a significant challenge in underground mines and is a key driver of our effort towards mine electrification. During FY22 we continued our support for an electric mine consortium which is testing new equipment on a wide scale so that we can better, and more quickly, determine ways to overcome cost barriers and uncertainty in technology choices. As part of the consortium, work continued in relation to the planned trial of battery electric vehicles at our Cannington operation.

A challenge with surface mining is that air quality is subject to the physical impacts of climate change. Many parts of the world in which we operate are generally getting hotter and drier, which can result in increased dust events and less water being available to suppress the dust. At some operations we supplement water with dust suppressant compounds to help manage dust.

We continue to focus on improving our governance processes and monitoring programs across our manganese operations. At our GEMCO operation, we have undertaken significant work to reduce ambient dust exposure, including road sealing, creation of dust barriers, redesign on stockpile areas and the construction of additional water fill points to service the deployment of water carts. We have also invested in further upgrades to our monitoring systems, broadening the number of real-time devices to improve the effectiveness of our operational dust control measures and reduce potential impacts on local communities. We work closely with the Anindilyakwa Land Council (ALC) in relation to dust management on Groote Eylandt and remain committed to reducing our operational dust emissions while working with the ALC and other stakeholders to support improved dust awareness and management within the local community.

Other activities we undertook in FY22 included upgrading the air quality monitoring system at our Hotazel Manganese Mines in South Africa and reviewing the air quality management at our Cerro Matoso operation in Colombia. We continue to implement enhancements to the EQuIS platform, enabling improved data analytics and trending associated with non-GHG emissions performance and management.

Read more about **our non-GHG emissions performance data** in our 2022 Sustainability Databook at www.south32.net

Looking ahead

As we continue to safely manage and where possible reduce, reuse or recycle our waste streams, activities planned for FY23 and beyond include:

- Refining and implementing the GISTM whole-of-life requirements for planning, design, construction, operation, maintenance, monitoring and closure of TSFs. This includes embedding use of the Decipher platform at all operations, providing enhanced visibility of tailings status across the business;
- Continuing to pursue opportunities that will maximise reuse and recovery of our tailings waste streams to minimise our environmental footprint and associated closure liability, while investing in a new TSF at GEMCO to assist in disposal cycling and further improve tailings deposited densities;
- Continuing to embed the requirements of our internal environment standard regarding management of non-GHG emissions and waste governance across our operations, while broadening the pilot deployment in relation to circular economy methodology; and
- Continuing to strengthen our management of non-GHG emissions across our operations through scheduled reviews to identify further enhancements to our existing dust management practices and governance processes.

Working with local communities to improve air quality

At our Cerro Matoso operation in Colombia, we increased the number of air-quality stations to further strengthen our air-quality monitoring network. As part of the installation, community members were educated in environmental monitoring by the University of Cordoba to allow them to participate in the monitoring effort as 'citizen scientists' and perform environmental oversight tasks.

Air quality is of great importance to local communities and a transparent and participatory way of operating the network helps build confidence in the results.

The stations have improved the quality and quantity of information received by the operation as part of our ongoing air emissions monitoring and management. Data on the real-time situation at each settlement allows the calibration of dispersion models and facilitates faster decision-making.

The project is the result of a prior consultation process and forms part of the community agreements that have been developed with the communities surrounding the operation, demonstrating the value of working together for mutual benefit.

ADDRESSING CLIMATE CHANGE

Our approach to climate change is integrated with our strategy and is designed to protect and unlock long-term value, build operational resilience, and enhance our competitiveness in a low-carbon world. As a global mining and metals company, we have an important role to play in responding to the risks and opportunities of climate change: to produce the metals that support the transition to a low-carbon world; and to do so in a way that seeks to minimise our impact.

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UNGC Principle

ENVIRONMENT

This section of the Sustainable Development Report sets out our Climate Change Action Plan (the Plan) which describes the actions we are taking to address the risks and opportunities that climate change presents and has been prepared in accordance with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD).

This Plan will be the subject of a non-binding advisory resolution at our 2022 Annual General Meeting. The Board retains ultimate responsibility for our strategy. The vote on the resolution provides shareholders with an opportunity to discuss and provide feedback on the Company's approach to climate change. The Board will take the outcome of the vote and shareholder feedback into consideration when determining the Company's approach to climate change going forward.

We intend to put our Plan to a non-binding advisory vote every three years. This Plan also forms a part of our Sustainable Development Report, which we will continue to use to provide annual updates of our progress on delivering this Plan in accordance with the recommendations of the TCFD.

We will continue to regularly review our approach to climate change in the context of the United Nations Framework Convention on Climate Change (UNFCCC) actions, credible sources of climate science and emerging regulation.

In line with our ICMM membership requirements and transparency commitments, we obtain independent assurance over selected sustainability information.

Learn more about **our FY22 Independent Assurance Report** in our 2022 Sustainability Databook at www.south32.net

About this Climate Change Action Plan

This section of the Sustainable Development Report outlines South32's Climate Change Action Plan (CCAP) and is intended to assist its investors with understanding South32's policies and practices in responding to climate change. It has been prepared by South32 for submission to a shareholder advisory vote at South32's 2022 Annual General Meeting. It has not been prepared as financial or investment advice or to provide any guidance in relation to the future performance of South32.

In this CCAP (on pages 69 to 101 of the Sustainable Development Report), metrics describing GHG emissions are dealt with in the following manner: unless otherwise stated, (a) metrics describing our operational GHG emissions (i.e. Scope 1 and 2 GHG emissions) apply to 'operated operations' that are wholly owned and operated by South32, or that are operated by South32 in a joint arrangement[1][2], and (b) metrics describing GHG emissions in the value chain (i.e. Scope 3 GHG emissions) apply to all of our operations including those that are wholly owned and operated by South32, and those that are operated and not operated by South32 in a joint arrangement.

Forward-looking statements and scenario analysis

Like certain other sections of the Sustainable Development Report, the CCAP contains forward-looking statements, including statements in relation to climate change and other environmental and energy transition scenarios. These forward-looking statements reflect South32's expectations at the date of this CCAP (including with respect to its strategies and plans regarding climate change), and they are not guarantees or predictions of future performance or outcomes, or statements of fact. They involve known and unknown risks and uncertainties, which may cause actual outcomes and developments to differ materially from those expressed in such statements. For further information regarding South32's approach to risk, see pages 26 to 35 of our Annual Report.

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.

There are also limitations with respect to the scenario analysis which is discussed in this CCAP, and it is difficult to predict which, if any, of the scenarios might eventuate. Scenario analysis is not an indication of probable outcomes and relies on assumptions that may or may not prove to be correct or eventuate. Except as required by applicable laws or regulations, South32 does not undertake to publicly update or review any forward-looking statements. South32 cautions against reliance on any forward-looking statements or guidance, particularly in light of the long time horizon which this CCAP discusses and the inherent uncertainty in possible policy, market and technological developments in the future.

Please see the inside front cover of this Sustainable Development Report for other important information regarding South32's approach to reporting on climate change and sustainable development generally.

Information prepared by third parties

Certain information contained in this CCAP is based on information prepared by third parties. South32 does not make any representation or warranty that this third party material is accurate, complete or up-to-date.

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

OUR PROGRESS ON CLIMATE CHANGE

Since starting out, we've been taking action to address climate change.

FY16

We committed to supporting the goals of the Paris Agreement within 12 months of South32 being established.

We developed Our Approach to Climate Change, focusing on climate change opportunity, resilience and emissions reduction.

We set our long-term goal of achieving net zero operational GHG emissions (Scope 1 and 2) by 2050.

We published our first GHG emissions reduction target to keep our Scope 1 GHG emissions below the FY15 baseline by FY21.

FY17

We published our inaugural 'Our Approach to Climate Change' disclosure, in line with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD).

We committed not to develop any new greenfield energy coal basins.

FY18

We announced that we would manage South Africa Energy Coal (SAEC) as a standalone business, to sustainably improve its financial performance, broaden its ownership and simplify our portfolio.

We published our second 'Our Approach to Climate Change' disclosure, including analysis of physical resilience for our Australian operations.

We rolled out new emissions reduction initiatives at our operations, including the Cannington solar farm and Worsley Alumina biomass fuel trial to reduce energy coal consumption.

FY19

We completed analysis of physical resilience for all operations outside Australia.

We completed decarbonisation concept studies for Worsley Alumina and Illawarra Metallurgical Coal.

We set contextual water targets for Hillside Aluminium, Mozal Aluminium and Worsley Alumina in response to projected physical impacts of climate change.

FY20

We published our policy positions in support of the goals of the Paris Agreement.

We undertook a review of the climate change positions of our industry associations.

FY21

We achieved our first GHG emissions reduction target, keeping our Scope 1 GHG emissions below the FY15 baseline.

We announced our medium-term target to halve our operational GHG emissions by 2035 compared to our FY21 baseline.

We exited carbon intensive and lower returning businesses, completing the divestments of SAEC and Tasmanian Electro Metallurgical Company (TEMCO).

We assessed the resilience of our portfolio in a 1.5°C scenario.

FY22

We added copper to our portfolio and increased our exposure to low-carbon aluminium.

We completed a trial of the AP3XLE energy efficiency technology at Hillside Aluminium and commenced its deployment.

We linked long-term executive remuneration to progress on our climate change commitments.

We updated physical climate risk assessments for our operations.

We updated our Sustainability Policy, reaffirming our commitment to sustainable development.

FY23

We set a goal of net zero Scope 3 GHG emissions by 2050.

We made a commitment not to develop or invest in greenfield metallurgical coal projects.

Our Climate Change Action Plan will be the subject of a non-binding advisory resolution at our 2022 Annual General Meeting.

Employees inspecting a bauxite stockpile at our Worsley Alumina operation.

Our approach to climate change

The science is clear – human activity is causing climate change and the impacts are affecting ecosystems, biodiversity, and communities around the world. The recent Intergovernmental Panel on Climate Change (IPCC) report shows that the case for change has never been so compelling, and the time for action never so critical. The challenge we face will require a coordinated effort across governments, businesses, and communities to transition to a low-carbon[1] world in a just manner.

Within 12 months of South32 being established, we committed to supporting the objectives of the Paris Agreement and set a long-term goal[2] to achieve net zero operational greenhouse gas (GHG) emissions by 2050. Our first emissions reduction target[3] was to keep our FY21 Scope 1 GHG emissions below our FY15 baseline. In FY21, we achieved our first emissions reduction target and stepped up our ambition by setting our medium-term target – to halve our operational GHG emissions by 2035 from our FY21 baseline[4]. Recognising that we have a critical role to play in contributing to the decarbonisation of the value chain, in partnership with our customers and suppliers, this year we have set a new goal of net zero Scope 3 GHG emissions by 2050.

Our goals and target are delivered through the work described in this Plan, which is a continuation of work underway since 2015. This Plan sets out our approach, our commitments, our progress to date, our unique risks and opportunities, and the actions we are taking to play our part in addressing climate change.

Delivering on our climate change commitments is fundamental to our purpose – 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.

We are doing this by managing the risks and capturing the opportunities which climate change presents, including protecting and unlocking long-term value and producing metals that support the transition to a low-carbon world in a way that minimises our impact.

Our approach to climate change is aligned to our purpose and integrated with our strategy, and is focused on:

- Reshaping our portfolio to the base metals that are critical in the transition to a low-carbon world;
- Decarbonising our operations, with a focus on the four operations within our portfolio which account for the majority of our emissions profile;
- Understanding and responding to the potential physical impacts of climate change on our business to build operational resilience; and
- Working with others to innovate and address shared challenges across industry, and to decarbonise the value chain.

The actions we are taking in each of these areas are set out in this Plan.

Our Board, together with its standing Committees, has oversight of our work on climate change as a material strategic and governance issue. The Board oversees the Company on its approach to delivering its decarbonisation commitments, recognising that it must be both ambitious – which is necessary to achieve our net zero goal – and realistic, recognising that there is no definitive 'best pathway' to net zero and some of the innovations we will need are not yet fully developed. Our CEO, together with our Lead Team, is accountable for execution of our approach to climate change.

The remuneration of our Lead Team is directly linked to our performance on climate change and the transition of our portfolio towards the metals critical for a low-carbon future. Performance against these measures accounts for 20 per cent of the long-term incentive plan performance hurdles, with outcomes intended to reflect the achievement of significant milestones and long-term value protection and creation.

We regularly engage our investors on our material environmental, social and governance topics and to hear their views on our approach to climate change, our progress, and our governance.

Key strategic decisions and investments are assessed within our capital allocation framework, including those which support our climate change commitments. Investment decisions to decarbonise our operations consider both project returns and the protection of portfolio value, incorporating our carbon pricing assumptions and an assessment of transition risk. In FY22, we invested US$6 million to improve energy efficiency and reduce emissions intensity at our operations. We expect to invest US$30 million in FY23, and more than double this expenditure in FY24. Over time, we expect our decarbonisation expenditure will also include a greater proportion of operational expenditure, for example, through long-term power purchase agreements, in combination with our capital investments.

(1) In this Plan, 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.
(2) In this Plan, '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.
(3) In this Plan, '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.
(4) FY21 baseline adjusted to exclude GHG emissions from SAEC and TEMCO, which were divested in FY21.

Reshaping our portfolio

Part of our strategy is to identify opportunities to sustainably reshape our business for the future, increasing our exposure to metals critical to the transition to a low-carbon world.

In FY22, we added copper to our portfolio with the acquisition of a 45 per cent interest in the Sierra Gorda copper mine in Chile. Copper is a key metal for electric vehicles, charging infrastructure and renewable energy.

With aluminium expected to benefit from higher intensity of use in electric vehicles, increased use in renewables, and substitution of plastics in packaging, in FY22 we invested to double our share of low-carbon aluminium production. We participated in the restart of Brazil Aluminium smelter, with our share fully powered by renewable energy, and we increased our shareholding in Mozal Aluminium in Mozambique to 63.7 per cent, which is primarily powered by renewable energy.

We are also exploring options to produce high quality, battery grade raw materials, supporting energy storage. At our Hermosa project in Arizona initial studies have confirmed the potential for battery-grade manganese, as well as zinc, silver and lead.

Subsequent to the end of the reporting period, we announced that we will not proceed with an investment in the Dendrobium Next Domain project at our Illawarra Metallurgical Coal operation in Australia, following our consideration of recently completed study work and extensive analysis of alternatives.[5] We will continue to focus our efforts on optimising Dendrobium and the broader Illawarra Metallurgical Coal complex to extend the mine life within approved mining areas. While we believe metallurgical coal will be required in the steelmaking process for at least the next two decades, until low-carbon steelmaking becomes economically viable on a commercial scale, we will not develop or invest in greenfield metallurgical coal projects.

We assess the resilience of our portfolio[6] in accordance with the recommendations of the TCFD. In our last assessment, we included a 1.5°C scenario to inform our assessment of the potential impact of a rapid global transition to a low-carbon world. This assessment was conducted in FY21 and showed that demand for most of our commodities would grow significantly under our 1.5°C scenario despite a rise in recycling rates, reflecting the critical role of many of our commodities as the world decarbonises.

Decarbonising our operations

Decarbonising our operations is fundamental to the delivery of our strategy as we optimise and unlock the full value of our business. Our priority is to invest in reducing our operational GHG emissions over the use of carbon offsets, in line with our mitigation hierarchy. Our operational decarbonisation pathway to support delivery of our medium-term target and long-term goal consists of three steps: efficiency initiatives in the near term, transition to lower-carbon energy in the medium-term, and technology solutions in the longer-term.

Four of our operations account for 93 per cent of our Scope 1 and Scope 2 emissions: Hillside Aluminium (59 per cent), Worsley Alumina (17 per cent), Illawarra Metallurgical Coal (10 per cent), and Mozal Aluminium (six per cent).[7] We are focusing our efforts on achieving material reductions in our operational GHG emissions at these operations.

Hillside Aluminium and Worsley Alumina utilise energy sources that are dependent on fossil fuels, including energy coal. We are studying and executing energy efficiency projects at both operations but their decarbonisation is, for the most part, tied to a transition to low-carbon energy.

At Hillside Aluminium, we are focused on transitioning the energy source from coal-based power supplied via the South African electricity grid to secure, reliable and affordable low-carbon energy in the medium-term. The existing power agreement for Hillside Aluminium expires in 2031 and the transition to a low-carbon energy source will be technologically and commercially complex due to the smelter's constant high energy demand. We will work with Eskom, government, and commercial partners to develop and implement an energy solution at the scale required for a large aluminium smelter.

We are also studying options to transition Worsley Alumina's energy source, but there are technical complexities to be addressed. Large-scale deployment of renewable energy such as solar photovoltaic (PV) and wind, which do not generate steam directly, would require a change to Worsley Alumina's process and energy infrastructure, and substantial expansion and modification of the energy grid would be required to deliver renewable power at the necessary scale for industrial users in the region. Therefore, we expect to decarbonise Worsley Alumina in two stages. We are working towards a conversion of the onsite boilers to natural gas which would reduce operational GHG emissions in the medium term. Longer-term, to help achieve our net zero goal, we are seeking new technologies to support increased electrification and renewable energy for the refinery, which would require broader investment in shared energy infrastructure in the region.

The focus on reducing or replacing our use of energy coal at Hillside Aluminium and Worsley Alumina creates both risk and opportunity for their respective communities. Hillside Aluminium, in South Africa, directly or indirectly employs an estimated 29,000 people, and plays a central role in the domestic aluminium value chain. However, it risks becoming internationally uncompetitive over time if we are unable to secure an affordable source of low-carbon electricity. At Worsley Alumina, our plan to transition away from energy coal aligns with the Western Australian Government's announced intention to retire the state-owned Muja and Collie coal-fired power stations. Coal mining has been a significant contributor to the economy of the region with the town of Collie playing a significant role for more than 100 years. Both transitions create the potential for job losses connected to the shift away from fossil fuels, and also the potential for the creation of new industry, employment and investment in low-carbon alternatives.

By working with governments, communities, and other stakeholders we aim to support a fair and just transition for the regions surrounding Worsley Alumina and Hillside Aluminium. Our just transition planning for both operations is underway and is based on a set of guiding principles that are aligned with the objectives of the Paris Agreement.

Given the complexities in decarbonising energy sources for Hillside Aluminium and Worsley Alumina, we have not set a short-term emissions reduction target. We will continue to evaluate our options but will only set a short-term target when we are confident that the pathway to meet a short-term target is credible, viable and just.

Beyond our two largest emitting operations, we are focused on increasing the efficiency of coal seam gas drainage and reducing ventilation air methane (VAM) at Illawarra Metallurgical Coal, through innovative new technologies.

(5) Refer to market release dated 23 August 2022 at *www.south32.net*
(6) Scenarios are hypothetical and are not forecasts, but rather a tool used to enhance critical thinking, refine our strategy and support key business decisions.
(7) The sum of the categories may vary to the total figure due to rounding. See page 79 for further information on FY22 operational GHG emissions.

At Mozal Aluminium, the smelter is already using renewable energy, and we are working to extend the hydroelectric power contract beyond its current expiration date of 2026. We are also investigating and assessing additional emissions reduction projects and technologies, such as inert anodes and anode coating technology.

Our decarbonisation planning also encompasses our development options, such as the Hermosa project, where our focus is on the application of low-carbon design principles.

Physical climate risk

Physical climate risks have the potential to affect the integrity and performance of our equipment and infrastructure, compromise productivity, and disrupt business continuity (including our supply chain activities). There may also be broader environmental and socio-economic impacts on key stakeholders, including local communities.

We completed our first physical climate risk assessments for our operations in FY18 and FY19, and updated these in FY22. The high-level themes that emerged across our operations relate to land and terrain, physical assets and infrastructure, water and transport routes.

Further work is planned to implement additional controls and inform adaption options, and to support future reporting on material physical climate risk, our management responses and, over time, potential financial impacts.

Working with others

While there is much we are doing ourselves to manage the risks and capture the opportunities of climate change, many of the challenges can be solved more quickly in partnership with others. By working with customers, suppliers, industry peers, technology partners and stakeholders, we can bring together our expertise, resources and learnings to address our shared challenges at speed.

Having set a new goal of net zero Scope 3 GHG emissions by 2050, we are progressing near-term actions including to work with customers and suppliers to support and co-design emissions reduction programs, contributing to industry decarbonisation and product stewardship initiatives, and supporting the development of innovative technology solutions. Our approach is based on the materiality of Scope 3 GHG emissions in each reported category and the level of control or influence we have on the associated activities.

We have defined focus areas to address the complex challenges associated with decarbonisation in the downstream value chain, including entering into four partnerships with key customers to collaborate on emissions reduction initiatives by FY25 and participating in relevant stewardship and innovation initiatives to develop net zero pathways for our key commodities.

Partnering on innovations to decarbonise our own operations will be key to delivering on our net zero operational GHG emissions by 2050 goal, as some of the innovations we need are not yet technologically or commercially feasible. This creates a real opportunity for us and the whole industry to develop and trial innovative solutions and support scaling them up to become commercially viable. We are actively engaged in this work through the trialling of new technologies at our own operations, sharing our findings and experiences, engaging our stakeholders on potential opportunities and participating in several industry forums.

We are a member of various industry associations where we contribute to knowledge sharing, proactive advocacy, and tangible action on climate change. We promote greater transparency on climate change positions to improve alignment, and directly advocate and seek to influence on issues in a way that is consistent with our approach to climate change. To remain consistent with our support for the objectives of the Paris Agreement, we do not support direct advocacy from our industry association memberships on energy coal expansion or energy coal subsidies, particularly in the absence of an associated position on technology development.

> “At South32, we understand the need for bold action on climate change and we are responding by addressing our biggest challenges. Our Climate Change Action Plan describes how we are working in collaboration with our stakeholders to prepare our business for the global energy transition, meet our climate change commitments and achieve a just transition for our people, our business and our communities.”
>
> **Karen Wood, Chair**

Reshaping our portfolio

We are continuing to reshape our portfolio to increase our exposure to metals that play a critical role in the transition to a low-carbon world.

This year we added copper to our portfolio with the acquisition of a 45 per cent interest in the Sierra Gorda copper mine in Chile. We also invested to double our share of low-carbon aluminium production, by participating in the restart of the Brazil Aluminium smelter and increasing our shareholding in Mozal Aluminium in Mozambique to 63.7 per cent. Copper and aluminium are expected to gain from increases in electric vehicle penetration and renewable power generation.

We are exploring options to produce high quality, battery-grade raw materials that support energy storage, with initial studies at our Hermosa project confirming the potential for battery-grade manganese at the Clark Deposit, as well as zinc, silver and lead at the Taylor Deposit.

Subsequent to the end of the reporting period, we announced that we will not proceed with an investment in the Dendrobium Next Domain project at Illawarra Metallurgical Coal in Australia.[8] This decision increases our capacity to direct capital towards other opportunities, including our world class development options in North America that have the potential to underpin a significant growth profile to produce metals critical to a low-carbon future.

We believe metallurgical coal will be required in the steelmaking process for at least the next two decades, until low-carbon steelmaking becomes economically viable on a commercial scale. The reconfiguration of steelmaking blast furnaces and the installation of renewable energy and associated power infrastructure requires significant capital investment and will take time. During this time, steel will continue to be essential for the development that supports economic growth and to build the infrastructure to support the transition to a low-carbon world, but it will need to be produced in way that is less emissions intensive. The premium-quality, hard coking coal that we produce and our investment in our gas capture and emissions abatement technology to lower the intensity of our product can support steelmakers to reduce their emissions intensity.

While we intend to focus our efforts on optimising Dendrobium and the broader Illawarra Metallurgical Coal complex to extend the mine life within approved mining areas, we will not develop or invest in greenfield metallurgical coal projects.

Expenditure and capital allocation

Our capital allocation framework is used to consider all investments and strategic decisions, including those designed to support our climate change commitments.

Our investments to reshape our portfolio demonstrate how we are allocating growth capital to commodities that support the global transition to a low-carbon world, including aluminium, copper and battery-grade raw materials.

Investment decisions to decarbonise our operations consider project returns and the protection of portfolio value, incorporating our carbon pricing assumptions and an assessment of transition risk. Where viable we intend to align our expenditure plans to achieve our operational decarbonisation target and goal.

In addition to investing operational expenditure to mature and expand our pipeline of decarbonisation initiatives, we also invested US$6 million of capital expenditure in initiatives to improve energy efficiency and reduce emissions intensity at our operations in FY22. We expect to invest US$30 million in FY23 and more than double this expenditure in FY24 to execute key decarbonisation projects, including our energy efficiency and coal boiler conversion projects at Worsley Alumina and deployment of energy efficiency technology at Hillside Aluminium. We expect our spend on decarbonisation initiatives to increase as additional projects mature to execution in coming years.

Our decarbonisation expenditure is likely to involve a greater proportion of operational expenditure when compared to others in the sector. Converting the electrical grid infrastructure that delivers power to Hillside Aluminium and Worsley Alumina is outside of our strategy and core capability. Therefore, we are seeking to partner with entities that focus on utility-scale energy projects and support their investments through long-term power purchase agreements, subject to them being financially viable.

(8) Refer to market release dated 23 August 2022 at *www.south32.net*

Scenario analysis

Since 2017, we have been using scenario analysis to stress-test the potential impacts of climate change on our business and to inform stakeholders about potential risks and opportunities. We use a set of plausible, evidence-based and divergent scenarios that describe a spectrum of global temperature change outcomes, against which we test the resilience of our portfolio[9].

While we support the objectives of the Paris Agreement, current global signposts continue to point towards a trajectory of at least 2°C warming, which forms our base case. It assumes, based on current trends and technology developments, that there will be increased commitment to climate action which accelerates the transition towards a low-carbon economy, raising the necessary investment in infrastructure to support the transition. This probable trajectory forms our base case for commodity and carbon price forecasts, planning, budgeting, investment decisions and valuation assessment.

In FY21, we developed a 1.5°C scenario to inform our assessment of the resilience of our portfolio under a rapid global transition to a low-carbon world. The outcomes from this assessment are described on page 77 and will be updated in FY23.

The scenarios we apply for our physical climate risk assessment are informed by the IPCC Representative Concentration Pathways (RCPs)[10]. These include RCP4.5, which equates to between 1.1°C and 2.6°C of warming by the end of the century and broadly aligns with our base case scenario, and RCP8.5, which equates to between 2.6°C and 4.8°C of warming by the end of the century. The RCP8.5 scenario reflects an emissions trajectory where the world fails to meet the goals of the Paris Agreement and the physical impacts of climate change are more severe.

Learn more about **our Physical Climate Risk assessment** on page 93.

Carbon pricing

Carbon pricing is a key policy tool and enabler to support the global transition to a low-carbon world. We use an internal carbon price to inform our strategic business decisions.

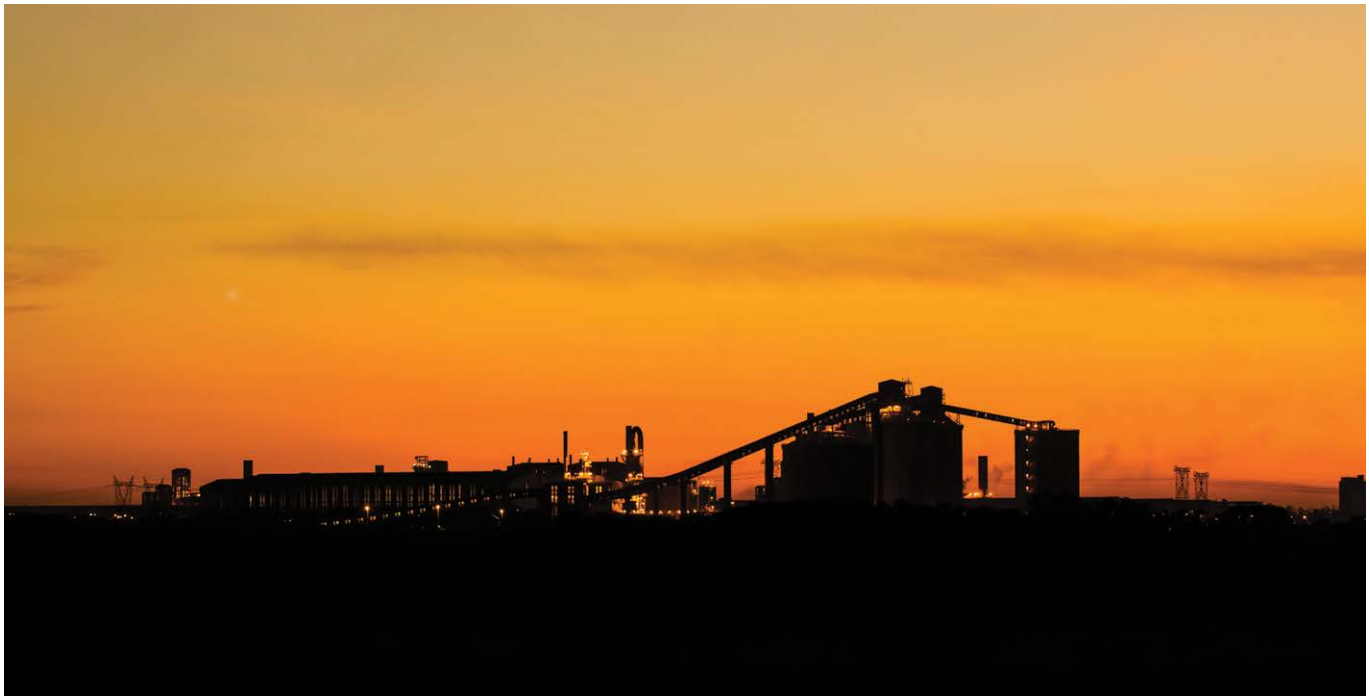
In the short-to-medium-term, our base case applies a carbon price in our key operating regions that is based on existing regulation and an expectation that emissions allowances will reduce over time.

In the long-term, our base case assumes a single global carbon price from FY40, based on an assessment of policy-driven costs, market price benchmarks, technological innovation, and the cost of abatement. In FY22, our long-term base case global carbon price assumption increased from US$40 to US$60 per tonne. This price reflects an assumption of no carbon leakage and is therefore applied to all South32's Scope 1 and 2 GHG emissions.

Our view is that higher carbon prices are likely to be required to accelerate the pace of global decarbonisation. Reflecting this, and to stress test for outcomes aligned to the temperature goals of the Paris Agreement, we adopt a long-term global carbon price from FY40 of US$100 per tonne in a below 2°C scenario and US$160 per tonne in our 1.5°C scenario. A higher carbon price than those used in our scenario analysis would trigger re-evaluation of the viability of new projects and the costs of existing operations under accelerated transition scenarios.

We continue to assess and update our carbon price forecasts in response to changes in policy, technology and price benchmarks.

Learn more about **our analysis that underpins our internal carbon price** in our 2022 Sustainability Databook at www.south32.net



(9) Our climate scenarios are not intended to represent a full and definite description of the future, but rather highlight the main elements of a possible future landscape and draw out the key factors that could drive future developments. It's important to note that scenarios are hypothetical, they are not forecasts but rather a tool used to enhance critical thinking, refine our strategy and support key business decisions.

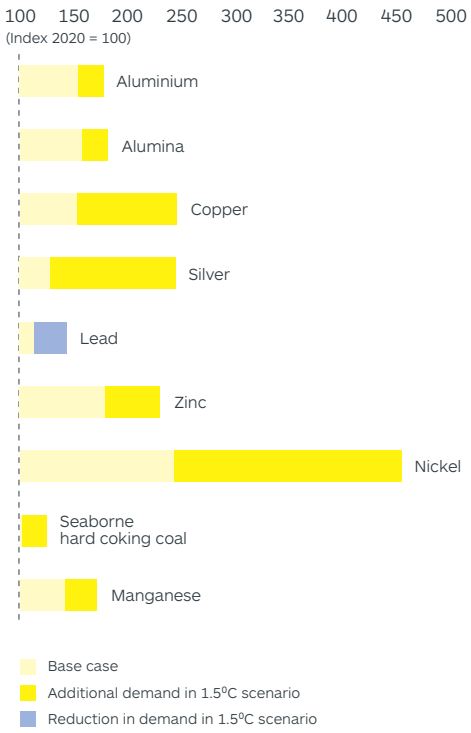
(10) The most recent and widely used scenarios are the IPCC's RCPs. These were developed in 2007 and used in the IPCC's 5th Assessment Report. There are four RCPs which represent possible future GHG emissions and concentration scenarios: RCP8.5, RCP6.0, RCP4.5 and RCP2.6. Each RCP defines a specific emissions trajectory and subsequent 'radiative forcing'.

Our portfolio in a low-carbon world

In our 1.5°C scenario, the transition to a low-carbon world occurs at a much more rapid pace across all major sectors than in our base case. Demand for most of our commodities grows significantly in this scenario despite a rise in recycling rates, reflecting the critical role of many of our commodities as the world decarbonises. The increased demand would be driven by the uptake of mineral-intensive low-carbon technologies, led by the electrification of passenger vehicles and supporting generation and transmission networks.

Key outcomes in our 1.5°C scenario, compared to our base case, are shown in the table below.

2050 average global commodity demand in 1.5°C scenario versus base case



1.5°C scenario anchored on rising electric vehicle (EV) penetration (from 4% to 100%) and proliferation of renewables generation (six fold increase to 20TW) from 2020 to 2050

Aluminium benefits from higher intensity of use in EVs, substitution of plastics in packaging and increasing use in renewables

- Aluminium intensity in EVs is ~40% higher than internal combustion engine (ICE) vehicles (from 111kg/car in 2020 to 256kg/car in 2050) due to light-weighting

Copper is a key metal used in EVs, charging infrastructure and renewable energy

- Copper intensity in EVs is ~3x that of ICE vehicles (23kg/car)
- Copper intensity for offshore wind generation is ~12x for coal and gas

Silver is used in solar panels due to its superior electrical conductivity

Lead impacted by reduced demand for lead batteries in motor cars as ICE fleet is phased out by 2050, partly offset by higher demand for use in energy storage systems

Zinc protects metals against corrosion

- Wind and solar energy could increase >10x by 2050 in 1.5°C scenario, equivalent to adding 3x the capacity of the USA each year
- Zinc intensity in offshore wind and solar installations is ~300x and 200x higher, respectively, than in autos (10kg/car)
- Zinc demand could double to 24 Mt by 2040, akin to adding three Taylor sized projects(1) each year in the currently supply constrained environment

Nickel is used as an alloy in renewables such as wind, solar, and geothermal power infrastructure; Nickel-rich batteries are critical for rapid adoption of EVs

Seaborne hard coking coal is required to support GHG emissions reduction targets and new integrated capacity in the steel industry; steel feeds into construction of renewable energy infrastructure and pipelines for carbon capture and storage.

Manganese benefits from higher use in infrastructure to improve steel quality and also has the potential to displace cobalt in lithium-ion batteries with ~7x higher intensity in manganese-rich(2) cathode chemistries than nickel-based chemistries

(1) Based on Taylor Deposit pre-feasibility study with 130kT per annum steady state payable zinc production.
(2) Manganese-rich chemistry is represented by NMX 370 with seven parts of manganese, compared to nickel-rich chemistry represented by NMC811 with on part in manganese.

Our analysis indicates that our base and precious metals and manganese businesses would benefit from commodity price upside in the 1.5°C scenario, with only a modest carbon price impact due to their lower carbon intensity. While our alumina and aluminium businesses would also benefit from higher commodity prices, the carbon price impact will depend on their energy intensity and the ability to decarbonise. For example, Hillside Aluminium would be uncompetitive in the 1.5°C scenario without an affordable source of low-carbon energy, while the carbon impact on Mozal Aluminium would be lower given its access to low-carbon energy. Our analysis also indicated that Illawarra Metallurgical Coal would face a high carbon price burden, but without the benefit of commodity price upside.

Learn more about **the key assumptions used in our 1.5°C scenario** in our 2022 Sustainability Databook at www.south32.net

Operational decarbonisation

Our decarbonisation target and goal

In the first year after South32 was established, we set a long-term goal of achieving net zero operational GHG emissions by 2050 and our first emissions reduction target to keep our FY21 Scope 1 GHG emissions below our FY15 baseline.

In FY21, we achieved our first emissions reduction target and set a medium-term target to halve our operational GHG emissions from an FY21 baseline[11] by 2035. Our medium-term target and long-term goal[12] guide our decarbonisation planning and activities and we assess all portfolio and major investment decisions against them.

Ninety three per cent of our operational GHG emissions are generated from four operations – Hillside Aluminium, Mozal Aluminium, Worsley Alumina and Illawarra Metallurgical Coal – and we are focusing on these operations in order to achieve a significant reduction in our emissions.

Delivery of our medium-term target is reliant upon transitioning the energy source for the Hillside Aluminium smelter from coal-based power to secure, reliable and affordable low-carbon energy and maintaining a low-carbon energy source for the Mozal Aluminium smelter beyond its current hydroelectric power contract.

Technology and innovation will also be critical to achieving our long-term goal of net zero operational GHG emissions. We are reviewing, developing and trialling technology solutions for our operations and where appropriate, collaborating and partnering with industry and research and development organisations.

Our medium-term target signals our focus on achieving a step-change in emissions reductions by 2035. However, we do not expect our emissions to reduce in a gradual or linear trajectory towards our medium-term target, and in some years they may increase. We have developed and will continue to evolve our decarbonisation plan to reflect all reasonable and practicable measures to decarbonising our business to deliver our medium-term target.

Short-term target

In FY22, we evaluated options for establishing a short-term operational GHG emissions reduction target for the business to guide our near-term action. Our assessment of what might constitute a credible short-term target was informed by a review of various international frameworks and guidelines.[13] We evaluated this guidance against our group-wide decarbonisation planning.

Hillside Aluminium and Worsley Alumina generate 77 per cent of our Scope 1 and 2 GHG emissions. The high energy demand of these operations means that transitioning to low-carbon energy sources is both technically and commercially complex. In addition, just transition considerations for both Hillside Aluminium and Worsley Alumina require the switch to low-carbon energy to be planned in collaboration with a broad range of government and community stakeholders. Resolving the technical, commercial and social challenges will take time, therefore we are not confident that we would achieve sufficiently material emissions reduction within the timeframe of a credible short-term target. Accordingly, we have not set a short-term emissions reduction target at this stage.

We will continue to evaluate our options, but will only set a short-term target when we are confident that the pathway to that target is credible, viable and just. In the interim, we remain committed to prioritising efforts to reduce emissions across our operations in the near term – from energy efficiency programs, to the maturation and execution of energy switching and technology-solutions, and low-carbon design principles that have the potential to materially reduce the GHG emissions footprint of our operations in line with our medium-term target.

Considering climate science in developing our target and goal

In developing our medium-term GHG emissions reduction target, we reviewed science-based emissions reduction pathways that seek to align with the goals of the Paris Agreement and limit global warming to well below 2°C, while pursuing efforts to limit the increase to 1.5°C. We recognise this is a critical step as we continue to assess options to align our business to prosper in a low-carbon world.

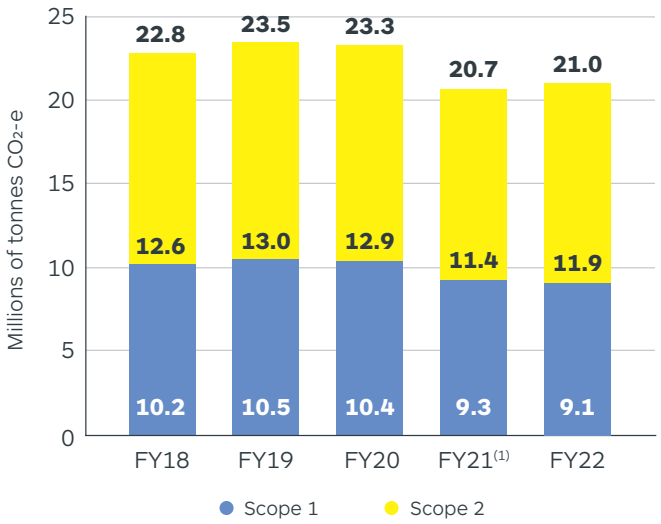
The IPCC Special Report *Global Warming of 1.5°C* indicates that, relative to 2010 levels, total global GHG emissions will need to decline by about 45 per cent by 2030 to limit global warming to 1.5°C. This includes deep reductions in methane emissions. The Special Report also presents a number of illustrative model pathways for how these net emissions reductions may be achieved, based on different mitigation strategies. These indicate that carbon dioxide emissions from fossil fuel and industry sources will need to decline sharply by approximately 50-70 per cent by 2030. This represents an annual average reduction of approximately 2.5 per cent to 3.5 per cent, applying an absolute contraction approach. The scale of reductions required depends in part on the rate of development and uptake of bioenergy with carbon capture and storage.

Our medium-term target is to reduce our operational GHG emissions by 50 per cent from FY21 levels by 2035. This equates to an annual average reduction of approximately 3.6 per cent (noting that some stakeholders consider full alignment with a 1.5°C goal would include Scope 3 GHG emissions)

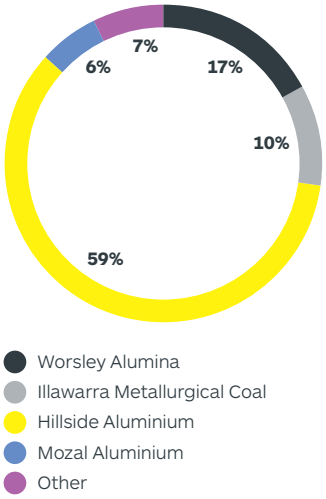
(11) FY21 baseline adjusted to exclude GHG emissions from SAEC and TEMCO, which were divested in FY21.
(12) Our medium-term target and long-term goal apply to our group-wide business. They are separate to, but take into account, facility specific regulatory targets, baselines, carbon budgets, and other emission related indicators, that are set by, or comply with, various national and sub-national regulatory schemes across the jurisdictions in which we operate.
(13) For example, Say on Climate Children's Investment Fund Foundation guidance; Australian Council of Superannuation Investors, December 2021 Guidelines; ISS International Climate Proxy Voting Guidelines; Glass Lewis 2022 Policy Guidelines; Investor Group on Climate Change 2022 Corporate Climate Transition Plans: a guide to investor expectations; Climate Action 100+ Net Zero Company Benchmark

FY22 operational GHG emissions

Scope 1 and 2 GHG emissions



FY22 Scope 1 and 2 GHG emissions by asset(2)



(1) FY21 emissions adjusted to exclude GHG emissions from SAEC and TEMCO, which were divested in FY21.
(2) The sum of the categories may vary to the total figure due to rounding.

A **breakdown of GHG emissions by source and operation** is available in our 2022 Sustainability Databook at www.south32.net

Our reported Scope 1 and Scope 2 GHG emissions for FY22 were 21.0 Mt CO_2-e, a 1.4 per cent increase from our adjusted FY21 GHG emissions(14).

Direct emissions from activities at our operations (Scope 1) decreased by 0.2 Mt CO_2-e largely due to reduced fugitive emissions from Illawarra Metallurgical Coal and an increase in the use of natural gas at Worsley Alumina along with the consumption of biomass in place of energy coal.

While our Scope 1 emissions declined, there was an increase of 0.5 Mt CO_2-e in emissions from electricity used by our operations (Scope 2). The primary driver was the increase in the grid emission factor(15) for the South African electricity grid, with Hillside Aluminium's Scope 2 emissions increasing by 0.4 Mt CO_2-e despite energy use at the smelter remaining steady. Scope 2 emissions from Mozal Aluminium also increased as a result of planned maintenance impacting the availability of hydroelectric power.

Cerro Matoso's operational GHG emissions increased by 0.2 Mt CO_2-e following a return to normal production after disruptions in FY21 due to COVID-19 and planned maintenance.

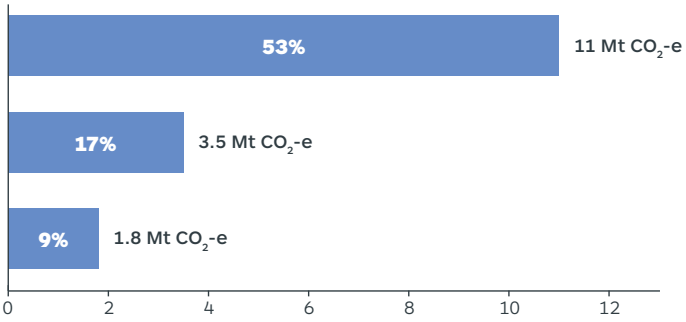
Operational GHG emissions sources

The largest single sources of our operational GHG emissions in FY22 are depicted below.

Consumption of coal-generated electricity from the South African grid at our Hillside Aluminium smelter.

Combustion of energy coal and natural gas to generate steam for the alumina refining process at Worsley Alumina.

Fugitive emissions at Illawarra Metallurgical Coal, due to the release of gases from underground coal seams during mining.



The remaining GHG emissions (4.5 Mt CO_2-e) are attributable to a range of activities, including consumption of carbon anodes at Hillside Aluminium and Mozal Aluminium, and electricity or fuel consumption at our other operations.

(14) Exclude GHG emissions from SAEC and TEMCO, which were divested in FY21.
(15) The GHG grid emission factor is the total amount of GHGs emitted per unit of electricity generated for and distributed by an electricity grid.

Reducing our operational GHG emissions

Our decarbonisation plans focus on the four operations that generate the vast majority of our Scope 1 and Scope 2 GHG emissions, and are shaped by their differing production methods and the energy markets and regulations to which they are exposed. Article 4 of the Paris Agreement recognises that peak GHG emissions will take longer in developing countries, creating additional complexity for Hillside Aluminium and Mozal Aluminium.

Our approach to decarbonisation applies the mitigation hierarchy. This means we prioritise avoidance of emissions and, where avoidance is not possible, we mitigate GHG emissions through efficiency initiatives or transition to low-carbon energy. We intend only to use voluntary carbon offsets after these options have been fully explored. Carbon credits may be used to comply with regulatory requirements in South Africa and Australia.

Learn about **our approach to the use of carbon credits and carbon offsets** on page 89.

Our operational decarbonisation pathway to support delivery of our medium-term target and long-term goal consists of three elements: efficiency initiatives in the near term, transition to low-carbon energy in the medium-term, and technology solutions in the longer-term. Some decarbonisation options common to the diversified mining sector, such as electrification of mobile fleet, do not present an opportunity for material emissions reduction for us due to the nature of our operations. Our decarbonisation planning encompasses growth projects, such as the Hermosa project, where our focus is on low-carbon design principles.

Operational decarbonisation pathway

Operation	Near-term	Medium-term 50% by 2035[1]	Long-term Net zero by 2050[2]
Worsley Alumina	Mud-washing project Waste to heat digestion	Coal to gas conversion	Renewables or hydrogren Processing technologies
Hillside Aluminium	AP3XLE implementation	Transition to low-carbon energy	Processing technologies (e.g. inert anodes)
Mozal Aluminium	AP3XLE implementation	Extend current hydropower contract beyond 2026	Processing technologies (e.g. inert anodes)
Illawarra Metallurgical Coal	Improved gas drainage	Commercial solution for ventilation air methane	

Efficiency projects · Low-carbon energy · Technology

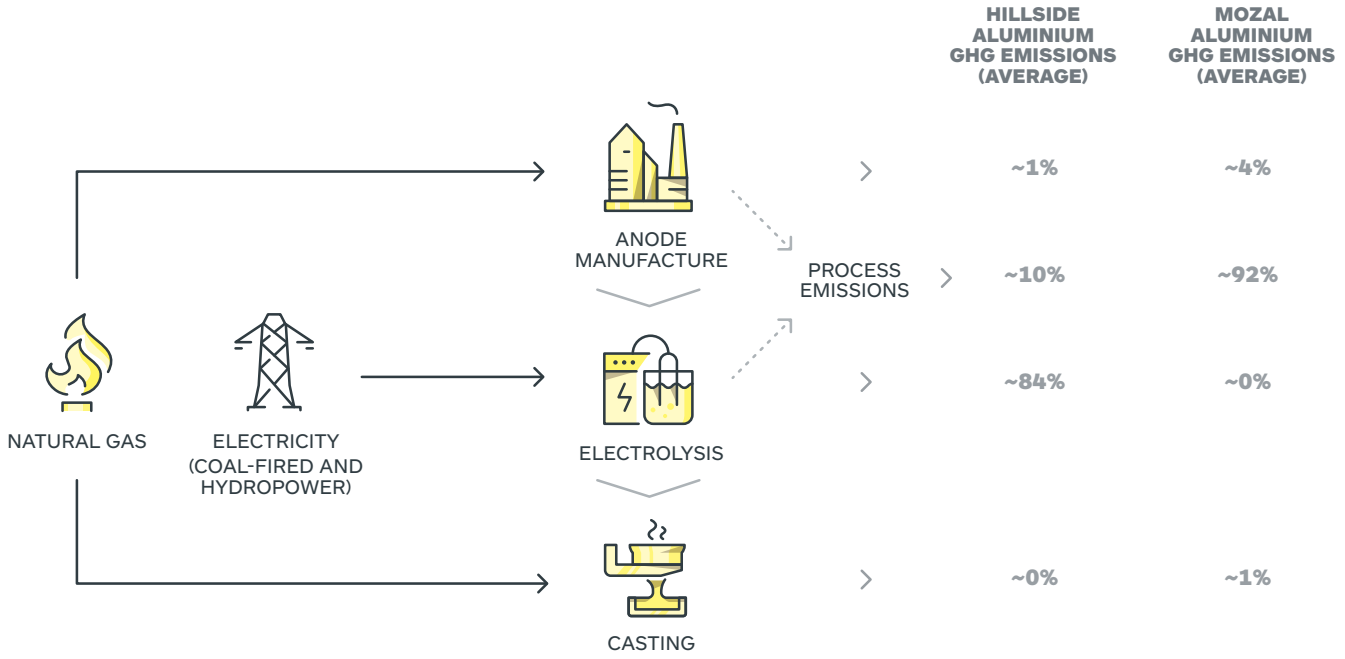
(1) Our target to halve operational GHG emissions from our FY21 baseline by 2035.
(2) Our goal of net zero operational GHG emissions by 2050.

There are a number of potential pathways to net zero and some of the innovations we need to achieve our long-term goal are not yet technologically or commercially feasible. We will continue to evaluate new and existing decarbonisation initiatives against a number of criteria including safety, technical performance, operability, emissions reduction, maturity, scale, cost, external policy and time required for adoption.

Aluminium smelters

Aluminium smelting involves an electrical current being applied to an alumina solution that is heated to around 960°C. This process consumes large amounts of electricity, while also producing carbon dioxide as a by-product of the consumption of carbon anodes.

The other material source of GHG emissions in aluminium production arises from the electrolytic reduction of alumina. Alternative processing technologies, such as inert anodes, which are not currently commercially available, will be required to avoid these emissions.



Note: Chart is a simplified representation of material sources of emissions from the aluminium smelting process. 'Process emissions' includes GHG emissions from baking anodes and consuming anodes, and contributions from anode effects.

Hillside Aluminium

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

Source of GHG emissions

Hillside Aluminium sources its electricity from Eskom, the South African state-owned entity which owns and operates South Africa's national grid. Hillside Aluminium is one of the largest consumers of power in South Africa, with a large baseload demand of 1,205 megavolt amperes demand at 99 per cent load factor. The smelter supports the stability of the national electricity grid, as its power agreement gives Eskom the flexibility to interrupt supply in times of system emergency. Eskom is the only viable provider of electricity at the scale required, but as the grid is still reliant on energy coal, Hillside Aluminium's electricity supply is highly carbon intensive.

Decarbonisation planning

Near term decarbonisation initiatives at Hillside Aluminium are focused on energy efficiency, while we investigate options for an alternate low-carbon energy solution to be deployed in the medium-term. While we are encouraged by the ground-breaking Just Energy Transition Partnership described on page 82 and Eskom's aspiration to replace 47 per cent of coal-fired capacity with renewable sources by 2035, our decarbonisation plans do not rely exclusively on the decarbonisation of the South African energy grid.

Decarbonising the South African grid

The ambition to transition South Africa's national energy grid away from energy coal received funding support of US$8.5 billion, by a coalition of the governments of France, Germany, the UK, the US and the EU at the 26th Conference of the Parties (COP26) to the UNFCCC. Referred to as the Just Energy Transition Partnership, the funding is made up of financial instruments including government grants, concessional loans and "risk-sharing instruments" designed to mobilise the private sector, over a three-to-five-year period.

According to a report[16] published this year by the Centre for Sustainability Transitions at the Stellenbosch University in South Africa and Blended Finance Taskforce, South Africa will need US$250 billion over the next three decades to transform its coal-powered economy into a low-carbon energy system. While the report assessed that the energy transition should be triggered by public development financial institutions, such as the Government Employees' Pension Fund or the Development Bank of Southern Africa, it also emphasised that the majority of the US$250 billion needed will require private investment.

Energy and process efficiency

In FY22, Hillside Aluminium completed a trial of the AP3XLE energy efficiency technology and recently committed approximately US$18 million to commence deployment of the technology over the next five years. Once fully deployed, this technology is anticipated to abate approximately 150,000 to 200,000 tonnes CO_2-e per annum.

We are investigating the potential of EnPot technology to support decarbonisation of the South African grid. Traditionally, aluminium smelters are designed to be operated at constant power inputs, which can be easily achieved with conventional power but less so with variable renewable generation. EnPot is a heat recovery technology that enables smelter power modulation while maintaining a precise pot heat balance, potentially enabling Hillside Aluminium to be used as a 'virtual battery' by returning surplus power to the grid and playing an increased role in grid ancillary services.

We also continue to investigate and assess additional emissions reduction projects and technologies, such as inert anodes and anode coating technology.

Transition to low-carbon energy

Hillside Aluminium has a power agreement with Eskom until 2031, which provides energy certainty while a commercially viable alternate energy solution is sought.

In FY21 we completed studies on the technical feasibility of deploying renewables to power the smelter at Hillside Aluminium. Those studies showed that the smelter's consistent, high level of power consumption would require multiple gigawatts of renewable generation capacity, including an over-build to ensure sufficient energy to enable continuous operation. Large scale energy storage and transmission infrastructure would also be required. The land area required for renewable energy infrastructure renders the option of on-site renewables impractical.

On-balance-sheet development of the renewables, storage and associated infrastructure needed on such a scale is outside of our strategy and core capability. Instead, we are exploring potential collaborations with entities whose purpose and expertise lies in utility-scale energy projects and will look to support them through long-term power purchase agreements.

We are progressing three core streams of work to decarbonise Hillside Aluminium:

- Engaging with Eskom to explore opportunities to convert our existing power agreement to low-carbon energy (e.g. green certificates or other public-private partnership opportunities);
- Investigating options for sourcing and securing low-carbon power through power purchase agreements with independent power producers and aggregators of renewable energy; and
- Behind-the-meter technology options including energy storage.

Through our decarbonisation workstreams, we aim to secure a suitable source of low-carbon energy for Hillside Aluminium by the early 2030s, however, grid access capacity for viable projects, wheeling and securing affordable backup power are material considerations, all of which are dependent to some degree on market reform.

(16) *https://www.blendedfinance.earth/making-climate-capital-work*

Just transition

If we are unable to secure an affordable source of low-carbon electricity, Hillside Aluminium risks becoming internationally uncompetitive over time, given the emergence of carbon border tariffs and the likelihood of realised pricing reflecting end-user demand for low-carbon aluminium.

The smelter is one of the largest industrial employers in the province of KwaZulu-Natal - an area that experiences an official unemployment rate of 33 per cent - with approximately 2,500 employees and contractors, which in turn supports an estimated additional 26,500 indirect full-time equivalent opportunities. As the only primary aluminium smelter in South Africa, approximately 27 per cent of Hillside Aluminium's production is sold to the domestic market, including the supply of liquid aluminium to local downstream industry. Hillside Aluminium also supports the stability of the national electricity grid, through its constant high baseload demand and Eskom's frequent utilisation of a contractual term which permits the interruption of supply to the smelter in times of system emergency to minimise load shedding for other customers.

Given the economic and social importance of Hillside Aluminium to South Africa, our decarbonisation plans will include just transition considerations for our workforce, the region and upstream and downstream value chains.

In FY22, we participated in the National Business Initiative Just Transitions Pathway Project and conducted an initial baseline review of just transition considerations. In FY23, we intend to work with stakeholders to conduct risk and opportunity assessments, develop metrics to measure and report on our performance and undertake value chain analysis to support our just transition planning.

Learn more about **our approach to just transition planning** on page 89.

Mozal Aluminium

Mozal Aluminium is the only aluminium smelter in Mozambique, co-owned by South32, the Industrial Development Corporation of South Africa, Mitsubishi Corporation (through MCA Metals Holding GmbH) and the Government of the Republic of Mozambique. It is one of the largest employers and contributors to the national economy producing over 500,000 tonnes of aluminium every year.

Electricity supplied to Mozal Aluminium is generated by Hidroeléctrica de Cahora Bassa (HCB), a hydro-electric power generator situated on the Zambezi River in the north-west of Mozambique. The electricity is supplied via Eskom's South African grid under an agreement with MOTRACO, a transmission joint venture between Eskom and the national electricity utilities of Mozambique and Eswatini. Eskom also provides back-up energy to Mozal Aluminium for periods when HCB produces less than its contractual maximum supply of hydro power, for example due to hydroelectric plant maintenance or drought conditions in the Zambezi basin.

We are working to extend the power supply agreement for Mozal Aluminium beyond 2026, as there are no viable alternative suppliers of renewable energy at the necessary scale and, without extension of the agreement, we will be limited in our ability to achieve our medium-term target. The extension of the existing arrangement will underwrite Mozal Aluminium's ability to maintain its current market position as a supplier of low-carbon aluminium.

Energy and process efficiency

Deployment of the AP3XLE energy efficiency technology is well advanced at Mozal Aluminium, with the pot relining program continuing and the final conversion and amperage ramp-up expected to conclude by FY24. The successful deployment of this technology at Mozal Aluminium has provided key learnings for its application at Hillside Aluminium, where the technology will achieve emissions reductions given Hillside Aluminium's exposure to high emissions intensity electricity.

We also continue to investigate and assess additional emissions reduction projects and technologies, such as inert anodes and anode coating technology.

South African Energy Market Reform

South Africa has made positive steps towards market reform with the publication of the Electricity Regulation Amendment Bill in March 2022, which advocates for a competitive market and trading, and prosumer models, which has the potential to unlock more commercial options for large power users.

We are a member of the Energy Intensive Users Group (EIUG) of Southern Africa, which works with the South African government and Eskom to enable electricity market and regulatory reforms and address impediments to large scale deployment of renewable energy projects. The aim of EIUG is to transition South Africa to a low-carbon future in a manner and within a time-frame that protects and maintains the competitiveness of the South African economy.

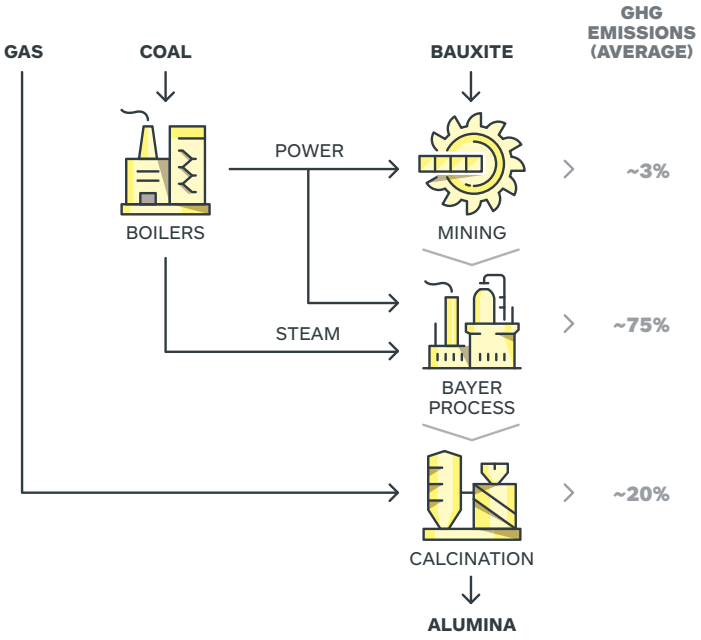
Worsley Alumina

Worsley Alumina is an integrated bauxite mine and alumina refinery located in the south-west of Western Australia. It is one of the largest alumina refineries globally, with production capacity of approximately 4.6 million tonnes per annum. The alumina we produce is shipped to aluminium smelters around the world, including our Hillside Aluminium and Mozal Aluminium smelters.

Source of GHG emissions

The primary source of GHG emissions for Worsley Alumina is the combustion of energy coal and natural gas (approximately 74 per cent of GHG emissions) to generate high pressure steam which is used in process heating in digestion and evaporation units. The generation of steam for processing also generates electricity as a by-product, most of which is consumed by the refinery and mine, with any excess (or shortfall) exported to (or imported from) the South West Interconnect System (SWIS) grid. Scope 2 emissions make up around two per cent of reported GHG emissions from the refinery.

On average, GHG emissions from bauxite mining make up around three per cent of Worsley Alumina's annual reported operational GHG emissions.



Note: Chart is a simplified representation of material sources of emissions from Worsley Alumina, it does not depict other sources of emissions which represent ~two per cent of operational GHG emissions.

Decarbonisation planning

Near-term decarbonisation efforts are focused on energy efficiency. We are pursuing energy transformation in the medium and long-term, while supporting a pragmatic, collaborative and just transition for people, local communities and the south-west region where the coal industry makes a significant economic contribution.

Energy and process efficiency

Worsley Alumina is pursuing initiatives to reduce the operational demand for steam and to improve efficiency through more effective use of industrial heat, which could reduce the operation's GHG emissions by between 10 and 20 per cent. Reducing the need for operational steam also reduces water consumption.

In FY22, Worsley Alumina commenced a dilution reduction project which reduces energy demand related to evaporation in the Bayer process at the refinery. Once fully commissioned (by FY24), this project has the potential to abate more than 80,000 tonnes of CO_2-e per year.

Two of the most material and advanced energy efficiency studies relate to mud washing and waste heat to digestion. Our mud washing efficiency study moved to feasibility stage in FY22 and is investigating the replacement of flat bottom washers with new high efficiency washers to reduce the amount of coal-fired steam required to evaporate water out of the circuit. Initial study estimates indicate a potential reduction in reported operational GHG emissions in the order of 295,000 tonnes of CO_2-e per year. The initiative is also expected to reduce water consumption by six per cent and improve workplace health and safety by reducing confined space maintenance work.

The waste heat to digestion concept study was completed in FY22 and is currently in pre-feasibility stage. The study is exploring options to retain low-grade heat within the circuit, to displace the coal-fired steam required for heating in digestion and desilication. Early estimates of potential GHG emissions reductions range from 60,000 to 250,000 tonnes of CO_2-e per year across the various options being considered.

We are also studying potential efficiencies in mechanical vapour recompression and calciner flue gas heat recovery.

Worsley Mine Development

Worsley Alumina has continued to progress State and Commonwealth environmental approvals for the Worsley Mine Development, which would provide access to future bauxite reserves and resources.

A comprehensive Environmental Review Document (ERD) was released in June 2022 to enable assessment by the Western Australian Environmental Protection Authority (EPA), in accordance with State and Commonwealth environmental legislation.

The ERD includes a draft GHG management plan (among other key management programs) which provides more specific detail on Worsley Alumina's decarbonisation activities[17] and proposes the establishment of interim GHG emissions reduction targets for Worsley Alumina in line with guidance from the EPA's *Environmental Factor Guideline: Greenhouse Gas Emissions, 2020*.

The proposed interim GHG emissions reduction targets are intended to drive incremental reductions in operational GHG emissions at Worsley Alumina, supported by regular review and evaluation. They are aligned with South32's group-wide GHG emissions reduction target and long-term net zero by 2050 goal, but they do not replicate them, noting South32's group-wide decarbonisation strategy to meet our medium-term target has been developed at a whole-of-portfolio level.

Learn more about **the Worsley Mine Development** at www.south32.net

(17) Please note this Plan includes more up to date information and figures, for some items, than depicted in the ERD. This is not an error, but rather represents more recent information being available for inclusion in this Plan (e.g. full year reporting of FY22 GHG emissions, updated emission abatement numbers from recently completed studies).

Transition to low-carbon energy

Transitioning to lower carbon energy sources will be the key driver of decarbonisation at Worsley Alumina, given energy coal consumption contributes approximately 69 per cent of reported GHG emissions in FY22. We have been exploring options to replace energy coal as the primary fuel source at Worsley Alumina, with trials of an alternative fuel source underway since 2018. In FY22, the Western Australian Government announced its intention to retire the state-owned Muja and Collie coal-fired power stations by 2030, providing an additional driver for our own transition away from energy coal.

We are focusing our studies for Worsley Alumina's energy transition on increased electrification combined with renewable energy to meet our operational GHG emissions reduction target and goal. However a large-scale deployment of renewable energy such as solar PV and wind, which do not generate steam directly, would require a change to Worsley Alumina's process and energy infrastructure. Additionally, delivering the scale of renewable power required by Worsley Alumina and other industrial users in the south-west region of Western Australia would require substantial expansion and modification of the existing grid. Potential solutions include increased capacity of the electricity transmission network, new wind and solar farms, and significant energy storage. Some of these changes will occur as Synergy, Western Australia's state-owned electricity generator and retailer, transitions away from coal and we anticipate that there will be opportunities for industrial users to support this transition.

Increased electrification and renewable energy solutions will require investment in energy infrastructure at the refinery, and potentially shared energy infrastructure in the region and therefore any deployment would most likely take place in the longer term. We anticipate partnering with entities which have the expertise in converting the electrical infrastructures that deliver power and supporting them with long-term power purchase agreements.

As an interim solution, we are evaluating the technical and commercial feasibility of converting the primary fuel source of the onsite boilers from coal to natural gas. In FY22, we completed a pre-feasibility study on options to convert the fuel source for our conventional pulverised fuel boilers. Our studies estimate that natural gas as a replacement for coal could deliver a reduction in the order of 15 to 20 per cent of the operation's GHG emissions, in addition to the energy efficiency projects described above.

In FY22, Worsley Alumina continued to use modest amounts of biomass as a fuel source in the multi-fuel co-generation facility. We source biomass via various harvesting and chipping companies, including waste residues from saw log operations, mine site thinnings or energy crop material. Worsley Alumina has consumed 85,000 bone dry metric tonnes since we first trialled the use of biomass to displace energy coal in FY18 and estimates a total reduction of GHG emissions of 127,000 t CO_2-e in that time. Biomass is expected to remain a complementary option in the near term, while we pursue more material efficiency and energy transition projects. A previous study found increased biomass usage is technically feasible, but it also identified supply chain and safety challenges associated with sourcing and processing higher volumes.

We are assessing the use of hydrogen in difficult-to-electrify applications, but production costs, markets and associated infrastructure will need to develop substantially for it to become a viable alternative. Work to date has indicated that electrifying steam generation is likely to be preferable to the use of hydrogen. However, hydrogen may have a role in achieving the high processing temperatures required for calcination.

Partnerships

Collaboration between governments, industry and other stakeholders is necessary to develop an accelerated energy transition of the industries operating within the south-west region while meeting the needs of communities and other stakeholders. We are participating in a number of early stage collaborations and aim to enhance our involvement as the region's plans take shape. For example, as a founding member of the Heavy Industry Low-Carbon Transition (HILT) Cooperative Research Centre (CRC), we are participating in various projects to support our decarbonisation activities at Worsley Alumina.

Learn about **our technology and innovation partnerships** on page 88.

Just transition

Our plan to transition away from energy coal aligns with the Western Australian Government's announced intention to retire the state-owned Muja and Collie coal-fired power stations. South32 welcomes the Government's support and commitment to the people and businesses of Collie, and the certainty this provides to enable parties to work together to promote a just transition for the town and surrounding communities.

Coal mining has been a significant contributor to the economy of the region and we acknowledge the significant role Collie has played for more than 100 years. Supporting the Western Australian Government's initiatives and investments to diversify Collie's economy are key considerations in our decarbonisation planning.

We are an active participant in the Collie Just Transition Working Group, which is led by the Western Australian Government. In alignment with a pillar of the Collie Just Transition Plan, we recently announced an A$415,000 partnership with the Shire of Collie to activate the Collie Tourism Strategy and support the economic future of the region.

In FY22 we conducted an initial baseline review of just transition considerations for Worsley Alumina. To support the ongoing development of a just transition plan for Worsley Alumina, in FY23 we plan to undertake detailed stakeholder mapping, engage with internal and external stakeholders to conduct risk and opportunity assessments, and develop metrics to measure and report on performance. We are also planning to undertake a study of the potential workforce impacts and opportunities from our decarbonisation activities at Worsley Alumina, to inform our participation in the Collie Just Transition Working Group.

Learn more about **our approach to just transition planning** on page 89.

Illawarra Metallurgical Coal

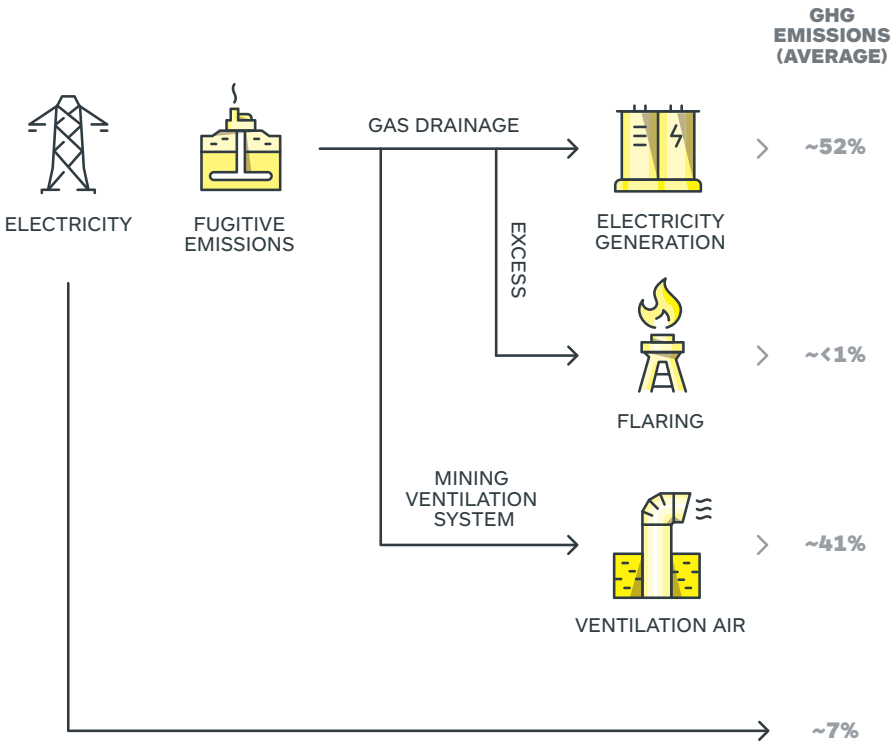
Illawarra Metallurgical Coal comprises two underground metallurgical coal mines, Appin and Dendrobium, located in the southern coalfields of NSW in Australia. IMC produces premium metallurgical coal, which is used to produce steel, a critical material for buildings, transportation and renewable energy infrastructure.

Source of GHG emissions

Illawarra Metallurgical Coal's Scope 1 GHG emissions are predominantly from fugitive emissions, which are gases released from underground coal seams during mining. Methane is a significant contributor to Illawarra Metallurgical Coal's reported operational GHG emissions with a global warming potential 28 times greater than carbon dioxide[18].

We measure fugitive emissions using certified instrumentation deployed on site and the amount can vary greatly between mining areas, based on the surrounding rock strata, depth and composition of the seam. Approximately 87 per cent of Illawarra Metallurgical Coal's FY22 reported Scope 1 emissions are from Appin, which has higher gas and methane content.

Illawarra Metallurgical Coal sources electricity to operate ventilation systems and conveyors through an existing partnership with EDL Energy, a producer of sustainable distributed energy, which utilises our coal mine waste gas to generate electricity. We also import electricity from the NSW grid, which represented around 15 per cent of Illawarra Metallurgical Coal's total reported Scope 1 and 2 emissions in FY22.



Note: Average GHG emissions include emissions captured and transferred to EDL for power generation. These are not reported as part of Illawarra Metallurgical Coal's operational GHG emissions inventory, in accordance with the Australian National Greenhouse and Energy Reporting (Measurement) Determination 2008.

Decarbonisation planning

Our decarbonisation plans are focused on increasing the efficiency of coal seam gas drainage and reducing ventilation air methane (VAM) through innovative new technologies, and remain unchanged as a result of the August 2022 announcement not to proceed with an investment in the Dendrobium Next Domain project at Illawarra Metallurgical Coal.[19]

In FY21, Illawarra Metallurgical Coal reviewed its decarbonisation opportunity assessment to determine if any new developments or technologies had emerged that warranted investigation. This work confirmed the focus on coal seam gas drainage efficiency and VAM abatement remains the most appropriate course of action, given the readiness of the technology.

Gas drainage

Gas is drained from coal seams before and after mining activity. The majority of the captured gas is piped to the surface and supplied to EDL Energy to generate electricity, with the remainder (less than 1 per cent in FY22) destroyed through flaring which converts the methane into carbon dioxide. The beneficial reuse of this waste gas allows us to redirect approximately two million tonnes of CO_2-e per annum for power generation, that would otherwise be released to the atmosphere or flared.

Through our drilling program, we are targeting an increase in equivalent coal seam gas capture to 67 per cent post-drainage capture efficiency at Appin by FY24, compared to 61 per cent in FY21. We are also evaluating drilling methods to increase post-drainage capture, as well as additional pre-drainage targets.

At Dendrobium mine, we recently received NSW Government approval to install additional coal seam gas drainage infrastructure, which will enable flaring and destruction of methane gas. Dendrobium has lower methane content than Appin and experiences greater variability of gas quantity and composition, so we cannot use the captured gas for power generation, which requires a stable supply at higher methane concentrations. Instead, we plan to use flaring technology to convert methane to carbon dioxide, reducing the potency of GHG released to the atmosphere.

(18) Australian Government, Clean Energy Regulator, National Greenhouse and Energy Reporting, Global Warming Potentials, 1 July 2020 amendments
(19) Refer to market release dated 23 August 2022 at *www.south32.net*

Ventilation air methane

While our gas drainage program is able to capture gas from the coal seams pre- and post-mining, some residual gases, including VAM, may still enter the underground mine ventilation system.

VAM occurs at low concentrations (0.15 to 1.5 per cent) which existing gas drainage technologies are unable to capture. While the concentration is low, the volume of air that moves through the ventilation system is high, so VAM is still a significant source of GHG emissions.

We have been working in partnership with Australia's national science agency, CSIRO, since 2013 to develop new VAM abatement technologies that can be deployed at scale.

A project to design, construct and test a commercial scale demonstration plant using CSIRO's VAM mitigator (VAMMIT) at Appin commenced in FY22. VAMMIT is a compact thermal flow reversal reactor with a regenerative bed, which oxidises methane to produce water and carbon dioxide.

The NSW Government and Coal Innovation NSW committed A$15 million of funding for the project, in addition to our A$4.5 million commitment. The proposed commercial-scale unit aims to reduce GHG emissions by an estimated 30,000 CO_2-e per year, based on an average VAM concentration of 0.33 per cent.

We are now moving to the final stage of developing the technology to be safely deployed in an underground coal mine. Once completed, the demonstration facility will remain on site for continuous operation to achieve further GHG emissions reduction, with potential for additional units to be installed across Illawarra Metallurgical Coal and other underground mines in Australia.

Other operations

The emissions profile and abatement challenges at our lower emitting operations arise from different sources and have site-specific characteristics that require tailored solutions. For example, Cerro Matoso's emissions arise from grid-sourced power and integrated ferronickel smelter gas consumption, while our South Africa Manganese operation produces emissions from a mix of surface and underground mining fleet, grid electricity imports and process emissions at the Mamatwan sinter plant.

Decarbonisation of these operations forms part of our annual planning and is supported by trials and collaborations, for example our 3 megawatt solar array at Cannington.

Technology and innovation

Technology and innovation are crucial enablers of the transition to a low-carbon world and will be critical to delivering against our decarbonisation plans. However, some of the innovations we need to meet our long-term goal are not yet technologically or commercially feasible.

This presents an opportunity for the whole industry and we are playing an active role by reviewing, developing and trialling technology solutions for our operations and our development options. We complement our own technology programs by collaborating with other companies, industry groups and research organisations with shared challenges that can potentially be addressed through innovation.

Our Innovate32 approach focuses on creating value through innovation with strategic focus areas including the Next Generation Mine mission, which seeks to reshape the way we mine. This mission studies the application of low-carbon design principles as part of the initial design and mine plan for the Hermosa project. Options include the use of electric mining equipment and vehicles, reduced operational footprint, low-carbon and renewable energy supply and energy efficiency technologies. Many of these options are being investigated through the collaborative initiatives set out below.

Learn more about **Innovate32** in our Annual Report at www.south32.net

Electric Mine Consortium

We are a founding member of the Electric Mine Consortium, which aims to accelerate progress towards a fully electrified, zero carbon, zero particulates, mine. The Consortium is pursuing workstreams aligned to our decarbonisation objectives, including mine design; light and auxiliary battery electric vehicles (BEV) and ancillary equipment; underground haulage; surface and long road haulage; energy storage; and electrical infrastructure. Participating in the consortium helps us make informed decisions about technology options through direct and indirect trials, and is one of the fastest ways to learn and leverage broader industry research for our business.

We are leading trials for underground light BEVs and associated electrical infrastructure at our Cannington operation. The installation of charging infrastructure, and fit-out and testing of the new BEVs was completed in FY22. The trial is planned to run for a minimum of 12 months, with the vehicles expected to continue at Cannington once the trial is complete.

For more information on **the Electric Mine Consortium**, visit www.electricmine.com.

BluVein

In FY22, we became a funding partner in the development of BluVein, an underground trolley assist system that seeks to accelerate the transition of heavy mining fleets to electrification. BluVein is a dynamic charging battery technology which aims to address some of the existing limitations of traditional heavy fleet batteries such as size, weight and cost, the requirement for in-shift recharging/battery swapping, and life cycle and disposal challenges.

Similar to the Electric Mine Consortium, our work with BluVein technology is being undertaken with the intention to support decarbonisation initiatives at our underground mines.

For more information on **BluVein**, visit www.bluvein.com.

Heavy Industry Low-Carbon Transition Cooperative Research Centre

We are a founding member of HILT CRC, a collaborative venture between industry, government and research organisations. HILT CRC was formed to develop and accelerate technologies for heavy industry to transition to net zero.

In FY22, we were an active partner in five of HILT CRC's QuickStart projects, covering topics such as low emission calcination and steam generation, energy storage, regulatory implications, and emissions profiling.

For more information on **HILT CRC**, visit www.hiltcrc.com.au.

Long Duration Energy Storage Council (LDESC)

The LDESC is an international council that was formed in 2021 at COP26 with the aim to accelerate nascent energy storage technologies that are required for the energy transition.

South32 joined the LDESC in 2022. Our participation provides access to solutions, technology and third-party investment that we are otherwise unable to pursue on our own, such as thermal storage for alumina heat.

For more information on **LDESC**, visit www.ldescouncil.com.

Carbon offsets

Our decarbonisation plans prioritise avoidance and mitigation, in accordance with our mitigation hierarchy. However, carbon offsets are likely to be required for residual emissions to deliver our long-term net zero operational GHG emissions by 2050 goal. Residual emissions may include 'hard to abate' emissions arising from chemical processes and fugitive emissions.

Use of carbon credits may be utilised in the near term to meet regulatory requirements in South Africa and Australia. In South Africa, the government extended the existing carbon credit exemption rules of the South African *Carbon Tax Act, 2019*. In Australia, we anticipate reform of the central climate change policy tool, the Emissions Reduction Fund, is likely to include tightening of emission limits under the Safeguard Mechanism which may promote demand for Australian Carbon Credit Units.

We may also use carbon offsets to support our ability to place products, should demand for carbon neutral base metals or aluminium emerge.

The agreement on the Article 6 mechanism at COP26 marked an important development in global carbon offset markets. The definition of a new form of carbon offset, double-counting safeguards and limits on use of carbon offset from the Kyoto Protocol's Clean Development mechanism, have clarified future global carbon market rules.

The private-sector led Taskforce on Scaling of Voluntary Carbon Markets (TSVCM) has made progress towards upscaling an effective voluntary carbon market. In late 2021, the TSVCM announced the creation of the Integrity Council for the Voluntary Carbon Market (the Council) as an independent governance body for the voluntary carbon market. The Council will have an initial focus on developing Core Carbon Principles (CCPs) and an accompanying threshold standard for voluntary carbon offsets. The CCPs are expected to set quality standards for the voluntary use of carbon offsets, including strong environmental and social integrity.

We will continue to monitor regulatory and market developments closely as we mature our approach to carbon offsets and credits, aligning with robust, credible standards and expectations. We will preference carbon offsets and credits sourced from jurisdictions in which we operate, from projects that benefit local communities or Indigenous, Traditional or Tribal Peoples, and provide co-benefits linked to our other sustainability objectives (e.g. just transition, social performance, biodiversity) to maximise value.

In FY22, we established a dedicated carbon markets team to monitor global and regional carbon market developments and procure carbon offsets and credits.

Just transition planning

Just transition is the fair, equitable and inclusive social transition towards a low-carbon global economy. We understand that our decarbonisation initiatives are likely to impact some of the communities and regions where we operate and that a well-planned and just transition can create new and long-term opportunities. We are committed to supporting a fair and equitable transition for people, communities and other stakeholders.

Our current just transition planning is focused on Hillside Aluminium and Worsley Alumina. These operations and connected businesses sustain significant energy coal supply chains that are large employers. The transition away from the use of energy coal creates both risk and opportunity for people, communities, regions and supply chains. We are working with governments, communities and other stakeholders to determine the best pathway towards a low-carbon future for these operations and regions.

Establishing a framework to support just transition

In FY22, we developed guiding principles which align with the objectives of the Paris Agreement and will be used to integrate just transition planning into our decarbonisation planning and decision making. These principles were developed following a review of technical papers[20], guidelines[21] and peer practices and will be integrated into our business processes and standards.

Our just transition guiding principles

NET ZERO PATHWAY	Alignment of the net zero pathway with just transition principles is critical to support access to clean energy and a safer, more sustainable world for generations to come.
WORKFORCE EVOLUTION	Plans should consider how to equip workers with skills for employment opportunities arising from the transition to a low-carbon economy, promote equitable and decent jobs and shield workers from adverse impacts as far as practicable.
COMMUNITY RESILIENCE	Plans should consider the impacts on communities of the transition through protecting the natural environment, providing support for local development, supply chains and infrastructure.
STAKEHOLDER COMMUNICATION AND COLLABORATION	Plans must be developed in collaboration with all material stakeholders, to co-create solutions that generate maximum value across the value chain.
GOVERNANCE AND TRANSPARENCY	Strong governance and accountability underpin just transition plans. Core outcomes are identified, monitored and reported.

(20) For example, the UNFCCC's Technical Paper on Just Transition of the Workforce, and the Creation of Decent Work and Quality Jobs
(21) For example, the International Labour Organisation's guidelines for a just transition towards environmentally sustainable economies and societies for all (2015)

Scope 3 GHG emissions

Scope 3 GHG emissions include those associated with upstream activities, such as embodied emissions in goods and services we use, and downstream activities such as the processing and end-use of our products by our customers. We have been reporting Scope 3 GHG emissions since FY17.

While we do not have direct control over Scope 3 GHG emissions, we have a critical part to play in contributing to the decarbonisation of the value chain for our commodities. To support this, we have set a new goal of net zero Scope 3 GHG emissions by 2050.

We are progressing near-term actions including partnering with customers and suppliers to support and co-design emissions reduction programs, contributing to industry decarbonisation and product stewardship initiatives, and supporting the development of innovative technology solutions. We will continue to assess the impact of our portfolio decisions on value chain emissions, and we expect that our Scope 3 GHG emissions intensity will decrease as we increase our exposure to base metals.

LONG-TERM SCOPE 3 GOAL: Net zero Scope 3 greenhouse gas emissions by 2050
with near-term actions in three strategic areas - Partnerships, Industry Engagement and Innovation

PARTNERSHIPS
Building meaningful partnerships with customers and suppliers to support and co-design emission reduction programs

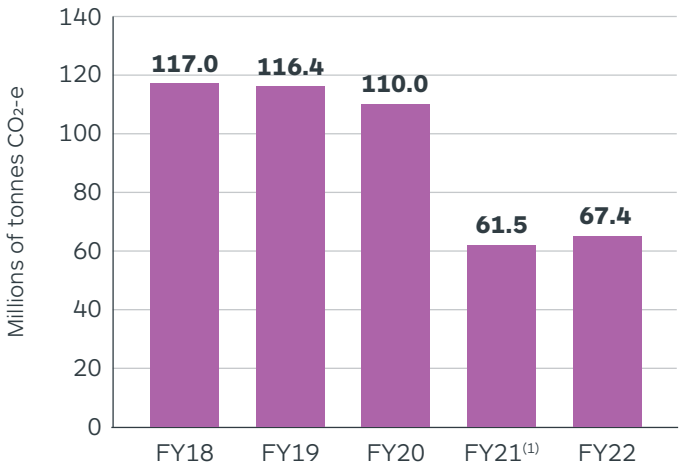
INDUSTRY ENGAGEMENT
Contributing to industry groups that support decarbonisation and product stewardship initiatives

INNOVATION
Supporting the development of technology solutions to address value chain emissions

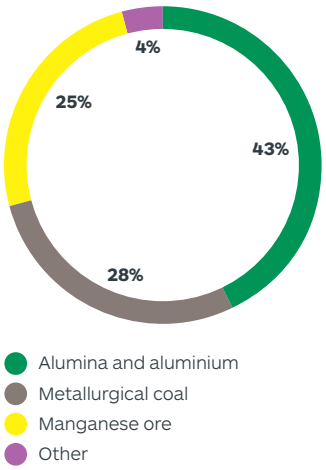
FY22 Scope 3 GHG emissions

In FY22, we reported Scope 3 GHG emissions of 67.4 Mt CO_2-e[22], ten per cent higher than the adjusted FY21 reported emissions of 61.5 Mt CO_2-e[23]. This is primarily due to changes in the global warming potentials for bauxite mining and electrolysis, an increase in spend profile related to purchased goods and services and upstream transportation and distribution. The acquisition of a 45 per cent interest in Sierra Gorda copper mine in Chile resulted in an increase in investment-related downstream emissions when compared to FY21.

Scope 3 GHG emissions



FY22 Scope 3 GHG emissions by commodity



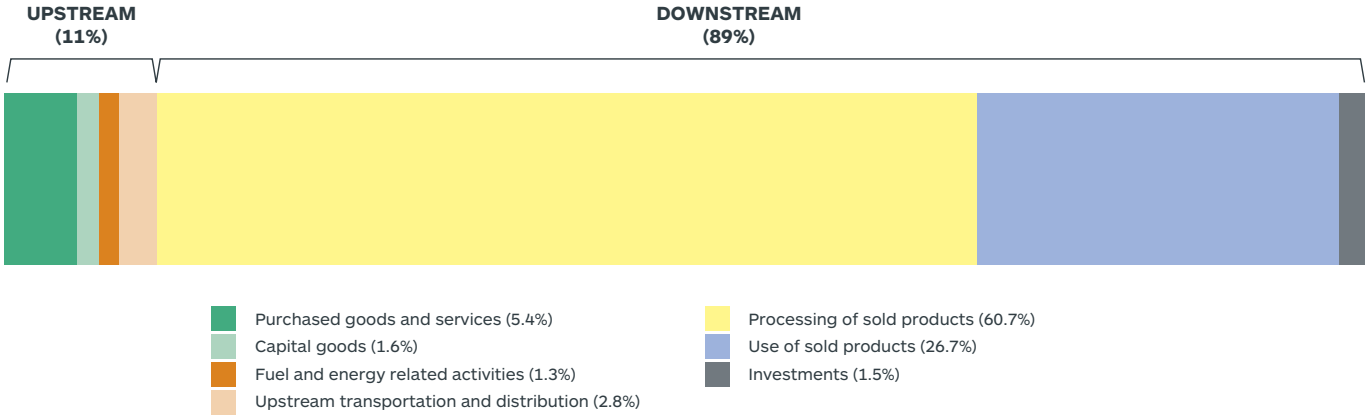
(1) FY21 emissions adjusted to exclude GHG emissions from SAEC and TEMCO, which were divested in FY21.

Notes: Estimate of Scope 3 GHG emissions by commodity are based on processing and use of sold products, and apportionment of other categories.

(22) Includes emissions associated with Sierra Gorda operations (South32 share).
(23) Reported FY21 Scope 3 GHG emissions adjusted to exclude SAEC and TEMCO which were divested in FY21. Unadjusted FY21 Scope 3 GHG emissions were 106 Mt CO_2-e.

In FY22, almost 90 per cent of reported value chain emissions were attributable to the downstream use and processing of our products, particularly the processing of alumina to manufacture aluminium ingots and use of metallurgical coal to make steel.

FY22 Scope 3 GHG emissions by position in the value chain



A **description of Scope 3 GHG emission categories and methodologies** is available in our 2022 Sustainability Databook at www.south32.net

Scope 3 GHG emissions reduction

Although we do not have direct operational control over upstream and downstream activities, we are committed to proactively collaborating with our suppliers, customers, industry peers and other value chain partners to make a meaningful contribution to the actions and innovations required to reduce these emissions.

To guide our progress towards our long-term Scope 3 goal, we have identified near-term actions across three strategic areas – partnerships, industry engagement and innovation. Our actions are underpinned by the:

- Current knowledge and understanding of the areas of material exposure, both from a Scope 3 category as well as a commodity portfolio perspective;
- Degree of control over upstream emissions and the ability to influence our downstream emissions;
- Level of support that we can provide towards the development of sectoral decarbonisation approaches; and
- Need to participate in activities to develop innovative technologies that will drive the transition of value chain emissions, despite the level of uncertainty.

In developing our approach, we considered the materiality of Scope 3 GHG emissions in each reported category and the level of control or influence we have on the associated activities. For example, purchased goods and services in the upstream value chain contribute 5 per cent of reported Scope 3 GHG emissions. We aim to influence emissions reductions in the upstream value chain and in FY23 we intend to define a vendor selection process that enables preferential sourcing of raw materials with a lower level of embodied GHG emissions, as compared to the current state. Our intention is to select key suppliers and collaborate to develop options to reduce their operational GHG emissions. Our collaboration with suppliers will also consider alternative metrics to plan and track interventions to achieve emissions reductions, such as engagement and other non-emission targets. Similarly, we are able to influence the emissions associated with transport and distribution of our products through our participation in maritime decarbonisation initiatives.

To address the complex challenges associated with decarbonisation activities in the value chain, where we have comparatively less ability to influence the use and processing of our products in the near term, we are planning to focus on:

- Our goal of entering into four partnerships with key customers to collaborate on emissions reduction initiatives in the downstream value chain by FY25;
- Our goal of working with at least four tier one suppliers to identify options to reduce GHG emissions in the value chain, commencing in FY23. This includes progressing our existing programs to support vessel owners and fuel suppliers in developing alternative or dual shipping fuels (see case study);
- Collaborating to improve accounting of GHG emissions associated with processing and use of our products. We will also explore the innovative use of data analytics, artificial intelligence and other smart technologies to manage complex data and identify potential improvement opportunities across the value chain;
- Participating in relevant stewardship and innovation initiatives to develop net zero pathways for our key commodities, including ResponsibleSteel, ICMM and the Aluminium Stewardship Initiative (ASI); and
- Implementing a continuous monitoring program for the shipping emissions baseline developed in FY22 to identify emissions reduction opportunities (see case study on page 92).

The near-term focus reflects the early stage of value chain decarbonisation planning. We intend to develop a longer-term pathway for value chain decarbonisation, building on insights gained from our near-term actions and reflective of relevant sectoral decarbonisation pathways.

Improving Scope 3 GHG emissions accounting

Understanding the quantum of GHG emissions in the value chain helps us to assess potential climate change transition risks outside of our operations and develop an informed approach to value chain decarbonisation.

Estimating emissions from activities under the operational control of others can be challenging in practice. Typically, limited information has been available on critical parameters such as fuel inputs, processing technologies and other essential operating inputs. There are also complexities in how emissions should be tracked and apportioned to different companies in a shared activity (sometimes referred to as carbon or emissions traceability). Improvements in both accuracy and traceability are necessary to evaluate results of Scope 3 emissions reduction activities at a number of levels, including individual organisations, sectoral initiatives, and global decarbonisation efforts.

We recognise that our customers want to understand the emissions associated with our sold products as one input into their GHG inventories and value chain decarbonisation plans. We continue to work on chain of custody requirements through product stewardship initiatives and are actively exploring options to participate in life cycle assessments to improve Scope 3 emissions calculation methodologies for our key products.

Industry groups

In 2022, Mozal Aluminium achieved ASI Performance Standard Certification (Provisional). ASI certification supports the responsible production, sourcing and stewardship of aluminium across the value chain, and Performance Standard Certification demonstrates that a facility's production practices are consistent with ASI's ESG criteria. ASI certification supports sales of our products to customers in the European Union. The standard includes a number of requirements linked to GHG emissions, including:

- Disclosure of independently verified energy and emissions data;
- Limits on emissions intensity for current operations and at future milestone years (2025 and 2030); and
- Establish and regularly review a publicly disclosed GHG emissions reduction plan.

We are also considering certification for our broader aluminium supply chain against the new ASI Performance Standard which was released in May 2022.

South32 joined ResponsibleSteel in July 2021 to support the development of pathways for the sustainable production and use of steel, including value chain emissions. ResponsibleSteel developed the steel industry's first global standard and certification initiative, to promote responsible sourcing and production of steel. During FY22, we provided input into the drafting of the revised ResponsibleSteel Standard alongside other commodity producers and steel makers, which includes responsible sourcing and GHG emissions requirements for site and steel certification.

Addressing GHG emissions associated with shipping of our raw materials and products

In FY22, we signed a contract of affreightment with Klaveness Combination Carriers (KCC) to develop and implement a carbon emissions adjustment factor mechanism from January 2023. The actual speed of a vessel is partly impacted by scheduling and customer requirements as well as KCC's speed optimisation preferences, which are determined by market earnings and fuel prices. The mechanism is used to adjust the freight rate per metric tonne upwards or downwards depending on actual emissions performance versus an agreed baseline. In doing so, KCC is able to implement operational and energy efficiency measures in the short-term to reduce emissions, enabling us to address GHG emissions associated with shipping caustic soda to our Worsley Alumina operation.

We also partnered with ZeroLab, a subsidiary of Klaveness, on a project to create a baseline and identify potential GHG emissions reduction opportunities. We created an interactive web-based dashboard that allows us to monitor GHG emissions associated with shipping raw materials (upstream value chain) and products (downstream value chain). The dashboard indicated that 85 per cent of GHG emissions associated with shipping activity in the downstream value chain are attributable to trades of manganese ore, alumina and metallurgical coal. In FY23 we will develop a baseline against which we can evaluate our progress in addressing shipping emissions and implement a continuous monitoring program.

Physical climate risks

Physical climate risks are driven or intensified by weather, climate variability or climate change. They include acute risks, resulting from increased frequency or severity of extreme weather events (e.g., drought or flood events) and chronic risks, resulting from longer-term changes in climate patterns (e.g., sustained higher temperatures, sea level rise).

Left unmanaged, physical climate risks may impact on the integrity and performance of our equipment and infrastructure, compromise productivity, and disrupt business continuity (including our supply chain activities). Financial implications could include asset impairments, increased maintenance costs and the impacts of supply chain disruption. Financial performance could also be affected by changes in water availability, food security, and extreme temperature changes impacting operations, supply chains, and employee health and wellbeing.

While physical climate risks may impact on our business directly, there are also broader environmental and socio-economic impacts on key stakeholders including local communities. Our assessment and management approach considers the potential vulnerabilities of surrounding communities, ecosystems, key suppliers and customers across the value chain.

Designing an assessment methodology

We published our first round of assessments of the physical risks of climate change across our operated assets in 2018 and 2019. Key outcomes were integrated into our strategic and operational planning, which informed infrastructure investments such as the construction of a pipeline from Wellington Dam to the Worsley Alumina refinery to improve the reliability of water supply, and installing desalination plants at our Hillside Aluminium and Mozal Aluminium smelters to mitigate potential water shortages.

In FY22, we revisited these assessments across our operated portfolio with a focus on:

- Integration of the latest climate data projections in our key areas of operation, under a range of emission scenarios;
- Incorporation of physical climate risk assessment methodologies developed across industry since 2019;
- Improved integration with existing business frameworks, to incorporate physical climate risk assessment, mitigation and adaptation planning into core business processes instead of as a periodic standalone activity; and
- Consideration of how the financial impacts associated with management of the physical risks of climate change may be meaningfully captured.

We worked with independent experts to design an assessment methodology that focused on identification and prioritisation of risk areas to inform both adaptation options and, over time, evaluation of potential financial impact. The methodology was informed by our existing business frameworks and procedures, and incorporated a mapping exercise to link identified risks to our strategic risks.

The assessment began with a review of the existing risk registers for each of our operated assets which identified existing risks that may be amplified by climate change, for example by altering the frequency of occurrence, severity of consequence and/or spatial distribution of a particular risk. New or more specific risks driven by climate change that were not already captured on the existing risk registers were identified and added. Both desktop analysis and interactive site workshops were used to explore these concepts, enabling an understanding of the incremental effects of climate change on each operation's risk profile.

Selection of climate models and parameters

Climate projections used for our FY22 assessment were sourced from a range of local and international data sources. For all locations, data from the Coupled Model Intercomparison Project 5 (CMIP5) was used, as it has widespread availability in a regional downscaled format.

Further information on the data sources used to develop our climate projections are detailed in our 2022 Sustainability Databook at *www.south32.net*

The data from CMIP5 assumes future climate changes in line with the IPCC RCPs, which project the effect of human activities on GHG concentrations in the atmosphere and subsequent radiative forcing by the year 2100. The data was assessed under RCP4.5 and RCP8.5[24] to provide a robust understanding of the potential scale of impacts, and subsequent mitigation and adaptative controls which may be required. RCP8.5 goes beyond our base case assumption of at least 2°C of warming, and assumes more severe physical impacts. When considering the resilience of critical infrastructure and requisite adaption planning, it is necessary to consider more severe impacts in line with the precautionary principle. There is relatively little divergence between the outputs from climate model simulations driven by different RCPs until after 2050, so RCP8.5-based climate scenarios do not provide notably different analyses on climate risks over planning timescales of 20-30 years.

The assessment highlighted the most significant climate parameters for each region. From this raw data, climate hazards[25] of concern were identified and a climate hazard assessment conducted. Hazards were categorised as acute or chronic risks, a timescale of when the hazard may manifest was provided, and impacts on assets, operations, supply chain logistics and safety of workers were identified.

Data and analysis will continue to be updated as new resources and techniques emerge. Findings from the recently released IPCC 6th Assessment Report (AR6) have informed qualitative projections for each site. Although AR6 made regional observations, the model that underpins AR6 and CMIP6 is currently only available at the global level, but once it becomes available at the regional level it will be incorporated into the data sources and our projections will be updated.

(24) Developed in 2007 and used in the IPCC's 5th Assessment Report. There are four RCPs representing possible future GHG emissions and concentration scenarios: RCP8.5, RCP6.0, RCP4.5 and RCP2.6. Each RCP defines a specific emissions trajectory and subsequent 'radiative forcing'. 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. (*https://www.ipcc.ch/site/assets/uploads/2018/02/WG1AR5_Chapter12_FINAL.pdf*)

(25) According to the IPCC, climate risk results from the interaction of hazard, exposure and vulnerability. Hazard refers to the potential occurrence of climate-related physical events or trends that may cause damage and loss.

Selection of time horizons

Climate data projections used in our assessment were developed for 2030, 2050, and 2090. The 2030 and 2050 projections provide climate data for use in our operations and business planning. For physical risk beyond 2050, we maintain an RCP8.5 resilience scenario for consideration of sea-level rise. The 2090 projections provide an indication of the trajectory of emissions and warming potential expected over the long-term.

Climate hazards of concern were identified for each of our operations based on 2050 climate projections. Levels of confidence in that identification differed depending on the availability of data and the number and range of assumptions required. The assessment considered potential impacts on assets, operations, supply chain logistics and safety of workers, arising from acute risks (rainfall, drought, storms, flood risk, fire weather) and chronic risks (temperature, sea level rise). The climate hazard assessment informed our risk reviews across our operations.

Changes in climate hazard context by asset

	Temperature	Rainfall	Drought	Storms	Flood risk	Fire weather	Sea level rise
Cannington	●	○	○	○	●	●	●
Groote Eylandt Mining Company	●	○	○	○	●	○	●
Illawarra Metallurgical Coal	●	○	○	●	●	●	●
Worsley Alumina	●	●	●	○	○	●	●
Hermosa	●	●	●	○	○	●	●
Mozal Aluminium	●	●	●	●	●	●	●
South Africa Manganese	●	○	●	●	●	●	●
Hillside Aluminium	●	●	●	●	●	●	●
Cerro Matoso	●	○	○	●	●	●	●

● Likely noticeable change to the projected magnitude and/or frequency of the climate hazard, with a high level of confidence

○ Possible noticeable change to the projected magnitude and/or frequency of the climate hazard, with a moderate level of confidence

Note: Graphic applies climate projections developed for 2050 under the RCP8.5 scenario.

Outcomes and next steps

Using the assessment methodology described on page 93, approximately 1,000 risks were reviewed across our operations. Of these, approximately 220 were assessed to have an additional cause relating to physical climate risk, or an increase in the likelihood or impact of the event. Further work is planned to implement additional controls (such as the development of adaptation pathways) that address the additional causes for these risks, and to reduce the impact or likelihood of the risk event occurring.

This work will aim to further embed the consideration of physical climate risks into our business frameworks and processes, and support future reporting on material physical climate risk, our management responses and the potential financial impacts.

The high-level themes that emerged across our operations from our physical climate risk assessments are described in the table below.

High level outcomes of physical risk assessment

 **Land and terrain**	Closure is a primary area of potential physical impacts from climate change for our business, due to impacts on closure likely to be more significant for long-horizon assets that are forecasted to close after 2050.
 **Physical assets and structures**	Design of existing assets may be inadequate to cope with projected climate extremes, and mitigation or adaptation may be required.
 **Water**	Climate change is likely to exacerbate the risks to water supply, storage and usage that we currently manage. Operations in areas of water scarcity may be particularly exposed, and increased severity of extreme rainfall events may increase risk of overtopping of storage facilities.
 **Transport routes**	Climate change may increase risks to our logistics and supply chains across most of our operations, particularly at single points of failure.

In addition to updating our risk registers and undertaking deep dive reviews of material risks where appropriate, we are planning to also focus on network risk, closure and supply chain in FY23.

More resilient logistics chains support reliability of production and supply, but existing non-material risks become material when considered in a networked scenario. To consider the effect of networked risks, we intend to undertake physical risk assessments across our logistics chains for specific sites, to stress-test critical components of our logistics chains against extreme weather scenarios. For example, rail, road, conveyors and port outages at our Worsley Alumina operation are currently assessed independently but, should acute climate impacts manifest across the network simultaneously, operational continuity risk may become material.

We intend to review our governance frameworks to validate that our closure management practices adequately capture and address long-term climate effects. The impacts of climate change are projected to manifest generally over the same timeframes as the estimated closure date of many of our operations. Closure risks and climate change are projected to manifest slowly across our operations yet may carry high costs to our communities and stakeholders. Longer term assets are likely to face more significant challenges and rehabilitation costs given the effects of climate change on ecosystems and biodiversity.

We also intend to undertake an assessment of our critical suppliers, key supply routes and supply chain interdependencies to better understand and improve low points of resilience in the value chain. For example, Mozal Aluminium and Hillside Aluminium rely on Worsley Alumina's export capacity for their production. This means there is a critical interdependency between operational continuity at Worsley Alumina, production at our aluminium smelters and the stability of the supply chain connecting them.

Good governance is essential to the way we work – to our actions, decisions, communications and behaviours.

Our Board continues to acknowledge the unique relationship between resource companies and the communities in which they operate, and the standards and expectations of our Company to act lawfully, ethically and responsibly.

Read more about **our approach to corporate governance** at www.south32.net/who-we-are/risk-governance

Climate change governance

Board oversight

Climate change is a material strategic and governance issue that is overseen by our Board, with the support of its standing Committees. The Board considers that integration of climate change mitigation and adaptation into our strategy is integral and oversees this integration together with the appropriate management of relevant risks and opportunities. Our Board is responsible for our strategy and also approves the Group's overall climate change approach, policy positions and this Plan.

In April 2022, our Board participated in our annual CEO-led strategy day and discussed our strategy and vision for the future. Key themes included our response to climate change and other critical environmental, social and governance (ESG) issues, and how we address them by delivering on our strategy.

Climate change is routinely discussed in Board and Committee meetings and has been integral to our strategy since our establishment in 2015. It is a key consideration in strategy, annual budget, capital allocation, statutory disclosure and investment decision making and it is recognised and managed as a strategic risk. During FY22 Board and Committee meetings, discussions continued to focus on climate change risk management in the context of our strategy. An update to our Sustainability Policy was approved in FY22 with amendments made to reflect, amongst other things, evolving societal and shareholder expectations on ESG issues. The Sustainability Committee's Terms of Reference were also updated to include specificity on delivery against climate change related targets and objectives.

Climate change expertise

The composition of our Board seeks to bring together Directors with an appropriate range of skills, expertise and experiences from a diverse range of backgrounds necessary for the Board to discharge its role and responsibilities effectively given our purpose, strategy, size, operations and geographic footprint. This includes collective skills to address existing and emerging business and governance issues relevant to the Group including a fluency in the implications of climate change.

In FY22, the annual skills evaluation of the Board involved individual Director self-assessments, along with an external assessment of each Director's competencies. This information was then used to populate the Board skills matrix. The FY22 evaluation found that the majority of our Board members are either highly skilled or skilled in the environment and climate change competency in the South32 Board skills matrix.

Our Board members are also experienced in a number of other areas including mining and metals, commodity value chain, strategy, finance, risk management and regulatory and legal compliance, all of which are relevant to understanding the potential implications of climate change on our business and associated risks and opportunities.

Further details of the qualifications, skills and experience of our Directors are set out on pages 64 to 71 of our 2022 Annual Report and the Board skills matrix is on pages 10 to 12 of our 2022 Corporate Governance Statement, available at *www.south32.net*

Our Directors supplement their climate change experience and knowledge with quarterly updates from management on developments in climate-related physical, economic transition and liability issues. From FY23, these updates will be provided at every Sustainability Committee meeting. There is also an annual briefing facilitated by independent experts addressing emerging climate change issues and related societal expectations and trends. This equips our Directors with the insights to consider potential implications of climate change on the Company's strategy and our operations, the systemic risk and potential impacts on our portfolio, as well as the regulatory, policy and societal developments in the area.

Board committees

Board-led standing committees guide Directors in oversight and approval of our emissions reduction targets and goals, climate change risks and potential impacts on operations, remuneration considerations and disclosures.

The role of the Sustainability Committee is to assist the Board by overseeing the sustainability management, performance, assurance and reporting practices of the Group. The Committee receives regular reports from management on climate change progress, and updates from internal and external experts about developments in climate science, policy, regulation and technology. Our Board, together with the Sustainability Committee will oversee management's implementation and further development of this Plan, the development of subsequent Plans, and our progress in meeting our commitments.

The Risk and Audit Committee assists the Board in overseeing the corporate reporting, risk management and assurance practices of the Group, and has oversight of the Group's risk management framework. Our climate change and environment strategic risk, and its associated key risk indicators and management responses, are monitored and evaluated twice a year.

In addition, the Risk and Audit Committee discusses the approach to inclusion and integration of climate-related disclosures in financial reporting, with input from the external auditor.

The Remuneration Committee assists the Board to oversee the Group's remuneration policy and has responsibility for gaining assurance that our remuneration and benefits framework is aligned to the long-term interests of our shareholders, operates within our risk appetite and supports our purpose, strategy and values. The Remuneration Committee also makes recommendations to the Board on the annual business scorecard and associated outcomes, the remuneration outcomes for the CEO and approves the remuneration outcomes for the Lead Team taking into consideration any recommendations from the Sustainability Committee and Risk and Audit Committee.

The Nomination and Governance Committee assists the Board in periodically reviewing the composition of the Board to determine whether it remains appropriate for the Group's purpose and strategy and whether the Board possesses the skills needed to address existing and emerging business and governance issues relevant to the Group.

In 2022, the Nomination and Governance Committee approved revisions to the skills descriptions and their relevance to South32 in the Board skills matrix. In addition to changes to the environment and climate change skill, climate change and other ESG considerations were integrated into relevant skills (such as strategy, commodity value chain and risk management) to align with our governance documents and societal and stakeholder expectations of our Board.

Our Board receives reports from each of the Committees, which it uses as input into the discharge of its responsibilities and reserved functions in relation to our strategy, budget, allocation of capital, corporate development decisions, risk oversight and statutory disclosures.

Executive and Management

Our CEO, together with our Lead Team, is accountable for execution of our approach to climate change in accordance with their delegated authority. Lead Team performance is assessed through a range of measures including with respect to climate change (see below for more information). The Legal and External Affairs team advises the Lead Team on climate change and provides regular updates on our progress against our plans. The Lead Team may also seek additional advice from external climate change advisers on particular subjects.

Stakeholder engagement on climate change

Engagement is an integral part of our purpose – we are trusted by our owners and partners to realise the potential of their resources. Through our stakeholder engagements we benefit from the insights and feedback provided on our approach to climate change and our performance.

Our Board and management regularly engage with shareholders, investors and proxy advisers for feedback, with climate change a key topic of discussion. Board engagement takes place at our Annual General Meeting and through Director-led engagements throughout the year with investors and proxy advisers.

Management engagements include two financial results roadshows each year, investor briefings and investor one-on-one meetings throughout the year. Feedback from these stakeholde engagements is shared with all members of our Lead Team and Board.

In FY22, we provided a Strategy Briefing led by our CEO and our first Sustainability Briefing, jointly led by our Chair and CEO, with other Lead Team members also participating. Both briefings were attended by investors and other stakeholders. They provided an update on our approach to climate change, its integration with our strategy and the potential demand outlook for our commodities in a 1.5°C scenario.

Since the inclusion of South32 in the Climate Action 100+ (CA100+) list of focus companies, we have had regular and productive engagement with our lead investor at CA100+, HESTA. We also regularly engage with the broader CA100+ group, including supporting investors and investor networks. We have actively participated in the CA100+ Net Zero Company Benchmark (NZCB) assessment process of South32 and this benchmark has guided the disclosures in this Plan. More recently, we participated in the CA100+ NZCB diversified miners dialogue, which aims to develop a benchmarking approach that is suitable for the diversified mining sector.

Learn more about **our response to the CA100+NZCB** in our 2022 Sustainability Databook at www.south32.net

Other investor networks and initiatives we regularly engage with include the Investor Group on Climate Change, the Institutional Investors Group on Climate Change, the Science Based Targets initiative, Market Forces, the Australasian Centre for Corporate Responsibility and the Australian Shareholders' Association. Management also engages with industry associations to promote greater transparency of their climate change positions and enable more effective advocacy, knowledge sharing and on-ground action.

Advocacy and our climate change positions

Our approach is underpinned by our positions on key climate change matters. These positions inform our decision making, support our external engagement with stakeholders and guide our contributions to public inquiries either directly or indirectly through our industry associations.

Our current climate change positions are outlined below. We will continue to review these positions as may be necessary to reflect updates in our Sustainability Policy.

We support:

- The Paris Agreement objectives to limit global temperature rise to well below 2°C this century, and to pursue efforts to limit the increase to 1.5°C. We will regularly review our approach in the context of the UNFCCC actions, credible sources of climate science and emerging regulation;
- Principle-based carbon price mechanisms that promote least-cost abatement, collaboration and international transfers, that align with rules determined under Article 6 of the Paris Agreement. There should be bi-partisan policy linking to the Paris Agreement objectives, and flexibility in carbon market design during a transition period to accommodate sector- and country-specific challenges;
- Technology-neutral energy policy that balances affordable access to reliable energy and emissions reduction, and technology-banded policy or subsidies to accelerate technology deployment; and
- Collaboration across the value chain to strengthen product stewardship, encourage innovation and reduce emissions.

Industry associations

Participation in industry associations is an important avenue to engage and influence matters affecting South32, which complements our own activity to advocate for or seek to influence policy on issues consistent with our purpose and strategy, including climate change. Membership offers opportunities to understand and contribute to industry best practice and contribute to knowledge sharing.

We regularly engage with industry associations to promote greater transparency on our respective climate change positions to improve alignment, and contribute to knowledge sharing, proactive advocacy, and tangible action. *Our Approach to Industry Associations*, outlines how we govern this important area. The approach includes:

- A requirement that an industry association's purpose and policy positions are aligned with our own;
- The process we follow where a material policy difference or misalignment exists;
- Principles and procedures that guide our involvement; and
- A list of our material industry association memberships.

Read **Our Approach to Industry Associations** at www.south32.net/who-we-are/our-approach/industry-associations

We recognise that there is significant stakeholder interest in the advocacy and policy positions of industry associations. Industry associations are by nature representative of similar member interests, but often from varied backgrounds and perspectives, so consensus on all issues is not always possible. We believe healthy debate and discussion can often lead to better industry outcomes. We prefer to advocate for climate action within an industry association, but will consider, on balance, whether any identified inconsistencies are sufficiently material to instigate action such as membership termination.

Our material industry association memberships are available on our website, including a reference to the fee band applicable.

In FY22, we joined the Minerals Council of Australia (MCA), the peak body for minerals producing companies in Australia. Our membership is driven primarily by adding value to the business, consistent with our purpose and our contribution to the industry. The MCA's policy positions and recent advocacy taken on climate change, including support for the Paris Agreement objectives, were key considerations in taking up membership.

Since 2019, we have undertaken an annual review of our member industry associations' policies on climate change and published our findings in our sustainability disclosures. At our 2021 Annual General Meeting, we committed to strengthening this review. Our latest review of industry associations found no material misalignments on climate change policy or advocacy.

Reflecting the increased focus on climate change by industry associations, many of the associations we are a member of either released or revised new climate change positions in FY22. Where practical, we actively participated in their development. We believe we have an important role to play in contributing to and formulating industry-wide positions that inform advocacy priorities.

We do not support direct advocacy from our industry association memberships on energy coal expansion or energy coal subsidies, particularly in the absence of an associated position on technology development, to remain consistent with the Paris Agreement. However, we note that many of the industry associations we are a member of contain broad commodity representation, including energy coal producers, which can occasionally create differing views. Where advocacy for energy coal is undertaken, we manage potential misalignment consistent with *Our Approach to Industry Associations*, but on balance found no material instances in this year's review.

Learn more about **our FY22 review of industry associations** in our 2022 Sustainability Databook at www.south32.net

Climate Change Action Plan Resolution

A non-binding advisory 'Climate Change Action Plan' resolution will be included in our 2022 Notice of Annual General Meeting. While the vote on the resolution is non-binding and the Board retains ultimate responsibility for our strategy, it provides shareholders with an opportunity to discuss and provide feedback on the Company's approach to climate change. We will engage with shareholders to understand the outcome of the vote and the Board will take the outcome of the resolution and feedback from shareholders into consideration when determining the Company's approach to climate change going forward.

To provide transparency to shareholders, we will continue to report our progress on climate change annually in line with the TCFD recommendations. We remain committed to regular stakeholder engagement on our approach to climate change and the progress we are making. Annual updates will be provided in our Sustainable Development Report, and we will also publish data on our performance on our website.

It is proposed that we will prepare an updated Climate Change Action Plan at least every three years which will be submitted to Shareholders for a non-binding advisory vote. We will consider seeking an advisory vote prior to then if significant changes are made to the Plan.

Executive remuneration

We hold our Lead Team accountable for aligning our business practices with our climate change commitments. Our executive remuneration is directly linked to our performance on climate change and the transition of our portfolio towards the metals critical for a low-carbon world.

Long-Term Incentive (LTI)

Our executive remuneration framework reinforces our focus on climate change through strategic measures included in our executive LTI from FY22. Ten per cent of our FY22 LTI award (granted in December 2021) is contingent on performance against a set of climate change measures and ten per cent is contingent on performance of the transition of our portfolio towards base metals required for a low-carbon world. Our performance against these measures will be assessed by the Board at the end of the performance period and the outcome, with the Board's rationale, will be disclosed in the Remuneration report.

Linking our performance on climate change to LTIs is aligned with the timeframe for the delivery of our decarbonisation, energy transition and just transition programs that support achievement of our GHG emissions reduction commitments. Our remuneration outcomes are intended to reflect the achievement of significant milestones and long-term value protection and creation.

FY22 Business Scorecard outcome

The annual Business Scorecard, together with individual performance assessments and any applicable Business Modifier, determines the short-term incentive (STI) payments made to our CEO, Lead Team and Senior Leadership Team, including operational leaders.

We track our sustainability performance (primarily focusing on health, safety, community, and, from FY23, water performance) and our "Next Generation Mine" innovation missions' performance in the annual Business Scorecard using performance measures that are approved by our Board.

The Business Modifier considers overall business outcomes or other factors that are not specifically contemplated in the Business Scorecard, such as fatalities, significant safety events or environmental events. The Business Modifier, which is based on Board discretion, ensures that STI outcomes reflect overall performance, including both what has been achieved and how it has been achieved.

Climate change risk management

Climate change, and the social and economic responses to it, pose risks to our portfolio, physical assets and people, as well as the infrastructure, markets, communities and environment on which we rely.

Climate-related risks are managed at both the company-wide strategic level and the local level for operations, functions and projects. We regularly assess these dynamic risks through a framework that considers policy, market and physical factors.

We use scenario analysis to stress-test the potential impacts of climate change on our business and to inform stakeholders about potential threats and opportunities.

Risk management framework

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, which has been in place since 2015. The framework is 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. This approach applies to all employees, Directors and contractors.

We report real-time risk data through our risk management tool, Global360, which connects data relating to the management of our risks, events, hazards and assurance actions. Reliable data on material risks contributes towards the monitoring and management of our strategic risks, providing insight into trends and emerging themes that can trigger a review of our business plans or inform a change in strategic direction.

The effective management of our material and strategic risks is routinely assessed by our Lead Team. These risks are reviewed by the Risk and Audit Committee and the Sustainability Committee, which assist the Board to carry out its role of overseeing our risk management and assurance practices.

Potential climate change impacts on our strategic risks

Climate change and environment is a strategic risk for South32. We assess our resilience to both the potential physical impacts of climate change and the impacts of the transition to a low-carbon economy, using an approach aligned with TCFD recommendations.

The complex and pervasive nature of climate change means that climate-related risks and opportunities are reflected across our risk profile. The potentially significant impacts of climate change on our strategic risks are outlined in the table below.

Learn more about **risk management at South32** in our FY22 Annual Report at www.south32.net

Potential climate change impacts on strategic risks

South32's strategic risk	Impact type, risks and opportunities	Our management response
Climate change and environment	Climate change and our response, as well as that of our markets and broader society, presents both threats and opportunities to our portfolio (i.e. demand for our commodities, costs and profit margins, our societal value contribution, regulatory exposure), our people, physical assets, infrastructure, value chain and surrounding communities and ecosystems.	Our response is outlined in this Plan, our Sustainable Development Report and Annual Report. We support the objectives of the Paris Agreement and have set a medium-term operational GHG emissions reduction target of 50 per cent by 2035 from a FY21 baseline, and a goal of net zero operational GHG emissions by 2050. We identify, assess and manage physical climate risks through our risk management framework, as outlined in this Plan. We are actively shifting our portfolio towards those commodities that will be required in a low-carbon future (with a bias to base metals) as indicated by our scenario analysis, which included our 1.5°C scenario. We engage regularly with stakeholders and are transparent in our disclosure of our climate change approach and performance in accordance with the TCFD.
Ensuring that our people go home safe and well	The potential impacts of the physical risks of climate change could impact the safety or health of our people. Scientific evidence is increasingly indicating that anthropogenic GHG emissions are contributing to making certain weather events more frequent and/or more severe, with frequency and severity of these events projected to increase as concentrations of atmospheric GHG increase. Longer-term changes in climate patterns (typically referred to as chronic physical climate risks) such as increased average temperatures also pose a potential health and safety risk.	We conduct physical climate risk assessments across our operated portfolio against projected changes in climate under a range of emissions scenarios. Identified physical climate risks are managed in accordance with our risk management framework. Our safety system of work guides our operations and projects, so the health and safety risks of our people are managed appropriately through detailed planning and execution following risk assessment.

Climate change risk management continued

South32's strategic risk	Impact type, risks and opportunities	Our management response
Actions by government, tax authorities and political risks	Carbon pricing, emissions caps, and other actions by governments have the potential to increase the cost of operating. Changes to environment and planning, licensing, permitting or approval regimes, or their application, may impact on our ability to develop or expand operations. Policy or regulatory actions aimed at reducing GHG emissions also have the potential to positively or negatively impact our competitiveness, or our ability to trade in certain markets. Policy change may also affect the demand dynamics for some of our commodities, such as metallurgical coal and aluminium. Rapid changes in regulation or adoption of inconsistent policies across global markets may limit our capacity to prepare for a transition.	We assess policy risks in our portfolio resilience assessments using scenario analysis. We aim to manage this uncertainty through engagement with key stakeholders and industry associations, monitoring of political activity, policy, legislative and regulatory changes, and by accessing subject matter experts. We annually review changes in carbon pricing policy and how it may affect us. This includes progress against the Paris Agreement objectives, including just transition measures, and government policy and regulation. We prioritise an investment grade credit rating and a disciplined approach to allocating capital, which keeps our balance sheet strong, providing us with financial flexibility.
Portfolio reshaping	Changing demand for our commodities, changes to trade flows, climate policies, societal expectations and developments in technology have the potential to impact costs, revenues and profit margins. For emissions- intensive commodities and operations this may result in stranded asset exposures, and/or impact on our ability to continue to access competitive capital and insurance. For future-facing commodities and high quality products, new opportunities may emerge.	We are actively shifting our portfolio towards those commodities that will be required in a low-carbon future (with a bias to base metals). Our scenario analysis and forecasts consider a broad range of supply and demand outcomes, stakeholder expectations, technology developments, evolving climate policies and regulations.
Major events or natural catastrophes	The projected increase in the frequency and intensity of extreme weather events, and gradual onset impacts such as increases in average temperatures and changing precipitation patterns, present risks to the resilience of our operations, and the infrastructure, ecosystems and communities on which we rely. This may impact on our supply chains, communities, access to key operational inputs (e.g. water), access to new ore bodies, business continuity and distribution to market, while incurring additional costs to maintain, adapt, repair or replace our assets and infrastructure.	We utilise climate modelling data to conduct physical climate risk assessments of our operations and major projects. 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, protecting the health and safety of people and the communities in which we operate.
Predictable operational performance	We run established processing facilities and mine geologically bound ore bodies, connected by rail, road, ports and sea. These may experience production and logistics delays because of extreme weather and/or operating conditions outside plant and equipment design envelopes. Droughts, heat extremes or unseasonal weather variability could also create water stress or contribute to worker ill-health and the spread of disease in our workforce or surrounding communities. The potential impacts of the physical risks of climate change may increase rehabilitation and/or closure liabilities. Our exposure to physical climate risks may also impact the terms or availability of finance or insurance.	We use scenario analysis to assess how climate change may act as an additional stressor on existing operational risk profiles (e.g., by alternating the frequency of occurrence, severity of occurrence, severity of consequence or spatial distribution of risk) and/or create new risks. We are using the outcomes to improve business continuity planning, operational resilience and to better understand potential adaptation pathways. We use the World Resources Institute's Aqueduct Tool to screen our operations for water scarcity and oversupply risks and we seek to proactively manage or adapt accordingly. Each of our operations has a closure plan in place, which includes a risk assessment. These plans are reviewed as required by our standards, and where changes in circumstances demand.

South32's strategic risk	Impact type, risks and opportunities	Our management response
Maintain competitiveness through innovation and technology	Technology and innovation will play an important role in the transition to a low-carbon future and achieving net zero emissions. New technologies may create substitutes, change demand for our products, and enable us to provide new products to meet changing customer demands. We may experience challenges adopting new technologies necessary to support our emissions reduction targets into our existing systems or be limited in our ability to rapidly adopt those technologies due to obligations under prevailing contracts. The cost and unproven nature of new technology could reduce our productivity and profit margins. Efficiencies or innovative products enabled by new technologies could increase productivity and profit margins.	Our scenario analysis considers potential new technology impacts on our operations and commodities. Our assumptions under these scenarios are updated every two years. We use these insights in our strategic planning. We apply an integrated approach to evaluate the suitability of innovation and technology, which considers productivity, cost, safety and our environmental and social footprint. Our innovation process considers climate change when setting our priorities including for our 'low footprint; and 'next generation mine' innovation missions. We maximise our success in realising the benefits of new technologies by partnering and collaborating with a range of organisations developing the solutions to reduce emissions across our industry, such as CSIRO, the Electric Mine Consortium, HILT CRC and LDESC. Some future technologies have the potential to transform the industry, e.g. inert anodes in the aluminum industry. We continue to monitor these emerging technologies with the potential to significantly reduce our carbon footprint.
Security of supply of logistics chains, and critical goods and services	Stakeholders across our supply chain may experience similar changes in policy to those outlined above, and we may face changing regulatory requirements in jurisdictions outside of our own operating environments. The potential impacts of the physical risks of climate change may result in supply chain impacts or logistics delays. Costs associated with this may be passed on from an upstream perspective, but also may have a downstream impact on the relative competitiveness and demand for some of our commodities and/or operating margins.	Our scenario analysis incorporates potential policy-based impacts on our supply chain to test resilience of our portfolio to these climate transition risks. Our assumptions under these scenarios are updated every two years. We use the insights we gain from this analysis in our strategic planning. Our approach to physical risk emphasises resilience of systems and networks across our operations. In FY23, we will assess vulnerabilities in our operational networks to improve production continuity. We calculate and disclose Scope 3 GHG emissions annually to identify the scale and sources of supply chain emissions and evaluate the potential corresponding climate transition risks. We have established a carbon markets team to enable cost-effective engagement in regulatory and voluntary carbon markets.
Evolving societal expectations	Shareholders (including activist groups) and other stakeholders are increasingly focused on the credibility and effectiveness of companies' climate change plans, disclosures, risk management and the activities of their industry associations. If we do not set and implement effective plans to address and disclose our climate-related risks, our credibility and reputation with a range of stakeholders may suffer. Failure to manage the above risks may increase our legal exposures, while limiting our ability to access capital and insurances, retain and attract employees and grow our business in existing and new jurisdictions. The actions we take to reduce our operational GHG emissions, may have economic or social impacts on surrounding communities or businesses. Climate change can introduce social risks, such as conflict over access to natural resources such as water in periods of prolonged drought. Our operations in regions with poorly developed social support systems could be more vulnerable to the potential impacts of the physical risks of climate change. This may lead to decreased food and water security and create a challenging operating environment.	To understand evolving expectations and communicate our progress, we prioritise regular and open dialogue with our shareholders, proxy advisers, civil society groups, investor representative bodies and other stakeholders on climate change and broader ESG issues. We provide comprehensive, transparent information to stakeholders on our climate change position, policies, risks and management actions. We were early adopters of the TCFD Framework and have integrated this approach into our business processes. We assess and monitor the climate change and energy positions of our industry associations to test alignment with our own positions. We closely monitor legal developments and litigation trends and seek advice on major developments when necessary. This information is integrated into our climate-related risk assessments, management and disclosures. We assess potential climate change risks and impacts both to our operations and to our communities. Where transition decisions may impact the resilience and continued prosperity of our communities, we will seek to partner with them and others to manage those impacts. We seek to maximise the potential benefit to communities in assessing options for reducing emissions or improving resilience at our operations. We make contributions to development programs to help communities build resilience to the impacts of climate change.

Glossary of terms and abbreviations

Climate Change terms

Aluminium Stewardship Initiative (ASI)
The ASI works together with producers, users and stakeholders in the aluminium value chain to collaboratively foster responsible production, sourcing and stewardship of aluminium.

Carbon credit
A transferrable instrument representing an emission reduction of one metric tonne of carbon dioxide, or an equivalent amount of other GHGs, that has been created and verified in accordance with a regulatory program in which they can be used towards compliance with a legal obligation to limit emissions.

Carbon offset
An action that avoids, reduces or removes GHG emissions to compensate for emissions that occur elsewhere.

CCAP
Climate Change Action Plan.

CO_2-e
Carbon dioxide equivalent.

Decarbonisation
Avoiding or reducing the greenhouse gas emissions associated with an activity.

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.

Fugitive emissions
Greenhouse gases that are released to the atmosphere from underground coal seams during mining activities.

Goal
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 (CH_4), nitrous oxide (N_2O), perfluorocarbons (PFCs) and sulphur hexafluoride (SF_6). They are measured in carbon dioxide equivalent (CO_2-e). Hydrofluorocarbons (HFCs) GHG emissions are currently not relevant for our reporting purposes.

Intergovernmental Panel on Climate Change (IPCC)
The IPCC is the international body for assessing the science related to climate change. The IPCC was set up in 1988 by the World Meteorological Organization (WMO) and United Nations Environment Program (UNEP) to provide policymakers with regular assessments of the scientific basis of climate change, its impacts and future risks, and options for adaptation and mitigation.

Just transition
A fair, equitable and inclusive social transition towards a low-carbon economy.

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
For the purposes of this Report, we define 'low-carbon aluminium' as 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.

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.

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.

Operational GHG emissions
Scope 1 and 2 GHG emissions from our operated assets.

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.

Physical climate risk
Physical climate risks are driven or intensified by weather, climate variability or climate change. They include acute risks, resulting from increased frequency or severity of extreme weather events (e.g., drought or flood events) and chronic risks, resulting from longer-term changes in climate patterns (e.g., sustained higher temperatures, sea level rise).

ResponsibleSteel
ResponsibleSteel is a not-for-profit organisation and the steel industry's first global multi-stakeholder standard and certification initiative.

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.

South West Interconnected System
The electricity grid in the south-west part of Western Australia comprising transmission, owned by the Western Australian Government, and electricity generators. It is not connected to other large Australian grids.

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.

Task Force on Climate-Related Financial Disclosures (TCFD)
In 2017, the TCFD released climate-related financial disclosure recommendations designed to help companies provide better information to support informed capital allocation.

Transitional climate risks
Non-physical risks arising from changes to policy, technology, legal and markets as the world moves to a low-carbon energy system, in line with the Paris Agreement objectives.

United Nations Framework Convention on Climate Change (UNFCCC)
The UNFCCC is the United Nations entity tasked with supporting the global response to the threat of climate change.

VAM
Ventilation Air Methane.

Mining related terms

Alumina
Aluminium oxide (Al_2O_3). Alumina is produced from bauxite in the Bayer refining process. It is then converted (reduced) in an electrolysis cell to produce aluminium metal.

Bauxite
Principal commercial ore of aluminium.

Brownfield
An exploration or development project located within an existing mineral province, which can share infrastructure and management with an existing operation.

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.

Greenfield
An exploration or development project that refers to a new venture or operation, without any association or proximity to a current operation.

Tailings
Those portions of washed or milled ore that are too poor to be treated further or remain after the required metals and minerals have been extracted.

TSF
Tailings Storage Facility.

Finance, marketing and general terms

ASX
ASX Limited or Australian Securities Exchange.

Baseline water stress
The ratio of total annual water withdrawals to total available renewable surface and groundwater supplies, accounting for upstream consumptive use.

Higher values indicate more competition among users. The values and definition of baseline water stress have been derived from World Resources Institute (WRI) Aqueduct 3.0: Updated Decision-Relevant Global Water Risk Indicators.

B-BBEE
Broad-Based Black Economic Empowerment.

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).

CEO
Chief Executive Officer.

Community 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.

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.

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.

COVID-19
Coronavirus disease (COVID-19) is an infectious disease caused by the SARS-CoV-2 virus.

Dewatering
Aquifer interception and removal of water from beneath the earth's surface. Does not include the removal of sea water.

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.

Energy consumption
Energy consumed where we have operational control includes fuel consumed for non-combustion and combustion activities, regardless of the use, i.e. stationary of mobile purposes. Where energy is consumed to generate a secondary energy stream (for example electricity generation or transfer of unprocessed natural gas to natural gas ready for distribution), only the primary energy consumption is reported.

Environmental incident
Any environmental event with an impact to land, biodiversity, ecosystem services, water resources or air.

ESD
Enterprise Supplier Development.

ESG
Environmental, social and governance.

EthicsPoint
A 24/7 confidential reporting hotline that is serviced by an independent provider.

Fatality
A health or safety event where an injury or occupational illness has caused the death of one or more person(s).

FYXX
Refers to the financial year ending 30 June 20XX, where XX is the two-digit number for the year.

GEMCO
Groote Eylandt Mining Company.

Global Reporting Initiative (GRI)
GRI is an international independent organisation that has established an international framework and standards for sustainability reporting. South32 prepares its Group-level annual Sustainable Development Report in accordance with the GRI Sustainability Reporting Standards.

HMM
Hotazel Manganese Mines.

Human rights
Human rights are the universal and inalienable rights and freedoms that every person is entitled to regardless of race, sex, nationality, ethnicity, language, religion or any other status. Human rights recognise the inherent value of each person, based on principles of dignity, equality and respect. We are committed to respecting all internationally recognised human rights as set out in the International Bill of Human Rights (comprising the Universal Declaration of Human Rights, the International Covenant on Civil and Political Rights and the International Covenant on Economic, Social and Cultural Rights) and the International Labour Organization Declaration on Fundamental Principles and Rights at Work.

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).

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.

Material health exposures
Material health exposures include potential exposure to carcinogens and airborne contaminants.

Material topic
Topic that reflects a reporting organisation's significant economic, environmental and social impacts or that substantively influences the assessments and decisions of stakeholders.

MCA
Minerals Council of Australia

Modern slavery
Modern slavery is an umbrella term referring to situations of serious exploitation that a person cannot refuse or leave because of threats, violence, coercion, deception, and/or abuse of power (Walk Free Foundation). It includes forced labour, debt bondage, forced marriage, slavery and slavery-like practices, and human trafficking and the worst forms of child labour (which means situations where children are subjected to slavery or similar practices, or engaged in hazardous work).

Musculoskeletal occupational illness
Musculoskeletal disorders are injuries or disorders of the muscles, nerves, tendons, joints, cartilage, and supporting structures of the upper and lower limbs, and spine - that are caused, precipitated or exacerbated by sudden exertion or prolonged exposure to physical factors such as repetition, force, vibration, or awkward posture.

MRN
Mineração Rio do Norte.

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 measures taken to:

1) avoid, minimise and mitigate negative impacts,
2) rehabilitate or restore affected areas, and
3) 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.

Occupational Safety and Health Administration (OSHA)
The OSHA of the United States Department of Labor. To ensure that incident classification definitions are applied uniformly across our workforce, we have adopted the United States Government Occupational Safety and Health Assessment (OSHA) and the ICMM guidelines for the recording and reporting of occupational injuries and illnesses.

Operational Leadership Team
All General Managers and Managers reporting to Vice President Operations, and all Managers reporting to General Managers at an operation. Excludes: Functional Managers (such as Human Resources, Finance and Supply).

Our people
As defined in our Code of Business Conduct, our people includes South32 Directors, executive management, employees and contractor staff (e.g. labour hire, temporary or agency staff, and secondees).

Recordable illnesses
The sum of work-related (fatalities + permanent impairment >30 per cent of body + lost time illnesses + restricted work illnesses + medical treatment illnesses).

Recordable injuries
The sum of work-related (fatalities + permanent impairment >30 per cent of body + lost time injuries + restricted work injuries + medical treatment injuries).

SAEC
South Africa Energy Coal.

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.

South32, South32 Group or Group
Refers to South32 Limited and its subsidiaries and operated joint arrangements, unless otherwise stated.

STI
Short-term incentive.

Sustainability Accounting Standards Board (SASB)
SASB Standards guide the disclosure of financially material sustainability information by companies to their investors. Effective August 1, 2022, the Value Reporting Foundation–home to the SASB Standards–consolidated into the IFRS Foundation, which established the first International Sustainability Standards Board (ISSB). SASB Standards are now under the oversight of the ISSB. In our Sustainability Databook we demonstrate how we are pursuing alignment with the Sustainability Accounting Standards Board (SASB) Metals and Mining Sustainability Accounting Standard.

Sustainable development
Defined as supporting the needs of the present without compromising the ability of the future generations to meet their own needs.

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.

Transformation
A national strategy in South Africa aimed at attaining national unity, promoting reconciliation through negotiated settlement and non-racism.

Underlying EBITDA
Underlying EBIT (Earnings Before Interest and Tax) before underlying depreciation and amortisation.

United Nations Global Compact (UNGC)
UNGC is a voluntary initiative based on CEO commitments to implement universal sustainability principles on human rights, labour, environment and anti-corruption, and to take steps to support UN goals. South32 is a member of the UNGC (GC Active) and our 2022 Sustainable Development Report serves as our Communication on Progress (CoP).

UN SDGs
United Nations Sustainable Development Goals.

Water risk
As defined by the CEO Water Mandate, 2014; water risk is the possibility of an entity experiencing a water-related challenge (e.g. water scarcity, water stress, flooding, infrastructure decay, drought). The extent of risk is a function of the likelihood of a specific challenge occurring and the severity of the challenge's impact. The severity of impact itself depends on the intensity of the challenge, as well as the vulnerability of the actor.

Water scarcity
In accordance with the CEO Water Mandate, Corporate Water Disclosure Guidelines, September 2014, water scarcity refers to the volumetric abundance, or lack thereof, of freshwater resources.

Water stress
In accordance with the CEO Water Mandate, 2014; 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.

World Resources Institute Aqueduct Tool
A global water risk mapping tool that helps companies, investors, governments, and other users understand where and how water risks and opportunities are emerging worldwide. The tool uses a peer reviewed methodology and the best available data to create maps of water risk.


SOUTH32