SOUTH32

FOR FUTURE GENERATIONS

SUSTAINABLE DEVELOPMENT REPORT 2021

Contents

See our reporting suite at *https://www.south32.net/investors-media/investor-centre/annual-reporting-suite*, including:

Sustainability Databook
Our supplementary reporting tool containing metrics and additional sustainability information.

Annual Report
Comprehensive information on our activities and financial performance throughout FY21.

Corporate Governance Statement
Our corporate governance practices and a description of our approach to responsible and ethical behaviour.

Modern Slavery Statement
Outlines our approach and the steps taken to seek to minimise the risk of modern slavery in our business.

Tax Transparency and Payments to Governments Report
Transparency on our approach to payments of taxes and contributions to governments where we operate.

www.south32.net

(1) In this Sustainable Development 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.

ACKNOWLEDGEMENT

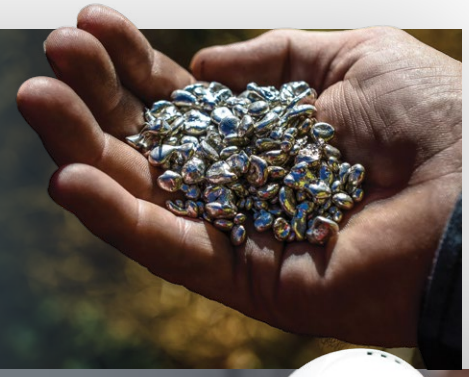
We acknowledge and pay our respects to the Indigenous and Tribal Peoples of the lands, waters and territories on which South32 is located and where we conduct our business around the world.

We respect and acknowledge the unique cultural and spiritual relationships that Indigenous and Tribal Peoples have to the land, 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.

SOUTH32 IS A GLOBAL MINING AND METALS COMPANY

We produce bauxite, alumina, aluminium, metallurgical coal, manganese, nickel, silver, lead and zinc at 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.

See some of the ways **we make a difference** on page 29

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 our stakeholders.

Read more about **our strategy** in our Annual Report

Care, Trust, Togetherness and 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 20

DELIVERING ON OUR PURPOSE

Sustainable development is at the heart of our purpose and forms an integral part of our strategy. We are committed to continually improving our sustainability performance and minimising the impact of our operations and aim to create enduring social, environmental and economic value.

Our sustainability approach aligns with the International Council on Mining and Metals (ICMM) Mining Principles and is informed by the United Nations Sustainable Development Goals and the United Nations Global Compact Ten Principles - to which we remain committed.

We will never be truly successful until we eliminate fatalities and significant incidents. We are deeply saddened that Mr Petros Sibeko, a contractor working on the Klipspruit Extension Project at South Africa Energy Coal, was fatally injured in an incident involving the use of an elevated work platform in May 2021. We express our deepest sympathies to Mr Sibeko's family and colleagues to whom we provided counselling and support. We completed an investigation into this incident, reviewed the results and shared learnings across our operations and with new owners Seriti Resources.

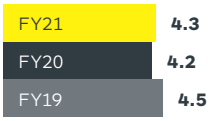
Despite a reduction in recordable injuries for the period, and four of our operations recording their lowest Total Recordable Injury Frequency (TRIF) to date, our TRIF increased by two per cent to 4.3 and did not meet our 20 per cent year-on-year reduction target. While our TRIF outcome at a Group level was disappointing, we made good progress in proactive hazard reporting which is key to our approach to improving safety outcomes.

The ongoing COVID-19 pandemic and the necessary measures taken to minimise the spread of infection continued to impact our people and communities throughout FY21. Following our early action in FY20, we have strengthened our response by improving health screening and testing and supporting vaccination programs in all the countries where we operate. We invested an additional US$2.5 million in our COVID-19 Community Investment Fund this year, taking the total invested since the start of the pandemic to US$7.6 million. Details of our COVID-19 response in FY21 can be found on page 12.

In FY21 we invested US$22.2 million in our communities aligned to our focus areas of education and leadership, good health and social wellbeing, economic participation and natural resource resilience. We also introduced our Community Investment Impact Measurement Framework to improve how we measure the impact of our community investment, help inform investment decisions and strengthen project design.

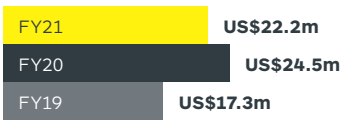
Total Recordable Injury Frequency

4.3



Community investment

US$22.2m



Increase in procurement from Aboriginal and Torres Strait Islander businesses

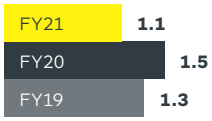
18% increase

between FY20 and FY21

> “It is my fundamental belief that when done sustainably, the development of natural resources can change people’s lives for the better.”

Total Recordable Illness Frequency

1.1



Scope 1 and 2 emissions CO_2-e

21.6Mt

New medium-term target

50% reduction

in operational carbon emissions by 2035

During FY21 we undertook a comprehensive review of the way we manage Aboriginal and Torres Strait Islander Peoples’ cultural heritage in Australia which advanced our understanding of cultural heritage across our operations. We worked together with more than 10 Indigenous and Tribal Peoples’ Groups or representative bodies and, with their feedback, updated ‘Our Approach to Aboriginal and Torres Strait Islander Peoples’ Cultural Heritage’. In FY22 we will develop tailored approaches to cultural heritage in Colombia, the US and Southern Africa, involving representatives of Indigenous and Tribal Peoples in the process.

We have updated our approach to climate change after we met our first short-term target of keeping our Scope 1 emissions below our FY15 baseline. We are committed to achieving net zero operational carbon emissions by 2050 and we have set a medium-term target to halve our Scope 1 and 2 emissions by 2035 compared to our FY21 baseline. This report provides details of our plans to achieve our target, which include decarbonising our existing operations, shifting to low-carbon energy and designing our growth projects to be carbon neutral. We are also sustainably reshaping our business and have established a pipeline of growth options to increase our exposure to the base metals required for a low-carbon future. We added to our portfolio risk resilience assessment by using a 1.5°C aligned scenario to test for rapid transition impacts and our analysis shows demand growth for most of our commodities in this scenario.

It is my fundamental belief that when done sustainably, the development of natural resources can change people’s lives for the better and we are committed to working with our stakeholders to create value and opportunities for people today, and into the future.

Graham Kerr
Chief Executive Officer

INDIGENOUS AND TRIBAL PEOPLES ACROSS OUR OPERATING REGIONS

- Office
- Upstream operations
- Downstream processing facilities
- Development option
- South32 investment

We are committed to working with Indigenous and Tribal Peoples, host communities, governments, investor groups and industry to achieve the best possible outcomes wherever we operate.

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.

Hermosa

The Tohono O'odham Nation, a federally-recognised tribe that occupies tribal lands in Southwestern Arizona, and its sister tribes as well as other Native American Tribal stakeholders.

Cerro Matoso

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

South Africa and Mozambique

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

Australia

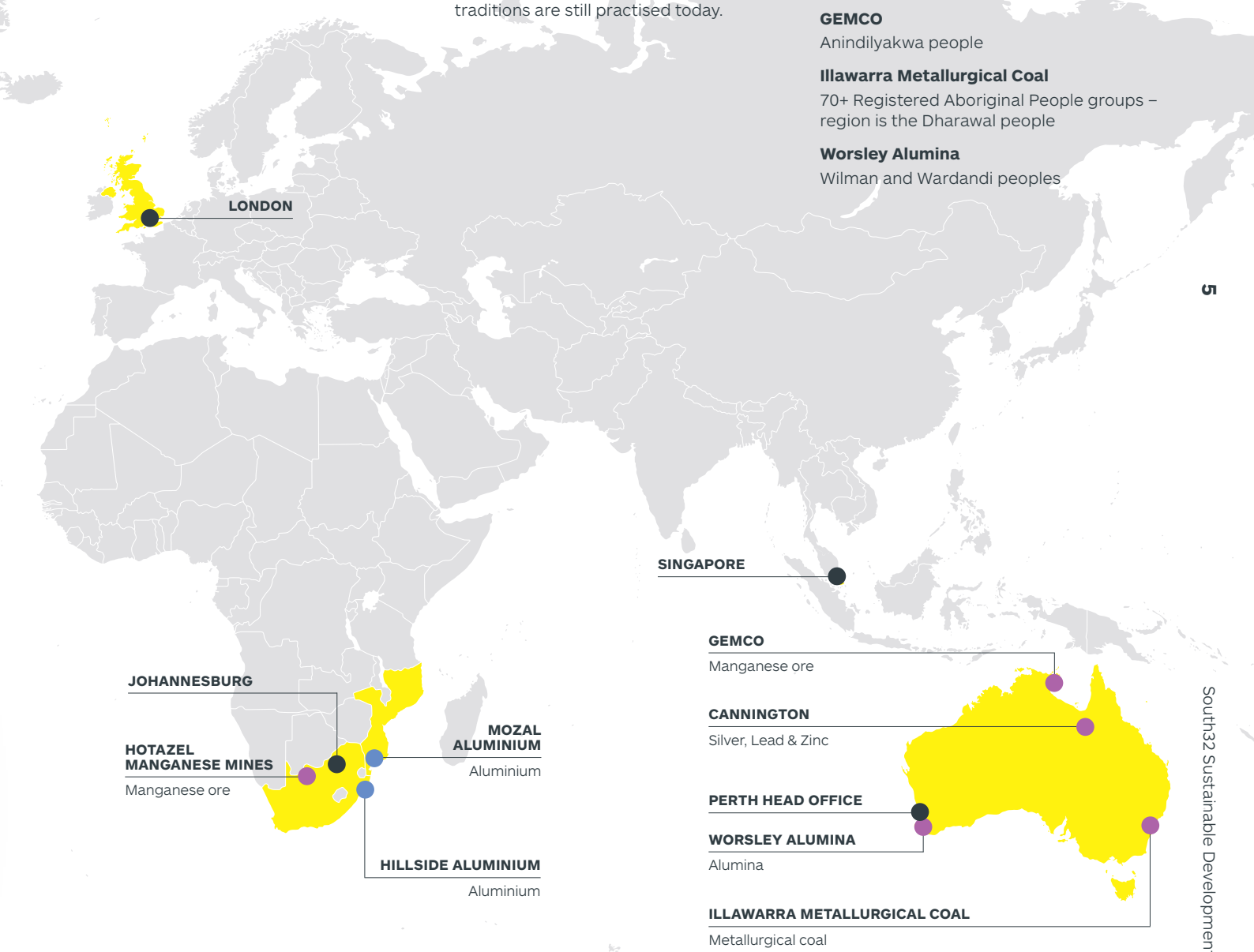
Perth Head Office
Whadjuk people

Cannington
Mitakoodi and Yulluna peoples
Bindal and Wulgurukaba peoples

GEMCO
Anindilyakwa people

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

Worsley Alumina
Wilman and Wardandi peoples



Our business model

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 projects and partnerships are diversified by commodity and geography. We work to minimise the impact of our operations and aim to create enduring social, environmental and economic value.

Our pipeline of development options and early stage exploration partnerships is central to our strategy to reshape and improve our portfolio to create long-term value.

Our operations focus on safe and reliable production, minimising their impact and continually improving their competitiveness.

MINE
- Bauxite(1)
- Manganese ore
- Metallurgical coal
- Nickel ore(1)
- Lead
- Silver
- Zinc

REFINE
- Alumina

SMELT
- Aluminium
- Ferronickel

Our marketing team generates revenue from the sale of our commodities and purchases raw materials from global markets. They also build a view of commodities and their markets that informs our strategy, business planning and investment decisions.

Construction

Transport

Energy

Consumer goods

Our strategy guides how we optimise the performance of our operations, unlock their potential and identify new opportunities to create value for all our stakeholders.

(1) We mine and refine bauxite to produce alumina; we mine and smelt nickel ore to produce ferronickel.

Mine

Manganese ore and metallurgical coal are used to produce steel for construction of buildings and infrastructure. Manganese is also required for steel recycling. We are the world's largest producer of manganese ore from our operations in Australia and South Africa.

We produce premium hard coking coal from Illawarra Metallurgical Coal in Australia and supply approximately two per cent of the seaborne market as well as the domestic steel industry.

Lead, silver and zinc from our Cannington mine have a range of applications. Approximately 65 per cent of global lead production is used in batteries. Silver is widely used in solar power and electronics and zinc protects steel from corrosion.

Refine

Alumina is the key raw material used to produce primary aluminium. Worsley Alumina and Brazil Alumina mine and refine bauxite which is used to produce alumina. Approximately 60 per cent of the production from Worsley Alumina is shipped to our aluminium smelters in South Africa and Mozambique, with the remainder going into the seaborne market. Worsley Alumina is one of the world's largest alumina refineries.

Smelt

Aluminium is often referred to as the metal of the future. It is lightweight, durable, strong, resistant to corrosion, and recyclable and it can conduct electricity, meaning it has a wide range of applications including construction, electrical wiring, transportation, packaging and consumer goods such as electronics and household items. Hillside Aluminium in South Africa is the largest aluminium smelter in the southern hemisphere.

Cerro Matoso mines nickel ore which is smelted in electric arc furnaces to produce ferronickel. The majority of ferronickel is used to make stainless steel for household items, surgical instruments and vehicle parts.

Our commodities in a low-carbon future

Construction

Steel produced from manganese ore and metallurgical coal is essential in construction. Modern steel supports energy efficiency solutions to enable low-carbon operation of buildings. Aluminium is also key in construction as it is lightweight, structurally strong and is resistant to corrosion. Zinc is instrumental in protecting key elements of essential infrastructure from corrosion.

Energy

Silver is a key component for the production of solar photovoltaic cells, which have become the leading option in renewable energy. Lead batteries are the mainstay of storage technologies for renewable energy sources. Zinc is used to protect steel components of wind turbines from corrosion and exposure to harsh weather conditions. Nickel-containing materials are increasingly being used to generate, transmit and store power in modern battery polymers in renewable energy generation.

Transport

The use of aluminium instead of other materials can reduce the carbon emissions of a vehicle given its relatively light weight. Lead is a key material for the starter or auxiliary batteries in vehicles. Almost every electrical connection in a vehicle uses silver and its intensity in electric vehicles is around two times higher compared to vehicles with internal combustion engines. Nickel-containing stainless steel is found in passenger trains and subway systems.

Consumer goods

Silver is widely used in consumer electronics, including mobile phones and computer equipment. Aluminium can substitute single-use plastics for packaging, such as in the food and beverage industry and is also widely used in electronics. Nickel-containing stainless steel and aluminium have various applications in household items.

DEVELOPING NATURAL RESOURCES TO CHANGE LIVES FOR THE BETTER

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.

Sustainable development is at the heart of our purpose and forms an integral part of our strategy. We are taking meaningful action to benefit our stakeholders, our planet, and our business. Our approach to sustainability focuses on five interconnected pillars with focus areas that are material to our business and our stakeholders, and which support the United Nations Sustainable Development Goals (UN SDGs).

More information on the UN SDGs we support can be found in each pillar.

Pillars

Material topics

Protecting and respecting our people

We are a people powered business. The most important commitment we all make at South32 is that everyone goes home safe and well. By providing a safe, secure and inclusive workplace we are unlocking the full potential of our people.

Read more on page 14

- Health and safety
- Inclusion and diversity
- Attracting, developing and retaining talent

Partnering with local communities

We are a global business with a local focus – passionate about supporting the communities where we operate. We work closely with our communities and consider different perspectives, working together to create shared value.

Read more on page 26

- Wider economic contribution
- Communities, social impact and wellbeing
- Cultural heritage

Operating ethically and responsibly

Trust underpins everything we do. We earn and build trust by working with integrity, doing the right thing and meeting our commitments. High ethical standards and transparency are fundamental to the way we operate.

Read more on page 36

- Business ethics and integrity
- Human rights
- Responsible value chain

Addressing climate change

The impacts of climate change are being felt by countries, communities and businesses around the world. We are playing our part by reducing our operational carbon (Scope 1 and 2) emissions, shifting to low-carbon energy sources and increasing our exposure to the base metals required in a low-carbon world.

Read more on page 46

- Climate change and greenhouse gas emissions

Managing our environmental impact

Successful environmental management is essential – not only for our business, but for all our stakeholders. Through planning, conservation and land management we are working hard to be responsible stewards of the environment and treat natural resources with care so that they are available for future generations.

Read more on page 66

- Biodiversity
- Water
- Waste
- Other emissions, effluents and pollution

We produce commodities that are used in all aspects of life and are required for a transition to a low-carbon future. The minerals and metals we produce are relied upon for infrastructure development, renewable energy, and for integral components in consumable products and vehicles. We aim to develop natural resources sustainably and with care, to create value and opportunities for people today and into the future.

Our approach

Sustainability is embedded throughout our business. We work with local communities and our stakeholders to set clear sustainable actions and goals, that will contribute to a better shared future for all. Our sustainability approach is based on the International Council on Mining and Metals (ICMM) Mining Principles, United Nations Global Compact (UNGC) Ten Principles, United Nations Sustainable Development Goals (UN SDGs) and applicable legal requirements. Our approach also considers how we interact with our people, the environment, local communities and society. Our Sustainability Policy affirms our commitment to sustainable development and outlines our commitment to governance and transparency on sustainability matters.

We seek to employ responsible business practices at our operations and throughout our value chain, to minimise and manage impacts, while maximising opportunities, for people, the environment, communities and other stakeholders.

The expectations of our 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, social inequality, and water scarcity. Challenging ourselves to create social, environmental and economic value is intrinsic to our purpose and aligns to our values.

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 the 2021 financial year.

Read more about **supporting data for the report** in our Sustainability Databook at *www.south32.net*.

Corporate Governance

Good governance is essential to the way we work – to our actions, decisions, communications and behaviours. Our approach to corporate governance is set out in our Corporate Governance Statement 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.

Our Board is assisted by the Sustainability Committee and the Risk and Audit Committee to manage the sustainability-related aspects of its responsibilities. These include oversight of health, safety, environment, climate change, human rights and social performance.

Risk management

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.

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

Stakeholders and collaboration

Our stakeholders are integral to our success. We operate in diverse geographies and markets and consequently have a wide range of stakeholders. We work to build positive, meaningful and respectful relationships, guided by ICMM Mining Principles 9 - Social Performance and 10 – Stakeholder Engagement, as well as our Code of Business Conduct and internal standards.

Read more about **how we engage and work with stakeholders** in our Sustainability Databook and in our Modern Slavery Statement at *www.south32.net*.

Sustainability reporting

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

We conduct a materiality assessment each year to ensure that we understand the sustainability topics that matter most to our business and our stakeholders. Our material topics in FY21 are shown on page 9.

Read more about the **materiality assessment** we conducted this year in our Sustainability Databook at *www.south32.net*.

We prepare this report in accordance with the Global Reporting Initiative (GRI) Sustainability Reporting Standards (Core option) and the ICMM Mining Principles and Position Statements. Our sustainability approach supports the UN SDGs and we work with stakeholders to develop and implement actions that contribute to sustainable development. In our Sustainability Databook we also demonstrate how we are pursuing alignment with the Sustainability Accounting Standards Board (SASB) Metals and Mining Sustainability Accounting Standard.

The divestment of South Africa Energy Coal on 1 June 2021 has significantly impacted several of our sustainability metrics due to the size of that operation and its headcount relative to the rest of the group. These impacts are noted throughout this report and in our Sustainability Databook.

In line with our ICMM membership requirements and transparency commitments, we undertake independent assurance of our sustainability approach and data.

Read more about our **FY21 Independent Assurance Report** in our Sustainability Databook at *www.south32.net*.

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

The international frameworks that guide our approach to climate change can be found on page 47.

Each year we issue a Modern Slavery Statement in accordance with the Australian *Modern Slavery Act 2018 (Cth)* and as a voluntary statement under the United Kingdom's *Modern Slavery Act 2015*. All our published statements are available at *www.south32.net*.

Our sustainability targets

FY21 Business Scorecard outcome

We track our performance against the annual Business Scorecard measures using key performance indicators, which are endorsed by our Sustainability Committee and reported every quarter.

On an annual basis, the Sustainability Committee shares its evaluation of the sustainability component of our annual Business Scorecard with the Remuneration Committee. The Business Scorecard, together with individual indicators, determines the short-term incentive (STI) payments we make to our Chief Executive Officer and Lead team.

Read more about **how we score our performance** in the Remuneration report within the Annual Report at *www.south32.net*.

Scorecard measure	Our performance
Safety: A 20 per cent reduction in Total Recordable Injury Frequency (TRIF) compared to FY20.	**Poor** We are deeply saddened that a contractor working at SAEC was fatally injured in an incident involving the use of an elevated work platform in May 2021. South32 recognises the fatality in our STI through the Business Modifier. We saw a reduction in recordable injuries for the period and four of our operations recorded their lowest TRIF to date. However, our TRIF increased by two per cent to 4.3 meaning our year-on-year performance did not meet our 20 per cent reduction target.
Significant Events and Hazards: Ensure 90 per cent of significant event investigations completed and signed off within the allocated timeframe plus achieve a significant hazard frequency of "30".	**Good** Eighty-three per cent of significant event investigations were signed off within the allocated timeframe. Delivered a good significant hazard frequency of "41".
Health: A 10 per cent reduction in material exposures from the baseline, plus develop an FY22 plan to reduce by 20 per cent the number of workers exposed above 200 per cent of the Occupational Exposure Limits (OEL).	**Fair** Material exposures reduced by six per cent compared to the baseline(1). Plans have been developed to reduce the number of workers exposed above 200 per cent of the OEL by 15 per cent in FY22.
Environment: Achieve Scope 1 and 2 FY21 emissions forecast of 24,649kt CO_2-e(2) and Scope 1 emissions below 10,653kt CO_2-e(2) (10 per cent below FY15 baseline). Define our next public target and glidepath narrative and progress the critical decarbonisation studies, energy planning and offsets approach.	**Excellent** In FY21, our combined Scope 1 and 2 emissions(3) were below our FY21 forecast, and our Scope 1 emissions were more than 15 per cent below our FY15 baseline. In May 2021, we released our medium-term target to halve our operational carbon emissions (Scope 1 and 2) by 2035, stepping up our ambition on climate change and pathway to net zero. We have progressed studies for our decarbonisation and energy transition projects at our most carbon intensive operations.
Community: Implement Operational and Strategic Community Investment Plans on time and on budget. Mature our 'outcome' and 'impact' measurement through the continued implementation of the community investment impact measurement framework. Demonstrate an improvement in community outcomes across the four key 'outcome' indicators: education and leadership, economic participation, natural resource resilience, and good health and social wellbeing.	**Excellent** FY21 Community spend was on budget. We matured our approach to measuring the outputs and outcomes of our community investments through the application of our Community Investment Impact Measurement Framework. In FY21, we saw improved outcomes across our four investment priority areas, which are reported in Communities, social impact and wellbeing from pg 29. Critical support was provided to communities and governments during the COVID-19 pandemic. In addition, a social performance framework was completed and is being piloted.
People: Achieve FY21 Inclusion and Diversity targets and implement activities to increase engagement above pre-COVID-19 levels.	**Good** Met targets with regard to representation of women on our Board, in our Lead Team and across our organisation(4). Below target for women at some leadership levels and for Black People in Management in South Africa. Proactive activities undertaken to increase employee engagement through the COVID-19 impacted period.

(1) Baseline for OEL excludes SAEC and TEMCO. More information can be found on page 18.
(2) FY21 emission forecast and FY15 baseline include the updated methane Global Warming Potential factor in Australia.
(3) A pro-rata calculation was applied for SAEC and TEMCO given their divestment part way through the year to so that our emissions performance was not overstated in the FY21 Business Scorecard.
(4) FY21 performance measured against FY20 data that excludes SAEC. More detail with regard to our targets is available in our performance on pg 22.

RISING TO MEET THE CHALLENGES OF COVID-19

Over the past 12 months, our people and communities around the world continued to face the challenges and devastating impacts brought about by COVID-19.

We have remained committed to three key areas that have guided our response from the beginning of the pandemic – keeping our people safe and well, maintaining safe and reliable operations, and supporting our communities.

Wherever we operate, including our operations, joint ventures, major projects and office locations, we have upheld controls to help protect our employees and contractors from COVID-19. These controls are tailored to the needs of each location, monitored for effectiveness and updated as required. Over the past year, our controls have included; restricted site access and travel, physical distancing measures, heightened workplace hygiene practices, mandatory face masks, the use of respiratory protective equipment, health surveillance and case management.

For our people and their families, the pandemic has also presented mental health and wellbeing challenges. We have found new ways to stay connected to each other, including through virtual check-ins, live sessions with our leaders and regular CEO COVID-19 updates. We have provided our people with access to mental health and wellbeing support materials, equipped our senior leaders with toolkits to have meaningful conversations and continued to encourage people to reach out to their leader or our Employee Assistance Program (EAP), a confidential counselling and support service. While some of these tools have been developed and implemented in direct response to the unique mental health and wellbeing risks associated with COVID-19, they will continue to be used across the business.

We continued to follow the advice of governments, their agencies and our own experts wherever we operate. Our business continuity and response plans changed to meet their advice as the situation evolved, and our emergency management team and onsite incident management teams continue to oversee our response.

Technology has played a key role in our response to the pandemic, including thermal cameras, pre-screening tool and contact tracing. At our operations in South Africa we implemented SafeTrace, a contact tracing solution which uses Bluetooth to improve the accuracy and speed of the contact tracing process. SafeTrace was created by a South African start-up, and has been rolled out at Hillside Alluminium, South Africa Manganese and Mozal Aluminium and at our Johannesburg office.

We strongly encourage the use of government approved vaccines amongst our employees, their families, and in our local communities. We are actively engaged with governments and health authorities regarding their vaccine rollout plans and have offered our support, providing access to our facilities to store and deliver vaccines and opening vaccination centres at some of our operations.

At GEMCO we worked closely with the Northern Territory Health Department to establish a vaccination centre. To date, more than 1,500 people have been fully vaccinated through the centre, including our residential and fly-in fly-out employees, and local communities. In coordination with the Government in Mozambique, Mozal Aluminium launched a vaccination program for employees and contractors, which also provides for members of their households to be vaccinated. Over a three-day period at Hillside Aluminium, our employees, contractors and their families over the age of 18, could attend our pop-up vaccination clinic to receive a COVID-19 vaccination. In coordination with the Government, we supplied the facilities and trained personnel at South Africa Manganese, to administer vaccines to our employees, contractors and the community.

We continued to support South Africa's Solidarity Fund, which receives donations to aid the country's ongoing fight against COVID-19. Following our initial donation of R10.5 million in FY20, we committed a further R2 million to the Fund in FY21.

Hillside Aluminium donated R2 million to Ngwelezana Hospital to fund medical equipment for COVID-19 patients as well as R1 million to the Red Cross to aid water distribution in rural communities, and R500,000 to the Municipality Food Bank program.

We partnered with the Departments of Health in the Northern Cape and Gauteng, where South Africa Manganese is located, contributing R1.5 million towards medical equipment, including ventilators, as well as personal protective equipment (PPE), hygiene supplies and improved water supply at local clinics.

In South Africa, we committed R2 million to the Gender Based Violence and Femicide Response Fund. The money supported the implementation of programs and campaigns to raise awareness and inspire change to address gender-based violence and femicide in South Africa.

In Western Australia, we partnered with the Patricia Giles Centre for Non-Violence. Our A$50,000 sponsorship contributed to a refuge unit that provides a safe place for women, and new start kits that contain essential household items for those who have fled their homes with nothing.

In South Africa's Northern Cape, we donated R2.3 million to support children returning to the classroom – the money was used to set up mobile classrooms, upgrade hygiene facilities and provide mental health support for teachers and staff.

In Colombia, our contribution to the national COVID-19 vaccination program included purchasing vaccines and vaccinating our employees and contractors at Cerro Matoso.

We worked with Santa Cruz County in Arizona, near Hermosa project, to fund and establish a pop-up COVID-19 vaccination clinic through our local medical provider. During the three-week period that the clinic was open, 900 people were vaccinated against COVID-19.

Since the start of the COVID-19 pandemic we have worked closely with our communities to identify potential health and economic risks. This year we invested US$2.5 million in our targeted COVID-19 Community Investment Fund, in addition to the US$5.1 million from FY20, to support our communities in COVID-19 prevention, preparedness, response and recovery.

At Cerro Matoso, some of our people donated a day of their salary to help provide relief to local families - raising US$31,000 which was matched by South32. The money was used to provide more than 2,000 food kits to families in need, and 6,500 gifts for children over the festive season.

The COVID-19 pandemic brought about movement restrictions and isolation measures, which can lead to increased rates of family and domestic violence, with women and children most at risk.

Small businesses have also continued to face ongoing challenges brought about by the pandemic. We provided financial relief to locally owned small businesses in the Santa Cruz County by partnering with Local First Arizona to award grants of between US$1,500 and US$2,500 to 40 small businesses enabling them to continue operations and retain their workforce. At Worsley Alumina we worked with the Collie Chamber of Commerce and Industry to deliver the Collie Small Business Grants Program, awarding grants of up to A$5,000 to local small businesses who were impacted by COVID-19.

We are committed to supporting our people and communities across the globe as we continue to respond to the ongoing challenges brought about by COVID-19.

PROTECTING AND RESPECTING OUR PEOPLE

The most important commitment we all make at South32 is that everyone goes home safe and well. We are committed to working together safely, continuously improving how we work, and creating an environment where our people are empowered to speak up and stop work if they feel unsafe.

We aspire to be an organisation where our people feel comfortable bringing their whole selves to work and our workforce reflects the broader demographic of the countries and communities where we operate. We believe an inclusive, diverse and engaged workforce will unlock the full potential of our business.

Total Recordable Injury Frequency

4.3

Employees as at 30 June 2021

9,000+

IN THIS SECTION

Health and safety 16

Nothing is more important than the health, safety and wellbeing of our employees, contractors and communities.

ICMM Principle

4 RISK MANAGEMENT

5 HEALTH AND SAFETY

South32 supports the SDG

3 GOOD HEALTH AND WELL-BEING

UNGC Principle

LABOUR

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LABOUR

HEALTH AND SAFETY

Nothing is more important than the health, safety and wellbeing of our employees, contractors, and communities. We are committed to working together safely and continuously improving no matter where we work.

Our approach

We are committed to providing and maintaining a safe workplace so that our people, contractors and visitors go home safe and well.

Our approach aligns with ICMM Mining Principle 5 – Health and Safety, and complies with local laws and regulations.

We have grown our health and safety capability globally, building a team with diverse experience and skills to address both strategic and operational health and safety challenges across our business.

This year, we strengthened our approach to verification and health checks on the minimum controls required for the most common safety fatality risks and our infectious disease risks. We also introduced a verification approach for hygiene data collection and reporting and conducted the initial verification of our hygiene data business process.

For more information on our health and safety management system, hazard identification and training, refer to our Sustainability Databook at *www.south32.net*.

Employee health and wellbeing

We actively promote health and wellbeing in our workplaces. We provide fit for purpose occupational health services to employees and contractors which includes health surveillance to prevent or detect any early stage adverse health effects from exposures in the workplace. This is informed by our monitoring programs to assess and characterise exposures in the workplace.

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 health exposures include exposure to noise and ergonomic stressors. We have defined the minimum controls for the management of these risks in the workplace in our internal health standard.

Highlights

- Seven per cent decrease in the number of recordable injuries reported and an 18 per cent reduction in injuries involving potentially fatal exposure.
- Four of our operations reported their lowest TRIF to date.
- Fifty per cent increase in our significant hazard reporting compared to FY20 and a reduction in near misses and actual impact significant events.
- Eighty three per cent of all safety-related investigations completed on time compared to 38 per cent last year.
- Thirty four per cent decrease in the number of recordable illnesses reported, with an 8 per cent reduction in musculoskeletal illnesses and injuries.
- More than 1.2 million COVID-19 health pre-screening certificates issued prior to workers starting their shifts.

During FY21 our health surveillance programs continued to be disrupted by COVID-19 due to the risks associated with the close contact required for testing, such as spirometry. We continue to follow guidance from health authorities and monitor COVID-19 developments in the regions where we operate. Suitable controls remain in place and we are progressing our plans to resume testing and bring them up to date when we are able to do so.

We provide preventative health measures which are appropriate to the locations and jurisdictions where we operate, including gym facilities, influenza vaccines, and malaria and HIV/AIDS programs. Through our occupational health services, we offer chronic disease management and education and referral for non-occupational related conditions.

Other services include our THRIVE mental wellness program, promotion of wellbeing through our Employee Assistance Program (EAP) and the THRIVE mental health toolkit provided on our knowledge portal.

Our THRIVE program is designed to help our employees stay healthy, connected and productive by providing access to resources to support mental wellbeing. We introduced the THRIVE mental health and wellbeing network to connect our operations and enable them to support employee wellness within their local context. We further refined our case management approach to make it more locally appropriate for each location and so our people are adequately supported.

In addition to THRIVE, our EAP has continued to provide vital support throughout the COVID-19 pandemic to our employees and their families. Our EAP is discussed further on page 23.

Health and technology

Over the past decade, technology has become increasingly important in the management of health in our industry. Innovative devices and tools now help us to prevent exposure to hazardous agents and use more proactive controls to manage workplace health exposures. With the use of technology, we receive real-time data which allows us to respond to system and control failures as they occur, predict where maintenance on health hazard controls will be required and then proactively address issues.

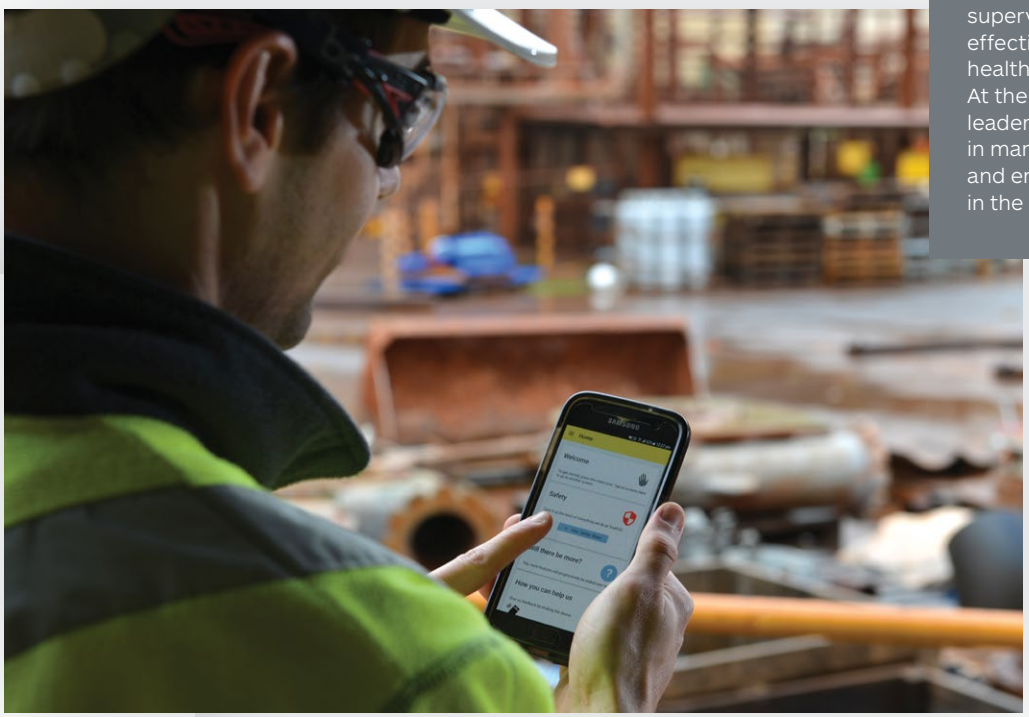
Our Health and Safety Stewardship team and Technology team are working together to trial instruments to monitor, in real-time, potential dust exposure at Cannington. This allows high exposure sources to be identified, along with the option to strengthen controls to reduce dust exposure. We will use these insights to work towards elimination of dust exposure through design at Hermosa and inform the roll out of real time dust monitoring instruments across our operations.

Improving Contractor Management

We have launched a major initiative to improve the way we manage contractors, with a specific focus on health and safety. This was initiated following a tragic accident in May 2020, when a diesel mechanic assistant was fatally injured while working at the Ifalethu Colliery in South Africa Energy Coal.

We have undertaken assurance activities across our operations to review the maturity of our approach to contractor management and identify opportunities for improvement. A Global Process Owner has been appointed and working group established comprising 13 functional and operational members supported by a broader network from across the business. This group will design and implement an end-to-end process for contractor management that enables global alignment and integration of standards and practices, provides clarity of accountability, and governance and assurance of the system.

An important change will be reducing the administrative burden on our frontline supervisors and reprioritising work, so they can spend more time supervising contractors and verifying safe systems. We plan to also equip supervisors with simpler, more effective tools to help improve health and safety outcomes. At the same time, we will help our leaders become more effective in managing the contract life cycle and enrol our contractors in the process.



Our performance

We set targets for the company and individual operations which are aligned with ICMM Mining Principle 5 – Health and Safety, and we track our performance against these targets using key metrics.

	FY21	FY20	FY19	FY18
Fatalities from safety and health incidents – total[1]	**1**	1	0	1
Total recordable injuries	**210**	225	263[2]	268
Total recordable injury frequency (TRIF) (per 1,000,000 hours worked)[3]	**4.3**	4.2	4.5[2]	5.1
Total recordable illness frequency (TRILF) (per 1,000,000 hours worked) [3]	**1.1**	1.5[2]	1.3	1.7

(1) Incidents are included where South32 controls the work location or controls the work activity.
(2) Figure has been restated since it was previously reported due to a reclassification or recalculation of data.
(3) Figure includes employees and contractors. These calculations exclude working from home hours as well as working from home injuries and illnesses.

We will not be truly successful unless all our people return home safe and well at the end of every shift.

We are deeply saddened that Mr Petros Sibeko, a contractor working on the Klipspruit Extension Project at South Africa Energy Coal (SAEC), was fatally injured in an incident involving the use of an Elevated Work Platform (EWP) in May 2021. We express our deepest sympathies to Mr Sibeko's family and colleagues to whom we provided counselling and support. We completed an investigation into this incident, reviewed the results and shared learnings across our operations and with new owners Seriti Resources. We commenced a global review of the safety features of EWPs and the way we use them in our operations and projects, which will inform the development of additional controls. We are also working on a major initiative to improve the way we manage contractors with a focus on health and safety– see further information on page 17.

We disclose contractor fatalities that occur as part of activities associated with our operations where we seek to influence safety performance, but which take place in locations where we do not have operational control. This year, an employee from a construction company tragically lost their life while carrying out road paving activities on the public road between the municipality of Planeta Rica and our Queresas and Porvenir Project.

Any loss of life is unacceptable, and we offered our support to the contractor company following the incident.

Our Total Recordable Injury Frequency (TRIF) increased to 4.3 despite a reduction in recordable injuries and four operations reporting their lowest TRIF to date. A two per cent increase in our TRIF meant we did not meet our target of a 20 per cent year-on-year improvement. Our TRIF was adversely impacted by a reduction in the total number of hours worked following the divestment of SAEC and Tasmanian Electro Metallurgical Company (TEMCO). It was also impacted by a reduction in the workforce at the Metalloys manganese alloys smelter, which was placed on care and maintenance in July 2020, and an increase in home-based working across multiple locations due to the ongoing COVID-19 pandemic. Working from home hours and injuries have not been included when determining TRIF.

To set our TRIF target for FY22, we have adjusted the baseline to account for the removal of SAEC and TEMCO from the portfolio. This will mean we measure our FY22 performance against a TRIF of 6.0.

Safety improvement programs at Worsley Alumina contributed to a 38 per cent improvement in TRIF, while Mozal Aluminium and Hillside Aluminium each achieved a TRIF of 0.5.

Proactive hazard reporting is key to our approach to safety, and significant hazard reporting increased by 50 per cent compared to FY20, as well as a reduction in near misses and actual impact significant events.

We have adjusted our baseline for material health exposures to account for the introduction of revised Occupational Exposure Limits (OEL) for crystalline silica, coal dust and manganese. We achieved a reduction in the number of people exposed above the OEL at South Africa Manganese and Hillside Aluminium, contributing to a six per cent overall reduction in potential material exposures greater than 100 per cent of the OEL. Unfortunately, planned exposure reduction measures at Mozal Aluminium were delayed due to COVID-19. Our occupational exposure data reflects the workplace exposures identified through our hygiene monitoring program. Sampling was concluded in June 2021 and therefore excludes the divested SAEC and TEMCO operations.

The most prominent source of illness and injury in our operations is musculoskeletal, accounting for 47 per cent of our total recordable occupational illnesses and injuries. At Worsley Alumina, the implementation of a systematic and comprehensive approach to addressing musculoskeletal injuries resulted in approximately 50 per cent reduction in reported instances.

An innovative approach to reducing musculoskeletal injuries

At Worsley Alumina, one of our most common illness and injury issues is musculoskeletal injuries and disorders. Traditional approaches to tackling this issue involved studying a 'snapshot' of the task being undertaken, with minimal consideration to the cumulative risk factors in the environment a person is working in.

We have taken a broader, more innovative approach by considering the overall design of a role and associated risks, systemically reducing the risk using participative ergonomics. This means our employees are involved in improving their workplace to reduce injury and improve productivity. We further strengthened our approach by increasing ergonomic education and introducing a tool to measure the impact of cumulative risk factors - such as repetitive movement, high force, sustained or awkward position and vibration - that may lead to musculoskeletal injuries. This tool is used to assist in the development of controls to reduce the risk of musculoskeletal injuries. The new approach reduced the number of musculoskeletal injuries reported at Worsley Alumina by 50 per cent.

Developing pre-shift health screening for COVID-19 risks

In April 2020, as the COVID-19 pandemic gained pace, our Health and Technology teams worked together to find a way to keep our employees safe and well. A need was identified to enable our operations to detect the presence of COVID-19 infection risks before employees started their shifts, thus reducing the risk of spreading community infection amongst work teams.

While survey tools were readily available, none provided the specific back-end workflow which allowed immediate notification and action when potential infection risk was triggered. Our Health and Technology teams developed a fast and effective pre-shift health screening tool, which was rapidly deployed to our operations and offices. The tool was deployed at 18 locations and in just 12 months, more than one million screening assessments were completed.

Thanks to the innovation and dedication of our Health and Technology teams, we were able to identify employees with potential COVID-19 risk factors and restrict their entry to the workplace while working with their line leader and the Health team to determine the appropriate course of action for return to work. This reduces the risk for the individual, their colleagues, and makes our communities safer.

Protecting our employees and communities at GEMCO

When the COVID-19 pandemic took hold, the team at GEMCO in the Northern Territory, Australia worked with the Traditional Owners and Northern Territory Government to protect our people and members of the local Indigenous community.

In May 2020, the team at GEMCO established a medical clinic with a doctor and two nurses to provide frontline medical services on the Eylandt. The clinic reduced the burden on the government's medical centre by treating South32 employees and their families and meeting critical health care needs in the wider Groote Eylandt community.

In the first 12 months approximately 6,000 appointments were booked at the clinic and almost 1,000 patients were seen. Nearly 3,000 doses of the COVID-19 vaccine had been administered by the end of June 2021 to our employees, contractors and local community members. The clinic continues to play a vital part in GEMCO's response to the pandemic to protect our people and communities.

OUR PEOPLE

Our people are fundamental to our success. As at 30 June 2021, we employed more than 9,000 people across eight operations and offices in nine countries. We seek to appoint outstanding people who share our values and offer them meaningful work tackling business problems, achieving measurable outcomes and contributing to exceptional business performance.

We are guided by our Code of Business Conduct and our values – care, trust, togetherness and excellence. We also 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.

You can read more about **human rights** on page 40.

Highlights

- Refreshed our Leadership Model, setting out core leadership accountabilities, competencies, and behaviours.
- Launched our Leadership Fundamentals Program to help frontline leaders successfully execute their roles and fulfil their potential.
- Formed a global Inclusion and Diversity working group to support a step-change in employees' workplace experiences and launched our global flexible work standard.
- Matured our measurement and reporting processes by including inclusion and diversity metrics in our monthly performance reporting routines to Senior Leaders and increased selection and appointment approval requirements for identified operational leadership roles.

Our culture is reflected in the way we work, the decisions we take, the courage we show in challenging situations and the legacy we leave. Across the business, we see the value of holding ourselves and each other to account, to act and make decisions aligned with our values. By delivering on our commitments and relying on each other to do the right thing, we nurture trust across our organisation and with our stakeholders.

Our Lead Team, together with our Board, set the direction and tone for our workplace culture. A culture tensions model is used to build a shared understanding between our Board and Lead Team of our current and preferred culture and this year we have introduced a Culture Tensions Assessment Tool to support culture discussions within functional and Operational Lead Teams. A Culture Health Check Tool is used in Directors' engagements with our workforce to review consistency with the direction and tone.

Global restrictions linked to COVID-19 impacted our ability to undertake employee engagement surveys and Board and Lead Team operational and office visits in FY21. To minimise this impact, we deployed technology to facilitate virtual meetings and interactions between the Board, leadership and employees. Face-to-face visits will resume when travel restrictions allow.

We believe an inclusive, diverse and engaged workforce will unlock the full potential of our business. We work to create clarity and shared understanding with our people through regular connection and engagement, so that we are all working together to fulfil our purpose, deliver on our strategy and live our values. Our Board and Lead Team track a range of metrics, including employee engagement, inclusion and diversity, and EthicsPoint data to identify areas for improvement.

INCLUSION AND DIVERSITY

As a global organisation, we're 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. This helps us attract, develop and retain talented people, who feel engaged and empowered at work, which in turn supports better business outcomes.

Our approach

We focus our efforts where we believe we can achieve significant positive change relevant to the local context. This includes increasing the representation of women across our business, and in South Africa, increasing the representation of Black People.

Our approach to inclusion and diversity is outlined in our Inclusion and Diversity Policy and is focused on:

- Building an inclusive workplace;
- Building our future pool of diverse talent; and
- Hiring and developing diverse talent.

Read our **Inclusion and Diversity Policy** at *www.south32.net*.

Each year we set measurable inclusion and diversity objectives which are approved by our Board as part of the strategic priorities of our Business Scorecard. For FY21 these objectives were to:

- Demonstrate year-on-year improvement in the representation of women employees by targeting reduced voluntary turnover and increased hires;
- Maintain the representation of women on our Board and Lead Team at greater than 33 per cent and 40 per cent, respectively;
- Improve the representation of women in our leadership teams, targeting 40 per cent of the Senior Leadership Team and 20 per cent of the Operational Leadership Team by the end of FY21;
- Continue to pursue fair representation of the Economically Active Population in South Africa, as measured by Broad-Based Black Economic Empowerment (B-BBEE) scorecard performance; and
- Continue to target pay equity for our employees, with respect to gender and ethnicity.

This year we formed a global Inclusion and Diversity working group to undertake a diagnostic review and develop an actionable plan to deliver an immediate and longer-term step change in our people's experience of inclusion and diversity in the workplace.

Commitment to gender equality

- We became a signatory to 40:40 Vision, an investor-led initiative to achieve gender balance in executive leadership across all ASX200 companies by 2030.
- Our CEO is a member of the Champions of Change National 2016 Group, part of the Champions of Change Coalition, which is committed to driving gender equality and increasing the representation of women in leadership positions.
- Our CEO is a member of CEOs for Gender Equity, a CEO-led membership organisation committed to achieve gender balanced workplaces.

Our performance

This year, our performance either improved against, or remained consistent, for four of our seven diversity commitments.[1]

Several changes, including the divestments of TEMCO and SAEC during the period have directly impacted the employee profile for a number of our metrics. The representation of women across the company decreased to 18 per cent, down from 19 per cent in FY20, while the representation of women on our Board and Lead Team was stable year-on-year. Representation of women on our Operational Leadership Team increased year-on-year, however there is more work to do to meet our target of 20 per cent.

In FY21 we redefined our Senior Leadership Team to reflect broader changes in our corporate and marketing structures, which resulted in a reduction in the total population of this group. This also had an adverse impact on the representation of women on our Senior Leadership Team, which declined by 6 per cent to 30 per cent at 30 June 2021. There is continued improvement in the representation of Black People in our South African workforce, with an increase to 86 per cent, compared to 83 per cent in FY20, of our total workforce. However, there was a three per cent reduction in the representation of Black People in management roles, at 52 per cent. Representation of women in leadership and Black People in management roles will continue to be a focus in FY22.

This year, 37 per cent of all our new hires were women and 44 per cent of our development roles were offered to women. To enable our people to focus on the COVID-19 pandemic response and business critical activities, our annual pay equity audit did not take place this year. We remain a Workplace Gender Equality Agency Pay Equity Ambassador and since 2016, we have invested around US$3 million to address the pay equity gap.

Employee conduct

We expect our people to treat everyone fairly, with respect and care. We are committed to providing a safe and inclusive workplace, one in which no form of bullying, discrimination, victimisation, intimidation or harassment is tolerated.

This year, on behalf of South32, our CEO pledged our support for the #IStandForRespect campaign with the Diversity Council Australia. This pledge is a commitment to make workplaces respectful and safe for everyone.

We also updated our Code of Business Conduct training and undertook a campaign to encourage completion by employees. By 30 June 2021, 90 per cent of our employees had completed this training, with routines in place to manage ongoing compliance.

Employees and contractors can report incidents, anonymously if they prefer, using our independently managed reporting portal, EthicsPoint. We take all concerns seriously, investigate them thoroughly and take appropriate action if necessary.

Read more about business ethics and integrity on page 38.

It has been concerning to see recent reports of incidents of harassment in our industry, and across society more broadly. We treat harassment, in all its forms, as a serious risk given the potential impact on physical and psychological safety and we are aware that it is often under-reported.

We have completed sexual harassment risk reviews at each of our operations and identified several control improvements which we are implementing, including enhanced security practices, such as ready access to security escorts and enhanced awareness of reporting mechanisms.

However, the most critical intervention that can be taken relates to culture, the behaviours we expect and the reiteration of our zero-tolerance approach to sexual harassment. As such, we are rolling out targeted campaigns designed to raise awareness and encourage victims of sexual harassment and bystanders to speak up, knowing they will be treated with care and respect, and that their allegations will be thoroughly and professionally investigated.

This work forms part of our broader Inclusion and Diversity Action Plan for FY22, which includes the development and implementation of a new global Inclusion and Diversity standard, and enhanced reporting. Our Human Resources function will continue to report on all matters classified as sexual harassment to the Risk and Audit Committee.

(1) Our inclusion and diversity performance has been measured in our scorecard from FY20. All scorecard metrics have consistently excluded the contribution of South Africa Energy Coal as this operation has been managed as a standalone business since the June 2019 quarter.

ATTRACTING, DEVELOPING AND RETAINING TALENT

Our ability to identify, attract, support and retain talented people is fundamental to delivering our business strategy.

Our approach

We take a broad view of talent, development and training to build technical, operational and functional skillsets, as well as leadership capability. Our talent management process is designed to promote movement of key talent within South32, align people's capability with challenging work and develop those with the potential to perform critical roles in the future.

Changes in labour markets, such as reduced mobility and increased competition, impact on the attraction and retention of talent and our voluntary turnover rates have risen recently. To address risks associated with volatile labour markets, we have implemented implemented measures to retain key talent. Further, we believe our global operating model and flexible working practices will help us access the top talent we need today and for the future.

Read more about how we manage risk related to culture and talent in our 'Shaping our culture and managing diverse talent' risk on page 30 of our Annual Report.

Leadership development

Our vision is that leadership transcends job title or level and that it encompasses how we work together to fulfil our purpose, deliver our strategy and live our values.

This year we refreshed our Leadership Model, which sets out the core leadership accountabilities, competencies, and behaviours expected of all our people. The model applies to all employees and provides clear expectations of what leadership excellence looks like at South32.

Our leadership development toolkit provides all employees with tools to support the development of leadership skills. It includes a 360-feedback survey, guidance to complete work-style self-assessments or career reviews and support for defining development goals to enhance leadership outcomes. Our employees also have access to a mentoring toolkit, which provides guidance on establishing mentoring processes to further support the achievement of development goals.

Our new Leadership Fundamentals Program provides tailored development support for our frontline leaders. To date, 26 leaders at IMC and Hermosa have completed pilots of this program, which combines standard and locally focused elements. Another development resource, our Emerging Leader Program, is designed to help our leaders in South Africa and Mozambique achieve their full potential. This year, 36 leaders graduated from the 18-month program, while a further 22 leaders started the program in May 2021.

Employee benefits

Through our award-winning annual AllShare Plan we invite eligible permanent employees to become owners of South32 to share in our growth and success.

We also support eligible employees to undertake further education and training through our Education Assistance program. Some of our employees receive external coaching and have the opportunity to undertake secondments to further their development.

All employees and their families can access our EAP, which provides confidential support and counselling across a very broad spectrum, from personal wellbeing to financial or legal questions. We work with our EAP service provider to confirm it stays relevant to employees' needs.

Employee engagement

Employee engagement is an important driver of business performance and long-term success. We encourage honest feedback from our employees through our annual global employee surveys. Due to the impact of COVID-19, our annual survey did not take place in FY21. In FY22, we will be undertaking more regular employee 'pulse' surveys, to gather a real time indication of our employees' lived experience and to test whether we are making a sustainable shift towards our aspired culture.

Recognition in FY21

- Six of our employees were recognised as finalists at the 2020 Northern Territory Exceptional Women in Resources Awards.
- Two of our employees were included in the 100 Global Inspirational Women in Mining 2020 list.
- Two employees were hailed as 'COVID-19 Women in Mining Heroes' by the Minerals Council South Africa Women in Mining Leadership Forum.
- Three of our employees were finalists in the 2021 Chamber of Minerals and Energy of Western Australia Women in Resources Awards, of which one was awarded the Outstanding Woman in Resources category.
- One of our employees was a finalist in the 2021 New South Wales (NSW) Women in Mining Awards.

Capability and development

We promote a lifelong learning approach and support employees to define their own professional development pathways through establishing performance and development goals. We link performance to reward, so people can be confident that their contribution will be recognised. This year over 4,500 employees completed a regular performance and career development review.

Employee relations

Our approach to employee relations is set out in our Global Employee Relations Framework. This framework is used by our operations and functions and respects freedom of association, representation, and collective bargaining. If collective agreements specify further consultation obligations, we work to meet these. As a minimum, our negotiations aim to achieve outcomes that balance the needs of our employees and our business and comply with relevant legislation.

This year, 52 per cent of our employees were engaged under collective bargaining agreements.

Read more about **employee relations** in our Sustainability Databook at *www.south32.net*.

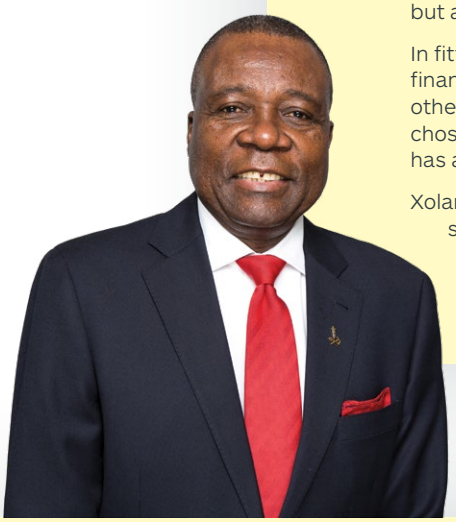
Our performance

We continue to strengthen our talent pipeline with more than 400 new offers made globally through our entry-level programs in FY21. These include apprenticeships, vacation courses, graduate schemes, learner schemes and bursaries.

We provided parental leave benefits to more than 400 employees this year. This benefit comprises Primary Caregiver Paid Parental Leave, Secondary Caregiver Paid Parental Leave, and our Supplementary Secondary Caregiver Paid Parental Leave. In Australia, our flexible parental leave policy awarded us a place in HBF's 20 Best Australian Workplaces for New Dads 2020. This policy was designed to make it easier for parents to take time off during the important early years of a child's life, providing more flexible and fulfilling career options for our employees.

During a year unlike any other, we introduced several initiatives to engage employees throughout the COVID-19 pandemic. These included global calls where employees had an open forum to ask questions of our senior leaders, covering a wide-range of topics such as our response to COVID-19, updates on our strategy and company performance. We also shared insights and resources to support our leaders and provided tools to help them engage with employee during a period of great uncertainty. We promoted our LinkedIn Learning content, which saw a 28 per cent increase in active users.

***Amanda Crehan**, Superintendent Exploration from IMC in NSW, was named as a finalist for the 2021 NSW Women in Mining Awards.*



Dr Xolani Mkhwanazi South32 Bursary Scheme

In FY21, we re-named our South African bursary scheme in honour of Dr Xolani Mkhwanazi, a Non-Executive Director on our Board, who passed away in 2020 after a short illness. The bursary scheme is an investment in young people and their careers, but also in our industry as it helps to build the future talent pool.

In fitting with his legacy, the Dr Xolani Mkhwanazi South32 Bursary Scheme provides financial support to students in need, covering tuition fees, accommodation, meals and other expenses for the duration of their studies. After receiving qualifications in their chosen fields, many of the bursars go on to work for South32. Since 2015, the program has awarded 400 bursaries.

Xolani joined our Board as a Non-Executive Director in July 2015 and was a renowned scientist and an esteemed business leader. He recognised that the bursars who join the graduate program bring a fresh perspective, enthusiasm and energy to our operations, and make a real difference. This was one of the reasons why he was so committed to improving education outcomes for young South Africans.

Making flexible working accessible across our operations

The COVID-19 pandemic has changed perceptions of flexible work and highlighted the benefits it can bring to our business and our people. We are leveraging this shift across all our locations.

In December 2020, we launched our internal flexible work standard, setting out guiding principles and requirements to underpin our global approach to flexible and distributed work. Before the COVID-19 pandemic, flexible working in South32 was focused largely on our office workers. COVID-19 changed this by curtailing mobility. In response, we transformed our perception of flexible work and the benefits it can bring to different areas of our business.

The new standard aligns with our Inclusion and Diversity Policy and will support our efforts to attract and retain diverse talent.

Our Perth office was the first to review its flexible work practices by introducing a suite of flexible working models, followed by other locations. At Cerro Matoso, the launch of a telecommuting program has enabled a third of employees to adopt remote working in some way.

At GEMCO, six people in frontline roles have job sharing arrangements in place to support their transition to either retirement or family care responsibilities.

At Hermosa, our people can work from home while supporting their children with remote learning. At IMC, work from home arrangements have been enacted to reduce the number of personnel on site. Worsley Alumina has implemented flexible working arrangements through all levels and has been exploring job-share options in operational roles. One example of this is a ‘hot seat’ roster, giving locals with the right skills and experience the chance to operate trucks while the main drivers take a break, which means the trucks are never sitting idle. The hot seaters come from a diverse range of backgrounds, including mums with young children, stay at home dads and employees who are job sharing.

We believe flexible and distributed working is here to stay and will strengthen South32’s employee value proposition.

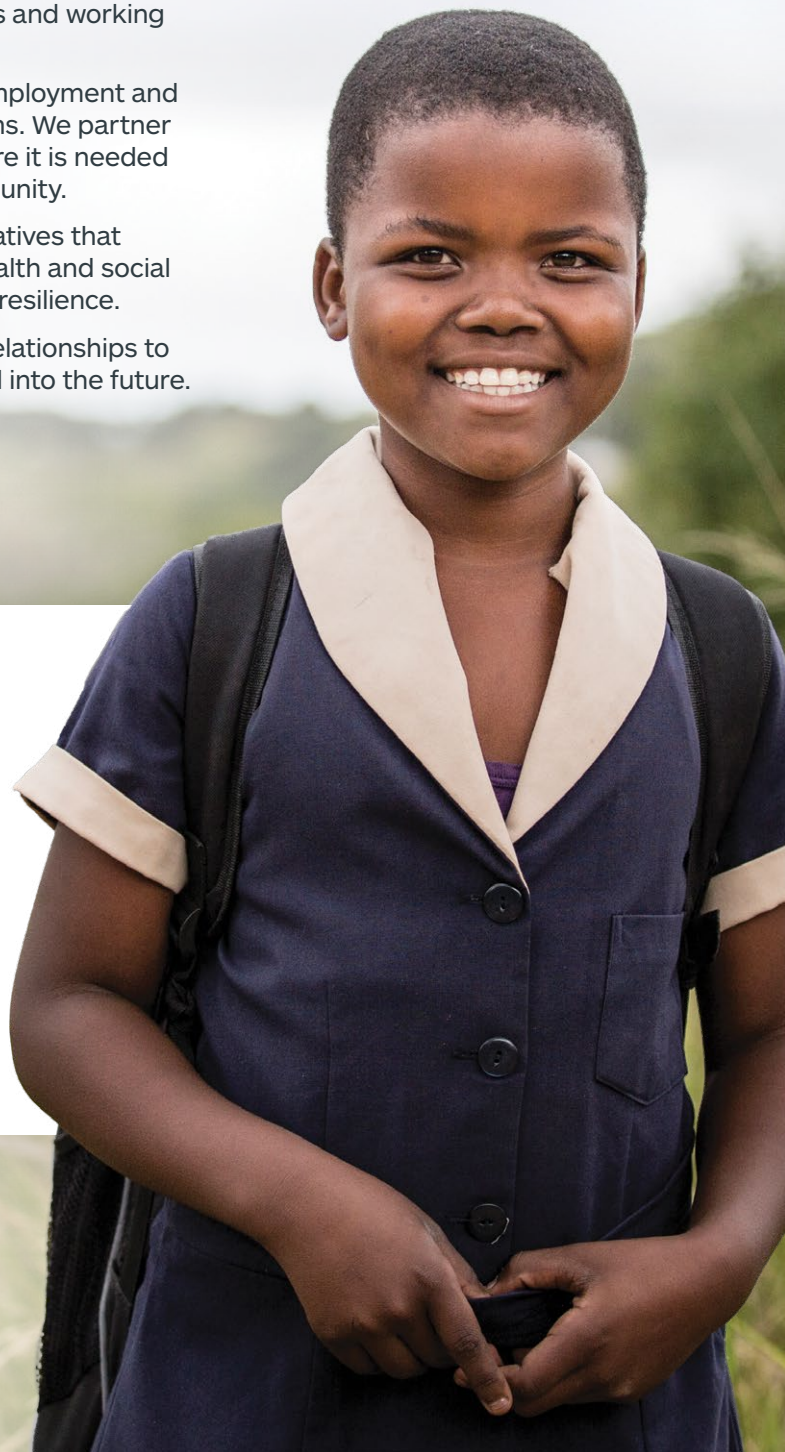
PARTNERING WITH LOCAL COMMUNITIES

We are a global business with a local focus and we are passionate about supporting the communities where we operate. Trust and transparency are essential to the way we operate. That means being in touch with the broader community – considering different perspectives and working together to create shared value.

As well as supporting local economies through direct employment and local procurement, we also support community programs. We partner with local organisations and governments to invest where it is needed most based on a deep understanding of the local community.

Our approach to community investment focuses on initiatives that enhance education and community leadership, good health and social wellbeing, economic participation, and natural resource resilience.

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



Community investment[1]

US$22.2m

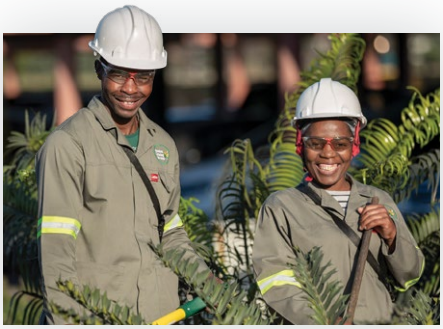
Increase in procurement from Aboriginal and Torres Strait Islander businesses

18% increase

between FY20 and FY21

(1) Community investment consists of direct investment, in-kind support and administrative costs.

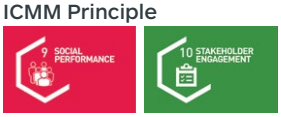
IN THIS SECTION



Wider economic contribution 28

We are committed to making a meaningful contribution to people's lives by creating lasting value.

ICMM Principle



South32 supports the SDGs

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HUMAN RIGHTS LABOUR

Cultural heritage 34

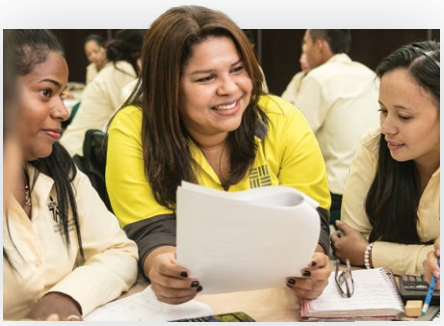
Many of our operations and projects intersect areas of cultural significance and we have a critical role to play in preserving cultural heritage.

ICMM Principle

South32 supports the SDGs

UNGC Principle

HUMAN RIGHTS LABOUR



Communities, social impact and wellbeing 29

We are passionate about supporting the communities where we operate.

ICMM Principle

South32 supports the SDGs

UNGC Principle

HUMAN RIGHTS LABOUR

WIDER ECONOMIC CONTRIBUTION

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.

Our approach

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 support initiatives that require companies to publicly share information on payments made to governments and communities and for governments to publicly disclose contracts and licences for the exploitation of minerals and other natural resources.

Each year, we publish an annual 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.

We support the EITI and provide a financial contribution to the EITI through our membership of the ICMM. This membership supports the EITI's ongoing activities of promoting open and accountable management of mineral resource wealth. The EITI has recently confirmed South32 meets all the expectations for supporting companies.

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

We source goods and services within our local communities, where possible, and set targets at many of our operations for local spend, with consideration of government objectives and legislative requirements.

Read more about our **community investment** and **wider economic contribution** performance in our Sustainability Databook at *www.south32.net*.

Our performance[1]

Government royalties paid (US$ million)

176

Total corporate income tax paid (US$ million)

262

Total corporate income tax accrued on profit/loss (US$ million)

298

Wages, salaries and redundancies (US$ million)

1,047

(1) Includes South32's ownership proportion for equity accounted investments. Figures include data from SAEC for 1 July 2020 - 31 May 2021 and TEMCO from 1 July 2020 - 31 December 2020.

COMMUNITY, SOCIAL IMPACT AND WELLBEING

Our relationships with wider society – whether local, regional, or global – are important to our shared success. We believe trust and transparency are essential to the way we operate. We listen to our stakeholders and communities to understand what's important to them, consider different perspectives and work together to create value for all our stakeholders.

Our approach

Investment and impact measurement

We invest in our local communities, designed in collaboration with them and other stakeholders to reflect their priorities. Our community investment 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 and use natural resources in responsible and sustainable ways.

This year we introduced our Community Investment Impact Measurement Framework to improve how we measure the impact of our community investment, help inform investment decisions and strengthen project design. Our teams have commenced implementation through their Community Investment Plans and we have been working closely with community partners to apply the measurement tool. We collect output data for all projects, and outcome data for longer-term strategic partnerships, with the goal of achieving social impact in the four key focus areas listed above.

The framework is a valuable monitoring mechanism for us to make evidence-based decisions regarding adjustments, scalability or replicability of our programs. Going forward, it will provide us with important feedback on the impact our programs are having in our communities and how these programs make a difference, now and into the future.

Supporting learning and skills development in schools

The team at Hotazel Manganese Mines (HMM) in South Africa has worked with service provider Star Schools, to support learning and development in schools near Wessels mine.

The project was designed to address low enrolment in maths and sciences from grades 10 to 12 and poor pass rates amongst students who took these subjects, which can be the key to future education and employment opportunities.

The project involves running engaging maths and science projects in secondary schools, providing extra tuition and building the capability of teachers and school management teams.

The results in 2020 were impressive, with improved pass rates in the targeted subjects and improved teaching methodologies and skills. Eighty-three per cent of the students passed both maths and science with good results and a number went on to study at a higher education level.

This project is part of a wider community investment plan, which also includes projects in primary schools, technology and robotics, community bursaries and work readiness programs.

We hope Star Schools will produce a pool of learners with the skills needed to take up technical positions in mining or other disciplines such as medicine, engineering and education.

Our performance

During FY21, we invested

US$22.2 million

in community initiatives and activities, which included:

Matching

US$177,440

of employee contributions through our Matched Giving Program. Since 2016 we have matched more than **US$640,000** of employee contributions

41%

directed to support good health and social wellbeing for **66,302** beneficiaries, **165** non-government organisations and health centres, **24,159** households and **334** communities reached

7%

directed to strengthen natural resource resilience with **23,015** hectares of land managed, **12,110** beneficiaries, **1,301** households and **81** communities reached

20%

directed to support economic participation with **803** jobs created, **179** small medium enterprises and **6,708** households engaged

32%

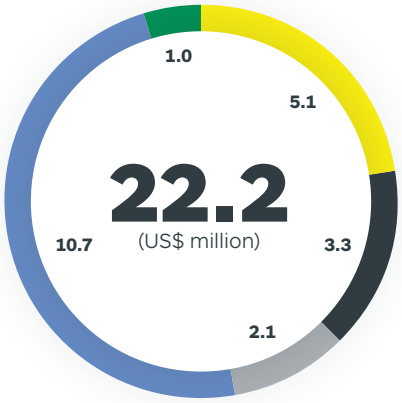
directed to support education and leadership, benefiting **52,482** students, **287** teachers, **477** parents and **539** schools

Donating

US$475,445

through our Disaster Relief Fund to organisations responding to bushfires in Australia and to help the Mission to Seafarers in Australia

FY21 community investment by country[1]



- Australia
- Colombia
- Mozambique
- South Africa
- United States

(1) Community investment consists of direct investment, in-kind support and administrative costs.

Community engagement

We go through rigorous processes to understand the unique social, environmental, cultural and legal contexts that we operate in. We take an inclusive approach to engagement with our communities, to understand what's important to them and their expectations of us. Many of our employees also come from communities close to our operations and offices, so this also gives us valuable insights into what matters.

Community health

Our internal health standard incorporates elements to improve our ability to identify and manage community health risk. Our operations are required to implement monitoring programs when a potential health risk to the community is identified. These programs consider baseline and impact assessment and the 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.

Indigenous and Tribal Peoples

We recognise that we often undertake activities on lands and waters where Indigenous and Tribal Peoples have a strong and distinct connection. We acknowledge and respect cultural values, heritage, laws, lore and the traditions of Indigenous and Tribal Peoples of the lands and waters where we operate. Indigenous and Tribal Peoples have a distinct spiritual connection with landscapes, waterways and rivers and their cultural values, traditions, lore, and customs are an integral part of their identity, which is passed on to future generations.

We know we can only operate and realise the potential of mineral resources with the support of Indigenous and Tribal Peoples. We must earn their support by respecting the value and importance of their cultural heritage and connection to the land, as well as sharing in the benefits from realising the potential of these shared resources.

We engage with Indigenous and Tribal Peoples throughout the life of our operations and our engagement is sensitive to and respects cultural protocols.

We will work to obtain free, prior and informed consent from Indigenous and Tribal Peoples before we operate, consistent with the ICMM Position Statement on Indigenous Peoples and Mining and the International Finance Corporation's Indigenous Peoples Performance Standard. We understand the importance of engaging and working with Traditional Owners and Indigenous and Tribal Peoples.

A map of our operations and the presence of Indigenous and Tribal Peoples can be found on page 4.

Reconciliation in Australia

We share the vision of an Australia that embraces the histories and cultures of Aboriginal and Torres Strait Islander Peoples. Our Innovate Reconciliation Action Plan (RAP) sets out how we can help make this vision a reality.

We seek to build constructive relationships with Aboriginal and Torres Strait Islander Peoples based on mutual trust and seek to be an active partner in their success. Our reconciliation journey started in 2018 with the launch of our first RAP, laying the foundations of our approach.

Our Innovate RAP, launched in September 2020, runs to August 2022. It sets new, more ambitious goals, including:

- Becoming 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;
- Increasing our procurement of goods and services from Aboriginal and Torres Strait Islander businesses by 10 per cent year-on-year;
- Helping our people become culturally aware and respectfully engage with Aboriginal and Torres Strait Islander Peoples in their day-to-day work; and
- Building and maintaining strong relationships with Aboriginal and Torres Strait Islander Peoples in the communities where we operate.

We are running several education and work initiatives. These include:

- The Anindilyakwa Future Leaders Program at GEMCO (pg 32);
- Australian Indigenous Education Foundation (AIEF) scholarships for Indigenous secondary school students;
- Indigenous Work Experience Program at Cannington; and
- Cultural heritage training for our people, including senior leaders.

Highlights

- Set up RAP Working Groups at each of our Australian operations, increasing the number of Aboriginal and Torres Strait Islander Peoples' representatives on these working groups, and created a RAP Steering Committee made up of senior leaders.
- Increased our procurement of goods and services from Aboriginal and Torres Strait Islander businesses by 18 per cent year-on-year, exceeding our target of a 10 per cent increase.
- Launched our Innovate RAP which introduced new goals to further embed reconciliation in the business.
- Created more community investment partnerships to support economic and social outcomes for Aboriginal and Torres Strait Islander Peoples.
- Committed A$2 million over two years to support the creation of a new Aboriginal cultural centre that will preserve and showcase the rich history of the Noongar people of the Peel and South West regions of Western Australia.
- Demonstrated our support for an Indigenous voice in the Constitution through a submission to Australian Federal Parliament.

Agreements with Indigenous and Tribal Peoples

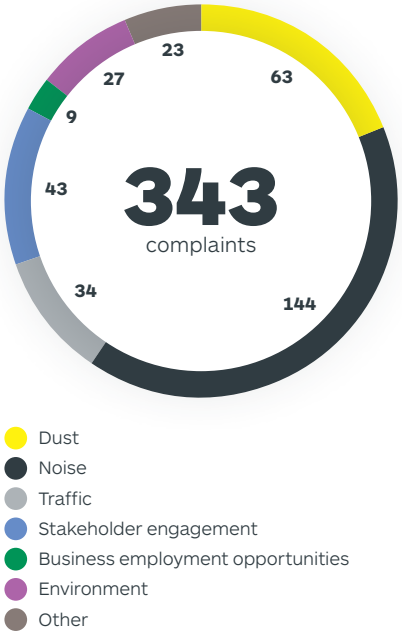
Agreement making is an important way that mining can deliver sustainable long-term outcomes with Indigenous and Tribal Peoples.

At GEMCO we have three agreements that relate to mining and exploration for the Western, Eastern and Southern Leases. In addition, there are other agreements with Aboriginal groups relating to haul road alignments, river crossing points, education and training. These agreements are important for the continuation of our mining operations, but provide financial benefits for the communities, establish requirements for the preservation of culture, and agree to promote the independence and lifestyles sought by the Aboriginal communities of Groote Eylandt.

At Cerro Matoso we have seven community agreements with the Indigenous Zenú People. These focus on improving health and socio-economic outcomes. Each agreement also documents Cerro Matoso's commitments to managing its environmental impacts with community members trained to participate in monitoring and surveillance. The agreements formed part of Cerro Matoso's submission for a new environmental licence which was granted in February 2021 by the National Environmental Licensing Authority. Cerro Matoso also has similar agreements with the Afro-Colombian communities of San José de Uré and Boca de Uré.

Read more about how we have built community partnerships at Cerro Matoso at *www.south32.net*.

FY21 community complaints by type



Community complaints in FY21

All our operations have implemented stakeholder engagement plans, impact assessments and community investment programs.

This year, we received 343 complaints, compared with 280 in FY20 and closed out 99 per cent of the total complaints.

Forty-two per cent of the complaints were noise-related and of these, 77 per cent were recorded at Illawarra Metallurgical Coal (IMC). In response to complaints related to noise at IMC, we engaged specialists to review the rail network and advise on improvements. As a result, we invested in rail track improvements which included rail surveys, realignment and grinding activities, and the installation of a noise monitor to observe rail performance.

Eighteen per cent of the complaints were dust-related and of these, 79 per cent were recorded at Hillside Aluminium. The complaints at Hillside Aluminium relate to alumina fall-out on neighbouring properties caused by a delay in the supply of and change out of filter bags for the Gas Treatment Centres due to COVID-19. Complaints relating to this issue ceased upon the installation of new filter bags.

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

Community unrest in South Africa

Mining communities across South Africa have experienced protests in the last year and we have seen an increase in community protests at our operations. Protests are driven by factors including community dissatisfaction with limited employment opportunities, limited opportunities for economic participation through procurement, poor service provision and a general lack of development. For many years, our operations have been working to address these areas of dissatisfaction, through community, employment and supplier development programs but socio-economic challenges remain. The COVID-19 pandemic has also seen an increase in poverty levels and increased unemployment, with communities looking to mining companies to address these challenges.

This year we had five protests at HMM and two protests at Hillside Aluminium. Additionally, there have been sporadic protests at the construction site for the new Kotulong Community Centre (KCC), a South32 community investment project.

Anindilyakwa Future Leaders Program

We have partnered with the Australian Indigenous Leadership Centre and Anindilyakwa Land Council to launch a program designed to enable and empower young people on Australia's Groote Eylandt, in the Northern Territory where GEMCO is located.

The Anindilyakwa Future Leaders Program was developed in collaboration with Traditional Owners and is focused on developing leadership capability and governance skills – to support the Anindilyakwa Peoples' vision for self-determination and a sustainable post mining future.

Along with financial support for the program, totalling A$1 million in the first year, we will provide mentoring opportunities for participants. Five employees from GEMCO are part of the program's inaugural cohort.

The initiative builds on our Innovate RAP, which includes a commitment to grow our Indigenous employment and procurement, increase community investment programs and expand cultural awareness training for employees.

Twelve young Anindilyakwa people, including Kyanna from GEMCO (*pictured*), make up the inaugural cohort.

"I wanted to take part in the program to be a role model for my younger siblings and community members, so they can look up to me and know that anything is achievable if they put their minds to it," Kyanna said.

Learn more about the **Anindilyakwa Future Leaders Program** at *www.south32.net*.

We have taken the following actions in response:

- Reviewed the risks associated with community unrest and protests at the sites and strengthened associated controls;
- Engaged with local authorities at senior levels, participated in local authority-led discussions with community groups and increased proactive engagement;
- Improved the community benefit components of our Social and Labour Plans to better respond to the needs of the communities; and
- We are working with local industry partners on joint industry socio-economic development projects.

As part of our security response, we monitor and identify threats and provide regular updates to senior management. Our guards are trained in the Voluntary Principles on Security and Human Rights (VPSHR) (read more on page 42). Our South African employees responsible for security services met regularly in FY21 to share learnings, incident management and best practice, with a standing agenda item on the VPSHR. HMM prepared a Security Vulnerability and Threat Assessment in January 2021.

Read more about our Transformation initiatives and performance in South Africa in our Sustainability Databook at *www.south.net*.

Complaints and grievances

We listen and respond to concerns from our communities through local complaints and grievance processes. Our grievance mechanisms are only effective if our communities know about their existence, understand how and when to use them, and trust them enough to do so. Each year, we review the effectiveness of our processes against the expectations set out in UN Guiding Principles on Business Human Rights which require processes to be legitimate, accessible, predictable, equitable, transparent, rights-compatible, promote continuous learning and be based on engagement and dialogue.

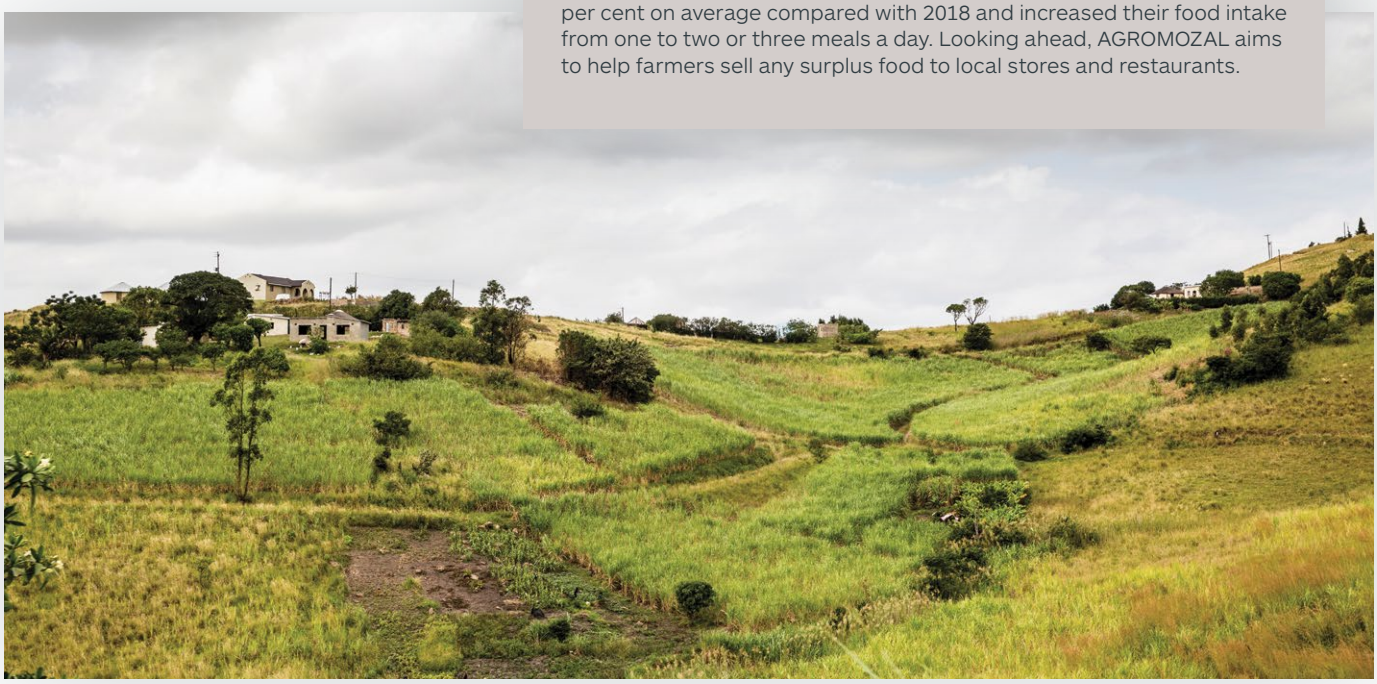
Fighting poverty and hunger in Mozambique

In Mozambique, Mozal Aluminium is supporting a project that aims to fight poverty and end hunger by helping local farmers to farm more productively, sustainably and competitively, to achieve a better income.

Launched in 2018, AGROMOZAL is a partnership with local non-government organisation, Fundaso. It has been rolled out with cooperation from nine agricultural associations in the Boane and Namaacha districts of the Maputo Province, where urbanisation has reduced land available for farming by 41 per cent over the past decade.

This project continues to make a positive difference for participating farmers. They receive agri-training in irrigation and crop rotation, along with subsidised equipment and other resources such as natural fertilisers and seedlings. This helps the participating farmers to move beyond traditional subsistence farming techniques to sustainable methods. This is better for the food they and their families consume and for the environment on which they depend.

In 2021, AGROMOZAL helped farmers increase income by around 520 per cent on average compared with 2018 and increased their food intake from one to two or three meals a day. Looking ahead, AGROMOZAL aims to help farmers sell any surplus food to local stores and restaurants.

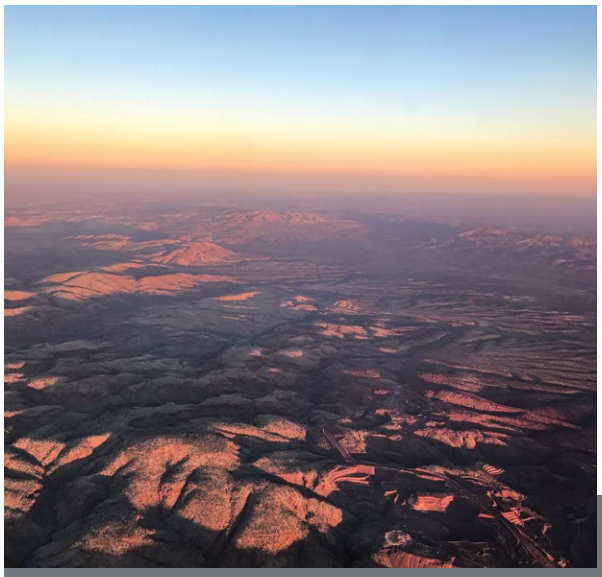


CULTURAL HERITAGE

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

We respect the unique cultural and spiritual relationships that Indigenous and Tribal Peoples have to the land and waters and their rich contribution to society. We are committed to working together to build lasting, meaningful relationships and we continually work to strengthen and enhance our approach to preserving cultural heritage.

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



Cultural heritage can be tangible - artefacts, natural landscapes and buildings, but also intangible - language, stories, connectedness, rituals, beliefs, cultural landscapes and customs. The significance of cultural heritage is defined by reviewing its aesthetic, historical, scientific, social, and spiritual value – separately or holistically – and can evolve as new information becomes available.

Our approach

Wherever possible we avoid impacting any cultural heritage, which includes changing our work practices. If this is not possible, we minimise our impacts in consultation with Indigenous and Tribal Peoples and work to obtain their free, prior and informed consent for impacts to critical cultural heritage. This approach is consistent with the ICMM Position Statement on Indigenous Peoples and Mining and with the International Finance Corporation's Indigenous Peoples Performance Standard.

From initial exploration, through to construction and operation and closure, we engage and learn from local Indigenous and Tribal Peoples so we can understand their cultural heritage. We use consistent processes and support these processes with tailored cultural heritage training for our people.

Read more about our **approach to cultural heritage**, including the guiding principles for Aboriginal and Torres' Strait Islanders Peoples' Cultural Heritage at *www.south32.net*.

Governance

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

Our senior leaders manage and review our internal standards, which are approved by our Chief Executive Officer and responsibility for implementation of the standards is within the mandate of the Vice President Operations at each site. The Board also has oversight of our relationships with Indigenous and Tribal Peoples, through regular reports submitted to our Sustainability Committee, annual updates about the implementation of our RAP, annual review and approval of our Sustainable Development Report and special briefings about material risks and issues.

Several states in Australia are undertaking cultural heritage legislative reform. We support amendments to cultural heritage laws so that cultural heritage is appropriately recognised and respected. We also support the development and maintenance of respectful relationships between land users and Aboriginal and Torres Strait Islander Peoples to deliver mutually beneficial outcomes that reflect local priorities.

Highlights

- Worked with more than 10 Indigenous and Tribal Peoples groups or representative bodies to update 'Our Approach to Aboriginal and Torres Strait Islander Peoples' Cultural Heritage'.
- Reviewed our Australian cultural heritage performance requirements to improve alignment with international standards and developed action plans to address key gaps identified in the review.
- Reviewed our cultural heritage risk profile and updated the risk registers and management systems for all our operations and non-mining lands.
- Launched a data migration project to collate and verify all Australian cultural heritage agreements into our land and tenements planning system.
- Rolled out cultural awareness and cultural heritage training for employees across South32 globally, including senior leaders.
- Developed a tailored program to brief the Board and senior leaders in detail on cultural heritage.
- Increased our cultural heritage subject matter expertise within the business.

Our performance

The destruction of rock shelters of exceptional significance at Juukan Gorge in May 2020 heightened public awareness of cultural heritage in Australia and increased scrutiny by investors and other stakeholders. Although the incident did not involve South32, we have sought to identify potential learnings for our own business and enhance the way we deal with matters of cultural heritage.

During FY21 we undertook a comprehensive review of the way we manage Aboriginal and Torres Strait Islander Peoples' cultural heritage in Australia.

Through this review we advanced our understanding of tangible and intangible cultural heritage across our operations. We also considered ongoing domestic and international legislation and reform and assessed our principles, systems, processes, accountabilities, and performance standards. With input from our people, representatives of Aboriginal and Torres Strait Islander Peoples and other global Indigenous and Tribal Peoples' stakeholders, the review highlighted the following:

- Our operations in Australia connect to a continuous cultural landscape, defined in many ways – trees, shelters, rock art, sacred places, and other tangible and intangible artefacts;
- All our operations had processes in place to help avoid or minimise their impacts, but we can improve accountability and governance, and develop a stewardship program;
- All our sites work to adjust their plans and actions to avoid negative impacts. This includes having buffer and no clearance zones, where appropriate and possible;
- There are opportunities to improve our relationships with Aboriginal groups through better engagement and by improving the outcomes of community investment; and
- All our sites need to improve their data and risk management systems.

The findings from the review have changed how we think, how we make decisions and how we act. We have updated 'Our Approach to Aboriginal and Torres Strait Islander Peoples' Cultural Heritage' and developed our Cultural Heritage Requirements. This was supported by cultural awareness training was completed by 588 employees this year.

Looking ahead

We have set several priorities beyond our operations in Australia. We recognise there is no one size fits all approach across our global portfolio, so in FY22 we will continue to develop additional tailored approaches to cultural heritage in Colombia, the US and Southern Africa, involving representatives of Indigenous and Tribal Peoples in the process.

Adjusting our working practices to protect Aboriginal and Torres Strait Islander Peoples' cultural heritage

Following consultation with the Anindilyakwa people who live near our GEMCO operation on Groote Eylandt in Australia's Northern Territory, we adjusted the route planned for a haul road and engineered a bridge capable of supporting our heavy machinery without the need for pylons in the Emerald River, which is sacred to the Wurrawilya Clan.

We became aware of this during an early consultation to discuss our plans and Anindilyakwa communities worked with us to develop alternative routes and solutions.

In the longer term, after mining ceases on Groote Eylandt, the bridge and road will provide the Anindilyakwa People with better access to the southern parts of the Eylandt.

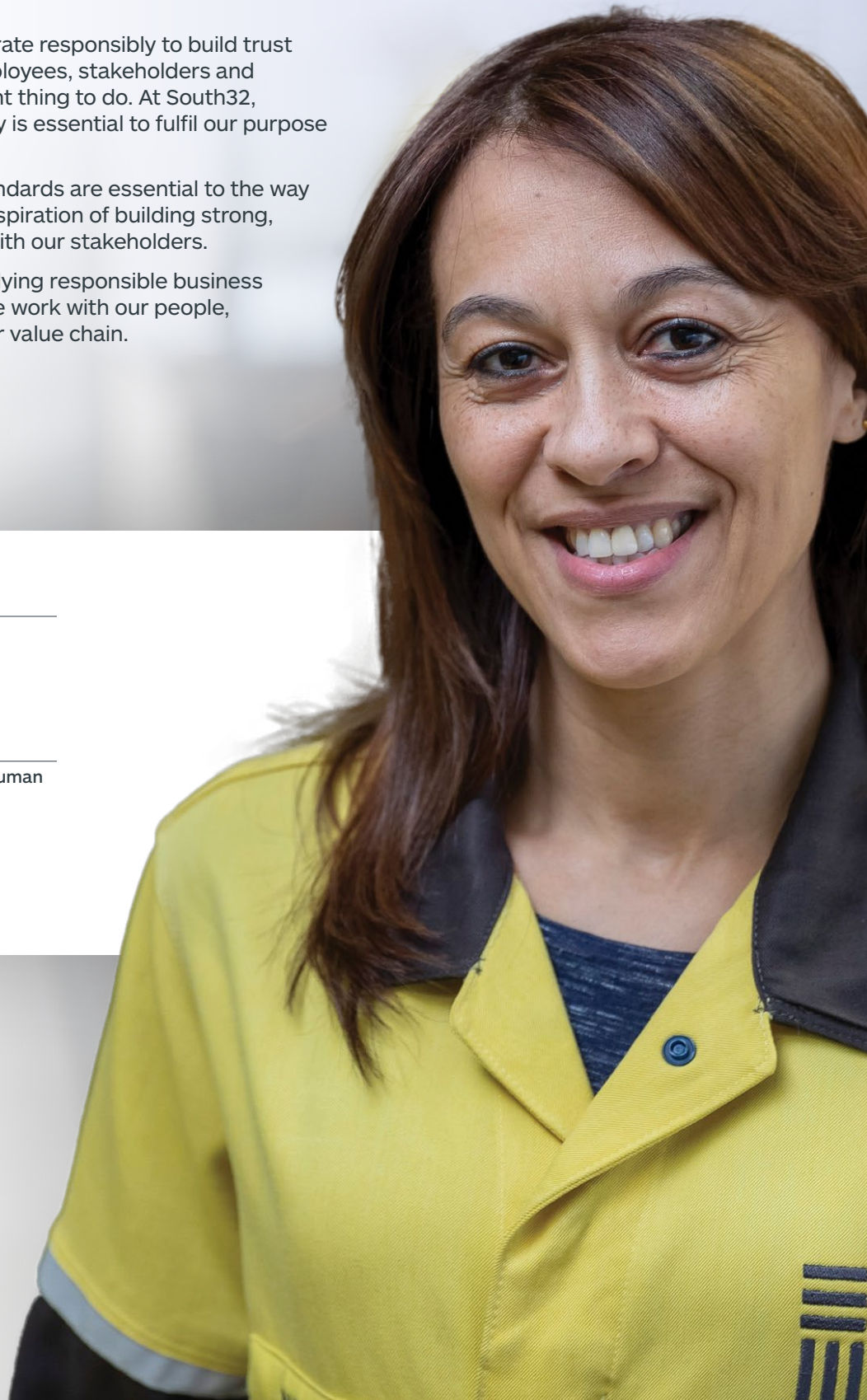
This adjustment demonstrates our determination to build enduring positive relationships with our Aboriginal and Torres Strait Islander Peoples' stakeholders and find ways for mining and cultural heritage to co-exist. It also reflects our inclusive and respectful approach to cultural heritage.

OPERATING ETHICALLY AND RESPONSIBLY

It is essential that businesses operate responsibly to build trust and meet the expectations of employees, stakeholders and society. More than this, it's the right thing to do. At South32, operating ethically and responsibly is essential to fulfil our purpose and deliver on our strategy.

Transparency and high ethical standards are essential to the way we operate and to achieving our aspiration of building strong, mutually beneficial relationships with our stakeholders.

Respecting human rights and applying responsible business practices are central to the way we work with our people, other organisations and across our value chain.



Enterprises that received funding support

60

Recorded completions of human rights training modules

10,000+

IN THIS SECTION

Business ethics and integrity 38

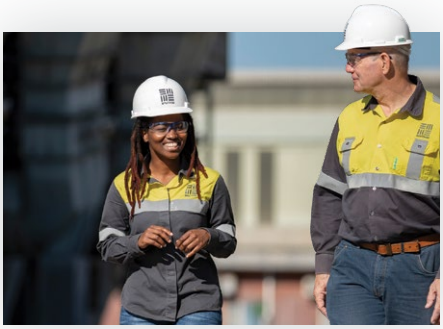
We are committed to the highest standards of integrity and accountability.

ICMM Principle

South32 supports the SDGs

UNGC Principle

ANTI-CORRUPTION



Responsible value chain 43

We seek to apply responsible business practices throughout our value chain.

ICMM Principle

South32 supports the SDGs

UNGC Principle

HUMAN RIGHTS LABOUR

Human rights 40

Respecting human rights is at the core of our sustainability approach.

ICMM Principle

South32 supports the SDGs

UNGC Principle

HUMAN RIGHTS LABOUR

BUSINESS ETHICS AND INTEGRITY

At South32, we are committed to the highest standards of integrity and accountability. Our values and Code of Business Conduct (Code) guide how we act, work, communicate and evaluate our conduct.

Our global whistleblower policy encourages our People to speak up when our values and standards of conduct are not being followed (a business conduct concern).

Our approach

Our Code of Business Conduct

Our Code sets the standards of conduct 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 act 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 and other workplace behaviour trends. We also provide the RAC with ongoing updates on our anti-bribery and corruption (ABC), economic sanctions, anti-money laundering compliance programs, and key 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*.

Highlights

- Released updated online training to support our Code – with a requirement for all employees to complete this training.
- Updated online training for relevant employees covering ABC, economic sanctions, and anti-money laundering compliance training was also released.
- Continued to carry out focused monitoring and risk assessment activities.
- Strengthened competition law, anti-bribery and corruption and sanctions compliance programs to continue to meet or exceed applicable laws, taking account of regulator guidance.
- Conducted ABC and sanctions compliance due diligence and provided related advice, through our Business Integrity team, including on higher risk acquisition and divestment transactions.

Speak Up

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

We encourage our People 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.

We have a Business Conduct Committee, made up of senior leaders, to provide guidance and oversight on material business conduct concerns. Material business conduct cases are reviewed by our Business Conduct Committee on a quarterly basis, with a focus on consistent application of our Code and disciplinary outcomes across South32.

We also run an EthicsPoint user training program for our relevant trusted employees who have a case management role.

Our global **Speak Up Policy** is available at *www.south32.net*.

Anti-Bribery and Corruption Policy and Program

As part of our commitment to act ethically, responsibly and lawfully, we operate a risk-based ABC compliance program. Our ABC Policy, which builds on our Code, is available at *www.south32.net* in several languages. Our ABC compliance program includes ABC training for identified employees at higher risk of exposure to bribery and corruption. During FY21, updated ABC compliance training was provided to identified higher risk employees. We are not aware of any legal action commenced, continuing or completed against us in FY21 regarding breaches of anti-corruption laws.

We report to our RAC and Board on material breaches of our ABC Policy. This year, we conducted ongoing ABC risk assessments and monitoring activities, as well as implemented risk-based program improvement initiatives.

Our ABC Policy, including more details about our **ABC compliance program and monitoring** is available at *www.south32.net*.

Economic sanctions

We operate a risk-based economic sanctions and anti-money laundering compliance program. This year, we conducted ongoing sanctions and anti-money laundering due diligence, risk assessments and monitoring activities as well as implementing risk-based program improvement initiatives. We are not aware of any legal action commenced, continuing or completed against us in FY21 regarding breaches of applicable sanctions or anti-money laundering laws.

Competition

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. We operate a risk-based competition law compliance program. We are not aware of any legal action commenced, continuing or completed against us in FY21 regarding breaches of competition laws.

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

Business integrity in our response to the COVID-19 pandemic

As communities around our operations responded to the COVID-19 pandemic, we supported them with targeted investment via prioritised COVID-19 projects.

At the same time, we needed to manage ABC risks associated with these projects. Our response was the rapid implementation of a streamlined risk-based COVID-19 community partner and community investment pre-clearance process, jointly developed by our Community and Business Integrity teams.

This involved completing an updated global ABC risk assessment, to identify opportunities to streamline governance processes, especially relating to our community partners who had already undergone due diligence reviews and were considered suitable for community investment support.

This collaborative approach enabled ABC due diligence to be further targeted, resulting in a quicker COVID-19 community investment response to support our communities, while appropriately mitigating ABC risks.

HUMAN RIGHTS

We are committed to respecting human rights and it is at the core of our sustainability approach. Not only is it the right thing to do, but it is critical to the success and integrity of operating as a responsible business. We celebrate the diversity, dignity and uniqueness of every individual.

Our approach

We respect all internationally recognised human rights as set out in the International Bill of Human Rights. We respect the rights of all stakeholders, and particularly focus our efforts on those people most vulnerable to harm, being marginalised, or at risk of having basic dignity and equality undermined. Collaboration is crucial, and we are committed to working with our peers, suppliers, host governments, non-profit organisations, rights-holders, and our other stakeholders to address this risk in our supply chain and more broadly.

This year we launched a revised 'Our Approach to Human Rights' which is tailored to reflect the needs of each location where we operate, and is guided by 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 commitments to respect human rights are 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 Supplier Requirements. We aim to influence our non-controlled joint ventures to adopt standards of conduct which are consistent with ours.

Read Our **Approach to Human Rights** at *www.south32.net*.

Highlights

- Updated ‘Our Approach to Human Rights’, a set of principles to guide us.
- Adopted the EcoVadis supplier assessment platform and are progressively mapping our key categories of suppliers against relevant human rights related risks.
- Updated due diligence vetting processes to understand human rights risks to seafarers and contributed funding and care packages to support seafarers during COVID-19.
- Launched 'Our Approach to Aboriginal and Torres Strait Islander Peoples’ Cultural Heritage'.
- Marked International Women’s Day and pledged for the HESTA 40:40 Vision as part of our ongoing focus on equality for women.
- Shared our VPHSR training program with security staff, guards, external affairs and public security forces across our operations.

Identifying our material human rights risks

We have due diligence processes in place to identify, prevent, mitigate and remedy potential or actual adverse human rights impacts in our operations and value chains. We focus our efforts on addressing severe risks to vulnerable or marginalised individuals or groups as well as risks connected to our operations.

Our material human rights risks and impacts are regularly reviewed through processes such as our community human rights impact assessments, supplier human rights assessments and other tailored human rights due diligence processes. The most material human rights risks and impacts we face relate to:

- 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 and Tribal Peoples.

Awareness and training on human rights

We brief our Board about human rights impacts, including Indigenous and Tribal Peoples and modern slavery, to help our Directors promote ethical and lawful decision-making as set out in our Board Charter. These briefings help our Directors to assess the actual or potential impacts of our operations or value chains on host communities, employees, contractors, suppliers and other stakeholders.

We run a holistic 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, which covers human rights;
- 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
- Cultural awareness and cultural heritage training for employees globally.

Our performance

In FY21, we assessed 5,668 direct suppliers for country and industry modern slavery risks, received 58 supplier scorecards and conducted eight independent modern slavery supplier audits in seven countries. We completed reviews of Indigenous and Tribal Peoples' cultural heritage management at four Australian operations and demonstrated our support for an Indigenous voice in the Constitution through a submission to the Australian Federal Parliament. We completed five human rights impact assessments on our communities in three countries. We improved our training program on human rights, with over 10,000 recorded completions across four different modules during FY21.

We participated in six collaborative human rights initiatives this year, including the Sustainable Shipping Initiative, the UNGC Modern Slavery Community of Practice, the WA Modern Slavery Collaborative Group and the ICMM working groups.

Working together to support seafarers

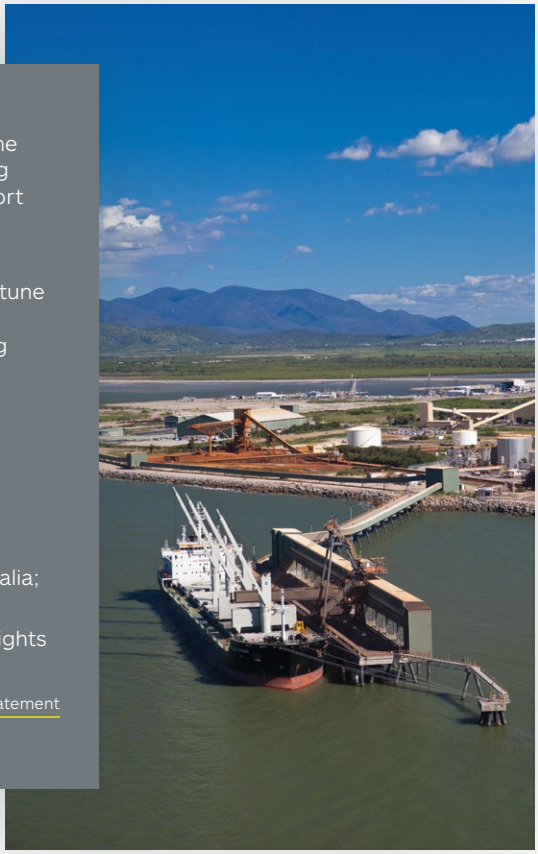
The human rights related risks that seafarers face have been exacerbated by the COVID-19 pandemic, particularly those related to crew changes. As our shipping supply chain is complex and overlaps with other companies, a collaborative effort is essential.

This year, our shared actions included committing to improve collaboration between shipowners and charterers to support crew changes through the Neptune Declaration on Seafarer Wellbeing and Crew Change. We also participated in the Human Side of the Shipping Working Group run by the Sustainable Shipping Initiative, to help develop a common code of conduct based on human rights standards.

Other activities we participated in include:

- Conducting rapid human rights due diligence at all the ports we use;
- Participating in national and state-based port welfare committees to review specific welfare risks at ports in Australia;
- Contributing funding and care packages to the Mission to Seafarers in Australia; and
- Contributing to a Perth-based multi-stakeholder working group on human rights in shipping.

Read more about our approach to **respecting the human rights of seafarers** in our Modern Slavery Statement at *www.south32.net*.



Looking ahead

We will continue to refine our processes and systems while also monitoring the effectiveness of our approach to human rights. Our commitments for FY22 include:

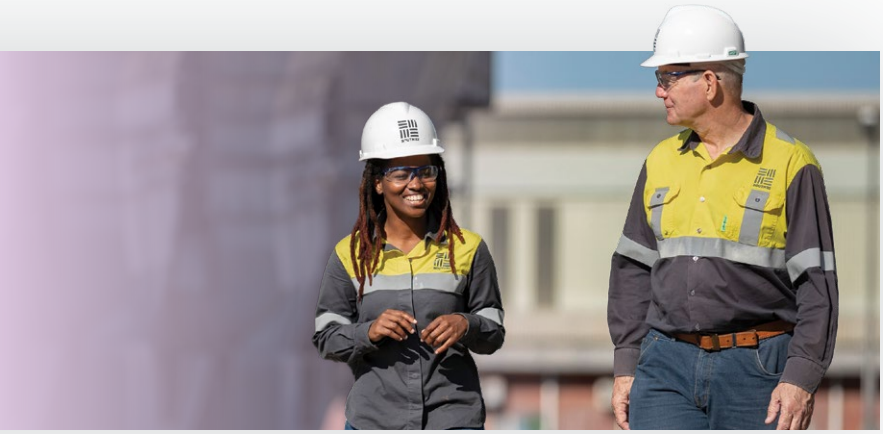
- Establishing a group-wide human rights working group to enhance our oversight and governance of human rights issues;
- Producing a periodic Sustainability Strategy, Community and Government Report (including updates on human rights and cultural heritage) which our Sustainability Committee will discuss as a standing agenda item;
- Updating our minimum performance expectations for human rights and our impact assessment process;
- Developing a new human rights training module to improve employees' understanding of the UN Guiding Principles on Business and Human Rights;
- Completing reviews of Indigenous and Tribal Peoples' cultural heritage and producing a tailored approach to Indigenous and Tribal Peoples' engagement for each operating region beyond Australia;
- Partnering with more Indigenous and Tribal Peoples' to support economic and social outcomes;
- Sharing 'Our Approach to Human Rights' with our stakeholders; and
- Supporting collaborative efforts to address systemic changes needed for long-term sustainable development through the UNGC, ICMM and other industry working groups on human rights.

Bringing the Voluntary Principles on Security and Human Rights to life

The most important commitment we all make is that everyone goes home safe and well after every shift. Our security function plays an important role in meeting that commitment. Our annual review of compliance against the VPSHR, highlighted an opportunity to refresh our training on the VPSHR, how we implement them, and why human rights are relevant to security services.

We worked with the not-for-profit Fund for Peace to design and build an animated online learning module that brings the VPSHR to life for our employees and private security guards. Rollout commenced in November 2020 and, by the end of June 2021, 199 employees completed the module and more than 3,500 completions of both the module and onsite training were recorded for security guards. The majority of the completions were from South Africa Energy Coal prior to the divestment of the business. Our next steps are to supplement the online module with tailored local workshops and real-life scenarios. We will also benchmark its effectiveness in helping us comply with the VPSHR.

RESPONSIBLE VALUE CHAIN



We seek to apply responsible business practices throughout our value chain to not only minimise and manage impacts on people and the environment but also to maximise opportunities for our communities and other stakeholders. We work with our customers and suppliers to source responsibly and enhance product stewardship in our value chain. This comprises 217 customers in 37 countries and 5,668 direct suppliers in 46 countries.

We aim to build strong, mutually beneficial relationships with these stakeholders and work with partners whose values and conduct align with ours.

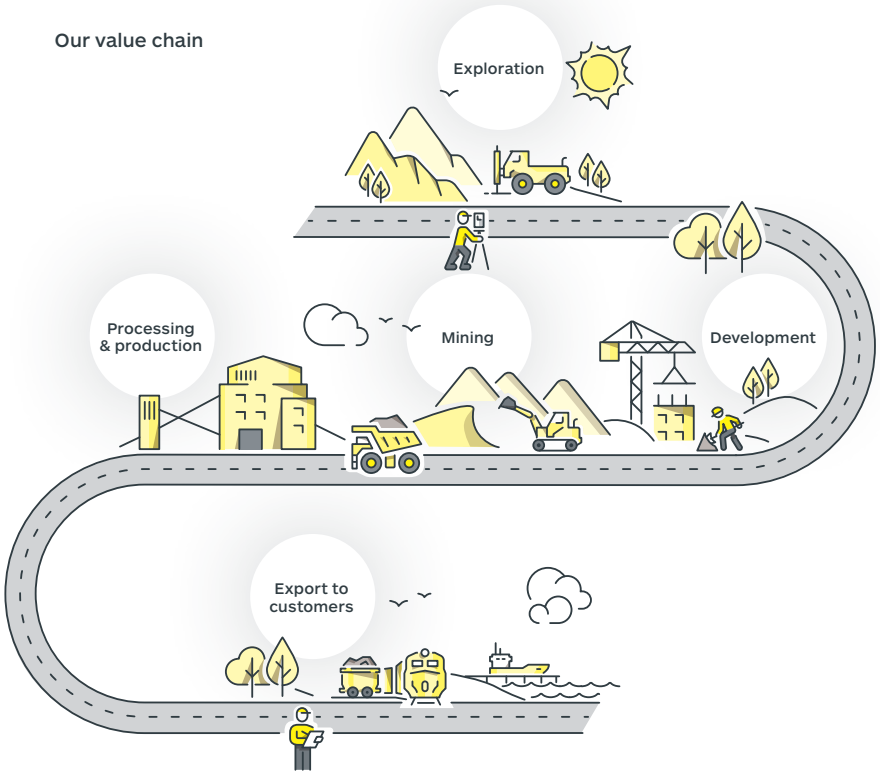
Our approach

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 and 'Sustainability and Business Conduct - Minimum Supplier Requirements'. Any third parties who work at our locations or interact with others on our behalf must follow our Code, or their own code provided their standards of conduct are consistent with ours. In addition, we assess risks associated with our suppliers, support our respective teams to align with our internal standards through stewardship activities and track the effectiveness of our joint efforts.

Our approach to the stewardship of our minerals and metals products is based on accepted best practice for their handling, transportation and use. We are guided by ICMM Mining Principle 8 – Responsible Production, and advice from industry bodies and commodity associations relevant to our products, including the International Manganese Institute, the International Lead Institute, the International Zinc Institute, the International Aluminium Institute and the Australian Coal Industry Research Program (ACARP).

Our value chain



Highlights

- Increased our procurement of goods and services from Aboriginal and Torres Strait Islander businesses by 18 per cent year-on-year, exceeding our target of a 10 per cent increase.
- Introduced a mentorship program for small, micro and medium sized enterprises (SMMEs) in South Africa to help them enter the value chains of larger companies, including South32.
- Partnered with Supply Nation to help Aboriginal and Torres Strait Islander suppliers through our procurement process.
- Launched our updated Sustainability and Business Conduct - Minimum Supplier Requirements, which covers compliance, community, environment, decent and safe work.
- Improved supplier awareness of modern slavery issues and provided tailored modern slavery risk training and tools for our employees.
- Exceeded the FY21 ESD spend target by approximately 12 per cent.
- Contributed to the sustainability of 60 suppliers through funding support, which is captured in our ESD spend, and provided Business Development support to an additional 37 businesses.

Responsible value chain initiatives

We support several initiatives led by industry bodies and associations. For example, we contribute to the collection of process data as part of the Nickel Institute's life cycle management program. Our data records improvements in energy efficiency, greenhouse gas emissions and emissions to air and water over time. By sharing the data with our customers to incorporate into their own life cycle assessments, they can assess the environmental performance of nickel-containing products.

Through our membership of the Aluminium Stewardship Initiative, we collaborate to help achieve certification of producers against an accepted performance standard.

We promote the use of aluminium as a metal in sustainable applications through our membership of the International Aluminium Institute.

For products we sell into the European Union under the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) regulation, we conduct annual REACH regulation training and compliance reviews.

We participate in the Sustainable Shipping Initiative (SSI) on human rights and decarbonisation. This has included contributing to the development of a common code of conduct for charterers, ship owners and ship operators based on human rights standards. We also took part in the SSI's decarbonisation working group, tasked with exploring alternative fuels and means of propulsion for vessels.

Enterprise Supplier Development

We have clearly defined plans to support Transformation and an ESD program in South Africa. It is aimed at building an inclusive and sustainable future for the communities where we operate by growing small and medium sized enterprises.

In line with South Africa's work 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 our local communities. To support socio-economic development in local communities, we comply with the *Broad-Based Black Economic Empowerment Act, Mining Charter III and Minerals and Petroleum Resources Development Act of 2002* (MPRDA), as well as with our operational Social and Labour Plans.

The business environment in South Africa for SMMEs is challenging and this has an impact on their ability to grow, compete and become sustainable.

In collaboration with various training partners, 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. We have similar programs in other countries.

Read more about **Transformation initiatives and performance** in our Sustainability Databook at *www.south32.net*.

Our performance

Metric	Unit of Measure	Target	FY21	FY20	FY19
Enterprise Supplier Development Spend	Spend in US$ million	3 per cent of NPAT[1]	5.3 (target 4.7)	5.6 (target 5.6)	8.7 (target 9.3)
Business Development support	SMMEs participating	No target[2]	37	172	59
Funding support	SMMEs participating	No target[2]	60	27	35
Procurement from Aboriginal and Torres Strait Islander businesses	Spend in US$ million	10 per cent growth year-on-year[3]	14.0	12.0	12.0
Local Procurement	Spend in US$ million	No target	855.8	862.1	Data not available

(1) Targets for Enterprise Supplier Development Spend based on three per cent Net Profit After Tax (US$ million): FY21: 4.73; FY20: 5.62; FY19: 9.34.
(2) Dependent on applications and ESD spend targets.
(3) Target set in FY21.

In FY21 we exceeded the ESD spend targets and matured our funding support model from grant funding only to a combination of loan and grant funding. This enabled us to support more suppliers within the communities where we operate and in FY21, we supported twice as many SMMEs, compared to the year prior.

We developed Indigenous participation plans at each operation and created an Indigenous Supplier Portal making it easier for our operations to work with Indigenous owned businesses. We increased our spend with Aboriginal and Torres Strait Islander owned businesses by 18 per cent compared with the previous year, exceeding our target to increase spend by more than 10 per cent.

We are working with our Indigenous suppliers to connect them with our business network and major contractors, with Indigenous supplier open days scheduled at Worsley Alumina. In FY22, our major contractors and suppliers will also begin reporting their Indigenous spend to enable us to track the indirect Indigenous procurement that our operations support.

Enabling enterprise development in South Africa

Together with Collective Value Creation, we provide an Enterprise Development Program (EDP) in South Africa, specifically tailored to help emerging and existing SMMEs become procurement ready, increase sales and build competitiveness. A longer-term aspiration is to help these SMMEs enter the value chains of larger corporates, including South32.

Currently, 29 SMMEs across a range of industries are involved in the program, which runs every two years. The program includes support and training on business-critical topics - including health and safety, anti-bribery and corruption, financial management, human resources, marketing, record keeping, modern slavery, COVID-19 responses and more.

The EDP aims to be inclusive and impact a wide variety of SMMEs by identifying both new entrepreneurs with feasible business ideas, along with existing businesses that need support.

Once identified, all SMMEs are analysed to understand their needs and are then provided with the appropriate business advice, mentorship and networking opportunities to facilitate long-term viability, creating employment opportunities and positive socio-economic outcomes. The modern slavery awareness training has been very well received. Many SMMEs had not previously perceived it as an issue, but now understand the risks they face and the need to focus on working hours, employment conditions, minimum wage levels, misuse of power and other relevant aspects.

By creating lasting skills across a range of new and existing businesses, the EDP provides the opportunity for SMMEs to build and maintain relevant, sustainable businesses and potentially become a part of larger supply chains, ultimately making a difference in their local communities, now and in the future. The EDP is ongoing with more SMMEs set to participate in the future.

ADDRESSING CLIMATE CHANGE

The impacts of climate change are being felt by countries, communities and businesses around the world. We are playing our part by reducing operational carbon emissions, shifting to low-carbon energy sources and focusing our portfolio on the commodities needed in a low-carbon future.

We support the objectives of the Paris Agreement and are committed to achieving net zero operational carbon emissions by 2050. We have set a medium-term target to halve our operational carbon emissions (Scope 1 and 2) by 2035.

There is no definitive 'best pathway' to net zero and some of the innovations we need are not fully developed. That's why we are working with others and transparently reporting our progress. By providing essential resources to support the global low-carbon energy transition, we can help to create a sustainable world for future generations.

Scope 1 and 2 emissions CO_2-e

7% reduction

between FY20 and FY21

New medium-term target

50% reduction

in operational carbon emissions by 2035

Our approach

Our approach to climate change is aligned with our purpose and integrated with our strategy which is focused on optimising the performance of our operations, unlocking their potential and identifying new opportunities to create value. Our approach is designed to protect and unlock long-term value, build operational resilience and enhance our competitive position in a low-carbon economy.

We are guided by international frameworks, including the ICMM Climate Change Position Statement and UN SDG 13 - Take urgent action to combat climate change and its impacts. As we operate in multiple jurisdictions, we are subject to various national regulatory schemes, such as the National Greenhouse and Energy Reporting (NGER) Scheme in Australia and the South African Carbon Tax. We report in accordance with the Task Force on Climate-related Financial Disclosures (TCFD) and are also informed by the Climate Action 100+ (CA100+) Net Zero Company Benchmark and other frameworks. An index of where we have disclosed information to meet the requirements of TCFD, CA100+, ICMM, UN SDGs and SASB is available in our Sustainability Databook at *www.south32.net*.

ICMM Principle

4 RISK MANAGEMENT | 6 ENVIRONMENTAL PERFORMANCE | 8 RESPONSIBLE PRODUCTION

South32 supports the SDGs

7 AFFORDABLE AND CLEAN ENERGY | 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE | 13 CLIMATE ACTION

UNGC Principle

ENVIRONMENT

Contents

Our approach to climate change is integrated with our strategy

Optimise our business

- Emissions abatement
- Energy efficiency
- Physical resilience

Unlock the full value of our business

- Low-carbon energy
- Low-carbon design
- Technology

Identify and pursue opportunities to create value

- Shift our commodity exposure
- Partner with industry
- Support a just transition

Our progress on climate change

Within 12 months of South32 being established, we committed to supporting the objectives of the Paris Agreement, set our long-term goal of achieving net zero operational carbon emissions by 2050 and set a short-term target to keep our FY21 Scope 1 emissions below our FY15 baseline.

In FY17, we published our first Our Approach to Climate Change report and were one of the first companies to report in accordance with the TCFD guidelines. We tested our portfolio resilience under different climate related transition scenarios and later extended this analysis to the physical resilience of our operations.

We have implemented a range of decarbonisation projects, including low-carbon fuel switching trials at Worsley Alumina, the installation of an off-grid solar photovoltaic (PV) system at our Cannington zinc-lead-silver mine and improved the rate of gas drainage at Illawarra Metallurgical Coal (IMC). We achieved our first emissions target of keeping our Scope 1 emissions below our FY15 baseline.

We have completed decarbonisation concept studies at Worsley Alumina, IMC and Hillside Aluminium. These studies identified a range of emission reduction options and technologies at various stages of commercial and technical feasibility, and continue to inform our current decarbonisation studies and projects.

We are reshaping our portfolio through the lens of our climate commitments. We have exited a number of lower returning and carbon intensive businesses, this year completing the divestments of South Africa Energy Coal (SAEC) and Tasmanian Electro Metallurgical Company (TEMCO). We are investing in base metals options to enhance our commodity exposure and growth pipeline, in FY18 announcing our acquisition of Hermosa and in FY20 forming the Ambler Metals joint venture. We are applying low-carbon design principles as part of our pre-feasibility study of the Taylor zinc-lead-silver deposit at Hermosa, which we intend to develop as our first 'Next Generation Mine'.

We have formed partnerships with customers, suppliers and industry to contribute to the decarbonisation of our value chain and promote the responsible production of commodities needed in a low-carbon world.

For the first time this year, we are reporting emissions by operation, and assessing the resilience of our portfolio in a 1.5°C scenario. We have also developed decarbonisation plans for our energy intensive operations.

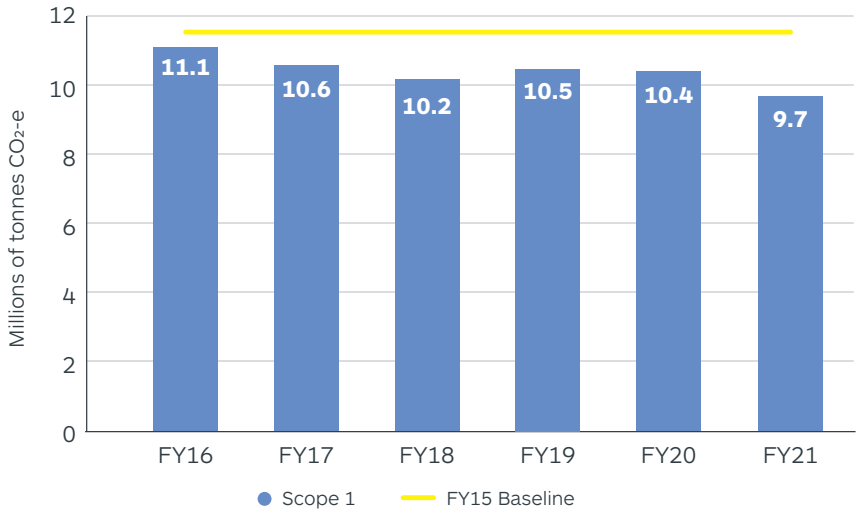
Despite our progress to-date, we have more to do to achieve our long-term goals. In May 2021, we announced our medium-term target, to halve our operational carbon emissions by 2035 from a FY21 baseline.

FY21 operational carbon emissions

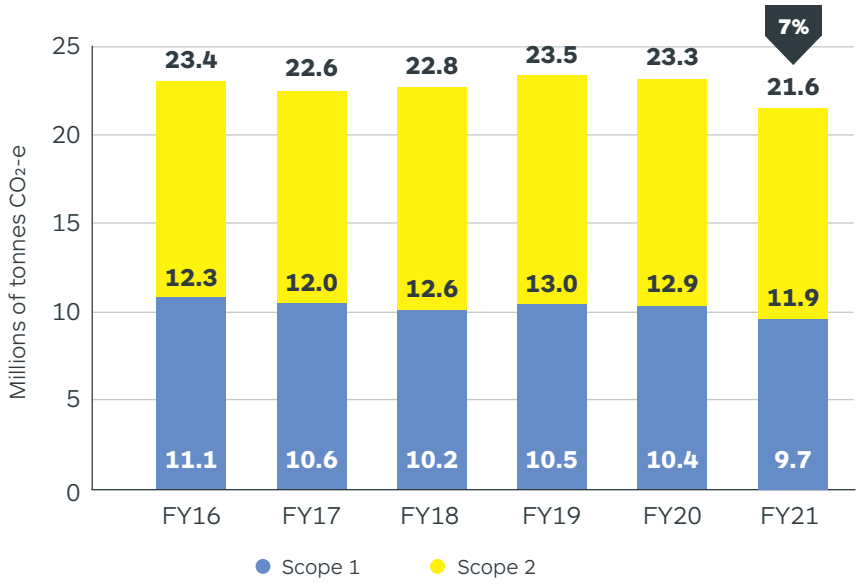
In FY21 we achieved our first short-term target of keeping our Scope 1 emissions below our FY15 baseline. Our total Scope 1 and 2 emissions in FY21 were 21.6Mt CO_2-e, a seven per cent reduction compared to FY20, with lower fugitive emissions from IMC as we realised higher rates of post-drainage gas capture efficiency, and curtailed production from SAEC (prior to the completion of its divestment) and our manganese alloy smelters, in response to market conditions. Our FY21 reported emissions include SAEC and the TEMCO manganese alloy smelter, which were divested during the period.

A breakdown of carbon emissions by operation is available in our Sustainability Databook at *www.south32.net*.

Scope 1 emissions from FY15 baseline



Scope 1 and 2 emissions



We engage with key stakeholders to inform our approach and response to increasing expectations on climate change related initiatives. Our engagement with HESTA, our lead investor at CA100+, provides us with valuable insight into the expectations of our institutional shareholders and global investors.

A message from HESTA | Engagement with South32

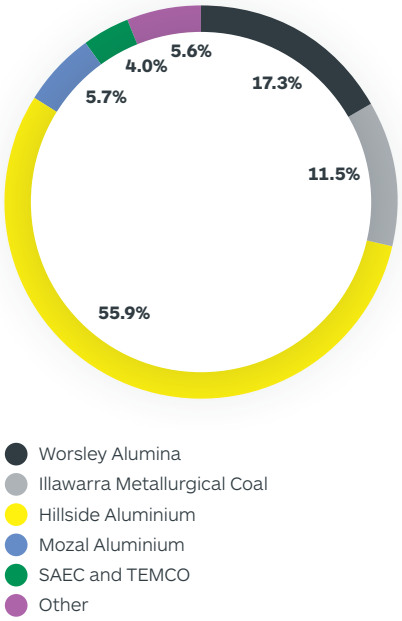
While some high emitters are lagging in their decarbonisation efforts, there are other companies actively re-shaping their business models to prepare for the low-carbon future and are setting ambitious carbon reduction targets to get there.

HESTA is the lead engagement partner, through Climate Action 100+, with South32, a diversified global mining and metals company who has recently announced their intention to achieve a 50 per cent reduction in Scope 1 and Scope 2 emissions by 2035. They have committed to have their emissions independently reviewed and reported on as part of their Annual Reporting Suite. We look forward to reading about South32's progress in the coming years.

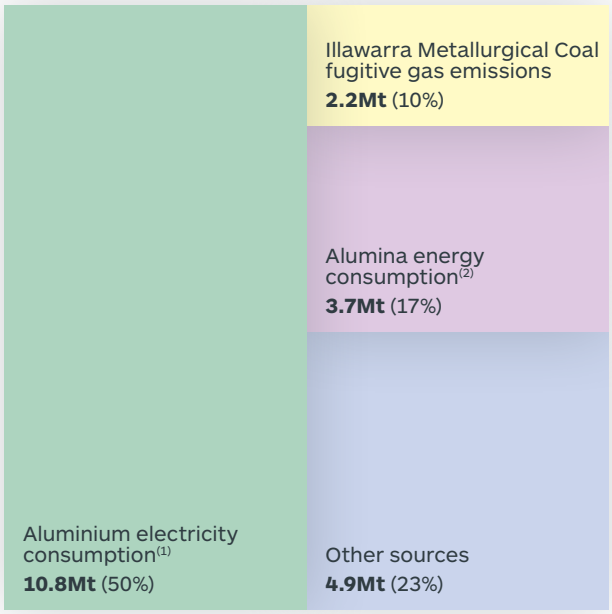
www.hesta.com.au

Decarbonisation

FY21 Scope 1 and 2 carbon emissions by asset



Our largest carbon exposures (CO_2-e)



(1) Aluminium electricity consumption refers to Scope 2 emissions from Hillside Aluminium and Mozal Aluminium.
(2) Alumina energy consumption refers to carbon emissions from Worsley Alumina.

How we plan to substantially reduce our carbon emissions

As a diversified mining and metals company operating in a number of jurisdictions, our decarbonisation plans include a broad range of options, shaped by different mining and processing methods, energy markets and regulations. At some of our operations we have the opportunity to decarbonise through processing or efficiency improvements, while for our refineries and smelters, the focus is procuring low-carbon energy and evaluating new technologies.

Our approach to decarbonisation is aligned with a hierarchy focused on emissions avoidance, mitigation and offsetting:

- Avoidance: low-carbon design and technology to avoid emissions;
- Mitigation: reducing emissions through efficiency projects and low-carbon energy; and
- Offsetting: using high-quality carbon credits to offset residual and hard to abate emissions.

Worsley Alumina, IMC and our aluminium smelters accounted for approximately 90 per cent of our Scope 1 and 2 emissions in FY21. Our decarbonisation plans are focused on these operations so that we can fundamentally reduce our carbon emissions.

Short-term emissions reduction activities are focused on process and energy efficiency projects. These include:

- The mud-washing project at Worsley Alumina;
- The use of AP3XLE energy efficiency technology at Hillside Aluminium following successful deployment at Mozal Aluminium; and
- Continued improvement of the rate of gas drainage at IMC.

We are also progressing a pipeline of concept-stage projects through study phases to increase certainty and optionality for our emissions reduction projects.

The transition of our energy intensive assets to lower carbon alternatives is expected to realise the largest share of our medium-term reduction target. Studies are underway at Worsley Alumina for the transition from coal to gas as an interim step, followed by the potential deployment of renewable energy as these options become technically and commercially feasible. At Hillside Aluminium, we are working with Eskom, the South African public electricity company, government and other potential partners to identify options to procure low-carbon electricity, given the current carbon intensity of the national electricity grid.

A capital allocation framework that supports our climate change commitments

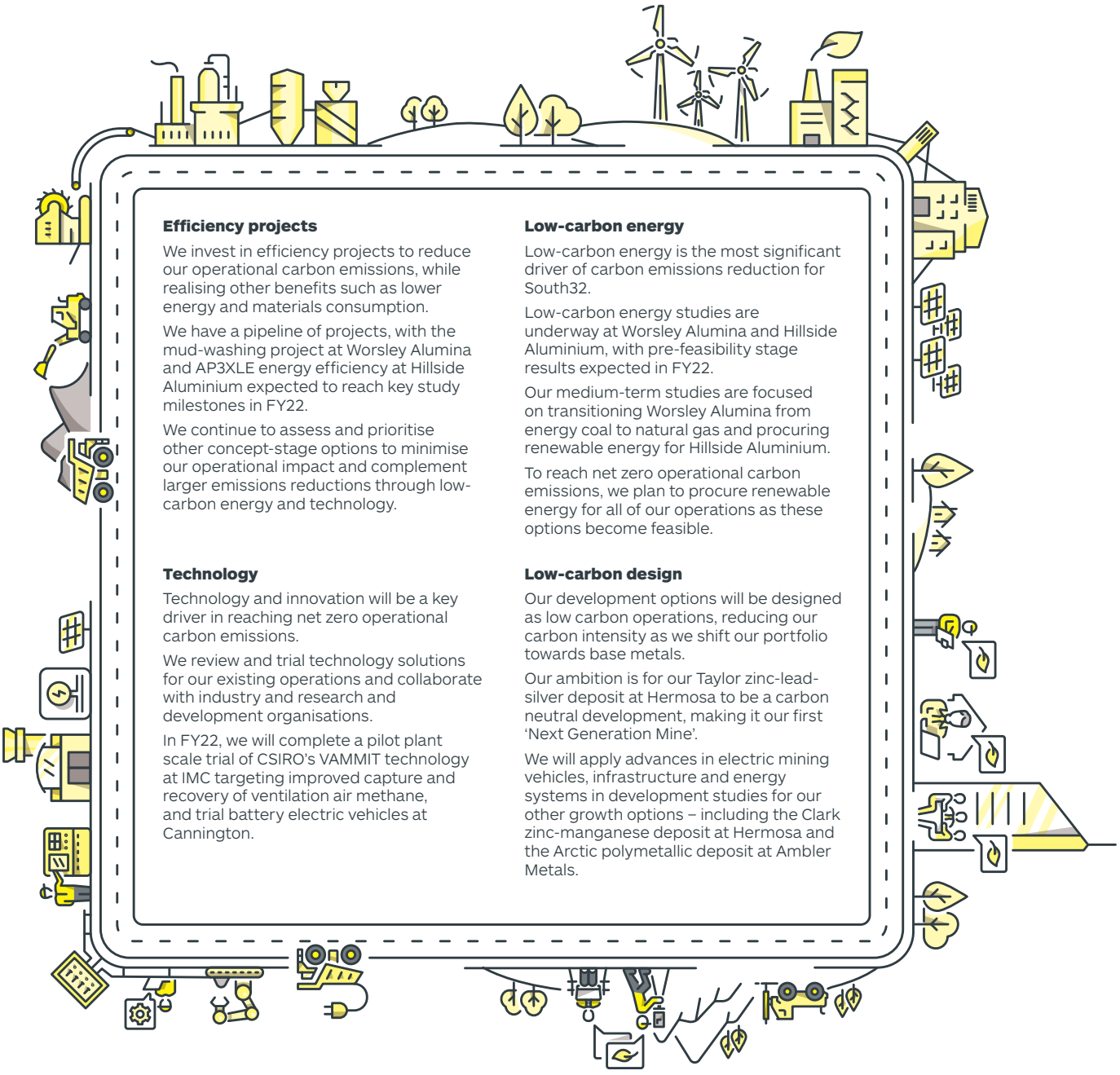
Our climate change commitments are integrated into our capital allocation framework, which considers all investments and strategic decisions.

Capital expenditure of US$40 million to US$50 million for decarbonisation is targeted over FY22 and FY23. This expenditure is expected to increase during this decade as additional projects move to execution to support our medium-term target and net zero operational carbon emissions by 2050.

Total decarbonisation capital is expected to be modest relative to Group expenditure. The evaluation of energy transition options for Worsley Alumina and Hillside Aluminium is more likely to be based on operating cost impacts and risk management decisions, rather than competition for Group capital. In this regard, due to their large and consistent energy consumption, Worsley Alumina and Hillside Aluminium present as potentially attractive offtake partners to support third party investment in renewable energy infrastructure.

Our commitment to achieving net zero operational carbon emissions is clear, but we know there is no definitive 'best pathway' and that some of the innovations needed are not yet fully developed. Certain decarbonisation pathways may depend on supportive policy frameworks to enable greater use of low-carbon energy, while the pace and scale at which emerging technologies will be deployed is a key uncertainty. To achieve our medium-term target, we will focus on emissions avoidance and mitigation options in accordance with the mitigation hierarchy and only use voluntary offsets after these options have been fully explored.

Activities to halve our operational carbon emissions by 2035 and reach net zero by 2050



Efficiency projects

We invest in efficiency projects to reduce our operational carbon emissions, while realising other benefits such as lower energy and materials consumption.

We have a pipeline of projects, with the mud-washing project at Worsley Alumina and AP3XLE energy efficiency at Hillside Aluminium expected to reach key study milestones in FY22.

We continue to assess and prioritise other concept-stage options to minimise our operational impact and complement larger emissions reductions through low-carbon energy and technology.

Technology

Technology and innovation will be a key driver in reaching net zero operational carbon emissions.

We review and trial technology solutions for our existing operations and collaborate with industry and research and development organisations.

In FY22, we will complete a pilot plant scale trial of CSIRO's VAMMIT technology at IMC targeting improved capture and recovery of ventilation air methane, and trial battery electric vehicles at Cannington.

Low-carbon energy

Low-carbon energy is the most significant driver of carbon emissions reduction for South32.

Low-carbon energy studies are underway at Worsley Alumina and Hillside Aluminium, with pre-feasibility stage results expected in FY22.

Our medium-term studies are focused on transitioning Worsley Alumina from energy coal to natural gas and procuring renewable energy for Hillside Aluminium.

To reach net zero operational carbon emissions, we plan to procure renewable energy for all of our operations as these options become feasible.

Low-carbon design

Our development options will be designed as low carbon operations, reducing our carbon intensity as we shift our portfolio towards base metals.

Our ambition is for our Taylor zinc-lead-silver deposit at Hermosa to be a carbon neutral development, making it our first 'Next Generation Mine'.

We will apply advances in electric mining vehicles, infrastructure and energy systems in development studies for our other growth options – including the Clark zinc-manganese deposit at Hermosa and the Arctic polymetallic deposit at Ambler Metals.

Our new carbon emissions reduction target

In May 2021, we announced our new target to achieve a 50 per cent reduction in our Scope 1 and 2 emissions by 2035 compared to our FY21 baseline[1], which steps up our ambition and pathway to net zero.

The timeframe for our medium-term target gives us the scope to substantially reduce our carbon emissions by investing in decarbonisation projects and securing low-carbon energy for our energy intensive businesses.

The decarbonisation plans for our existing operations will be complemented by the application of low-carbon principles in the design of new projects and deployment of technology solutions across our portfolio.

We continue to assess and prioritise our decarbonisation options based on projected emissions abatement, returns, value, risk management and external policy requirements.

Our short-term milestones

Our approach to decarbonisation is designed to deliver substantial emissions reductions, predominantly over the medium-term as decarbonisation projects are implemented and low-carbon energy alternatives become available. To support the achievement of our medium-term target and create optionality for our decarbonisation pathway, we are completing a range of short-term work programs. In FY22, our decarbonisation milestones are expected to include:

- **Worsley Alumina:** complete a pre-feasibility study for the mud-washing project, together with advancing earlier stage efficiency projects. Complete a pre-feasibility study for the conversion of a coal-fired boiler (Facility 110) to natural gas as part of our energy transition plans;
- **Illawarra Metallurgical Coal:** complete a pilot plant scale trial of CSIRO's 'VAMMIT' technology;
- **Hillside Aluminium:** complete a feasibility study for the deployment of AP3XLE energy efficiency technology. Complete pre-feasibility studies in relation to the options to deploy alternative low-carbon energy sources;
- **Taylor Deposit at Hermosa:** complete a pre-feasibility study, incorporating low-carbon design initiatives; and
- **Cannington zinc-lead-silver mine:** commence a trial of light battery electric vehicles.

Using carbon offsets

We anticipate that carbon offsets may be required at some of our operations to achieve net zero operational carbon emissions, where technologies or low-carbon energy alternatives remain undeveloped.

Our decarbonisation planning includes sourcing and self-generation strategies for carbon offsets to provide access to a portfolio of offsets that could be used to meet our long-term objectives. We are considering projects that generate Australian Carbon Credit Units in accordance with the Australian Government's Emissions Reduction Fund.

We will acquire our offsets from reputable international schemes, such as the Verified Carbon Standard, if they are required. Any offsets we use will need to meet quality criteria and will also be assessed on their potential to deliver complementary social and environmental benefits and enable partial or full return on investment.

(1) FY21 Baseline of 20.7Mt CO_2-e is total FY21 emissions (21.6Mt CO_2-e) less SAEC and TEMCO (0.9Mt CO_2-e), which were divested in the period. The FY21 Baseline will be adjusted for any other material acquisitions or divestments.

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.

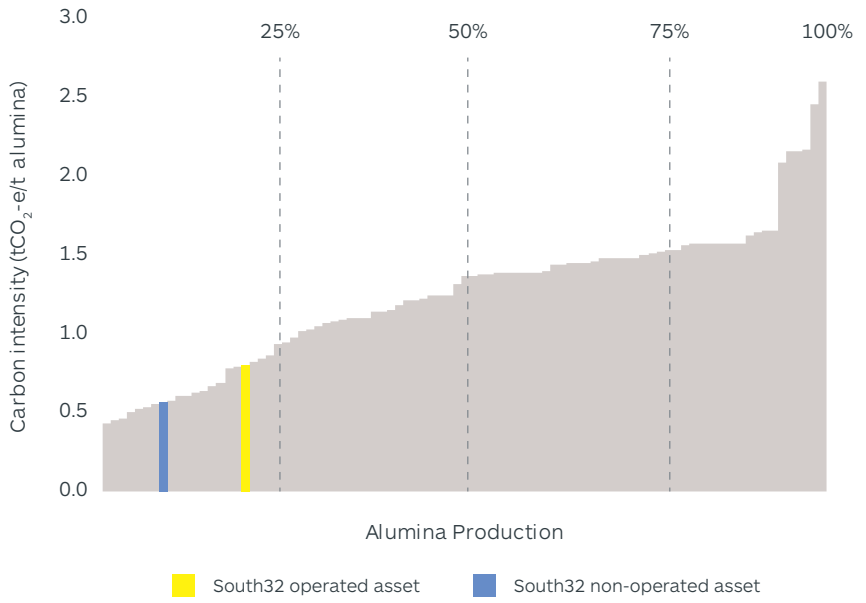
The alumina we produce is shipped to aluminium smelters around the world, including our Hillside Aluminium and Mozal Aluminium smelters in Southern Africa.

Source of carbon emissions

The primary source of carbon emissions is the combustion of energy coal and natural gas to generate steam for the alumina refining process (approximately 75 per cent of Worsley Alumina's FY21 emissions). Steam is currently generated from a mix of coal fired boilers and a multi-fuel co-generation steam and power generation plant. Carbon emissions from bauxite mining were approximately three per cent of Worsley Alumina's FY21 emissions.

Worsley Alumina is in the first (lowest) quartile of the carbon intensity curve, benefitting from lower energy intensive bauxite compared to the domestic bauxite used in most Chinese refineries. The implementation of our decarbonisation and energy transition plans is designed to further enhance its competitive position.

Alumina carbon intensity curve (Scope 1 and 2)



Source: Skarn Associates, 2020.

Decarbonisation plans

Our decarbonisation plans include process efficiency projects to reduce energy consumption and energy transition projects to shift our energy supply to lower carbon alternatives. These plans build on initial decarbonisation studies completed in 2019, which identified a range of options from short-term, technologically mature measures to innovative research and development options.

Worsley Alumina has successfully utilised timber waste product (biomass) in place of energy coal in the multi-fuel co-generation facility since 2018. Our use of biomass has been consistent across the last three years, but our ability to markedly increase consumption is constrained by supply and logistics challenges. The use of biomass will not be our primary driver of carbon emissions reduction, but it will remain a complementary activity as we implement our efficiency and energy transition projects.

Efficiency projects

We are targeting short-term carbon emissions reductions through efficiency projects, designed to reduce energy consumption, operating costs and carbon emissions.

The most advanced efficiency project is mud-washing, which involves the installation of high efficiency washers to reduce the amount of water required for mud-washing in the refining process. This will in turn reduce steam and energy consumption. A pre-feasibility study for the mud-washing project is on-track for completion in FY22.

We are progressing other efficiency projects through study phases, targeting further energy savings by reducing the operational need for steam or more effectively using industrial heat.

Worsley Mine Development

Worsley Alumina is nearing completion of its Environmental Review Document (ERD) for the Worsley Mine Development. This development will provide access to future reserves and resources. The ERD is expected to be released in FY22 to enable assessment by the Western Australian Environmental Protection Authority, in accordance with State and Commonwealth environmental legislation.

The ERD will propose the inclusion of incremental, five-yearly emission reduction targets for Worsley Alumina, that are consistent with our decarbonisation plan to reduce carbon emissions through efficiency projects and transitioning to lower-carbon energy. Worsley Alumina's decarbonisation approach will also investigate projects that deliver additional sustainability benefits alongside emission reductions, such as water, community and biodiversity outcomes.

For further information on **Worsley Alumina and the ERD** please visit *www.south32.net*.

Decarbonisation continued

Energy transition

While the energy efficiency projects target reduced consumption, the key driver of carbon emissions reduction will be transitioning our energy supply to lower carbon alternatives.

Energy coal consumption represented approximately 70 per cent of total carbon emissions from Worsley Alumina in FY21. Our transition from using energy coal is an important step, not only in respect of our decarbonisation plan for Worsley Alumina, but also to support the development of lower carbon energy markets in Western Australia and improve our long-term energy security. We are completing studies to determine the optimal approach to reduce the use of energy coal, with a pre-feasibility study for the conversion of a coal-fired boiler to natural gas on-track for completion in FY22. We will use this study to inform whether we convert the existing boilers or install new energy infrastructure.

As one of two major industrial users of coal from Collie, our transition from energy coal will impact the local coal operations and regional economy. You can read more about our approach to Just Transition and our involvement with the Collie Just Transition Working Group on page 58.

The shift from energy coal to natural gas is designed as an interim step until renewable energy options at scale are commercially viable. A key challenge for Worsley Alumina is that its energy demand is driven by the need for steam in the Bayer alumina refining process, with electricity generated as a by-product using the existing onsite power stations. The large-scale deployment of renewable energy such as solar PV and wind, which do not generate steam directly, would require a change to the existing infrastructure and connection with the energy grid.

Existing energy markets and infrastructure do not currently support the commercial deployment of renewable energy alternatives such as hydrogen or electrification. Hydrogen markets will need to develop substantially to become a viable alternative for Worsley Alumina using the existing refining process given the scale required. In addition, the South West Interconnected System network in its current form would not support the volume of electricity required for the refinery.

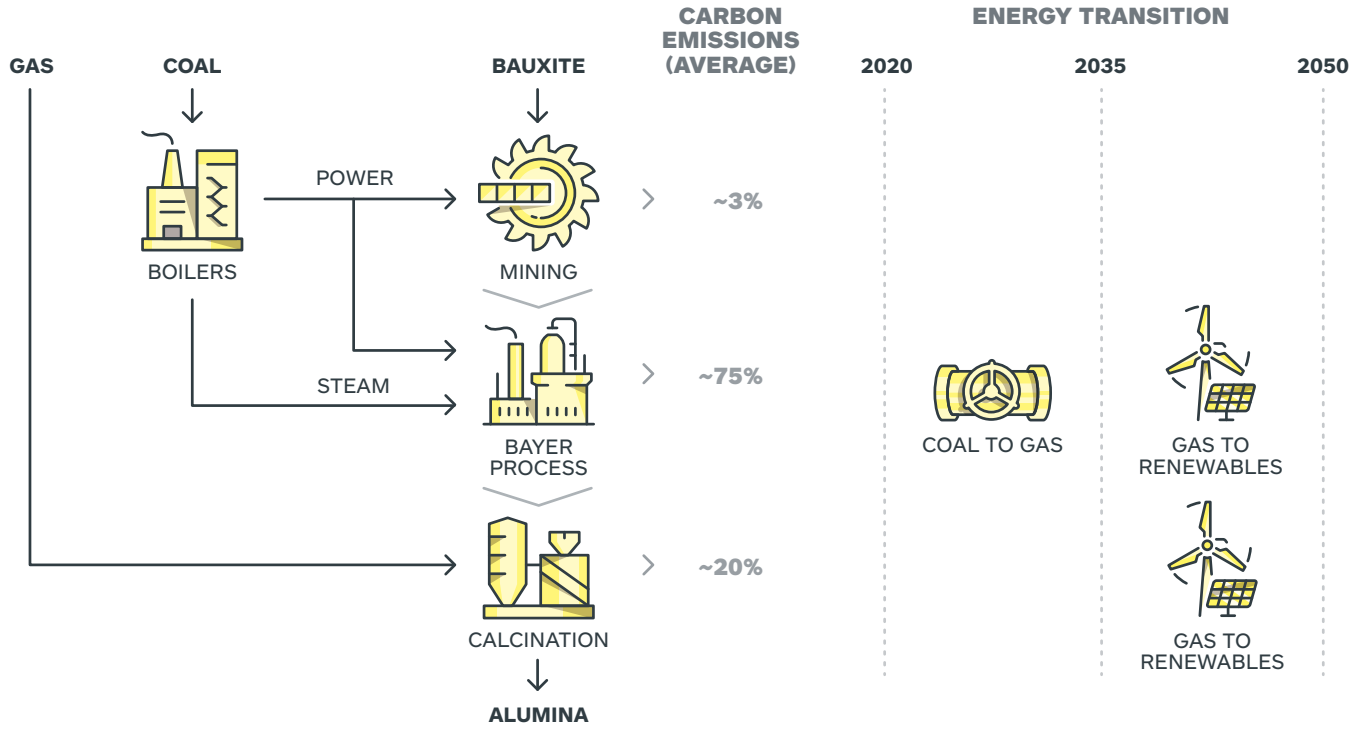
These challenges encourage us to think differently about how to efficiently transition our energy supply.

We are studying opportunities to make this transition and will work with government and industry to support the development of low-carbon energy markets in Western Australia. Our ambition is to play a leading role in this transition, including the potential emergence of the hydrogen sector.

In addition to our efforts to procure low-carbon energy, we are investing in research and development initiatives with the potential to accelerate our pathway to net zero operational carbon emissions, including becoming a founding member of the Heavy Industry Low-Carbon Transition (HILT) Cooperative Research Centre (CRC).

You can read more about our **approach to technology** on page 57.

Summary energy consumption and transition plan



Note: Chart does not depict other sources of emissions which represent ~2 per cent of operational carbon emissions. Estimated emissions associated with the Bayer refining process are predominantly from the use of energy coal (approximately 70 per cent), plus natural gas, biomass and diesel.

Illawarra Metallurgical Coal

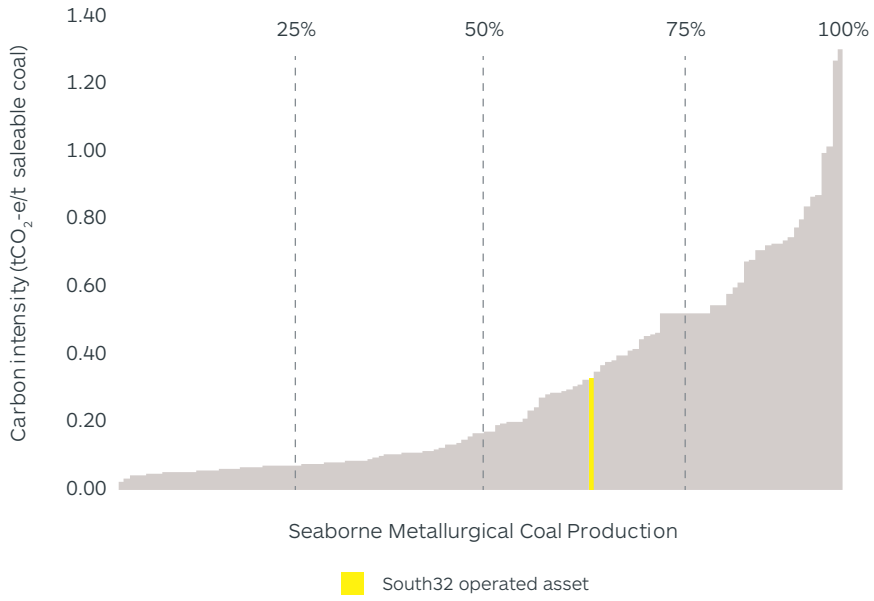
IMC comprises two underground metallurgical coal mines, Appin and Dendrobium, located in the southern coalfields of New South Wales.

IMC produces premium metallurgical coal, which is used for steelmaking, making it a critical material for buildings, transportation and renewable energy infrastructure.

Source of carbon emissions

Scope 1 carbon emissions are predominantly from the release of gases from the underground coal seams during mining. These gases are known as fugitive emissions. The amount of fugitive emissions can vary greatly between mining areas, based on the surrounding rock strata, depth and seam. The largest proportion of these emissions at IMC is from our Appin underground mine, due to its relatively high gas and methane content.

Metallurgical coal carbon intensity curve (Scope 1 and 2)



Source: Skarn Associates, 2020.

Decarbonisation plans

Our decarbonisation plans are focused on increasing the efficiency of gas drainage and assessing technologies for reducing ventilation air methane.

Gas Drainage

Gas is drained from coal seams before and after mining activity. The captured gas is piped to the surface and either supplied to a third party provider to generate electricity or destroyed through flaring which converts the methane into carbon dioxide.

We are targeting an increase in post-drainage capture efficiency at Appin from 61 per cent in FY21 to 67 per cent by FY24 through increased drilling. We are also evaluating drilling methods to increase post-drainage capture, as well as additional pre-drainage targets.

Ventilation Air Methane

While our gas drainage is aligned with industry best practice, some residual gases subsequently enter the underground mine ventilation system. The high volume of air in underground coal mine ventilation systems contains very low concentrations of methane (ventilation air methane or VAM) which cannot be effectively abated at scale, necessitating a commercial-scale technology solution.

In partnership with Australia's national science agency CSIRO, we are supporting the development of VAM abatement technologies which aim to increase the effectiveness of methane capture at low concentrations in ventilation air in a safe manner. If successful, this would represent a significant advancement for the industry. A trial of CSIRO's VAMMIT technology is expected to be completed by March 2022, which will inform the future deployment at IMC. We are also investigating other VAM abatement technologies alongside our work with CSIRO.

Aluminium Smelters

We operate two aluminium smelters, Hillside Aluminium located in Richards Bay, South Africa and Mozal Aluminium located west of Maputo, Mozambique. Our aluminium smelters produce high-quality, primary aluminium for our global customer base.

Aluminium is often referred to as the metal of the future. It is 100 per cent recyclable and retains its properties indefinitely. It is expected to play a key role in the transition to a low-carbon economy, given its wide-ranging applications in transportation, construction, packaging and consumer goods.

Source of carbon emissions

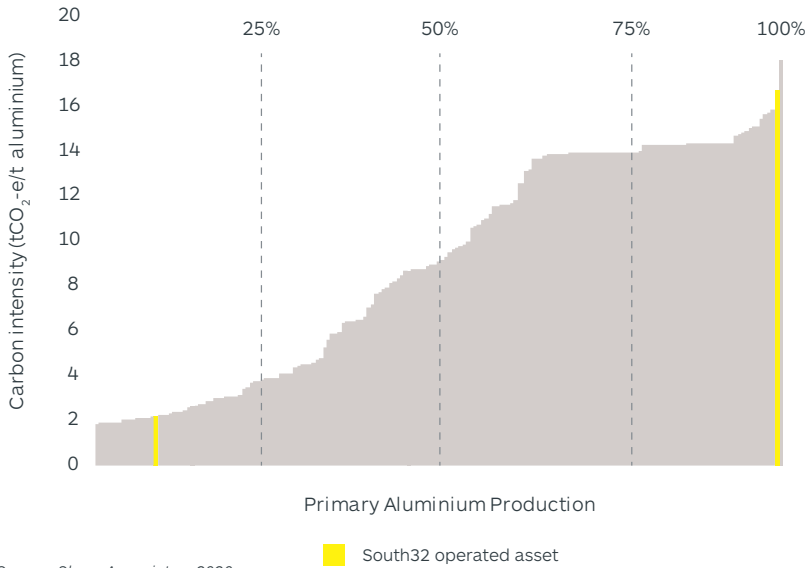
The aluminium smelting process involves the electrolytic reduction of alumina to produce liquid aluminium.

Scope 1 emissions are primarily from the consumption of carbon anodes in the smelting process. Achieving net zero operational carbon emissions in the aluminium sector will require the commercialisation of alternative processing technologies, such as inert anodes or other technology developments.

Electricity consumption is the largest source of carbon emissions in the aluminium sector. Hillside Aluminium sources its electricity from the South African electricity grid, which is owned and managed by the public electricity company, Eskom. While the South African Government has committed to decarbonisation, as outlined in South Africa's Integrated Resource Plan 2019, the Eskom grid is currently reliant on energy coal. As a result, Hillside Aluminium's electricity supply from Eskom, which is contracted to 2031, is highly carbon intensive. We are focused on working with Government, Eskom and other potential partners to support investment in new renewable energy capacity in South Africa. In June 2021, the South African Government announced that companies will be able to self-generate 100MW of power (from a capacity limit of 1MW) which will help to ease pressure on the national grid and create opportunities to increase the use of renewable energy.

At Mozal Aluminium, most electricity is supplied from hydroelectric power generated by Hidroeléctric Cahora Bassa, situated on the Zambezi River in the northwest of Mozambique. Electricity is supplied under an agreement with MOTRACO, a transmission joint venture between Eskom and the national electricity utilities of Mozambique and Eswatini, which we are working to extend beyond 2026. There are periods where Mozal Aluminium may receive less than its contractual maximum demand of hydroelectricity, for example due to hydroelectric plant maintenance, drought conditions in the Zambezi basin or higher energy demand in northern Mozambique. At these times, Mozal Aluminium sources a portion of its electricity from the Eskom grid, resulting in higher Scope 2 emissions. While hydroelectricity supply was consistent in FY21, current estimates suggest its availability may be lower in FY22, which would result in higher carbon emissions.

Aluminium sector carbon intensity (Scope 1 and 2)



Source: Skarn Associates, 2020.

Decarbonisation plans

We are studying energy efficiency projects and are focused on options to procure low-carbon electricity for Hillside Aluminium.

The next significant energy efficiency project is the installation of AP3XLE technology, which is currently being deployed at Mozal Aluminium. Upgrading the potlines at Hillside Aluminium with AP3XLE technology is designed to improve their energy efficiency, thereby reducing energy consumption, operating costs and carbon emissions. A trial commenced in June 2021, which if successful, will enable deployment of AP3XLE during FY22, saving a forecasted 150,000 to 200,000t CO_2-e per annum of carbon emissions once the pot relining program is complete.

In 2020, we established a project team to fast-track studies assessing affordable, low-carbon electricity options for Hillside Aluminium. The initial outcomes of these studies suggest that renewable energy could be technically feasible, through a combination of new solar PV and wind capacity, combined with battery storage. This work is ongoing, with pre-feasibility study outcomes expected in mid-2022.

Concurrently, we will engage with the South African Government, Eskom and other potential partners to identify options for renewable energy infrastructure. This will require a coordinated approach and is likely to be challenging, but it will be critical in reducing the carbon emissions of Hillside Aluminium and supporting the growth of the South African economy as the world transitions to a low-carbon future.

If we are unable to secure an affordable source of low-carbon electricity, Hillside Aluminium will risk becoming uncompetitive in the international market over time, given the emergence of carbon border tariffs and end-user demand for green aluminium.

Hillside Aluminium has played a key role in the economic development of the province of KwaZulu-Natal as one of the largest industrial employers in the region. Around 30 per cent of Hillside Aluminium's sales are to domestic customers, supporting local downstream industries and employment. Hillside Aluminium also plays an important role in supporting the stability of the national electricity grid, as Eskom has the flexibility to interrupt supply to the smelter to support management of the grid and minimise load-shedding. Given the economic and social importance of Hillside Aluminium, we have started Just Transition planning to support our decarbonisation plans and options for the smelter if the energy transition is not commercially viable and the smelter becomes uncompetitive.

Read more about our approach to **Just Transition** on page 58.

Deploying low-carbon technology

Technology and innovation will play an important role in the transition to a low-carbon future and achieving net zero emissions.

We are utilising technology to assess potential solutions for our existing operations and designing our future mines to have a low-carbon footprint from inception.

In addition to our own technology programs, we leverage and accelerate our efforts by collaborating with other companies, industry groups and research organisations such as CSIRO, Electric Mine Consortium, HILT CRC and Low Emissions Technology Australia.

Low-carbon design in projects

We are applying low-carbon design principles in the evaluation of our growth options, to further reduce our carbon intensity as we increase our exposure to base metals.

Our ambition is for our Taylor zinc-lead-silver deposit at Hermosa to be a carbon neutral development, making it our first 'Next Generation Mine'. Low-carbon design options, such as the use of electric mining equipment and vehicles are informed by trials and participation in research and development studies including the Electric Mine Consortium.

Beyond Taylor, we will evaluate low-carbon design options in our studies for the Clark zinc-manganese deposit at Hermosa and the Arctic polymetallic deposit at Ambler Metals.

ELECTRIC MINE CONSORTIUM

Electric Mine Consortium

In FY21, we were 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 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.

Cannington electric vehicle trial

As part of our participation in the Electric Mine Consortium, we are planning a trial of light BEVs at our underground Cannington zinc-lead-silver mine to support their potential widescale use in our vehicle fleet.

The deployment of BEVs has the potential to deliver significant benefits, including reduction in diesel and energy consumption, maintenance and ventilation costs, and exposure to diesel particulate matter.

Collaboration on heavy industry transition

HILT CRC is a collaborative venture between industry, government and research organisations, that has been formed to develop and accelerate technologies for heavy industry to transition to net zero. It creates a framework to collaborate and share knowledge with industry partners and lower the cost of trialling new technology. The evaluation of potential low-carbon solutions for alumina production is a key interest for us, given the limited maturity of alternative processing and technology options.

The Australian Government has provided A$39 million of funding under its CRC Grants program. This is backed by an additional A$176 million of funding and in-kind support from industry, government and research institutions.

HILTCRC

Supporting a just transition

Just Transition is the fair, equitable and inclusive social transition towards a low-carbon economy

We will work towards a fair and equitable transition for our people, communities and stakeholders. Energy transition can negatively impact people and communities, for example through job losses connected to the shift from fossil fuels to renewable energy. However, a well-planned and just energy transition can create new opportunities, including new industries and increased investment, as well as a cleaner environment in which to live.

We will embed the principles of Just Transition into our decarbonisation plans, focusing on those operations with the greatest transition impacts.

Just Transition risk assessments

Our decarbonisation plans for Worsley Alumina and Hillside Aluminium involve reducing or replacing our use of energy coal. These operations and connected businesses sustain significant energy coal supply chains that are large regional employers.

In FY22, we will complete Just Transition risk assessments at Worsley Alumina and Hillside Aluminium. We will integrate the outcomes of these assessments into our decarbonisation plans, while continuing to engage with governments and other stakeholders on the development of appropriate Just Transition plans.

Collie Just Transition Working Group

Worsley Alumina sources its energy coal from the Collie coalfields. Collie is home to Western Australia's only productive coalfield and has been integral in the development of Western Australia's economy and energy landscape for over 100 years. As Western Australia and the global economy transitions to a low-carbon future, energy coal is increasingly being replaced by lower-carbon alternatives, which represents a potential risk to our energy supply for Worsley Alumina.

As one of two major industrial users of energy coal in Collie, our plan to transition away from energy coal will impact the industry and the businesses that support the industry. Accordingly, we are committed to working with government, the community and other stakeholders to support a fair and equitable transition for Collie.

We are a member of the Collie Just Transition Working Group which developed the Just Transition plan for Collie, released in December 2020. The purpose of this plan is to create a strong and sustainable future for Collie, its workforce and community as it shifts away from energy coal. The plan was developed in collaboration with a variety of stakeholders, including representatives from local industry, community, unions and government.

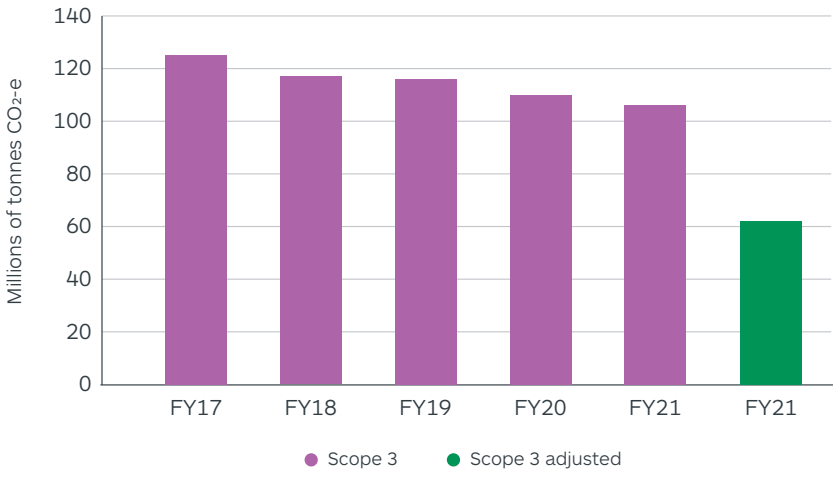
In June 2021, we signed the Just Transition Working Group Memorandum of Understanding, committing to support the implementation of the Plan in a positive, collaborative and cooperative manner that seeks to deliver a sustainable and positive future for Collie, its workforce and community.

Addressing value chain emissions

Scope 3 emissions are indirect carbon emissions in our value chain from sources not owned or controlled by South32. We have reported on our material Scope 3 carbon emissions since 2017 and this enables us to identify upstream and downstream carbon-related risks and opportunities. Most of our Scope 3 carbon emissions are associated with the downstream use and processing of our products (more than 90 per cent of our Scope 3 emissions), particularly in the aluminium value chain, and the use of our metallurgical coal in steel making. Other Scope 3 emissions sources include purchased goods and services, capital goods, and transportation and distribution.

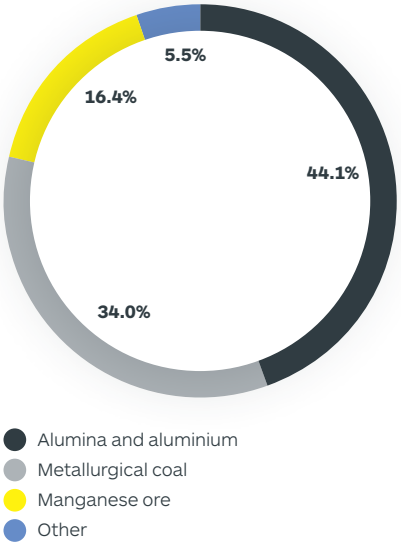
In FY21, our reported Scope 3 emissions were approximately 106Mt CO_2-e. Excluding SAEC and TEMCO, which were divested in the period, reduces our Scope 3 emissions by 42 per cent to 61Mt CO_2-e. Following these divestments, our largest contributor to Scope 3 emissions is IMC which accounts for approximately 34 per cent of FY21 Scope 3 emissions excluding SAEC and TEMCO.

Scope 3 carbon emissions



Note: Estimate of Scope 3 emissions by operation are based on processing and use of sold products, and apportionment of other categories.

FY21 Scope 3 emissions by commodity, excluding SAEC and TEMCO



While we do not have direct control over our Scope 3 emissions, we recognise the critical importance of contributing to the decarbonisation of our value chain and reducing our carbon emissions footprint. To achieve this, we focus on:

- **Partnerships:** building meaningful partnerships with customers and suppliers to support and co-design emissions reduction programs;
- **Industry Engagement:** contributing to industry groups that support decarbonisation and product stewardship initiatives; and
- **Innovation:** supporting the development of technology solutions to address value chain emissions.

Scope 3 target

We understand the need to significantly reduce emissions across our value chain and will continue to assess options to set a target for Scope 3 emissions in future reporting periods, recognising the uncertainties associated with projecting future emissions outside our operational control and the level of influence we have in downstream industries. This ongoing assessment will benefit from progress made through our industry initiatives, greater clarity for IMC including the potential Dendrobium Mine Extension Project, and the reduced carbon intensity of our portfolio as we increase our exposure to base metals.

Read more about the **Dendrobium Mine Extension Project** on page 73

Mozal Aluminium joins the Aluminium Stewardship Initiative

Mozal Aluminium joined the Aluminium Stewardship Initiative (ASI) in November 2020.

The ASI is a non-profit global standard-setting and certification organisation that brings together producers, users and stakeholders in the aluminium value chain. It promotes responsible production, sourcing and stewardship of aluminium and is based on membership and certification against a set of standards.

Mozal Aluminium has commenced certification against the ASI Performance Standard, which defines Environmental, Social, Governance (ESG) and climate change requirements for entities in the aluminium value chain. We are also considering broader ASI certification across our aluminium value chain.

South32 joins Responsible Steel

South32 joined Responsible Steel in July 2021. Responsible Steel is the steel industry's first global multi-stakeholder standard and certification initiative for the steel sector and aims to enhance responsible sourcing, production, use and recycling of steel. As a producer of premium metallurgical coal for steel making, joining Responsible Steel is an important step to support the sustainable production and use of steel while also addressing emissions in the value chain.

We are assessing other product stewardship initiatives that are aligned with our portfolio and growth options.

Climate change governance and risk management

Climate change governance

Our Board is responsible for approving South32's approach to climate change and has oversight of the management of climate-related risks and opportunities. The Board is assisted by the Sustainability Committee and the Risk and Audit Committee in managing these responsibilities.

The Sustainability Committee receives regular progress reports on climate change from management as well as updates from internal and external experts about developments in climate science, policy, regulation, technology, and stakeholder feedback. The Board is also briefed annually on climate change developments by an external expert.

We intend to include a 'Say on Climate' shareholder resolution at our 2022 Annual General Meeting. While we continue to review and monitor market practice and stakeholder expectations, our current intent is that we will put our climate change reporting, which is reported in accordance with the TCFD, to an advisory, non-binding shareholder vote.

Read more about our corporate governance practices, including the Board Charter and Committees Terms of Reference in our Corporate Governance Statement at *www.south32.net*

Executive remuneration

Our executive remuneration arrangements incorporate our performance on climate change.

Following a review of our executive remuneration framework in FY21, we have modified our executive long-term incentive (LTI) plans to include performance on climate change, with 10 per cent of the LTI awards to be determined by the Board based on our action and progress.

Linking our performance on climate change to long-term remuneration is aligned with the timeframe and delivery of the decarbonisation and energy transition programs that will support the achievement of our medium-term carbon emissions reduction target. In this way, our remuneration outcomes will reflect the achievement of significant milestones and long-term value protection and creation, rather than short-term variability in emissions performance.

Climate change risk management

We identify and assess climate-related risks in line with the South32 Risk Management Framework. Risks assessed as material are routinely reported to our Lead Team and reviewed by both the Risk and Audit Committee and the Sustainability Committee, to assist the Board in overseeing our risk management and assurance practices.

In FY21, climate change resilience was once again identified as a strategic risk.

Read more about this in our **Annual Report** on page 25.

Given the uncertainty regarding how and when climate change risks will impact South32, we complement our risk management approach with scenario analysis to stress test climate-related risks. Since our first climate-related scenario analysis in 2017, we have continued to revise and build upon our assessment of resilience to extreme physical impacts as well as transition impacts, using an approach aligned with the TCFD recommendations.

In FY21, we added to our portfolio risk resilience assessment by using a 1.5°C aligned scenario to test for rapid transition impacts. Our physical resilience assessment will be reviewed and updated in FY22.

Read more about **scenario analysis** on page 62.

Industry Associations

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.

Throughout FY21, our industry association memberships continued to provide insights and information to inform our business strategy and opportunities to improve our decarbonisation outcomes. One example is the New South Wales Government's Net Zero Industry and Innovation Program which resulted from effective public and private engagement between industry associations, researchers, industry and government, to encourage the development and implementation of new emissions reduction technologies.

A number of industry associations that we are members of have strengthened their climate change positions in line with global expectations. Some have also updated or are updating their public commitments and policies, including the Chamber of Minerals and Energy of Western Australia; the Arizona Mining Association; the South African National Energy Association and the Queensland Resources Council (QRC). These updates enable greater focus by members on material topics and challenges to support climate action and a more effective environment to advocate for sound government policy and regulation.

In FY21, we raised concerns with the QRC regarding their advocacy in the lead up to the 2020 Queensland State election. Along with other members, we participated in the development of a QRC political engagement policy to guide future engagement in political processes, which was published in February 2021.

We continually monitor our industry associations for alignment on key policy positions and remain prepared to terminate memberships where material misalignment outweighs the benefits of membership.

Read about our approach to industry associations at *www.south32.net* and find further detail on alignment between our climate change positions and those of our industry associations in our Sustainability Databook at *www.south32.net*.

Portfolio

Reshaping our portfolio for a low-carbon future

We are sustainably reshaping our business through the lens of our climate commitments.

We produce the commodities needed for a low-carbon future and are investing further in base metals leveraged to the global transition.

We have established a pipeline of growth options including projects at Cannington, Cerro Matoso and Mozal Aluminium; development options at Taylor, Clark and Arctic Deposits; prospective regional exploration properties at Hermosa and Ambler Metals; and more than 20 greenfield exploration projects.

These options offer exposure to favourable commodity demand fundamentals and are expected to reduce the overall carbon intensity of our portfolio, given the low intensity of these operations and opportunities to design new projects with a low-carbon footprint.

We assess potential growth options based on their value proposition, ability to generate returns for shareholders and for consistency with our approach to climate change, in terms of commodity exposure and having a credible pathway to net zero emissions.

As part of reshaping our portfolio, we have exited a number of low returning and carbon intensive businesses, which has simplified our business and reduced our exposure to climate change risks.

South Africa Energy Coal

In FY21 we completed the divestment of SAEC.

The transition of SAEC to Seriti Resources and two trusts for the benefit of employees and communities will enable this business to continue playing a role in meeting South Africa's energy needs. We selected Seriti Resources as the new owner of SAEC following a competitive process with extensive due diligence. The transition to the new owner was consistent with our objective for it to become a Black-owned and operated business and with South Africa's transformation agenda. As part of the transition, we provided an additional financial support package to underpin the future sustainability of SAEC which includes US$200 million to fund rehabilitation activity.

For South32, the divestment of SAEC has simplified our business, reduced our capital intensity and improved our commodity exposure through exiting energy coal.

Scenario analysis

A scenario consists of a set of assumptions narrating a path of development leading to a particular outcome. Scenarios are not intended to represent a full and definite description of the future. Rather, their aim is to highlight the main elements of a possible future landscape and to draw attention to 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 to enhance critical thinking.

We use scenario analysis to stress-test the potential impacts of climate change on our business and to inform stakeholders about potential risks and opportunities.

We have used scenario analysis as a risk management tool since the TCFD first published its recommendations in 2017.

We assess our resilience to both transition risk (changes to climate and energy policy and technology to achieve the objectives of the Paris Agreement) and physical risk (potential impacts of climate change and global warming). Our assessment of these risks is disclosed in our annual Sustainable Development Reports at *www.south32.net*

In FY21, we reassessed our portfolio's resilience to transition risk and developed a scenario in which global warming is assumed to be limited to 1.5°C above pre-industrial levels.

In FY22, we will publish an updated assessment of our operational resilience to physical risk.

Mitigating the physical risks of climate change

We have undertaken detailed studies of the physical risks associated with climate change for each of our operated assets, including our Australian operations in 2018 (see *Our Approach to Climate Change 2018*) and expanding to our international operations in 2019 (see *Our Approach to Climate Change Report 2019*). We integrate the outcomes of our physical risk assessments into our strategic and operational planning. Through this process, we have invested to improve our infrastructure in response to potential physical risks of climate change – including 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.

We are revisiting our physical risk assessments in FY22 as part of our schedule of regular program updates.

1.5°C scenario

In FY21, with support and analysis from Vivid Economics, we developed a 1.5°C scenario and analysed the potential impacts on commodity demand. The purpose of this scenario is to illustrate the resilience of our portfolio under a rapid global transition and engage with stakeholders in response to increasing expectations for climate change related disclosure.

The scenario was developed in FY21 with reference to the Intergovernmental Panel on Climate Change (IPCC) report 'Global Warming of 1.5°C'. Read more about the key assumptions used in our 1.5°C scenario in our Sustainability Databook at *www.south32.net*.

The IPCC report highlights that limiting global warming to 1.5°C is expected to substantially reduce the environmental and socio-economic risks of climate change.

Our scenario is underpinned by an assumption around the global carbon budget that may result in an outcome limiting global warming to 1.5°C. Achieving this carbon budget would require steep annual emissions reductions globally, sustained for decades, as a result of major political, technological and societal shifts.

Despite more countries committing to net zero and greater action by society, companies and investors to address climate change, the major global transformation required to limit warming to 1.5°C remains aspirational based on current signposts. We review this analysis on an annual basis and our FY22 review will include analysis of outcomes from the 26th Conference of the Parties (COP26) to the United Nations Framework Convention on Climate Change (UNFCCC), which may see greater action and momentum towards global decarbonisation.

The 1.5°C scenario is intended to illustrate the potential impact on our portfolio if a rapid transition is achieved, with our analysis encompassing potential impacts on commodity demand and portfolio resilience.

Key differences between the 1.5°C scenario and our base case include:

- A global carbon price of US$160 per tonne in the 1.5°C scenario signifies a substantial increase in decarbonisation efforts compared to current levels, where the global carbon price currently averages US$2 per tonne and our long-term base case is US$40 per tonne;
- The deployment of renewable energy occurs at a much faster rate in the 1.5°C scenario, with solar and wind accounting for approximately 34 per cent of electricity generation by 2030 and almost 50 per cent by 2050; and
- In transportation, a major transition sector in the 1.5°C scenario, we expect to see passenger electric vehicles rise from less than 5 per cent of vehicle stock in 2020 to 100 per cent by 2050. Electrification is projected to be rapid, with internal combustion engine (ICE) car sales in passenger vehicles falling to zero globally in the mid-2030s in the 1.5°C scenario. This implies that some ICE vehicles would be scrapped before their end-of-life to meet decarbonisation objectives.

Our base case

While we are committed to net zero by 2050 and more countries have recently strengthened their climate change commitments, current global signposts point towards a probable trajectory of at least 2°C warming without stronger global commitment and implementation of climate policies. Global emissions have continued to rise and there remains a gap between the long-term pledges by governments and the private sector and the level of action taken to date.

This probable trajectory forms our base case (at least 2°C warming) for our commodity and carbon price forecasts, planning, budgeting, investment decisions and valuation assessments. Our base case assumes that there will be increased commitment to climate action and priorities which accelerate the transition towards a green economy, raising investments in green infrastructure and mitigating climate risks.

We review and update our base case on an annual basis. Our FY22 review will include analysis of the outcomes from COP26.

Together with our base case, we employ scenario analysis and the development of range estimates to stress test our forecasts and business planning for alternative outcomes, including a faster global transition.

Carbon pricing

Carbon pricing is a key policy tool and enabler to support the global transition. We use an internal price on carbon to inform decisions across the business.

In the short-to-medium-term, our base case applies an effective carbon price (net of allowances and exemptions) in our key operating regions based on existing regulation and an expectation that allowances will reduce over time as countries strengthen their climate policies.

In the long-term, our base case assumes a single global carbon price of US$40 per tonne for all operations, based on an assessment of policy-driven costs, the evolution of technological innovation and abatement costs. Our long-term global carbon price reflects the assumption of no carbon leakage and hence US$40 per tonne is applied on an effective basis.

To stress test for different outcomes, we adopt a carbon price of US$100 per tonne in a lower than 2°C scenario and US$160 per tonne in a 1.5°C scenario. These assumptions reflect that higher carbon prices are required to accelerate the pace of global decarbonisation, in combination with other regulatory policies and corporate and investor action. The carbon prices are developed based on internal analysis and external benchmarks and consultation.

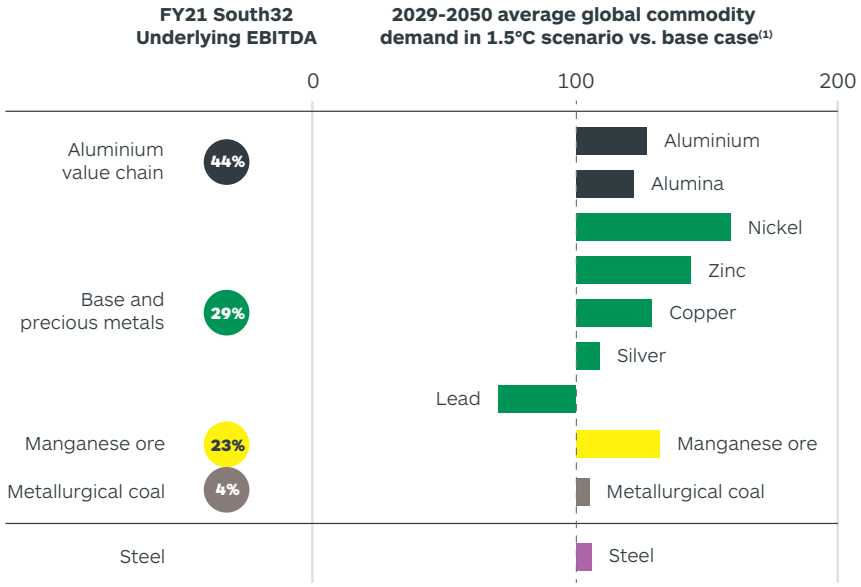
We will continue to assess and update our carbon price forecasts in response to changes in policy, technology and price benchmarks.

Commodity demand in the base case and 1.5°C scenario

The base case commodity demand outlook is developed through a rigorous, bottom-up approach. We assess existing key policies, economic and technological drivers, and form a view on how they will evolve through time based on observed signposts. The commodity demand outlook is also underpinned by projections on global and regional economic growth, demographic changes, and pace of urbanisation. We expect global GDP growth to average over two per cent in the next three decades. In the base case, a growing environmental focus globally is expected to accelerate the adoption of cleaner technologies (including the electrification of vehicle fleets and larger blast furnaces), higher scrap usage and emphasis on better quality raw materials. This underpins the long-term demand for our commodities, including base metals and manganese, through higher intensity of use.

Commodity demand in the 1.5°C scenario is projected through combining the main scenario outputs on transition-related sectors, including electricity, buildings and transport, and a forward-looking view on demand intensities. The scenario accounts for recycling and reuse of metals to arrive at primary demand.

In the 1.5°C scenario, the transition towards a low-carbon world occurs at a much more rapid pace across all major sectors including transport. Total demand for most commodities grows significantly in the 1.5°C scenario due to the uptake of mineral-intensive low-carbon technologies, led by the electrification of passenger vehicles (which contributes the largest share of transition-related demand). To meet higher total demand, recycling rates rise in tandem with a stronger environmental focus, leading to a more circular economy. However, primary mined demand for most minerals will still see a positive increase compared to the base case, reflecting the key role of minerals in supporting the global transition.



(1) Base metal demand references primary demand. Metallurgical coal refers to total global metallurgical coal, excluding PCI (pulverised coal injection). Base case = 100.

Key drivers in the 1.5°C scenario

Aluminium	↑	Higher intensity of use in the electrical vehicle fleet due to its light-weight properties
	↑	Used to improve durability and design flexibility in building construction
	↑	Substitution of fossil fuel-based plastics in packaging
Alumina	↑	The key raw material required for the production of primary aluminium
Nickel	↑	Used as an alloy in renewables such as wind, solar and geothermal power infrastructure
	↑	Nickel-rich batteries critical for rapid adoption of electric vehicles
Zinc	↑	Used as a protective coating in wind turbines, with wind capacity increasing 10x by 2050
	↑	Used in solar panels for higher energy conversion, with solar capacity increasing 14x by 2050
Copper	↑	Used in electrical wiring of power infrastructure including electric vehicle chargers as electrification accelerates
	↑	Used in wind and solar power generation and electric vehicles (and associated infrastructure) due to its thermal and electrical conductivity
Silver	↑	Used in solar panels due to its superior electrical conductivity
	↑	Intensity of use in electric vehicles higher compared to internal combustion engine cars
Lead	↓	Lead-acid batteries displaced from use in motor cars as internal combustion engine vehicle fleet is phased out by 2050
	↑	Used in energy storage systems which will grow in tandem with the uptake in renewable energy
Manganese	↑	More use in infrastructure sector to improve quality and strength of steel
	↑	Minimally impacted by recycling as it needs to be continually replaced in steel making
	↑	Technologies that favour manganese in electric vehicle batteries
Metallurgical coal	↑	Need for high quality metallurgical coal to support carbon emissions reduction targets in the steel industry
	↑	Establishment of new integrated steel capacity in emerging markets
	↓	Higher rates of scrap steel recycling and increasing share of electric arc furnaces in steel production to impact demand. Hydrogen-based steel making is competitive against new and existing blast furnaces beyond 2040. Global metallurgical coal demand peaks in the current decade
Steel	↑	Required in build out of renewable energy infrastructure and pipelines for carbon capture and storage

Portfolio resilience

We use commodity demand outcomes, carbon and commodity prices in the 1.5°C scenario to assess the resilience of our portfolio under a rapid global transition. Key outcomes in the 1.5°C scenario, compared to our base case, are shown in the table below.

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 low carbon intensity. While our alumina and aluminium businesses would also benefit from higher commodity prices, the energy intensity of these businesses means that rapid decarbonisation, energy transition and technology programs would be required to mitigate the carbon price impact. In particular, the aluminium smelters would need to operate on renewable energy to be viable in the 1.5°C scenario. IMC would face a high carbon price burden without the benefit of commodity price upside.

The assessment below represents our hypothetical assessment of disorderly economic transition risk, all else being equal, and assumes that no management response has been undertaken to mitigate the relevant risks to our business. Current market signposts do not currently indicate that a 1.5°C scenario is a likely outcome. In the interim, we use insights from our hypothetical stress-testing as an input to our broader strategic planning and risk management processes, as appropriate.

Portfolio resilience in the 1.5°C scenario, compared to our base case

	Commodity prices	Carbon prices	Overall	Commentary
Alumina	▲▲▲	▼▼▼	▬	– Our refineries offer high quality, long life exposure to higher alumina prices – The higher carbon price would require the industry to rapidly decarbonise to maintain operating margins. Although this would require investment in decarbonisation and low-carbon energy projects, our refineries are well positioned given their relatively low carbon intensity
Aluminium	▲▲	▼▼▼	▼	– Higher aluminium prices, partly offset by higher alumina (input cost) prices – The aluminium sector would need to transition to low-carbon electricity or commercialise processing technologies to mitigate the higher carbon liability – Hillside Aluminium would be uncompetitive in the 1.5°C scenario without an affordable source of low-carbon electricity, while the carbon impact on Mozal Aluminium would be lower given its access to hydroelectricity
Base and precious metals	▲▲	▼	▲	– Higher nickel, zinc, silver and manganese (at the Clark Deposit) prices, partly offset by lower lead prices (Cannington, Taylor Deposit) – Modest carbon price impact given the low intensity of these assets, which could reduce further with our ambition for Taylor to be a carbon-neutral development – Potential upside from copper and other base and precious metals from the Arctic Deposit and regional exploration at Ambler Metals
Manganese ore	▲▲	▼	▲	– Higher manganese prices in the 1.5°C scenario, which most benefit our South African operations given their long reserve life – Low carbon price impost due to the low intensity of our manganese operations
Metallurgical coal	▬	▼▼▼	▼▼▼	– In the 1.5°C scenario IMC would be uncompetitive without a commercial solution for the abatement of ventilation air methane, another decarbonisation breakthrough or legislation that protects strategic, trade exposed industries

▲ Positive ▼ Negative ▬ Neutral

MANAGING OUR ENVIRONMENTAL IMPACT

Successful environmental management is essential – not only for our business, but for all our stakeholders. We are committed to protecting natural resources including water, air and biodiversity aspects as well as the 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 rehabilitation of the surrounding landscape remains front of mind.

Our Environmental Management

Our approach to environmental management is embedded within our Code of Business Conduct and Sustainability Policy. It is guided by ICMM Mining Principle 6 – Environmental Performance, and other recognised industry guidelines and statutory frameworks.

We have a comprehensive environmental management system, codified in our internal environment standard, with specific local requirements included in our operational management plans and procedures.

Read more about our **approach to environmental management** in our Sustainability Databook at *www.south32.net*.

IN THIS SECTION

Biodiversity 68

We recognise the importance of biodiversity and ecosystems and our responsibility to minimise the impacts of land clearing and to rehabilitate the land that is disturbed by our activities.

ICMM Principle

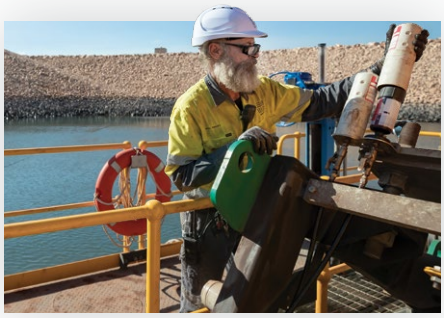
4 RISK MANAGEMENT · 6 ENVIRONMENTAL PERFORMANCE · 7 CONSERVATION OF BIODIVERSITY

South32 supports the SDGs

14 LIFE BELOW WATER · 15 LIFE ON LAND

UNGC Principle

ENVIRONMENT



Waste 74

The safe management of waste from our operations and projects is essential to operating responsibly.

ICMM Principle

4 RISK MANAGEMENT · 6 ENVIRONMENTAL PERFORMANCE · 8 RESPONSIBLE PRODUCTION

South32 supports the SDGs

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

UNGC Principle

ENVIRONMENT

Water 71

Water is a valuable resource that we all share. In many of the areas where we operate water is scarce and we must carefully manage our water-related impacts.

ICMM Principle

4 RISK MANAGEMENT · 6 ENVIRONMENTAL PERFORMANCE

South32 supports the SDGs

6 CLEAN WATER AND SANITATION · 14 LIFE BELOW WATER

UNGC Principle

ENVIRONMENT

Other emissions, effluents and pollution 77

The nature of our mining and processing activities can result in gaseous air emissions, noise, effluents and contamination. We take active steps to manage these.

ICMM Principle

4 RISK MANAGEMENT · 6 ENVIRONMENTAL PERFORMANCE · 8 RESPONSIBLE PRODUCTION

South32 supports the SDGs

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

UNGC Principle

ENVIRONMENT

BIODIVERSITY

We recognise the importance of protecting ecosystems and avoiding or minimising the impact we have on biodiversity. It is our responsibility to minimise the impacts of land clearing and to rehabilitate land disturbed by our activities. We support biodiversity conservation, and have effective systems for designating protected areas and integrated land use. We have committed not to explore or mine in World Heritage Areas and to respect legally designated protected areas.

Four of our operations are located in, or contain portions of, designated protected areas, and three of our operations are located adjacent to designated protected areas. The South West region of Western Australia, where Worsley Alumina is located, is one of 36 global biodiversity hotspots in the world, as defined by Conservation International.

Our approach

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 land management and biodiversity is stated in our Sustainability Policy and managed through our internal environmental and closure standards. When we develop our operational procedures, we take regional and local biodiversity needs and regulatory requirements into account.

Identifying our biodiversity risks and opportunities

Under our internal standards, all operations and major projects must complete a risk and opportunity screening exercise at least every five years. Three of our operations, Worsley Alumina, GEMCO and Illawarra Metallurgical Coal (IMC), have been identified as having material biodiversity-related risks. In line with these internal standards, we also apply the mitigation hierarchy – avoid, minimise, rehabilitate, offset – across all of our operations, and work towards a no net loss outcome for all major expansions and new projects.

Read more about our **biodiversity risks and opportunities** in our Sustainability Databook at *www.south32.net*.

Strengthening our biodiversity management approach

In FY21, we updated our internal environment standard with new minimum performance requirements for land disturbance and rehabilitation activities, including:

- Mapping and grading the significance of biodiversity features, within and beyond operating boundaries;
- Incorporating progressive rehabilitation of vegetation, topsoil, and other elements into operational plans;
- Setting performance criteria for progressive rehabilitation activities, measuring actions against them and adapting processes to achieve better outcomes;
- Implementing an effective ‘permit to clear’ process, reflecting all biodiversity features and their significance, as well as all relevant legislation; and
- Undertaking research to close biodiversity knowledge gaps and support better performance and outcomes.

Highlights

- Strengthened requirements for rehabilitation and biodiversity management in our updated internal environment standard. This includes working towards no net loss for all major expansions and new projects by implementing our new four-step mitigation hierarchy.
- Launched a new rehabilitation and biodiversity knowledge portal in our internal Environment Hub, containing information, tools and links to support improved on-ground management of land and biodiversity aspects.
- Strengthened our partnership with industry peers as we continue to support improved biodiversity and conservation outcomes in the Northern Jarrah Forest in Western Australia, close to Worsley Alumina.
- Progressed the Biodiversity Offset Plan for Worsley Alumina, which forms part of the current Environmental Review Document (ERD) for the Worsley Mine Development.
- Updated and aligned our internal closure standard with the ICMM Integrated Mine Closure Good Practice Guide.
- Updated closure plans for our Dendrobium mine at IMC, Mamatwan, Wessels and Middelplaats at our Hotazel Manganese Mines (HMM) and our Hermosa project.
- Produced a detailed decommissioning scope and cost estimate for Worsley Alumina to enhance our assessment of our closure liability.
- Continued closure planning for tailings storage facilities at GEMCO, Cannington and Worsley Alumina.
- Removed unused buildings, power poles and power lines at IMC.

Collaborations

Through collaboration we have improved outcomes for rehabilitation, biodiversity and conservation. Our strategic partnership with industry peers has been established to support improved biodiversity outcomes in the Northern Jarrah Forest in Western Australia. Work between IMC and the Australian Botanic Garden Mount Annan has also resulted in successful research and a pilot for propagating the endangered Persoonia Hirsuta plant.

Closure

Just as we take action to avoid or minimise environmental impacts when our operations are running, this commitment continues at closure. We aim to optimise our closure outcomes by planning for closure during the design of our operations. Our activities during operations are consistent with achieving our closure objectives, which includes progressive rehabilitation. Our closure management activities support the UN Sustainable Development Goals 11 – Sustainable Cities and Communities and 15 – Life on Land.

We are guided by the ICMM Integrated Mine Closure Good Practice Guide. Our approach aligns with our performance requirements and is codified in our internal closure standard. Every operation has 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 ICMM's closure working group and the Cooperative Research Centre for Transformations in Mining Economies (CRC TiME).

Championing biodiversity – focus on Worsley Alumina

The South West area of Western Australia is one of the world's 36 biodiversity hotspots. More than half of the 6,000 plant species found here are unique and include some threatened plant and animal species, including the Chuditch, Woylie, Carnaby's Black Cockatoo, Quokka, Western Ring-tailed Possum and the Numbat.

Worsley Alumina supports several initiatives to protect, preserve and increase biodiversity, including:

- Being one of three industry partners that make up the South West Biodiversity Partnership, sharing a vision and long-term commitment to improving biodiversity outcomes in the region;
- Research on several threatened species such as Carnaby's Black Cockatoo;
- Controlling the spread of the plant pathogen Dieback; and
- Progressive rehabilitation.

Our performance

Around the world we have land holdings of around 634,000 hectares, with 98 per cent of these located in Australia. We have disturbed approximately two per cent (11,584 hectares) of our landholdings for operational reasons and have rehabilitated around one per cent (5,769 hectares). At Cerro Matoso and IMC we have set aside over 1,947 hectares of land for conservation.

This year, we rehabilitated 251 hectares of disturbed land across our operations, increasing the total rehabilitated area to 5,769 hectares. We also developed plans to increase rehabilitation at Worsley Alumina[1], with an FY22 target of around 300 hectares. We are measuring our success using 'end-state' criteria and looking for ways to improve our performance and achieve greater ecological value. 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.

Helping to preserve an endangered plant species

IMC is helping to preserve the endangered *Persoonia hirsuta*, otherwise known as the Hairy Geebung.

The Hairy Geebung is found throughout the Sydney region, where IMC operates, but has been in gradual decline for the past 20 years or more. Today, the species consists of groups of fewer than 10 specimens in increasingly isolated locations, largely as a result of land clearance and urbanisation.

There is a core population of Hairy Geebung at the Appin mine, which IMC takes great care to protect and seeks to preserve. Through its Offset Management Plan, IMC intends to increase the number of Hairy Geebung at Appin to at least 44 specimens by 2039, incorporating its cultivation into all mine rehabilitation plans.

IMC takes its custodial responsibility for the plants at Appin seriously and has collaborated with the Australian Botanic Garden Mount Annan (ABGMA) for many years, to learn more about a species that is notoriously difficult to propagate and grow to maturity.

ABGMA has nurtured around 90 plants (aged two to four years) and is working with IMC to trial their translocation and suitability for use in post-mining land restoration. The first plants were moved onsite in 2021, where their growth and health are monitored.

Championing biodiversity – focus on Cerro Matoso

Colombia has the greatest diversity of bird species in the world and is a habitat for 20 per cent of all birds globally. At Cerro Matoso, the surrounding forests are home to more than 300 different bird species, with many classified as 'threatened'.

To protect and maintain these populations, Cerro Matoso plants thousands of native trees every year. More than 62,000 were planted in 2020, an increase of 32 per cent year-on-year, contributing to over 1,000 hectares of conserved forests around the operation.

This work brings together more than 200 people from ethnic and non-ethnic communities neighbouring the operation, who participate in various ways - from creating native species nurseries, to planting the trees and maintaining planted areas.

Cerro Matoso has also implemented a program for our people to take part as voluntary observers, uploading images of the birds they spot via the iNaturalist platform.

Rehabilitating a local landscape in Australia

The electrical substation at the Dendrobium mine at IMC supplied power from BlueScope Steel to our operation for over 70 years, using a substation and overhead powerlines supported by poles.

In 2019, IMC's Dendrobium mine successfully completed the installation of an electrical kiosk at the mine entrance, enabling the transition of energy supply to the local network.

Following the transition, the overhead powerlines and the old substation transformer were no longer needed. The largest poles are approximately 25 metres tall and weigh nearly seven tonnes, which makes removing them safely a challenge, even with access to the latest equipment. The IMC team has removed more than half of the poles and is progressively removing those remaining. Residents welcome this rehabilitation and the removal of the poles, as some stand in private backyards.

(1) Read about the development which will support Worsley Alumina's next phase visit www.south32.net

WATER

Water is a valuable resource that we all share. In many of the areas where we operate water is scarce, and we must carefully manage our water-related impacts. Water is a critical input in our mining, refining, and smelting activities – where it is used for processing, suppressing dust, and managing tailings, as well as for sanitation and catering for our people – so we need a secure supply. At the same time, water is vital for our local communities and the natural environment, and we must take action to minimise and, where possible, avoid any negative impacts on its availability and quality. We are water consumers, but also water stewards.

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 project in areas defined as having baseline water stress: IMC, Worsley Alumina refinery, HMM, Mozal Aluminium and the Hermosa project. The classification is determined through annual assessment using the World Resources Institute's Aqueduct tool, which is then subject to internal verification that considers local context and catchment conditions.

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 to optimise performance and business value. 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, community and closure standards. We report water-related data in accordance with the Minerals Council of Australia's Water Accounting Framework and support improvements in water management, disclosure and accounting practices through the ICMM Water Working Group.

To manage water effectively, we maintain water balances for all our operations, maintain water forecasts in our planning process and undertake water resource risk and opportunity assessments. Our internal standards also require fit for purpose internal 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.

Highlights

- Hillside Aluminium revised its contextual water target to support the water needs of the catchment, including local communities.
- Mozal Aluminium and Worsley Alumina stayed on track to meet their contextual water targets.
- Strengthened our requirements to improve local water management controls for operations and projects, including investment in additional water treatment capacity at our Appin Mine at IMC.
- Launched an environment and water-stewardship knowledge portal, improving access to water management tools and information for all employees.
- In FY21 we recycled or reused approximately 93,040 ML of water, more than our total water input of 83,632 ML.
- Worsley Alumina and the Peel-Harvey Catchment Council (PHCC) launched a major environmental partnership to help protect, preserve and rejuvenate sections of river in Western Australia's Peel and Wheatbelt regions.

Our water-related risks

All our operations are required to maintain water resource forecasts to assess how much water they will need and make informed decisions about supply and demand. Operations also maintain water balances to track water withdrawals, discharge and consumption.

Each operation and major project is required to undertake a risk and opportunity screening process at least every five years.

We have identified material water-related risks at Hillside Aluminium, Mozal Aluminium, Worsley Alumina, HMM and 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.

Some of the activities we have undertaken at our operations with material water-related risk include:

- Installing desalination plants at both Hillside Aluminium and Mozal Aluminium to provide adequate operational water supply, during periods of water scarcity, and minimise the impact on the municipal network, which supplies the community;
- Progressing studies aimed at reducing water consumption at Worsley Alumina to help address regional water scarcity issues, with a focus on efficiency projects that also have the potential to reduce our carbon emissions;
- Using water treatment plants at IMC to increase reuse of water, reduce reliance of the Sydney Network, and improve quality of discharge water; and
- Improving water governance at HMM, through the development of an operational water plan and associated operational working group.

Consistent with our internal environment standard and ICMM requirements, for operations that face material water-related risks we also set Contextual Water Targets.

Read more about our **water-related material risks and associated contextual water targets** for each of our operations in our Sustainability Databook at *www.south32.net*.

Our performance

Almost all of the water we source for operational use is groundwater or surface water. To a lesser extent, and in smaller volumes, we also use sea water and supplies from third parties. Around half of this water is considered low quality and unsuitable for most other purposes. We reuse and/or recycle as much water as we can to limit our dependency on shared water sources. We conducted a scheduled review of the water accounting at five of our operations during FY21 and this resulted in an increase to our data accuracy and a restatement of some of our FY20 data. In FY21 we recycled or reused approximately 93,040 ML of water, more than our total water input of 83,632 ML. By recycling or reusing water within our operations, we reduce our dependency on water resources from the catchments in which we operate.

Our consumed volume of water equates to 66 per cent of input volume, not accounting for reuse and recycling of the water within our operations. The remaining water is discharged to surface water, groundwater and sea water, or piped to third parties in line with regulatory requirements.

Read more about our **water performance** in our Sustainability Databook at *www.south.net*.

In August 2020, an event occurred at IMC where the release of water containing fine coal particles occurred from the Kemira Valley sediment pond after a period of excessive rainfall. Following the initial release of water, remedial actions were put in place to divert the water flows to the buffer dam. A project manager was engaged to coordinate further remedial activities which have since been completed. This included clean-up activities along the banks of Brandy and Water Creek, and American Creek.

An investigation determined that the event was caused by the corrosion and subsequent failure of a clean water diversion pipe beneath the sediment pond. This caused a void to form underneath the sediment pond and the subsequent release of water. Measures to reinstate the sediment pond were undertaken, including replacement of the clean water diversion pipe. We monitored the environmental impact of the event and our remedial actions. Aquatic monitoring undertaken in November 2020 showed that there are no long-term impacts associated with the event. The sediment pond returned to normal operation in December 2020.

The NSW Environment Protection Authority issued a A$15,000 penalty notice in March 2021. In addition to the remedial actions put in place, an audit of all dams across IMC was undertaken to review and enhance our management controls.

Looking ahead

In addition to maintaining our focus on implementing our water management practices and understanding our risk profile for the year ahead, we have also set four key focus areas:

- Enhancing our life of operations planning so that water risks and opportunities are contextualised, prioritised and accurately documented within our long-term plans for each of our operations;
- Developing contextual water targets for IMC and HMM and working to meet existing targets at Worsley Alumina, Mozal Aluminium and Hillside Aluminium;
- Setting and embedding performance metrics to drive better reuse and recycling of water, and defining a roadmap to deliver improved performance; and
- Updating our water accounting processes in alignment with the new ICMM reporting disclosure requirements.

Enhancing biodiversity in river corridors

In June 2021, Worsley Alumina and the Peel-Harvey Catchment Council (PHCC) launched a major environmental partnership to help protect, preserve and rejuvenate sections of river in Western Australia's Peel and Wheatbelt regions.

Under the five-year partnership, PHCC, a community-based not-for-profit organisation, will carry out the Hotham-Williams Warlang Bilya (Hotham-Williams Healthy Rivers) Project, focusing on eight priority sites to improve habitat and ecological function of river corridors in the Hotham-Williams subcatchment. Work is already underway, with PHCC consulting with local communities to identify the priority activities for the sites.

The partnership will also help PHCC deliver additional environmental projects aligning with its Hotham-Williams Natural Resource Management Plan. Worsley Alumina has committed A$625,000 over the five years.

DENDROBIUM MINE EXTENSION PROJECT

This year we sought approval for the Dendrobium mine extension project, to extend the life of the Denbrobium mine at Illawarra Metallurgical Coal in New South Wales.

The New South Wales Department of Planning, Industry and Environment published a whole of government assessment report in November 2020, stating that the project's benefits significantly outweighed its impacts and therefore was in the public interest. The project also received widespread support from community and industry.

In February, the Independent Planning Commission (IPC), an independent statutory body that assesses and determines state significant development applications, refused the project, citing concerns regarding the mine design. In its assessment, the IPC said the proposed mine design did not "achieve a balance between maximising the recovery of coal resource and minimising or mitigating the impacts on the water resources, biodiversity and other environmental values of the Metropolitan Special Area".

We take our environmental responsibilities seriously and we understand the sensitivities of working in the Metropolitan Special Area, where the Dendrobium mine is located. The application determined by the IPC included measures such as longwall setbacks of up to one kilometre from walls of prescribed dams, and no longwall mining beneath the Cordeaux and Avon dams, named watercourses and key stream features including waterfalls and permanent pools.

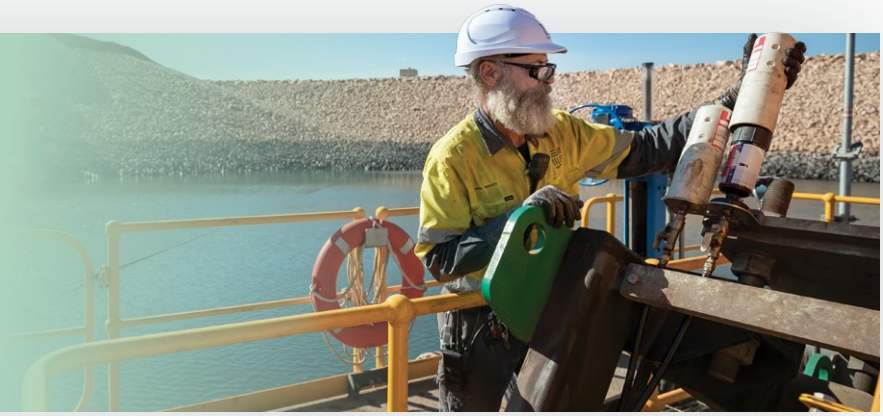
The outcome of these commitments would leave over 25 million tonnes of coal unmined, supporting our sustainable mining practices while maintaining a viable project well into the future.

After the IPC handed down its determination, in light of the significance of IMC to the Illawarra region and for domestic steelmaking, the New South Wales Legislative Council passed a motion requesting the Minister for Planning and Public Spaces make an order that any future development for the Dendrobium mine extension project be declared State Significant Infrastructure under New South Wales law. This would enable the Minister to determine the project upon the submission of an alternative mine plan by South32.

In addition, South32 has requested a judicial review of the IPC's decision in the Land and Environment Court of New South Wales.

We continue to assess options for the project, including a revised mine plan, and we expect to provide a further update on the project by the end of the 2021 calendar year.

WASTE



The safe management of waste from our operations and projects is essential to operating responsibly. We are determined to reduce waste generated from our operations, and to reuse or recycle a higher percentage of the waste that is unavoidable. Our highest waste volumes come from tailings – materials left after we have removed the target minerals from the ore. Our other waste streams include rock, water and materials containing hazardous chemicals or with dangerous physical properties, as well as non-hazardous waste.

Our approach

We manage waste in line with ICMM Mining Principle 8 – Responsible Production, and apply the mitigation hierarchy as part of our approach. This hierarchy prioritises waste prevention, followed by minimisation, reuse, recycling, energy recovery and disposal.

This year, we strengthened our approach to managing waste by adding new performance requirements to our internal environment standard. These requirements are designed so that our operations become even more effective at classifying, quantifying, managing and disposing of waste.

Our new performance requirements call on all operations that are exposed to waste-related risks to:

- Improve the way they identify, assess, quantify and report the risks and opportunities associated with all their waste streams, using a waste register;
- Implement effective procedures and controls to handle, segregate, store, transport and dispose of their waste;
- Keep a record of all waste that is moved off-site for disposal, so that this is done in line with local laws and internal requirements; and
- Implement governance processes (risk-based) to verify the treatment, handling and disposal of waste is being undertaken in accordance with local laws and internal requirements.

To support our new performance requirements, during FY21 we developed a five-step waste reduction methodology to help our operations identify value-based opportunities in their waste streams. This supports our aspiration to continue to reduce and design our waste in line with the circular economy principles.

Tailings management

Management of tailings storage facilities (TSFs) and water retaining dams is an integral part of our mining and processing activities. We have 27 TSFs located across both our owned and operated sites and those that we operate on behalf of joint venture partners. Sixteen of these TSFs are active, ten are inactive and one TSF is 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 (ANCOLD) 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. We are implementing the Global Industry Standard on Tailings Management (GISTM) to improve our management, governance and disclosure.

Read more about our **approach to tailings management** at *www.south32.net*.

Managing our tailings risks

We recognise the potential risks TSFs present to our people, our communities, the environment and our shareholders, and we are committed to their safe and responsible management.

Water is a primary cause or contributing factor to the failure of TSFs. Consequently, we deposit our tailings as dry and densely as possible, so they are unlikely to flow in damaging ways or for any meaningful distance. The requirements for doing this are set out in our internal dam management standard.

Our operations and projects use various techniques to achieve dry and dense tailings, including dry stacking at Hermosa, permitted discharging of excess water at GEMCO and efficient water recycling at Cannington. At Worsley Alumina, we manage our tailings deposition through the discharging and consolidation of high-density thickened tailings material in a process known as amphirolling. We benchmarked our tailings management approach at Worsley Alumina against other alumina refineries and base metal operations and found we produce one of the best tailings residue densities in the world, contributing to the safety and stability of the TSF. We measure the effectiveness of our tailings management techniques by assessing tailings densities, the extent of decant ponds and the dryness of tailings beaches.

We have undertaken significant investigative work and research to understand more about the properties and behaviours of tailings at our operations, including state-of-the-art sampling and testing. We have donated specialist laboratory equipment to the University of Western Australia, where these tests are carried out.

Our in-house tailings specialists play a key role, by developing innovative new ways to design and construct TSFs, including one under construction at GEMCO.

Read the **case study** on page 76 for more information.

Highlights

- Strengthened the performance requirements relating to waste management in our updated internal environment standard.
- Established a new waste management knowledge portal on our internal Environment Hub to provide information, tools, and useful links to help our operations manage waste more effectively.
- Finalised our new five-step waste reduction methodology and piloted it at GEMCO.
- Collaborated with other mining operations to support Tyre Stewardship Australia's review of end-of-life processing for large vehicle tyres used in mining, and their potential for reuse or recycling.
- Our subject matter experts provided input to the Global Industry Standard on Tailings Management (GISTM), and contributed to the development of the ICMM Tailings Management Good Practice Guide and associated Conformance Protocols.
- Increased storage capacity equivalent to one year at our GEMCO TSF through increasing densities by 30 per cent from 0.9 t/m³ to 1.15t/m³.
- Completed construction of new raises and drainage works at our Cannington TSF due to dry and dense tailings.
- Achieved one of the industry's best bauxite residue densities at our Worsley Alumina TSF.
- Built a water treatment plant at Hermosa to capture and treat tailings-impacted water. This eliminated the prior discharge of legacy tailings-impacted water into the environment.
- Started the implementation of the GISTM at all our operations and as part of this have appointed Accountable Executives for all our operations and projects.

Investigating the recovery and recycling potential of mining tyres

When haul truck tyres reach the end of their life, there are often limited options to dispose of them. At Worsley Alumina, the only option available at present is to send them to landfill.

To explore the recovery and recycling potential of these tyres, Worsley Alumina has collaborated with other mining operations in Western Australia. Together, they have provided support and valuable data to Tyre Stewardship Australia (TSA), which has commissioned a review into the disposal processes used for these tyres. TSA's mission is to achieve sustainable management, recycling, and productive use of end-of-life tyres.

Worsley Alumina will continue working with TSA and other stakeholders to explore the potential for applying the principles of a circular economy in its operations, for both tyres and other assets such as conveyor belts.

Our performance

The ability to accurately report on tailings is important to satisfy the needs of key stakeholders, including joint venture partners and insurers.

Tailings	FY21
Total tailings waste (kilotonnes)	**17,269**
Total tailings recycled (kilotonnes)[1]	**1,130**

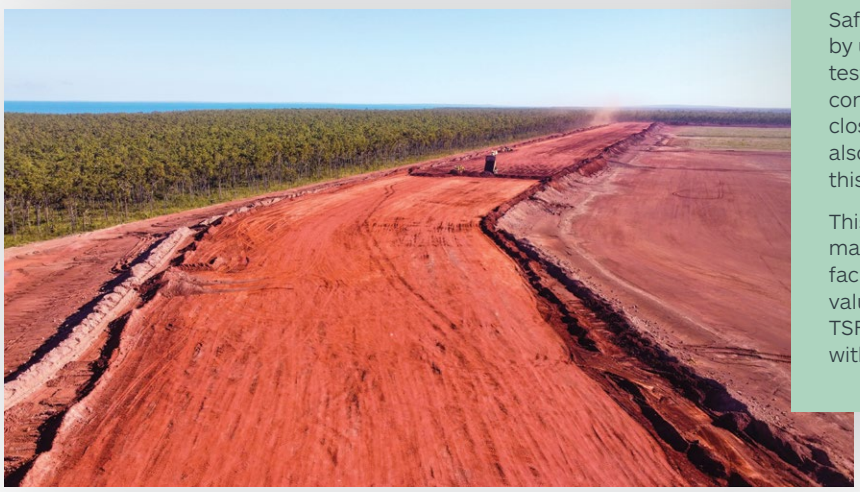
(1) Product removed from tailings storage facility and sold as product.

Further information on our tailings storage facilities, including their hazard categorisation based on the consequence of failure, is available in the Tailings Directory at *www.south32.net*.

Looking ahead

Over the next 12 months we will focus on implementing our new performance requirements for waste. We will also review the pilot deployment of our new five-step waste reduction methodology at GEMCO and explore its potential for wider roll out.

We are accelerating the implementation of the GISTM at all our operations and have completed a gap analysis of our internal dam management standard and the GISTM, against our operations. This has allowed us to address specific items in the GISTM implementation.



Thinking innovatively about tailings storage facilities

The TSF located at GEMCO on Groote Eylandt in the Northern Territory of Australia is used to store tailings from mining. What makes it exemplary for future TSFs, is the innovative thinking that went into its design and construction.

The TSF has been built using fill material from local mine quarries that would otherwise have been transported to a waste stockpile. The haulage of this material, as well as the construction and compaction of the facility itself, was undertaken using mine trucks driven by GEMCO drivers.

Safety and integrity of the design was maintained by undertaking construction supervision and testing per ANCOLD guidelines, which also contributes to lower construction, operation, and closure costs. The team behind this innovation also delivered the dam earlier than required, and this resulted in reduced risks.

This work supports our internal dam management standard that requires new tailings facilities to explore alternatives, and provides valuable lessons for future TSF constructions. The TSF has also been approved by local authorities, with support from the Groote Eylandt community.

OTHER EMISSIONS, EFFLUENTS AND POLLUTION

The nature of our mining and processing activities can result in gaseous air emissions, noise, effluents and contamination. We actively manage these and prevent and minimise any impact on neighbouring communities and the environment, in line with our strategy.

Read more about our carbon emissions and our response to climate change on page 46.

Our approach

Our approach to managing emissions and contamination is informed by ICMM Mining Principle 4 - Risk Management and ICMM Mining Principle 6 - Environmental Performance.

Non-GHG air emissions

Non-Greenhouse Gas (GHG) air emissions from our operations include sulphur oxides (SOx), nitrogen oxides (NOx) and particulates.

This year, we strengthened our capacity to manage non-GHG air emissions by adding new performance requirements to our internal environment standard. Our approach is risk-based, and through the use of Source-Pathway-Receptor assessment methodology, we require operations and projects under our operational control to:

- Identify and evaluate the impact of all air emissions, including their cumulative impact;
- Design and implement effective controls, with legal compliance as a minimum to protect ambient air quality for the benefit of local communities and the natural environment; and
- Monitor operating performance using systems that trigger effective responses to abnormal emissions, emission levels and dispersal conditions to protect human health.

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 FY21, we co-founded an Electric Mine Consortium with fourteen other member companies who are committed to work together to test 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.

Many of our operations run real-time telemetered air quality programs and supplement these with high volume air samplers and dust deposition gauges, if necessary. Over the past two years we have significantly upgraded monitoring programs for our manganese operations in Australia and South Africa, including deployment of new dust monitoring technology at GEMCO, TEMCO, Metalloys and Wessels.

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 our local communities.

Highlights

- Strengthened performance requirements for non-GHG emissions and contamination in our updated internal environment standard.
- Launched non-GHG emissions and contamination knowledge portals, containing useful information, tools and links, in our internal Environment Hub.
- Commenced a bioremediation research program with CSIRO as part of a wider Milner Bay Remediation Strategy and Action Plan for GEMCO's port facility.
- Improved monitoring for dust at Wessels at HMM and noise at Dendrobium at IMC and GEMCO through real time technologies.
- Concluded the air dispersion methods study at Worsley Alumina and the Collie Airshed Study exploring air dispersion.
- Progressed a review of artificial intelligence as a tool for noise management at Worsley Alumina.

Contamination

This year we implemented additional performance requirements related to identifying, predicting, and managing contamination risks for our projects and operations. They emphasise the need to understand the risks we face, identify actual or potential contamination quickly, and use effective control strategies to address incidents. They include the requirement to:

- Identify and assess contamination risks, using a contaminated land register to record all relevant information;
- Develop appropriate remediation action plans;
- Implement effective inspection regimes and spill prevention measures in high-risk areas, with appropriate training so that our people understand their responsibilities; and
- Monitor performance against agreed contamination management objectives.

We use the Source-Pathway-Receptor assessment methodology, like that for non-GHG emissions management, for regulatory compliance and to prevent negative impacts on human health. This methodology also helps us reduce long-term costs and closure liabilities.

Our performance

During FY21 we improved our noise management capability and participated in several trials that will help us make further refinements in future. They include:

- Implementing a directional noise monitoring system at our Dendrobium mine at Illawarra Metallurgical Coal (IMC);
- Trialling new Artificial Intelligence technology at Worsley Alumina (refer to case study on page 79); and
- Developing a new real-time noise monitoring program for GEMCO.

We have commenced a bioremediation research program in partnership with CSIRO related to a legacy contamination at GEMCO, which experienced an extensive oil spill during the 1990s. The program aims to identify ways of enhancing natural bioremediation in the area near GEMCO's port facility, Milner Bay, so that it can be restored to acceptable environmental standards as quickly as possible, without the need for extensive and evasive ground disturbance activities. Our research with CSIRO is part of a wider Milner Bay Remediation Strategy and Action Plan, both of which were developed through consultation with the Anindilyakwa Land Council.

Read more about our performance data on oxides of sulphur emissions, oxides of nitrogen emissions and mercury emissions in our Sustainability Databook at *www.south32.net*.

Read more about our **air emissions in Australia**, reported to the National Pollutant Inventory, at *www.npi.gov.au*

Looking ahead

Over the next twelve months, we will focus on:

- Improving our monitoring programs and extending the analytical capability of EQuIS and other data platforms;
- Concluding the Milner Bay Bioremediation Research program and initiating field trials based on its conclusions; and
- embedding the new performance requirements within our internal environment standard.

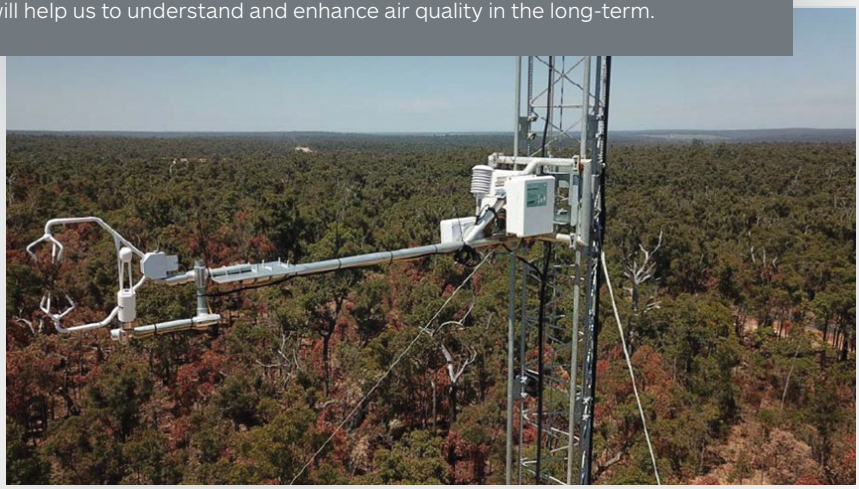
Improving our understanding of air emissions

Over several years Worsley Alumina participated in an ambitious, collaborative study of sulphur dioxide (SO_2) air emissions – the Collie Air Shed Study (CASS) – with other industry partners in the Collie region, including Synergy and Bluewaters coal-fired power stations.

This study ran in two phases. The first, lasting two years, involved detailed monitoring and data gathering in three distinct components; emissions monitoring of all major SO_2 stacks in the region, meteorological monitoring to record winds, turbulence, rainfall, radiation and other weather phenomena – all essential to quantify the dispersal of pollutant plumes and the measurement of ground level concentrations of SO_2 to validate the other inputs.

The second phase, lasting three years, involved trials of several internationally recognised air dispersion data models – resulting in the decision to adopt the AERMOD model, which was adapted to suit users' needs.

The comprehensive, high-grade data collected confirmed that all sites recorded were well within permitted SO_2 levels and provided confidence that the modelling used will help us to understand and enhance air quality in the long-term.



Utilising artificial intelligence to control noise emissions

We take steps to reduce noise emissions from our operations for the benefit of our people and local communities. Conventional noise monitoring methods are generally effective, but a persistent problem is false alarms, which can be triggered by non-mining activities, for example, weather events, animal activity and traffic movement.

To address this issue, the team at Worsley Alumina are trialling 'Noise AI', a system that has the potential to transform the way we control noise emissions using artificial intelligence. This trial started in 2019 and is set to conclude in 2021.

Noise AI uses cloud computing tools and machine learning technology to analyse noise sources. It can identify where specific noises originate from, their volumes and the contribution they make to the overall soundscape and noise level.

Trials have shown that Noise AI can eradicate almost all false alarms and therefore only generate alerts when they are needed. An estimated 95 per cent of all alerts can be managed solely via Noise AI, with no further interventions. By processing around 120,000 alerts a year at the Boddington Mine, it will free up around 2,000 working hours for control personnel to focus on safe operations.

This successful trial demonstrates the intelligent use of technology and resources for the benefit of local communities.

Glossary

Alumina
Aluminium oxide (Al_2O_3). Alumina is produced from bauxite in the Bayer refining process. It's then converted (reduced) in an electrolysis cell to produce aluminium metal.

Baseline water stress
The ratio of total annual water withdrawals to total available annual renewable supply, accounting for upstream consumptive use. Higher values indicate more competition among users. The values and definition of baseline water stress have been derived from WRI Aqueduct (Working Paper) 2014.

Bauxite
Principal commercial ore of aluminium.

Biodiversity
Refers to the variety of life on Earth – the different animals, plants and micro- organisms, their genes and the ecosystems of which they are a part.

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.

Brownfield
An exploration or development project located within an existing mineral province, which can share infrastructure and management with an existing operation.

Carbon emissions (also referred to as Greenhouse gas (GHG) emissions)
For our reporting purposes, these are the aggregate carbon dioxide equivalent (CO_2-e) emissions of carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF_6).

We measure and report emissions according to local jurisdictional requirements and the World Resources Institute/World Business Council for Sustainable Development Greenhouse Gas Protocol, which includes:

- Scope 1 carbon emissions that are direct carbon emissions from our own operations, including the electricity we generate at our sites;
- Scope 2 carbon emissions that are indirect carbon emissions from the generation of purchased electricity; and
- Scope 3 carbon emissions that are carbon emissions in our supply chain.

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 that we operate in, or have an interest in. Our contributions to community programs comprise direct investment, in-kind support and administrative costs.

Contractor
Any organisation or individual (other than a South32 employee) who provides labour to South32 pursuant to a contract for service.

CO_2-e
Carbon dioxide equivalent.

Contextual water target
A contextual water target is a specific time-bound target that is set to deliver an intended outcome based on the environmental and social context of the local catchment.

COVID-19
Is an infectious coronavirus disease which causes respiratory illness. On 11 March 2020 the World Health Organization declared the COVID-19 outbreak a pandemic affecting many countries globally.

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 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.

Energy consumption
Energy consumption for activities where we have operational control includes fuel consumed in both stationary and transport combustion. 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. Excludes energy consumed but not combusted (such as lubricant and solvent use) and energy embodied in waste streams (such as flared gas).

ESG
Environmental, social and governance.

Fatality
A health or safety event where an injury or occupational illness has caused the death of one or more person(s).

Fugitive emissions
Release of greenhouse gases to the atmosphere from underground coal seams during mining activities.

FYXX
Refers to the financial year ending 30 June 20XX, where XX is the two-digit number for the year.

Global Reporting Initiative (GRI)
GRI is an international independent organisation that has established an international framework and standards for sustainability reporting. South32 prepare our Group-level annual Sustainable Development Report in accordance with the GRI Sustainability Reporting Standards (Core option) and the GRI Mining & Metals Sector Supplement.

Greenfield
An exploration or development project located outside the area of influence of our existing mine operations/infrastructure.

Group
Refers to South32 Limited and its subsidiaries and joint arrangements.

HSEC
Health, safety, environment and community.

Human rights
Human rights are the universal and inalienable rights and freedoms that belong to every person 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 mutual respect. We respect all internationally recognised human rights as set out in the Universal Declaration of Human Rights, the International Covenant on Civil and Political Rights, the International Covenant on Economic, Social and Cultural Rights, and the ILO Declaration on Fundamental Principles and Rights at Work.

Indigenous and Tribal Peoples
We use the defined term "Indigenous 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 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 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.

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.

International Council on Mining and Metals (ICMM)
ICMM is an international organisation dedicated to improving the social and environmental performance of the mining and metals industry. As a corporate member, South32 commit to implementing and reporting on the ICMM Mining Principles, which define environmental, social and governance requirements. South32 participates on the ICMM and various working groups.

International Financial Reporting Standards (IFRS)
Accounting standards as issued by the IASB (International Accounting Standards Board).

Just Transition
A fair, equitable and inclusive social transition towards a low-carbon economy.

LTI
Long-term incentive.

Management roles
Management roles are Leaders with an identified job grading based on the requirements of their role and salary rate of 13 or higher.

Materiality
Materiality is the threshold at which an issue or topic becomes sufficiently important that it should be reported. Beyond this threshold, not all material topics will be of equal importance and the emphasis should reflect the relative priority of these material topics and indicators.

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.

Modern slavery
Modern slavery is used as an umbrella term to include the legal concepts of forced labour, debt bondage, forced marriage, slavery and slavery-like practices, and human trafficking. Essentially, it refers to situations of exploitation that a person cannot refuse or leave because of threats, violence, coercion, deception, and/or abuse of power (Walk Free Foundation).

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.

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. We adopt these guidelines for the recording and reporting of occupational injuries and illnesses to ensure that classifications are applied uniformly across our workforce.

Operational carbon emissions
Scope 1 and 2 carbon emissions from our operated assets.

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).

Paris Agreement
A global climate agreement that was agreed under the United Nations Framework Convention on Climate Change (UNFCCC) at the 21st Conference of the Parties in Paris (30 November to 12 December 2015). The Paris Agreement sets in place a durable and dynamic framework for all countries to take climate action from 2020, building on existing international efforts in the period up to 2020.

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).

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.

Significant environmental incidents
Any environmental events with an impact where the potential severity level is 4 or greater with a major impact/s <five years to land, biodiversity, ecosystem services, water resources or air.

SMME
Small, micro and medium enterprise.

STI
Short-term incentive.

Sustainability Accounting Standards Board (SASB)
SASB Standards guide the disclosure of financially material sustainability information by companies to their investors. SASB Standards are maintained under the auspices of the Value Reporting Foundation, a global nonprofit organisation. 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.

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.

Total Recordable Injury Frequency (TRIF)
(The sum of recordable injuries x 1,000,000) ÷ exposure hours. 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.

Transitional climate change risks
Non-physical risks arising from changes to policy, technology, legal and markets as the world moves to a low-carbon global economy, in line with the Paris Agreement objectives.

Underlying EBITDA
Underlying EBIT before 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. South32 is a member of the UNGC (GC Active) and our 2021 Sustainable Development Report serves as our Communication on Progress (CoP).

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.

Workplace Gender Equality Act 2012
Australian legislation which aims to improve and promote equality for both women and men in the workplace.

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.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