



 **CENTENNIAL**

2021

SUSTAINABILITY REPORT

Our way to sustainability

Report Boundary and Scope

The information in this report covers Centennial Coal Company Pty Limited (Centennial) and its subsidiaries for the period 1 January 2021 to 31 December 2021. The contents of this report have been informed by the Global Reporting Initiative (GRI) Standard and demonstrates the linkage between Centennial's environmental, social and governance performance, collectively termed sustainability, and the United Nations' Sustainable Development Goals.

Greenhouse and energy data, waste and occupational health and safety data has been externally assured, with the additional inclusion of waste to the assurance scope in 2021. Centennial is committed to further expansion of external assurance in the future.

Note: This report includes performance data from all of Centennial's business entities and joint ventures, on a 100% basis.



Contents

Managing Director and CEO's message	1
Sustainability highlights 2021	2
Who we are	3
Our sustainability approach	4
Material issues	5
Stakeholder engagement	6
Creating value	7
Governance	8
Sustainability governance	9
Challenge and opportunity	10
Responsible supply chain	
Stability during COVID-19	11
Environment	12
GHG emissions	13
Water	16
Environmental compliance	17
Minimising environmental impacts:	18
Biodiversity and land use	19
Waste	20
Mine subsidence	
Social	21
Health and safety	22
Corporate culture	23
Community engagement	25

Managing Director and CEO's message

Welcome to Centennial's 2021 Sustainability Report

Strong Environmental Social Governance (ESG) principles and performance outcomes are a key part of our sustainability journey, one in which all of our employees have a role to play. We commit to a robust transparent governance framework, upon which we aim for continual business improvement. Continual improvement, being a valued member of our community and being economically strong make us a future ready business and that is what sustainability means to us.

We have aligned our sustainability strategy with the United Nations, Sustainable Development Goals (SDGs), a set of global goals to address the world's most pressing social, environmental and economic challenges. In doing so we have developed specific commitments with respect to the SDGs, in line with our 2021-2025 ESG targets. The appetite for ESG is certainly growing amongst our stakeholders and we will continue to monitor this evolution and seek to boost our performance as we report on these targets.

We continue to align with our parent company Banpu Public Company Limited (Banpu) Greener Smarter strategic agenda. Banpu is a diversified energy company with three core business pillars: Energy Resources, Energy Generation and Energy Technology is recognised as sustainability leaders by international organisations, such as Dow Jones Sustainability Indices (DJSI). Centennial plays a key role in the Energy Resources pillar of Banpu and seeks to provide a solid return to Banpu.

Centennial is taking an agile role in the energy transition to a low carbon society and is proceeding with active steps to decarbonise operations and upcycle our land assets. An example of this is an 8 megawatt gas power station at Mandalong, due to commence in 2022. The facility will utilise methane that is extracted from the coal seam (to ensure the safe operation of the mine) to generate electricity in lieu of emitting it to atmosphere. This will reduce our greenhouse gas emissions, while adding to our decarbonisation momentum. This is in addition to the existing Airly solar farm and a small solar installation at Awaba, both operating since 2020.

We completed the year with no significant environmental incidents. We recognise the continued efforts of our people and their strong engagement and aim for continual improvement in this key area. We also continued to progress our digital capability through our digital capability centre (DCC), building on operational efficiency and business improvement imperatives.

With the COVID-19 pandemic continuing to have a far-reaching impact on all industry, our people, our processes and our collaboration with our business partners have enabled us to continue operating our business efficiently with minimal disruption during 2021. Despite easing government restrictions, our people remain vigilant with respect to identified risks and also supportive of each other. Whilst the pandemic has continued to present challenges for business and governments, it has also fortified the essential role the coal industry presently plays in sustaining our economy.

On behalf of the Centennial Board and our owners Banpu, I would like to express my gratitude and appreciation to all our people for their dedication, innovation and passion throughout another challenging year and extend this to all stakeholders.



Craig Gillard
Managing Director and CEO



Sustainability Highlights 2021



9.7 Mt
coal produced



\$405 m
spent with local suppliers



345,000 t
of CO₂ abated



1,565
people employed



120 hrs
employee hours volunteered



82%
of total water usage is mine water



23,906 hrs
of training provided to employees



22%
reduction in Total Recordable Injury Frequency Rate (TRIFR) from 2020



8 MW
Mandalong gas power station substantially completed



Who we are

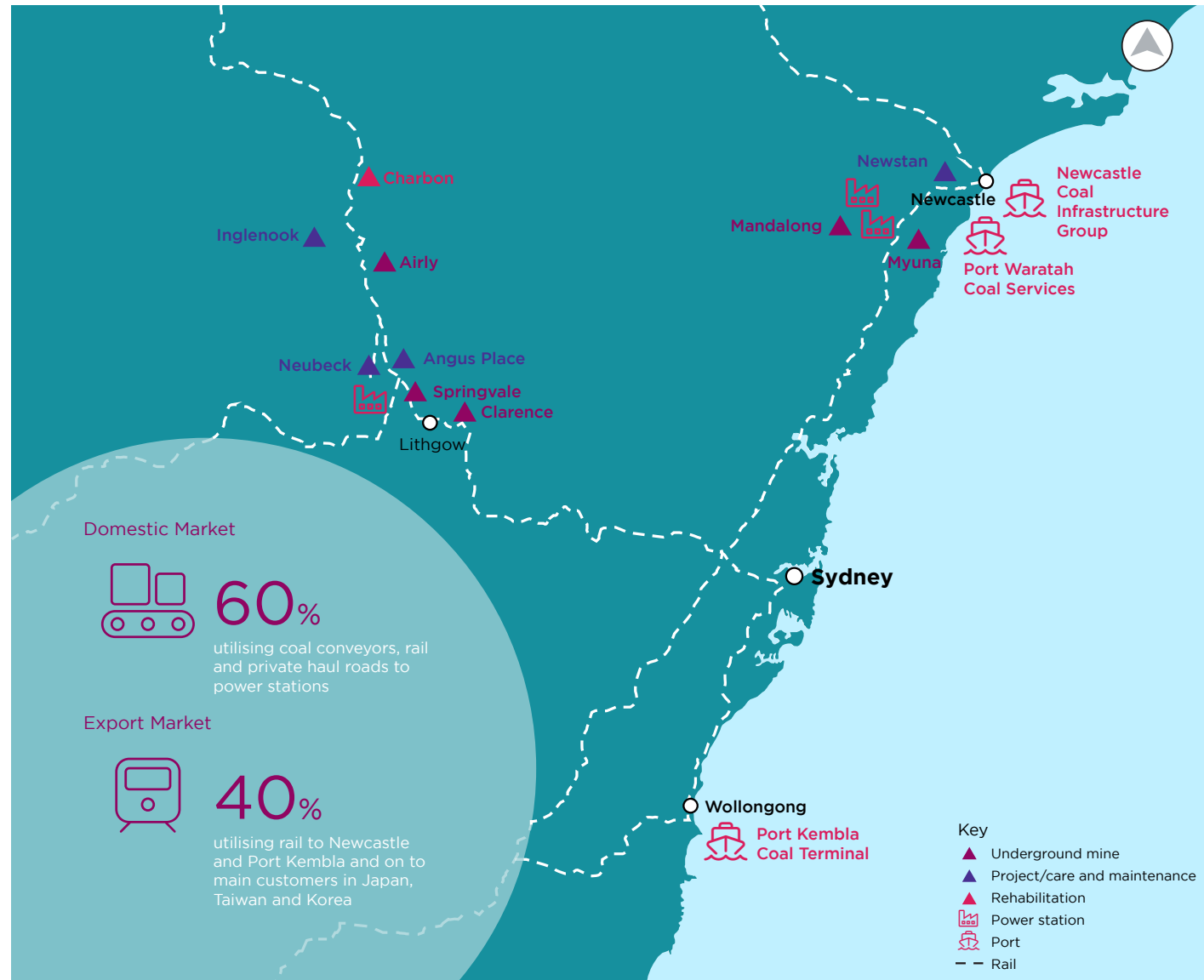
We are an energy company providing around 30% of NSW's coal-fired electricity.

Centennial is an energy company based in NSW, Australia. Our vision is to be the Australian energy company at the heart of innovation, technology and sustainability. With the production of high-quality coal, we support local and regional communities through employment, procurement and community support. Centennial is a wholly owned subsidiary of Banpu Public Company Limited (Banpu), a leading integrated energy solutions company operating in 10 countries. By 2025, Banpu's aim is to have more than 50% of its portfolio from renewable energy. For more information on Banpu's activities, visit www.banpu.co.th

Centennial has five operating coal mines supplying essential domestic and export energy coal markets. Our exports are shipped to long-term customers in Japan, Taiwan and Korea. As part of the company's decarbonisation strategy, we have operated a 2 MW solar facility at Airly in our western region, along with another small installation in the Lake Macquarie region since 2020. Future solar installations are being evaluated to assist with the diversification and decarbonisation of our operations and to contribute to Banpu's vision as we move into the future.

Mirroring our parent company, our business is evolving from one based solely on coal, to a diversified energy company with three pillars: Energy Resources, Energy Generation and Energy Technology.

We are here as an energy provider to keep the lights on in NSW and provide required energy for overseas markets. In doing so we never lose sight of the fact that our operations can have impacts from both people and planet perspectives, therefore we must meet legislative requirements as a minimum, manage risk and recognise and work with our stakeholders for common benefit.



Our sustainability approach

Our Vision

The Australian energy company at the heart of innovation, technology and sustainability

Our Strategy

Bring people along on the journey and build a beyond compliance mindset

Our Values



We will not compromise on safety



We will act ethically and with integrity



We strive for synergy through collaboration



We strive to improve our performance and encourage innovation

We use Environmental Social Governance (ESG) criteria to assess the sustainability of Centennial. Specific metrics in relation to governance and risk, human resources and human rights, environment, health and safety and community, spanning our ESG criteria, indicate our performance. This is our sustainability strategy.

Governance



A sound system of corporate governance led by the Board of Directors, incorporating risk management and innovation that responds to dynamic business needs and societal expectations is key for our business. ESG strategies are integrated into our operations.

Environment



We are committed to responsible environmental management integrated into business objectives and contributing to improved environmental stewardship. We acknowledge that decarbonisation contributing to the reduction of greenhouse gas emissions remains a key issue and objective for our industry and we are committed to a low carbon future, supporting relevant Sustainable Development Goals.

Social



We continually seek to improve our processes and demonstrate leadership with respect to the health and safety of our people as they are our highest priority. We strive to engage our communities as a key stakeholder of our operations to gain and maintain trust.

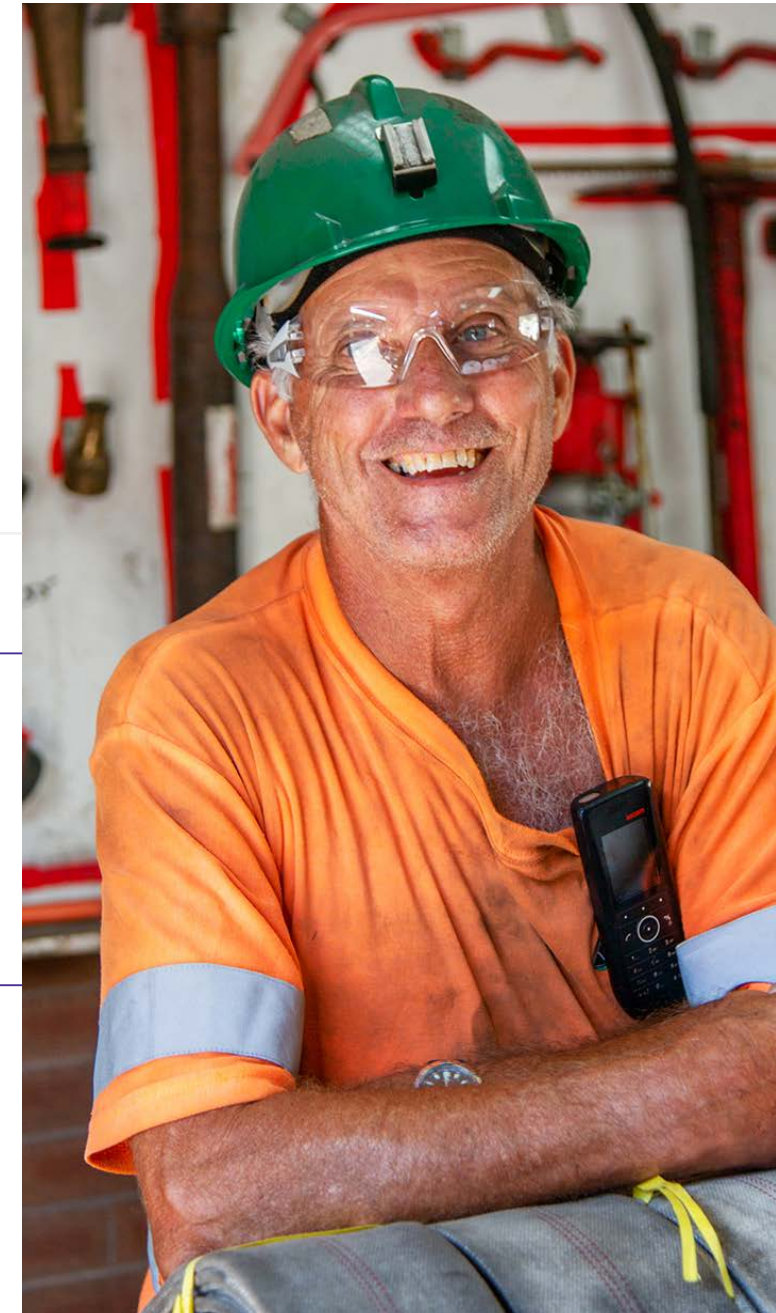
Material Issues

In 2021, our parent company Banpu, with input from the Centennial Sustainability Steering Committee, conducted a materiality assessment to define key ESG issues, starting from the revision of previous material topics, and overlaying global trends and peer industry material topics.

The assessment was aligned with the AccountAbility Principles Standard (AA1000APS) and informed by local environmental, social and governance aspects. The result of this matrix was a revised list of material topics for our energy business.



	Material Topic	UN Sustainable Development Goals
 Governance	Sustainability governance	
	GHG emissions	  
 Environment	Water	
	Environmental compliance	 
 Social	Occupational Health & Safety	
	Corporate culture	
	Community engagement	



Stakeholder Engagement

Centennial places importance on inputs from all stakeholders

We regularly engage with various stakeholder groups through differing methods to best meet their needs, seeking to educate our stakeholders and ourselves and improve our dialogue and trust.

We identify and categorise stakeholders by interest, influence and impact, aiming for inclusivity.

Stakeholder Group	Key Interests and Concerns	How we engage													
		Toolbox talks	Meetings/Briefings/Updates/Reviews	Newsletters	Intranet/Centennial website	Personal visits	Community Consultative Committee	Community Information Sessions	Dedicated contact email and number/Response to customer queries	Briefings/meetings with Mayor, Councillors and Council Officers	Separate process as per regulatory guidelines	Site inspections	Issues monitoring	Targeted media releases	Environment, Social and Governance information
Employees	Health and safety, job security, working conditions, benefits and personal development opportunities, business model.	●	●	●	●										
Adjacent residences	Potential environmental and social impacts from exploration and operations, community engagement.			●		●	●	●	●						
Nearby town centres	Potential environmental and social impacts from exploration and operations, community engagement.				●		●	●							
Local Government	Environmental and social performance and compliance, employment and economic impact.			●	●					●					
Government representatives	Environmental, social and fiscal performance and compliance, employment and economic impacts.		●	●	●										
State regulatory agencies	Operational, environmental and social performance and compliance.		●		●										
Aboriginal groups/ traditional owners	Potential environmental and social impacts associated with operations, cultural and heritage impacts.		●	●	●						●	●			
Centennial Corporate	Health and safety of employees, environmental, social and governance performance and financial stability.		●		●										
Suppliers/contractors	New business opportunities, maintaining and servicing contracts.		●												
Customers	Product quality, cost and reliability of supply.		●		●				●						
Unions	Employment, health and safety and rights of members.		●	●	●										
Training provider	Recruitment, developing and maintaining partnerships.		●		●										
Financial institutions	Financial returns, management of financial and non-financial risks, corporate governance.		●												●
Non-government organisations (NGOs)	Environmental and social performance of both current operations and proposed operations, efficient use of resources.		●	●	●								●		
Neighbouring industry	Business alliance.			●	●										
Media	Environmental, health and safety and social performance of both current and proposed operations.		●		●									●	

Creating Value

We are guided by our core purpose of championing innovation, technology and sustainability. We build coal assets and create value that is distributed to our people, governments, industry and communities.

We partner with and support local organisations, activities and events.

Our contribution to local and regional economies is significant, sustaining jobs and providing royalties that help build hospitals, schools and roads.





Governance

Centennial believes that holistic corporate decision making, or governance, is integral for any business, helping to drive positive sustainable outcomes.





Sustainability Governance

Responsibility for our sustainability strategy ultimately rests with the Board of Directors. The Board receives support and strategic advice from the Audit and Risk, the Health, Safety, Environment and Community (HSEC) and Remuneration Committees. The strategic direction set by the Board is implemented by the executive management team.

The Board comprises experienced Directors with the relevant qualifications, experience, knowledge, skills and expertise.

Board-endorsed policies cover all key business areas, including health and safety, environment and community, climate change, human resources and procurement. These policies set the requirements for each area of sustainability and lead to the delivery of management systems comprising standards, plans and procedures.

Executive management meets weekly to ensure priority areas of the business (including Health, Safety, Environment, Risk and Compliance) receive regular oversight. Environmental and social performance is monitored by the HSEC Committee, Executive Management and also externally by each mine site's Community Consultative Committee (CCC).

Mine sites are required to make a range of planning and environmental performance reports publicly available on Centennial's website. Our sustainability steering committee meets regularly, coordinating ESG strategy and priorities across Centennial. ESG targets are reported to the HSEC Committee and the Board quarterly.



Proportion of business units with risk management plan (for high priority ESG-related risks)

2021	Target 2021	Target 2025
100%	100%	100%

Proportion of contracts that include ESG Clause

2021	Target 2021	Target 2025
100%	>20%	100%

Proportion of spending on local suppliers

2021	Target 2021	Target 2025
58%	>50%	>50%

All of our high priority ESG-related risks have a risk management plan and all our contracts contain an ESG clause.

We have exceeded our target for proportion of spending with local suppliers, at 58%.



The ESG Summit, themed 'ESG - from Strategy to Action' was held virtually in October 2021 welcoming 188 participants from the Banpu group, including Australia. The common goal was to strengthen partnerships, share key ESG issues and discuss long-term company ESG targets.

A key note speaker from Deloitte shared insight into ESG global trends and leading practice.



Challenge and Opportunity

To be sustainable into the future we assess the challenges and opportunities of our energy resources business in a transitioning domestic and global energy market, whilst maximising opportunities for energy generation through renewable sources and assets.

Challenge and Opportunity	Centennial's Strategy
<ul style="list-style-type: none"> Volatility of export coal prices 	<ul style="list-style-type: none"> Maintain a balanced sales portfolio between domestic and export markets
<ul style="list-style-type: none"> Demand for high-quality Australian black coal remains strong throughout Asia 	<ul style="list-style-type: none"> Being a trusted and reliable supplier of energy
<ul style="list-style-type: none"> Reduced demand for thermal coal as renewable alternatives come on-line and coal fired power stations move towards retirement 	<ul style="list-style-type: none"> Decarbonisation of operations through methane gas management
<ul style="list-style-type: none"> Australian Government is supportive of low emission technology 	<ul style="list-style-type: none"> Decarbonisation of operations through repurposing assets for renewable power generation
<ul style="list-style-type: none"> Clear strategy of NSW and Australian Government to achieve net zero greenhouse gas emissions by 2050 in line with the Paris Agreement 	<ul style="list-style-type: none"> Diversification of assets into other minerals Waste gas to energy system (Mandalong Mine Power Station) due to commence system operation in 2022
<ul style="list-style-type: none"> The NSW Electricity Infrastructure Roadmap provides a framework to deliver a modern electricity system including the development of renewable energy zones 	<ul style="list-style-type: none"> Energy management (efficiency, demand response)
<ul style="list-style-type: none"> The National Electricity Market (NEM) is being modernised and reformed to meet the changing energy market (changes in electricity generation, emerging technologies such as batteries and shifting consumer preferences) 	<ul style="list-style-type: none"> Introduction and use of advanced analytics platforms and digital technology
<ul style="list-style-type: none"> The International Energy Agency (IEA) global analysis of energy use and forward-looking scenarios for a transition to a new energy economy 	<ul style="list-style-type: none"> Contribute to research, development and application of low emissions technology Environmental compliance is high priority and is consequently linked to performance payments

Responsible Supply Chain

We believe in ethical business practices and transparency in all we do and are committed to improving our processes with respect to responsible supply chain practices and human rights.

Centennial has a role to play in addressing the risk of modern slavery occurring within our company and our supply chain, taking practical steps to address this universal issue within our sphere of influence. Our responsibility with respect to human rights is underpinned by our employee Code of Conduct and Ethics and our Supplier Code of Conduct.

Activities undertaken are outlined in our second Modern Slavery Statement, in accordance with the *Modern Slavery Act 2018* (Cth). The statement is available on the **Modern Slavery Register**.



Stability during COVID-19

Whilst the COVID-19 pandemic has continued to present challenges for all businesses and governments, key prevention and response mechanisms and employee engagement have continued, allowing our operations to efficiently supply coal to our markets with minimal disruption.

The rapid spread of COVID-19 during its onset and the containment measures taken by governments have had consequences for supply markets. Centennial, due to its business model mix of domestic and export products, has a hedge against this volatility, assisting our ability to maintain business continuity. The continued supply of our coal to customer nations in the Asia region will assist in their continued economic recoveries.

Pandemic response

The establishment of the executive Incident Management Team (IMT) has continued to provide oversight and guidance throughout Centennial's response to the pandemic. The health and safety of our workforce remains our priority. Initial concerns regarding supply chain stability have been monitored and to date have been effectively managed.

Centennial has implemented NSW Government Public Health Order restrictions across the workforce to reduce health impacts to our employees and to maintain business continuity and stability.

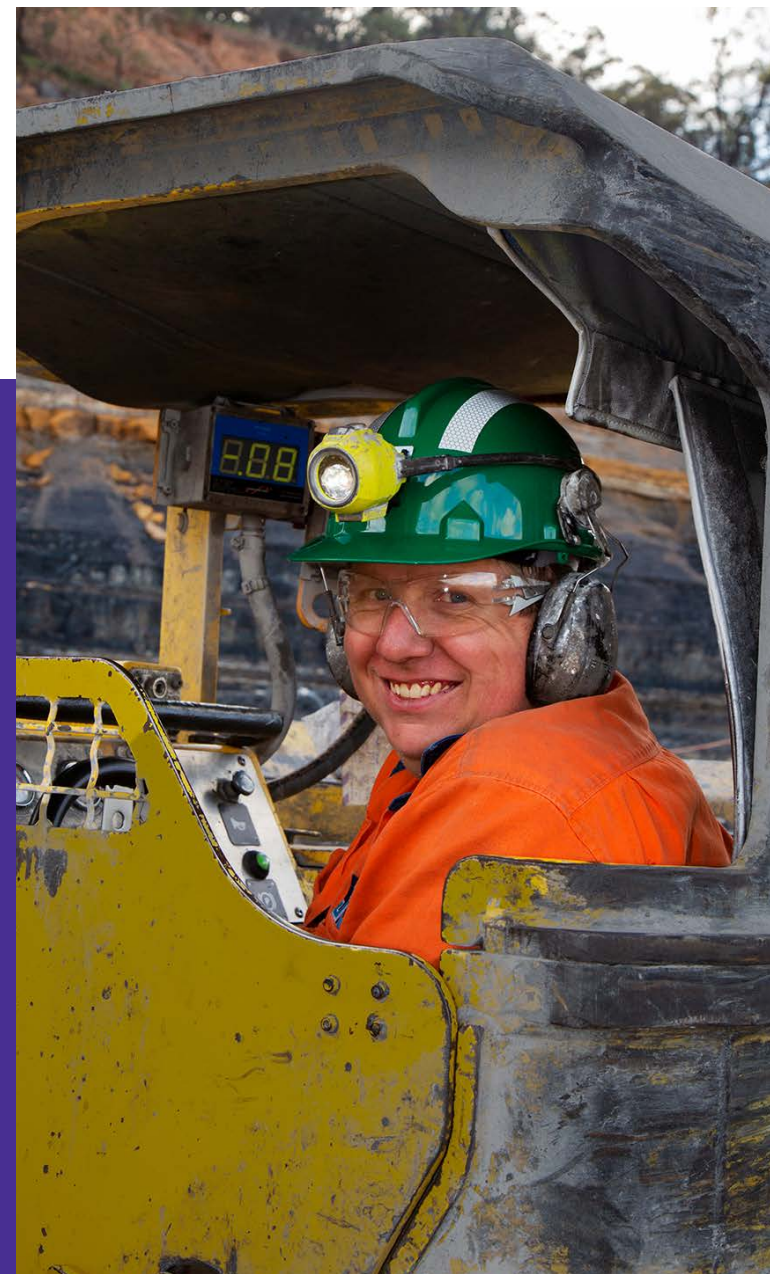
As greater than 60% of our workforce are involved in direct operations, the working from home requirements of the Public Health Order were not applicable to many employees. To safeguard the health of our employees, a range of tightened site access controls were introduced, inter-site travel was heavily restricted and contractor site presence reduced to an absolute minimum.

Other health controls introduced included temperature and health checks on site entry, shift segregation and mandatory respiratory protection. Support staff implemented work from home arrangements and while impacts were felt, these were kept to a minimum. Challenges were identified and met through the adoption of established risk control and health measures.

Centennial openly supported the roll-out of the Australian Government Vaccination Program. High vaccination rates of our employees allowed Centennial to reduce stringent controls in line with Government health advice during the latter half of 2021.

Since December 2021, the emergence of the Omicron strain of COVID-19 posed new challenges for our business. A significant increase in community-based infections and the requirement for close contact isolation impacted Centennial's workforce during December 2021 and into 2022. While Centennial was able to maintain operational continuity during this time, increased absenteeism impacted production rates across the Group. A marked reduction in the amount of COVID-related absenteeism was observed since the retraction of the 7-day isolation requirements for close contacts.

Despite easing government restrictions, our people remain vigilant with respect to identified risks and supportive of each other. We will continue to monitor impacts to our business and take appropriate action as required.





Environment



We are committed to responsible environmental management contributing to improved environmental stewardship. Climate change remains our highest environmental priority, with decarbonisation of our operations a key driver for the sustainability of our business.



GHG Emissions

Climate change remains the most significant issue facing our industry and arguably one of the most pressing societal issues globally.

We acknowledge that the production and consumption of coal contributes to climate change through the generation of greenhouse gas emissions, and we aim to navigate this reality, minimising our contribution through avoidance, mitigation, adaption and being part of a low carbon society.

GHG emissions reduction intensity*

2021	Target 2021	Target 2025
+23%	-2%	-7%

GHG emissions intensity (CO₂-e/tonne saleable coal)*

2021	Target 2021	Target 2025
0.213	≤0.193	-

* against business as usual (BAU)

We have GHG targets for the period 2021-25 as part of our Sustainability strategy.

In 2021 GHG emissions intensity increased 23% at 0.213 CO₂-e/saleable tonne of coal, both above target, despite a decrease in total emissions from the previous year. This is a result of decreased production during the year across operations and a decrease in the amount of gas combusted. Ongoing decarbonisation investigations form part of our strategy as we aim for a downward trajectory in emissions intensity.

Centennial will continue to appraise and deploy greenhouse gas abatement opportunities, with particular focus on methane gas management from operations and utilisation of land assets for renewable power generation. Focus in these areas will assist us to improve our emissions intensity.

Our management approach is to seek opportunities to decarbonise our operations through avoidance, mitigation, adaptation and being part of a low carbon society, contributing to a low carbon future. We support initiatives and research and development, investing in low emissions technology abatement programs through Low Emissions Technology Australia (LETA), and the Australian Government Department of Industry, Innovation and Science Coal Mining Abatement Technology Support (CMATS) program.

Climate Governance

The taskforce for Climate-Related Financial Disclosures (TCFD) provides a voluntary framework for disclosure of climate-related financial risks. It recommends companies disclose governance and risk-management elements where climate-related risks and opportunities are assessed as material and where there are implications for their strategy, as well as metrics and targets. Banpu and thereby Centennial, supports the TCFD recommendations and during the year prepared for future reporting under the framework in 2023. An internal TCFD working group was established, comprising key internal stakeholders.

Mandalong 8 MW gas power station

An 8 MW gas power station was substantially completed in 2021, due to commence operation in 2022. The facility will utilise methane that is extracted from the coal seam to generate energy. In turn this will reduce our greenhouse gas emissions, through a reduced requirement for grid electricity, while adding to our decarbonisation momentum.

Climate-related risks and opportunities

Identifying and assessing climate-related risks is embedded in our enterprise-wide risk management framework, with risks prioritised according to magnitude and likelihood. Our most significant risks are reviewed annually, together with emerging issues.

In 2021, Centennial, together with Banpu assessed climate risks and opportunities using the TCFD voluntary framework, separating climate risks into two categories, transition and physical. A scenario analysis for the financial impact on business as usual was conducted, which will inform strategy and future target setting.

Risk type	Risk opportunity
Transition Risk	<ul style="list-style-type: none"> Regulatory changes Carbon technology investment Change of energy consumption behaviour Ban on fossil fuels
Physical Risk	<ul style="list-style-type: none"> Change in precipitation patterns Change in frequency and severity of natural disasters



Challenges and key progress

As an energy producer we are committed to reducing our climate-related greenhouse gas emissions and emissions intensity, focusing on key areas where we can contribute to a downward emissions trajectory.

Focus area	Measure	Key Progress
Avoidance	<ul style="list-style-type: none"> Solar renewable energy for onsite use (or grid use) Point source control of ventilation air methane (VAM) 	<ul style="list-style-type: none"> A 2 MW solar facility at Airly and a small solar installation at Awaba have been operational since 2020. Further installations are under investigation. The Digital Capability Centre (DCC) supports all sites to implement energy management initiatives to assist with decarbonisation.
Mitigation	Reduce emissions by pre-mining drainage, capture and utilisation of methane waste gas for energy production	Four 2 MW gas engines have been constructed at Mandalong, due to commence operation in 2022. These gas engines will utilise waste gas to generate energy.
Adaption	Monitoring risk, opportunities and implications of climate change	We assessed the risks from climate change in 2020. Outcomes confirmed that decarbonising our operations is the highest moderate to long-term risk to our business, and this was reconfirmed in 2021.
Being part of a low carbon society	<ul style="list-style-type: none"> Seeking to increase renewable or low carbon energy Decarbonisation of operations through further gas (methane) management Supporting initiatives, research and development (R&D) of low greenhouse gas emission technologies 	<ul style="list-style-type: none"> A 2 MW solar facility at Airly and a small solar installation at Awaba have been operational since 2020. Further installations are under investigation. Commonwealth and State funding secured to investigate the feasibility of utilising underground mine voids for pumped hydro energy generation in 2021. Current indications are that the system in its current arrangement is not viable.
Participation in a climate change community	Being a member of voluntary climate change reporting frameworks	Preparing to disclose information in accordance with the TCFD recommendations as part of Banpu.





Emissions Performance

Reducing greenhouse gas emissions is a critical commitment of our business and remains one of our highest priorities given worldwide social concerns around global warming. Our main source of direct, or Scope 1, greenhouse gas emissions is low concentration methane that is exhausted through our underground mine ventilation fans. Other sources of emissions are direct from fuel consumption and indirect, or Scope 2 emissions, from electricity use.

We report our emissions and energy production and consumption to the Australian Government's Clean Energy Regulator (CER), annually on an Australian financial year basis, under the requirements of the National Greenhouse and Energy Reporting Scheme (NGER). Annual reporting is available on the CER website.

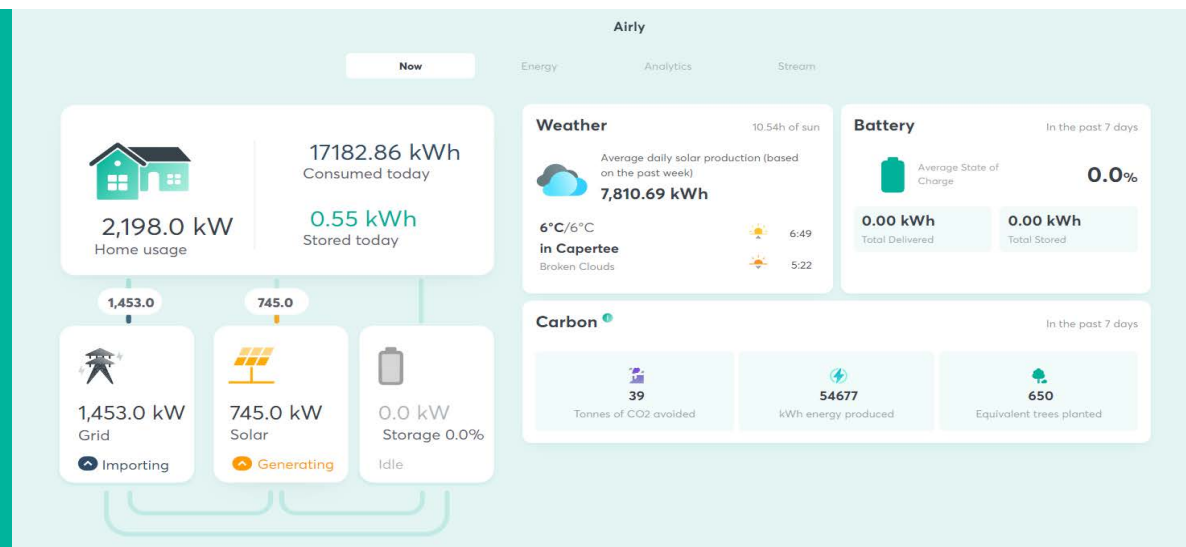
For the 2021 period our Scope 1 and Scope 2 emissions decreased by 4% on the previous year. This was related to lower production across our operations, resulting in lower fugitive emissions. The amount of gas abated more than halved during the year (345,000 tonnes CO₂-e in 2021 compared to 765,000 in 2020) as a result of the decreased volume of methane gas combusted.

	FY17	FY18	FY19	FY20	FY21
Scope 1 and 2 greenhouse gas emissions (Tonnes of CO ₂ -e)	2,751,761	3,011,562	2,217,751	2,057,839	1,960,563
Emissions intensity (CO ₂ -e/saleable t)	0.19	0.23	0.22	0.17	0.21
ROM (million tonnes)	14.7	13.8	10.7	12.7	9.7
Saleable (million tonnes)	14.2	13.3	10.0	12.2	9.5
Energy use Total¹ (MJ)	1,343	3,540	3,124	3,079	2,485
Energy intensity (GJ/t of saleable coal)	0.09	0.26	0.29	0.25	0.26
Tonnes of CO₂-e abated (GJ/t of saleable coal)	210,000	700,000	775,000	765,000	345,000

¹ Energy use from waste gas flared and vented from gas drainage plant reported from 2018 onwards

Sustainable energy generation digital monitoring

The DCC continued its collaboration with a local start-up company, **SwitchDin**, to amplify performance monitoring of key input and output data from our solar generators at Airly and Awaba and the impending commencement of the Mandalong gas power station. The dashboard and its analytics allows us to understand our generation, greenhouse gas emissions avoided and energy utilisation, leading us to further optimise our generation and plan energy storage capacities at our sites.





Water

Water is a precious natural shared resource with high environmental, social and economic value to a range of stakeholders, both locally and globally. We are committed to using and managing water responsibly, and collaborating with key stakeholders, ensuring long-term benefits for our communities.

Water consumption intensity (m³/tonne saleable coal)

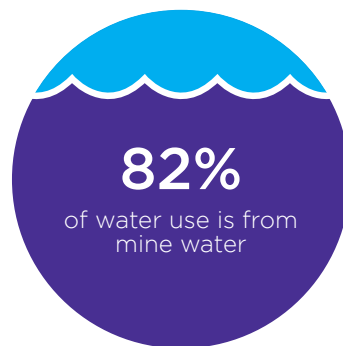
2021	Target 2021
0.290	≤0.089

This year we did not achieve our water consumption intensity target. In 2021 Centennial worked on improving data collection systems and reviewing water balances for each site. Enhanced data systems will assist water management in future reporting periods. Alongside climate change, water scarcity is another of the defining environmental issues globally this century. We aim to reduce our water footprint and improve our water consumption intensity.

Water use and management

Over recent years there has been a shift in thinking of water as a resource managed at a mine-site level, to employing a catchment-based approach to water management, actively engaging and considering the needs and priorities of other users. Water has two main roles in our business; we import potable water from town supplies and we export water from our mines to either the environment (under strict conditions), or to service our coal handling needs or provide as an input to bolster town water supply systems. There is an additional water use at our Airly mine site, where town water is not available and that site must be self sufficient in its water management system.

Where possible and where geological conditions allow, we use in-seam mine water to service our operational needs, reducing the dependence on town water imports. In 2021 82 % of total water use was from minewater (groundwater). We aim to minimise water use and maximise recycling where we can. The majority of water recycling is through our coal handling and preparation plants, where mine water is used for coal washing.



Limited water resources and security of water supply for our operations is currently not a material issue for our business, with the exception of Airly. However, with the increased potential for climate change induced drought in some areas, ongoing water security will be an issue for business continuity into the future. As such, Centennial conducted a water risk assessment, according to the Aqueduct Water Risk Atlas of World Resources Institute, to determine whether operational and potential project sites are in future predicted water-stressed areas. The outcomes of this assessment determined three operations are located in future water-stressed areas, increasing the materiality of this environmental issue for those sites into the future.

Water is discharged through licenced discharge points. Some of these are located near sensitive natural environments and areas close to population centres. Discharged water is monitored, managed appropriately and removed from sites within regulatory limits. Centennial manages water through management plans. An annual high-level risk assessment is conducted at each site and outcomes prioritised into action plans.

2021 Water Inputs and Outputs

Water withdrawal (ML)

Surface water	4,524
Groundwater ¹	23,124
Third-party water ²	577

Water discharge (ML)

Surface water	14,601
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¹ Mine water is classed as groundwater

² Third party water is municipal water

Water sharing

The mine site handling of water presents an opportunity to better use and share this resource for common benefit.

Adequate town water supply is a material risk for some of the western communities in which we operate. Clarence Colliery, situated near Lithgow in western NSW, has entered into a memorandum of understanding with Lithgow City Council to transfer some 25 megalitres of water per day to Farmer's Creek dam catchment, essentially drought-proofing Lithgow.

This beneficial reuse of mine water will provide water security for the region. Discussions also continued with third parties to distribute water to western councils in Orange and Bathurst to reduce water scarcity in these regions for community benefit.



Environmental Compliance

Centennial operates within strict regulatory environmental parameters so compliance with licences and approvals is always a focus for our business. Compliance is a fundamental foundation for our sustainability. We are committed to eliminating material environmental events and strive to avoid fines, penalties and prosecution.

Number of significant environmental incidents

2021	Target 2021
0	0

Number of significant environmental fines from non-compliance

2021	Target 2021
0	0

All our sites are subject to Environment Protection Licences issued by the Environment Protection Authority (EPA) and conditions of consent from the Department of Planning and Environment (DPE).

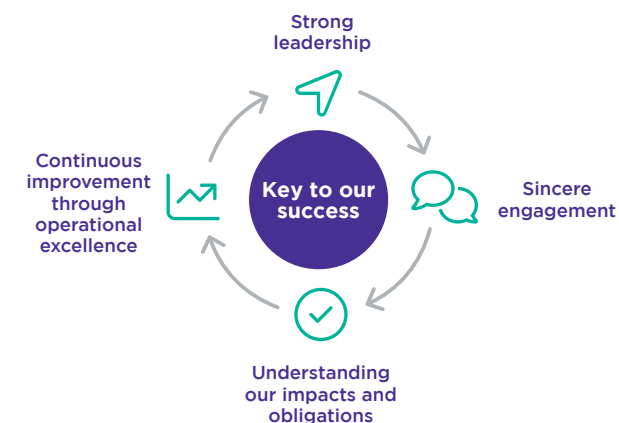
Although there were no significant environmental incidents during 2021, we still acknowledge the need for continual improvement in environmental management. Compliance with our internal and external requirements is checked through periodic audits. This allows us to identify areas and set targets for even greater improvement in environmental compliance outcomes from our activities.





Minimising Environmental Impacts

We recognise that our operations have the potential to impact on the environment and the communities in which we operate and that we are accountable to our stakeholders. We are committed to responsible environmental management in all stages of mining, from project design through to final rehabilitation. We work to firstly avoid impacts where we can and minimise and offset any remaining impacts.



Our aim is to improve environmental performance through a clear understanding of our obligations, minimising our impacts and identifying areas for improvement, whilst maintaining community relationships.

Our approach to environmental management is set out in our Environment and Community Policy, supported by an environmental management system and standards. We have identified metrics to track progress and performance as part of our ESG targets.

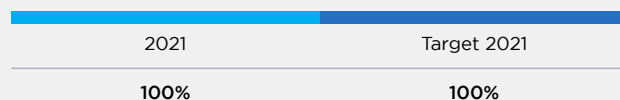
Environmental approvals, assessments, management plans, reporting compliance and audits for our operations are available on our website.



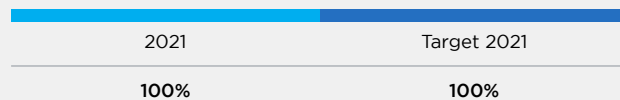
Biodiversity and Land Use

Centennial has significant landholdings, the majority of which are not impacted by our mining operations. Much of this land is of high ecological value and Centennial carries out management for the maintenance or improvement of ecological value, and, where feasible, seeks beneficial co-existence of agricultural grazing activities with biodiversity conservation.

Proportion of business units assessed for potential biodiversity impact



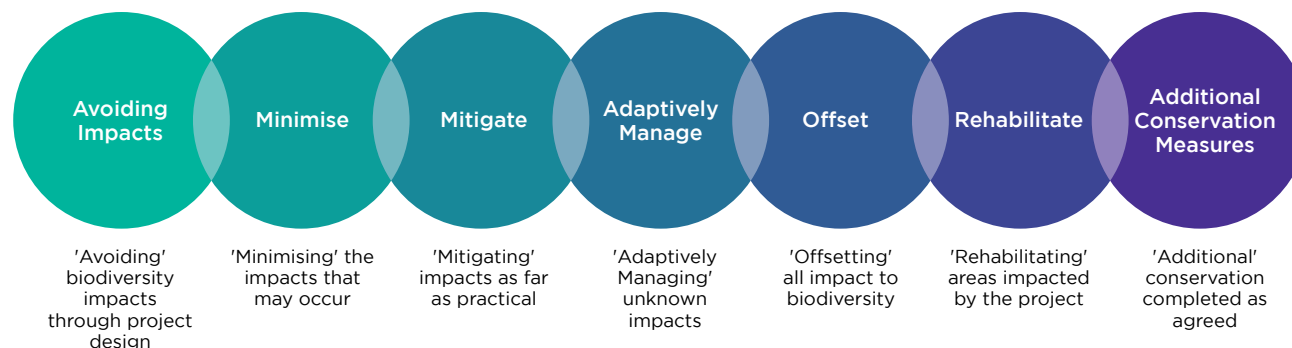
Proportion of business units assessed for potential biodiversity value



All of the land owned by our business units has been assessed for potential biodiversity impact and biodiversity value.

We follow a holistic approach to biodiversity, overseeing all actual and potential negative and positive impacts under Regional Biodiversity Management Plans. These plans meet the relevant regulatory requirement for each operation. A site-specific plan identifies baseline ecological values, land management actions to improve biodiversity and an ecological monitoring program.

As part of a project approval process, Centennial identifies, assesses and enters into biodiversity offset agreements for the protection of significant flora, fauna and ecological values on land it owns.



Before mining begins, Centennial works with regulators to determine and develop a rehabilitation goal. This rehabilitation goal subsequently becomes part of the Rehabilitation Management Plan (RMP). A rehabilitation plan has objectives that are agreed upon by the community and government and lays out the post-mining use of the land, once this temporary land use has ceased. Centennial aims for progressive rehabilitation of disturbed areas. We aim to practice responsible land stewardship and incrementally undertake progressive rehabilitation as areas become available, focused on completion criteria.

Land Use 2021

	Hectares (ha)
Total land owned	7,627
Total area disturbed at year end	1,328
Area rehabilitated during the year	7
Total area rehabilitated at year end	462
Total area disturbed and not yet rehabilitated	866



In 2021, **915 hectares** were managed for conservation

During the year we progressed rehabilitation and also refined all our land disturbance boundaries. Refining these boundaries has resulted in a new baseline of disturbed and rehabilitated land, forming the basis of rehabilitation management plans for our sites, formerly known as Mining Operation Plans (MOPs).



Waste

Our constant challenge is to reduce the quantity of our waste streams, improving the amount of waste recycled and reducing hazardous waste generated.

Hazardous waste directed to disposal intensity (kg/saleable tonne)	
2021	Target 2021
0.015	≤0.003
Non-hazardous waste directed to disposal intensity (kg/saleable tonne)	
2021	Target 2021
0.292	≤0.215
Number of significant tailings spills	
2021	Target 2021
0	0

In 2021, waste directed to disposal intensities was 0.015 and 0.292 kg/saleable tonne for hazardous and non-hazardous waste respectively, exceeding targets. There were no tailings incidents. During the year we focussed on improved data capture and monitoring systems, providing a future opportunity for improvement whereby we aim to minimise hazardous and non-hazardous waste disposal.

Our management approach is to maximise the value of the resources we use and to have one total waste management provider that also sorts waste streams for recovery and recycling.

We generate recyclable waste, such as fuel and oil, scrap metal and non-recyclable general waste, maintaining a register of waste collected by licenced contractors for transport to licenced facilities.

A verifiable set of data and targets are important in improving our waste management. In 2021 our waste data was assured by a third party, providing opportunity for improved data capture and monitoring systems.

Tailings

More commonly called 'rejects' within Centennial, we have both coarse and fine rejects that are emplaced into either walls (coarse) or dams (fines) in Reject Emplacement Areas (REA).

Over the past few years, Centennial has implemented an REA Oversight Committee that has carriage of an REA Standard and the management of an audit process. All REAs are designed by independent experts and are periodically inspected, with reporting to the CEO through the REA Oversight Committee. The REA standard takes a total life-cycle approach for the design and management of each facility.

Where new facilities may be required, our Project Evaluation and Investment Standard is applied to consider site selection, design and construction.

Each of our sites conducts an annual site risk assessment, in line with a risk management standard. Higher risk dams are also subject to regular internal and external design, construction and operating audits, as well as facility specific risk assessments.

We have dedicated resources to review our rehabilitation and mine closure requirements, developing strategy and policy for rehabilitation and reviewing our liabilities and opportunities to reduce them.

Mine Subsidence

We meticulously plan our operations to avoid or minimise subsidence impacts from our underground operations to maintain ecological and social values, operating within strict regulatory parameters.

Progress of subsidence management activities against plan	
2021	Target 2021
95%	≥90%

We achieved 95% of subsidence management activities during the year, exceeding the target of 90%. We aim for continual improvement in this area.

We undertake conservative mine design to achieve subsidence performance criteria and apply adaptive management with regards to mine design to limit subsidence.

We maintain a diligent monitoring network at all of our operations, in accordance with our management plans, to indicate areas of potential risk of mine subsidence. Additional subsidence monitoring, where required, is undertaken to provide an appropriate early warning for potential exceedance of subsidence thresholds. Additional monitoring will be undertaken at Airly mine, due to increased subsidence and some promontory surface cracking evident.



Social



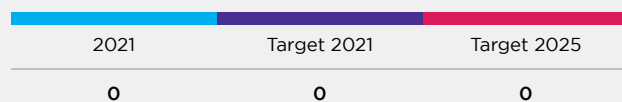
Keeping our people safe, having a positive workplace corporate culture and establishing and maintaining ongoing engagement in our communities are fundamental to our sustainability and our success.



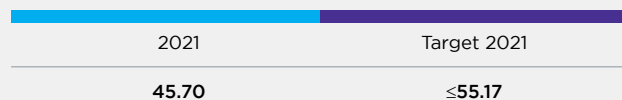
Health and Safety

We are committed to the health and safety of our people as our number one priority and strive for a workplace where we always take care and responsibility for our own safety and the safety of our workmates. We are reminded daily to think safe, work safe and arrive home safely to our families.

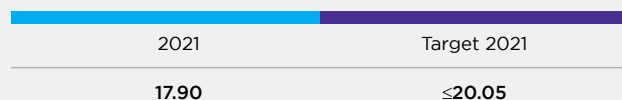
Number of fatalities



Total Recordable Injury Frequency Rate - employees (person per million hours worked)



Total Recordable Injury Frequency Rate - contractors (person per million hours worked)



In 2021 we achieved our Total Recordable Injury Frequency Rate (TRIFR) targets for both employees and contractors (45.70 and 17.90 person/million hours worked respectively). There were no fatalities.



LTIFR has decreased by 48%



TRIFR has decreased by 22%

We are uncompromising in our commitment to health and safety and zero harm on our people. This requires the commitment of every person in every part of our organisation, every day. To achieve our vision, our management approach is to continually seek to identify opportunities arising through engagement, innovation, personal development and risk reduction activities.

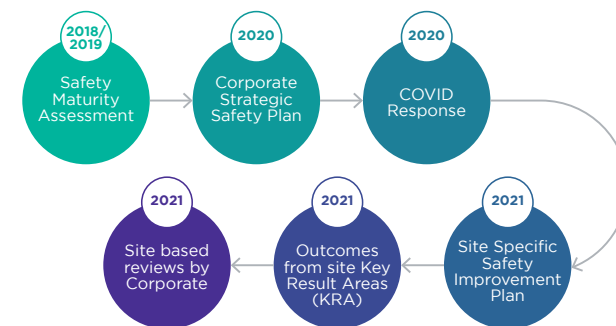
Our safety improvement programs are developed in the short to medium term based on current industry practice, research, performance evaluation and incident learnings. We require individual accountability, expect all employees in the business to adhere to our operational standards and actively participate in and support the advancement of our health and safety practices and safety culture. Safety is the responsibility of all employees. From executives to the workforce, we all share a responsibility to ourselves, our fellow workers, our families and communities. We have well developed, fully integrated systems to support our people in their daily work.



LTIFR (Lost Time Injury Frequency Rate) and TRIFR for last 5 years (employees and contractors):

	FY17	FY18	FY19	FY20	FY21
TRIFR	54.18	50.9	49.18	55.43	44.79
LTIFR	10.54	6.92	8.24	9.42	5.20

Our safety performance is improving, driven by the Strategic Safety Improvement Plan (SSIP). The SSIP has resulted in site-specific safety improvement actions and rigorous reviews by Corporate. The outcomes of these reviews have been implemented by our CEO. Key examples include reviewing whether safety functions are effectively integrated into operational and management roles, identification of the need for a persons at risk program and audits of strategic safety plans.



The mining environment is inherently hazardous, and it is incumbent on us to provide a safe place of work and safe systems of work. Whilst workplace health and safety (WHS) performance indicators have improved significantly during the past decade, there remains the need to redefine what we do from a WHS perspective and how we do it to continue to improve performance and safety culture across our business. We will continue to amplify our efforts to strengthen our performance and seek zero harm on our people.



Corporate Culture

Our people are at the heart of both our achievements and challenges and are critical to our sustainability and success. We are committed to providing an inclusive workplace where our people feel valued and supported.

Level of alignment between employee behaviour and the corporate culture "Banpu Heart"

2021	Target 2021	Target 2025
72%	≥70%	≥80%

High critical positions with succession plan implemented

2021	Target 2021
100%	100%

Individual employee development plans implemented

2021	Target 2021
100%	100%

We achieved a Banpu Heart survey score of 72%, exceeding our target of ≥70%. We also met our objective of 100% of high critical positions with succession plan and individual employee development plans implemented.

Our management approach incorporates formal and informal processes to ensure we directly engage with our people in an open, transparent and honest manner. This is guided by a suite of human resource policies including our Employee Code of Conduct and Ethics, Harassment and Bullying Policy and Whistleblower Policy.

These policies are part of our governance framework, and also act as protection mechanisms for our people. The Code of Conduct and all policies are regularly reviewed to ensure they reflect an evolving workplace and societal expectations.

How we engage with our people



meetings
and company
presentations



team
meetings



website and
intranet



site toolbox
talks



newsletters



performance
reviews

A strong corporate culture is key to strengthening employee engagement and increasing productivity. Our corporate culture model, 'Banpu Heart', seeks to leverage our diversity to create a happy and harmonious workplace, aiming to achieve effective operations. The implementation of Banpu Heart has improved value creation, competitiveness and created synergy to drive innovation for the organisation into the future.

We track our performance in workplace culture using the Banpu Heart survey; measuring employees' views toward the corporate culture across three key value areas of Passionate, Innovative and Committed. These values are supported by key behaviours to guide expectations and empower people. The annual score within Centennial increased from 66% in 2020 to 72% in 2021, a particularly remarkable improvement given the challenging year of COVID-19 uncertainty, balancing staff working from home arrangements and increased employee turnover.

SuccessFactors, Banpu's human resources platform, includes a real-time database as a standard tool for individual development planning, onboarding, learning management and succession planning. 2021 saw the continued roll-out of SuccessFactors.

Retention and Human Capital Development

Our people are critical to our success. We aim to attract and retain great talent to contribute to our business achievements. We do this through feedback on our Banpu Heart annual surveys, development pathways and leadership programs, and active recruitment.

Leadership and management training remains an area of focus. We partner with Hunter Valley Training Company (HVTC) to deliver a customised version of Certificate IV in Leadership Management to employees in the northern and western regions.

During 2021, the 'Banpu Leadership Program for Future Leader' and 'Banpu Global Leadership Program for First Line Leader' were conducted for identified individuals across all of Banpu's businesses, albeit on a virtual platform.

We strive for a stable workforce, attracting people to our industry to ensure sustained business success. However, our employee turnover rate was almost 11% in 2021. This is undesirably high and despite the certainty of employment in Centennial during the pandemic when we operated as an essential service. This upward trend in employee turnover rate we are experiencing is consistent not only with a wider mining industry issue, but also a global issue as people re-evaluate their circumstances and job security. There is also potentially an influence from a perceived reduced demand for thermal coal associated with societal values and climate change.

We remain vigilant in our recruitment process and believe in our role as part of a low carbon society. We are considering a range of retention and attraction mechanisms for implementation in 2022.

**35**

apprentices hosted

**3%**

female representation

**175**

new employees

**\$261,884,545**

wages and salaries

**17**

trainees

**5**

graduates

**78%**employees covered by
collective bargaining
agreements**1,565**

people employed

**11%**

total employee turnover

**15**Average hours of
training per employee

Our People

Digital Maintenance Services (DMS)

The issue:

Centennial has a comprehensive maintenance work order system, managed through its Enterprise Resource Planning (ERP) software. This amounts to approximately 5,000 work orders a week, which are scheduled, printed and distributed both on the surface and underground for work activities to be completed. This amounts to substantive paper use, handling and administrative storage.

The solution:

A digital maintenance services project was initiated in 2021 by the DCC, collaborating with Pulse Mining Services, to transform the maintenance work order system from a paper-based system to one that is fully digital. This required a range of infrastructure and resources to work successfully in an underground mining environment. The DCC facilitated the introduction of underground compliant tablets and the associated Wi-Fi infrastructure to ensure the smooth transition to digital work orders. The cloud-based system is currently operating at Clarence Colliery and will be introduced across all sites in 2022.

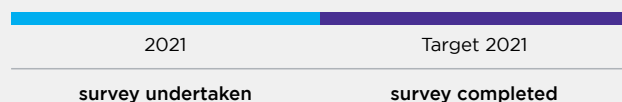




Community Engagement

Our community, in particular the local communities in which we operate, are a key stakeholder to our operations. We believe in transparency in our approach to engagement, building shared value, and aiming to establish relationships to gain and maintain trust with these communities.

Level of stakeholder perception survey result (%)



A stakeholder perception survey of our Community Consultative Committees (CCCs) was undertaken in 2021. This provides baseline data on the awareness of, and attitudes towards Centennial that are held by the local communities in which we operate. The survey results will contribute to improved understanding of how we are perceived in the community and how we can ultimately improve relationships with this key stakeholder group. Our 2022 report will indicate the progress in this area.

Authentic, regular engagement and meaningful conversations are key to our approach to community engagement, underpinned by our stakeholder management plans. People have preferred methods of engaging, so we offer a range of communication channels, for example newsletters, community information sessions, and personal visits. The operation of our CCCs, however, continues to be the main engagement method and point of contact with the communities in which we operate, providing a two-way exchange of information. We know that open communication and listening to our stakeholders' concerns is of great value.

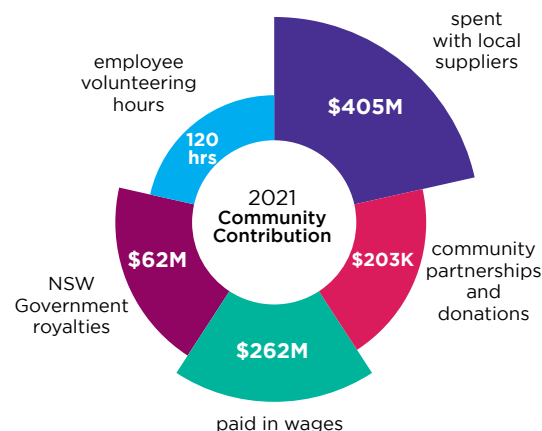
The CCCs provide an important forum for open discussion between representatives of Centennial, community, council and other stakeholders on issues directly relating to a mine's operations, environmental performance and community relations, and keeps the community informed on these matters. Meeting minutes and presentations are available on our website. Despite restricted opportunities during 2021, we were still able to host:



To ensure community enquiries and complaints are addressed expeditiously a 24-hour hotline is available. We maintain a centralised community contact register for all community contacts and complaints and a resolution process.

Supporting Local Communities

Centennial has always supported the communities in which we operate. We support local and give financial benefit to key groups and in-kind donations of time spent volunteering with our community partners. We believe our local communities should benefit from our presence.



We are committed to:

1

Strengthening community engagement & positive social impact

2

Building shared value in our communities

3

Leaving a positive legacy where we operate

Community partnerships

We actively participate and invest in many community networks and volunteering activities that are not directly mine-related, because we understand they are important to the communities where our people live and work. Our employees also support a range of charities, seeking fundraising support from their colleagues for issues they are passionate about.

We are committed to investing in, and contributing to, the communities in which we operate through long-term relationships and partnerships. A key example of this is our long-term alliance with the Wests Cycle Classic, an annual event involving a team of Centennial cyclists raising money for the Westpac Rescue Helicopter. This event raises around \$100,000 annually for this worthy beneficiary. We have been assisting the Toronto and Morisset Meals on Wheels with financial and in-kind volunteering hours for 14 years, bringing meals and social support to the elderly local community.



Banpu Heart



Passionate
Striving for the Future

...ve for success
...do more
...ile and change
...ess care and share

Innovative
New ideas, New solutions

...nscond the trend
...ate and get real
...fast, do first

Committed
Success is the Only Option

...ity and ethics
...etwork
...bility

Get in touch

Your feedback and comments are welcome.
To provide feedback, please email the sustainability
team at sustainability@centennialcoal.com.au

Or write to:

Centennial
Level 18, 1 Market Street
SYDNEY NSW 2000

For further information about Centennial please visit:

www.centennial.com.au

