Centennial Coal Sustainability Report 2017

Centennial Coal

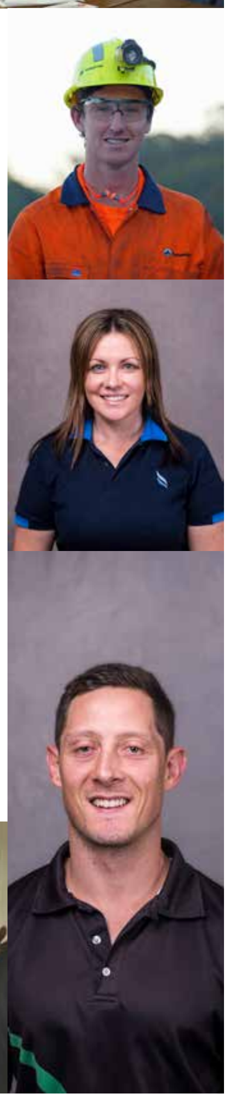
Contents

Report boundary and scope

This Report covers all of Centennial's wholly-owned operations, and assets that operate as joint ventures, for the period 1 January 2017 to 31 December 2017.

Centennial has elected to produce a Global Reporting Initiative (GRI) referenced sustainability report for 2017 (GRI Report), to detail specific information relevant to our economic, environmental and social impacts. All data is reported to GRI 100 Universal Standards.

Note: all data is reported on a 100% basis.



At a glance

In 2017 we ...

Produced 14.7MT of coal

Paid $255 million in wages/salaries

Paid $15 million in superannuation

Employed 1,559 people

Contributed to a flow-on effect of about 5,500 jobs (every person we employ = 3.5 jobs elsewhere in Australia)

Worked approximately 3.3 million people hours (mine sites)

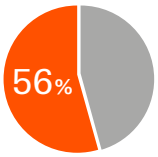
Contributed $85 million to the NSW Government (government royalty)

Conducted business/ interacted with about 1,350 suppliers and contractors

Achieved a decrease of 7%* in lost time injury frequency rates (LTIFR)

Achieved a decrease of 12%* in total recordable injury frequency rates (TRIFR)

Contributed $457 million to the local economy through goods and services



Used local suppliers for 56% of goods and services

Abated more than 210,000 tonnes of carbon dioxide

Recycled 2,000 tonnes of waste or 43%

Used mine water for 71% of our total water use

Discharged water equivalent to more than 6,000 Olympic swimming pools

** compared to 2016*

Success for Centennial incorporates the following

Safety is our priority
and it is important our employees think safe, work safe and return home safe to their families.

Our people
will always be our key asset and we place a high priority on remaining supportive and proactive in our community.

The environment
is at the forefront of our planning and we strive for continual improvement in its management.

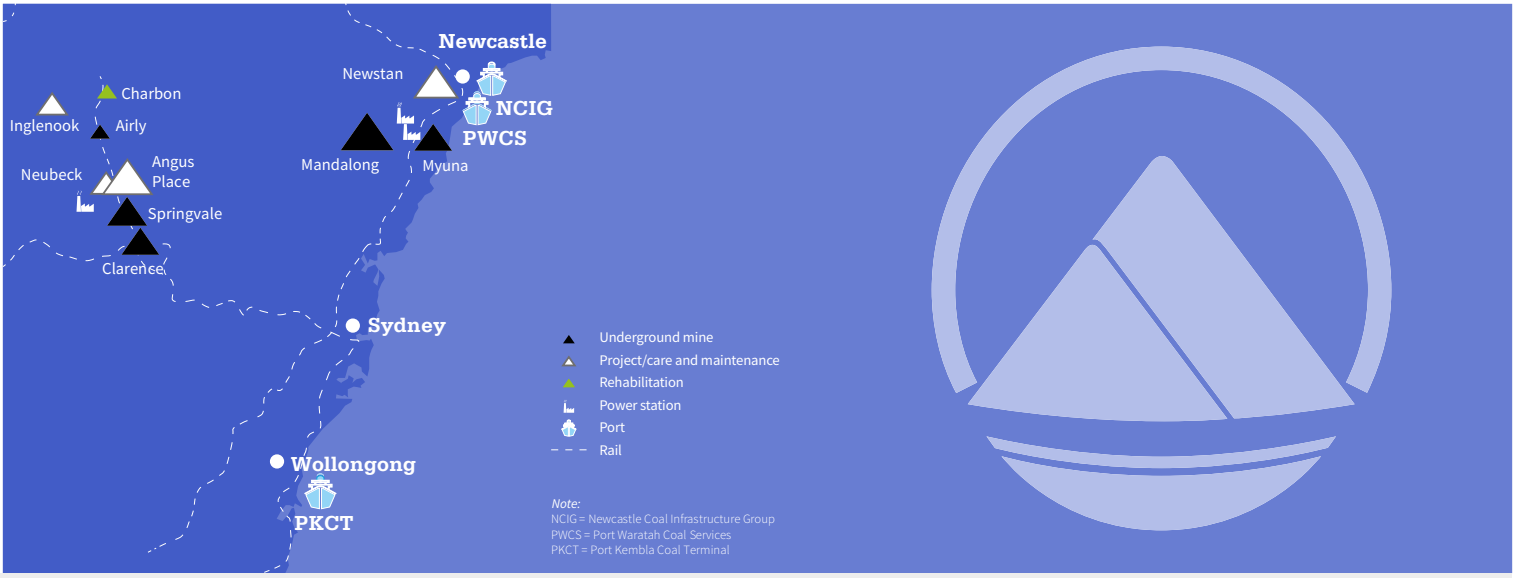
Climate change
is important and we will continue to invest and deploy new technologies to reduce our emissions and energy use.

What we do

Centennial Coal Company Limited (Centennial) is a coal mining and marketing company based in NSW, Australia. We are an underground coal mining company supplying both domestic and export energy markets.

Centennial is a wholly owned subsidiary of Banpu Public Company Limited (Banpu), an energy leader in the Asia-Pacific region.

For more information on Centennial please refer to **www.centennialcoal.com.au**



Where does our coal go?

Domestic market 60% – via coal conveyors, rail and private haul roads to power stations

Export market 40% – via rail to Newcastle and Port Kembla and on to main customers Japan, Taiwan and Korea

What does it mean?

- We 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

"It's timely to step back, recognise our strengths, face up to our weaknesses and develop strategic initiatives to ensure sustainable success"

A message from our CEO

2017 was a year of transition, successes and challenges. In my first year as Centennial's Managing Director and CEO, my aim was to build upon our strong culture of working together to "design our future" across many areas of the business. The principle of "sustainability" has been defined in many ways, but for me sustainability means striving to be relevant and accepted in our global and local communities by conducting our business for the best economic, environmental and social outcomes for the long term.

It's timely to step back, recognise our strengths, face up to our weaknesses and develop strategic initiatives to ensure sustainable successes – in safety and health, environment, community engagement and financially.

To guide us down this path, we formally introduced "Banpu Spirit" and its foundation principles to Centennial – innovation, integrity, care and synergy. Further, it is worth reminding ourselves that the State of NSW entrusts us to extract its resources on behalf of all stakeholders. We don't take this for granted – we believe operating our business is a privilege and demands respect for our workers, communities and the environment. To this end, we seek to be the leading, sustainable coal supplier to both domestic and export markets – we owe it to our stakeholders to do what we do the best that we can.

As mentioned, 2017 has had its challenges – the Land and Environment Court imposed penalties following our 2015 environmental incident at Clarence; court proceedings that challenged our licence to operate at Springvale; difficult geology at Clarence, Mandalong and Springvale; and water management continued to be a significant challenge. Nonetheless, our successes should be celebrated – the introduction of super-unit panels at Myuna in a strategy to lift productivity but also to improve the underground work environment; outstanding productivity at Airly; the commencement of construction of the Mandalong South access site; the positive and ongoing contribution of Centennial Drilling; new productivity initiatives across the Group with some good work done at Springvale, Mandalong and Clarence; and improved IT systems to support our future digital transformation.

Banpu, our parent company, is broadening its wider Asian businesses into a diversified energy company, with an increased focus on renewable energy. These changes reflect global and national commitments to reducing greenhouse emissions. During the year, Centennial formulated a "Greener, Smarter" strategy that will gather pace in the coming year.

The strategic initiatives identified in 2017 include a renewed focus on health and safety, enhancing our licence to operate, productivity improvements and new mining systems, operational excellence, production growth, automation and digital transformation and improved exploration standards. These initiatives will be resourced and implemented.

While 2017 was a year of design, 2018 and beyond must be the years of delivery and sustainable success. It is a privilege to lead Centennial and I look forward to the opportunities and challenges of 2018 with great optimism and enthusiasm. I thank all employees for their efforts, innovation and support over the past 12 months.

Mick Cairney
Managing Director and CEO

Our approach to sustainability

Vision

To be the leading, sustainable Australian coal supplier

Mission

Operate and grow a sustainable mining business

Values

Financial and operational excellence

No compromise on safety

Listen to, understand and provide opportunities for our employees

Communicate honestly and openly with our stakeholders

Encourage innovation

Strive for synergy through collaboration

Respect our reputation and social licence to operate in our effort to be a good corporate citizen

Centennial's Vision is to be the leading, sustainable Australian coal supplier to both domestic and export markets. We aim to be a long-term supplier of coal and energy to create growth and value in our business. The key to our ongoing viability is the continuous improvement of our performance with respect to sustainability drivers – health and safety, environment, and community engagement – while providing a return to our shareholder, Banpu. Integrating sustainability into all that we do means being the best at what we do, assisting Centennial in maintaining a competitive advantage.

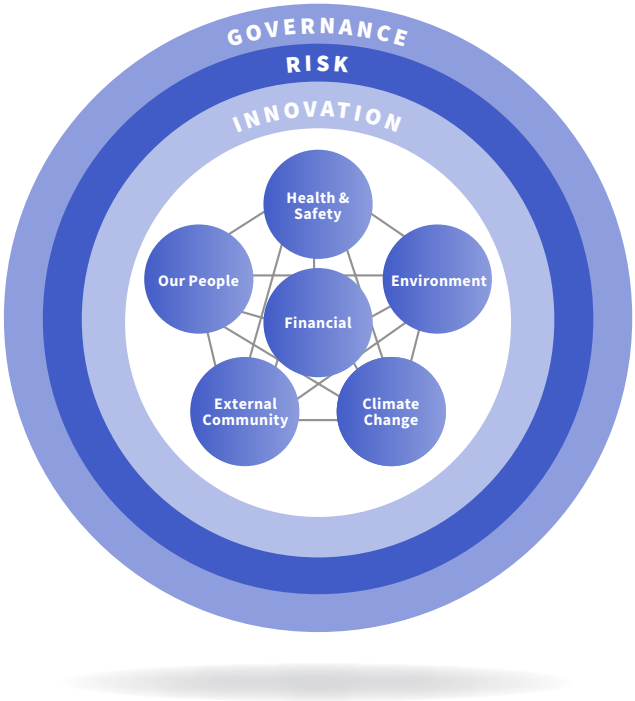
Centennial recognises we must contribute to the global project of sustainable development and consider our activities in light of environmental, economic and social impacts. Our environmental responsibilities go beyond statutory obligations and encompass commitments to minimise the impacts associated with each of our operations. We respect our local neighbours and the broader community as important stakeholders in our business and seek to maintain effective working relationships.

To be a sustainable supplier of energy we believe we must:

- seek zero harm to people and the environment
- productively and efficiently mine quality coal
- increase company value
- leave a community with greater capacity than when we arrived
- attract, develop, motivate and retain a diverse workforce
- maximise the value of the resources we use
- secure new resources.

Our approach to sustainability integrates six key areas within a framework of governance where risk is managed and innovation encouraged.

We apply our sustainability approach through our publicly stated Vision 2020 targets and through our policies, standards, procedures and employee code of conduct.



Centennial's sustainability approach

Global and emerging issues

Material issues

Centennial has previously engaged with key stakeholders (by way of personal survey in 2014) to formally identify and understand issues of material concern in respect of sustainability. Through ongoing engagement and analysis we have reconfirmed that the issues of material significance are reflected in the content of this Report as follows:

Economic
- Economic Performance

Social
- Employment
- Training and Education
- Health & Safety
- Local Communities

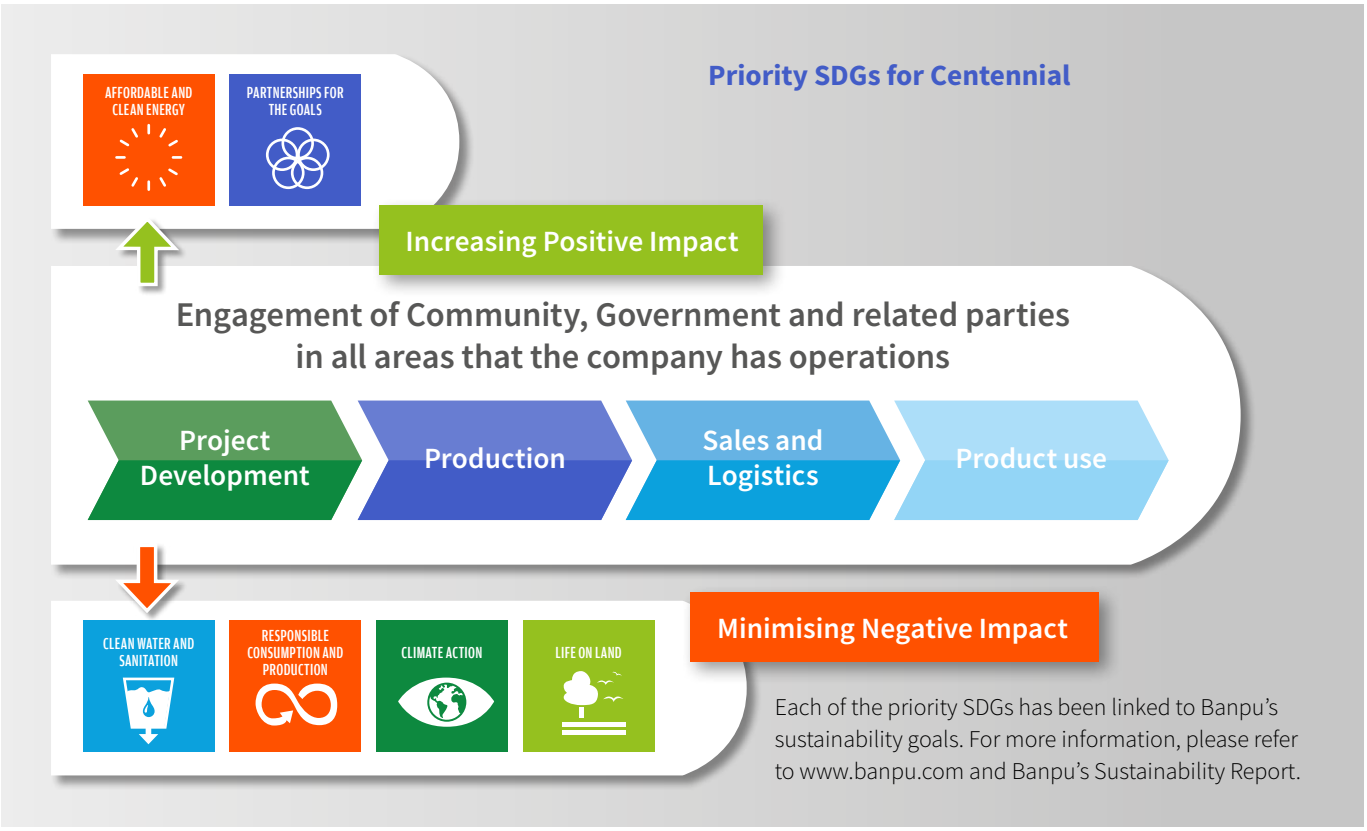
Environment
- Emissions
- Energy
- Water
- Biodiversity
- Waste
- Environmental Compliance

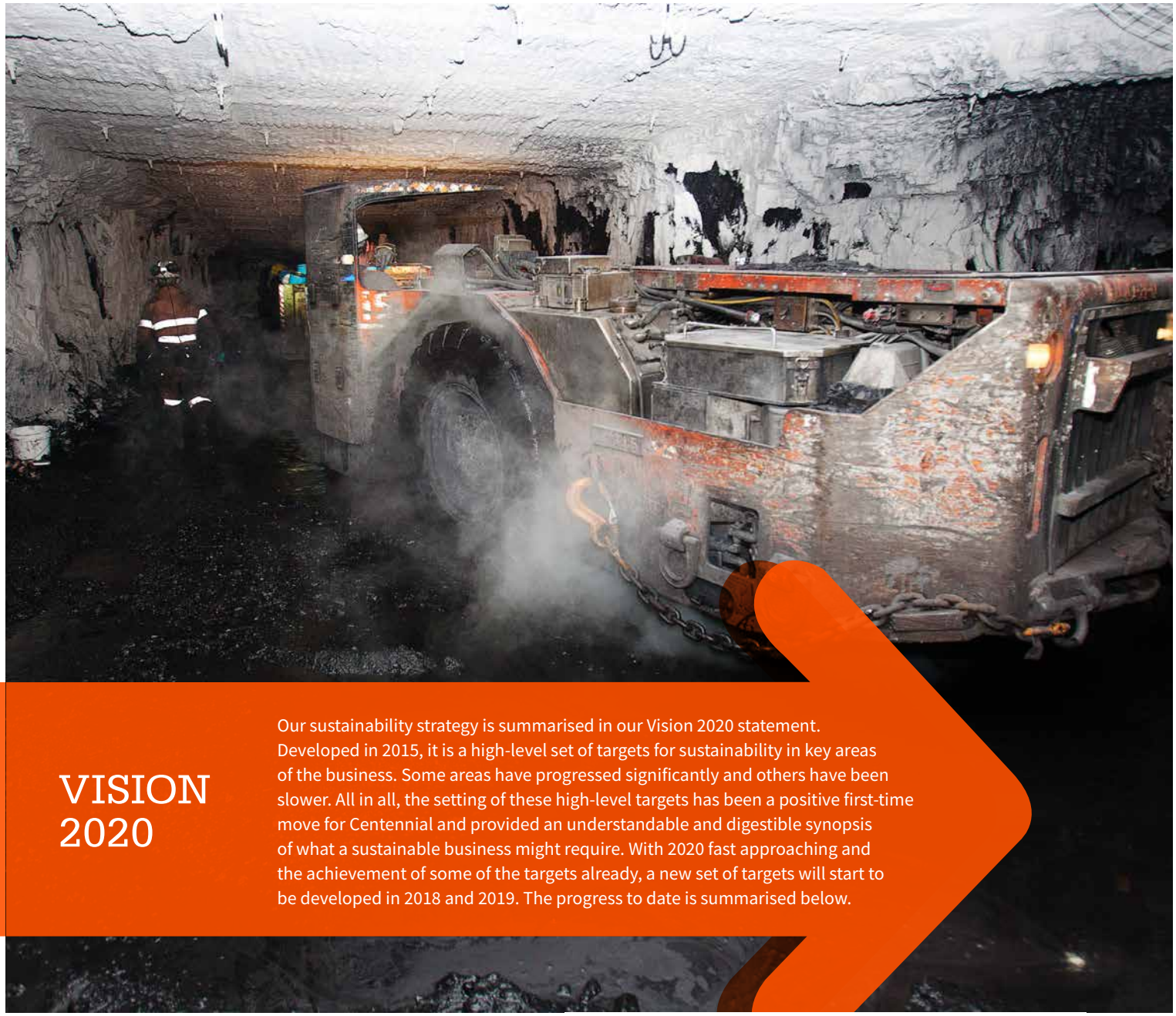
In order to inform and steer Centennial's strategic and future disclosure requirements, an internal sustainability strategy planning session was facilitated in February 2018. To progress Centennial's materiality and two-way dialogue and respond to the changing information needs of a range of stakeholders, four key steps were identified to inform strategy and reporting process for the 2018 period onwards. Inclusive of these steps is a strategy workshop to validate key issues. This assessment will take place in 2018.

As part of Banpu, and as a responsible corporate citizen, Centennial considers global and emerging sustainability issues in its management. Banpu has identified a number of the 17 United Nations sustainable development goals (SDGs) as being of particular concern and relevance to its business (see graphic below). These priority SDGs are affordable and clean energy, partnerships for goals, clean water and sanitation, responsible consumption and production, climate action and life on land. These are viewed as opportunities to increase positive impact and minimise negative impact. As such, Centennial considers these matters as part of its sustainability agenda, and will consider specific responses in 2018. Climate change and energy matters continue to dominate discussion from a global environmental impact aspect. Climate change response is a pivotal component of Centennial's sustainability journey. More details on our response can be found within this Report.

As a supplier to the black coal-based electricity generation sector, Centennial will continue to watch, and respond accordingly, to the developments in the Australian National Energy Guarantee. Centennial will also continue its contribution to low-emission technology through its participation in the Coal 21 Fund.

Although no longer a listed company, Centennial observes and responds to stakeholder concerns and trends. During 2018, Centennial will develop its response to the Recommendations of the Task Force on Climate-Related Financial Disclosures. In other areas in 2018, Centennial will continue to develop its work on supply chain management, biodiversity management and responsible consumption.





VISION 2020

Our sustainability strategy is summarised in our Vision 2020 statement. Developed in 2015, it is a high-level set of targets for sustainability in key areas of the business. Some areas have progressed significantly and others have been slower. All in all, the setting of these high-level targets has been a positive first-time move for Centennial and provided an understandable and digestible synopsis of what a sustainable business might require. With 2020 fast approaching and the achievement of some of the targets already, a new set of targets will start to be developed in 2018 and 2019. The progress to date is summarised below.

Maintain a reserve base equivalent to 20 years' mining

This target remains on track, however as we seek to diversify into an energy company a more appropriate indicator of sustainability needs to be developed.

Implement the Step Change Productivity initiative 100%

This project has been successfully completed (see Innovation Section). It is now evolving into other aspects of automation, digitisation and productivity.

Enhance our safety culture dimensions by 20%

Dimensions are cultural elements that contribute to an individual's formation of an approach to safety, including environmental and organisational factors. The initial safety culture dimensions survey was independently conducted by the Department of Industry and Resources Mine Safety Advisory Unit. It is no longer active in that project and Centennial is exploring ways to measure its progress in enhancing its safety culture dimensions.

Rehabilitate 50% of all available and suitable land*

This target remains on track. As at the end of 2017, 131 hectares of the forecast 257 hectares of the identified available and suitable land has been rehabilitated. During the year, 102 hectares were rehabilitated. Charbon carried out considerable rehabilitation in 2017 (99 hectares), with further progressive rehabilitation to occur in 2018.

Lower our greenhouse gas emissions by 25%*

We are currently not on track to meet this goal. Initially, we were progressing towards the goal and would have exceeded it had the research and development (R&D) projects come to fruition. However, delays and hurdles in the R&D projects, together with geological changes resulted in increased emissions at Mandalong (see Climate Change section). With a strong focus on underground practices and modifications to gas drainage and management at Mandalong, we remain focused on achieving this target.

Increase community contributions by 100%

We have never seen this as a monetary only initiative, and believe it encompasses availability of our people to the community as well as in-kind contributions. The employment of a specialist stakeholder engagement manager has increased community contact and considerably widened our network of contacts within the communities in which we operate. This has led to formalisation of systems and practices and increased understanding of our stakeholder network to allow formal and structured engagement of NGOs, businesses and communities. We have mapped our stakeholders to identify more dynamic and effective ways to engage, and continued to provide significant financial and in-kind support to the communities in which we operate.

Many of these things are not measurable; and community contribution will never be far from our key targets as it is fundamental to a sustainable future. However, we consider this particular target to be met and look forward to developing our next target in the community/stakeholder space.

Double our training and development efforts

We have changed the quality and context of training and development, and this will change again with the advent of Maintenance of Competency requirements (see Health and Safety section). It has become apparent that although a noble goal, it is difficult to both quantify and have a fair and equitable ("apples with apples") comparison base. To that end, a new goal will be sought to better reflect the true value that we as a company place on attracting, developing, motivating and retaining a diverse workforce.

** Compared to 2010*

Governance

Board composition and committees

The Centennial Board (Board) functions to protect and enhance shareholder value. For the period under review, it comprised six appointed Non-Executive Directors and one Executive Director, being the CEO.

The Board comprises experienced and qualified Directors. Centennial's parent entity, Banpu, has nominated four of the seven members of the Board; Banpu's current and former CEOs (Somrudee Chaimongkol and Chanin Vongkusolkit respectively, with the latter now chairman of Banpu pcl), Banpu's Deputy CEO (Somyot Ruchirawat) and Adviser to the Banpu CEO (Philip Gasteen) formerly Banpu's head of marketing, sales and logistics.

Bruce Allan (Chair), who has held many senior positions within the Australian coal industry, and David Moult (formerly CEO of Centennial) complete the complement of Non-Executive Directors for the period under review. Both Mr Allan and Mr Moult provided country experience, corporate knowledge and independence for the Centennial Board. Mr Moult subsequently retired from the Board in January 2018.

During the period under review, there were several changes to the composition of the Board and to Centennial's executive management team.

Two Non-Executive directors, Rawi Corsiri a Banpu Board member, and Robert Cameron AO, former chairman of the Board, founder and former CEO and Managing Director of Centennial, retired on 31 March 2017.

David Moult stepped down as CEO and Managing Director, staying on as a Non-Executive Director, on 30 April 2017, with Michael Cairney (formerly Executive General Manager, Operations) appointed as CEO and Managing Director of Centennial from 1 May 2017.

In addition to the above changes, following two years in the role of CFO for Banpu, Peter Parry returned to Australia taking up the position of Deputy CEO of Centennial.

There are three Board Committees, comprising:

- Audit and Risk
- Health, Safety, Environment and Community (HSEC)
- Remuneration

These three committees form an essential part of the Group's corporate governance system.

The Board (and its committees) addresses economic, environmental and social issues as part of its consideration of risks and opportunities for the business. Ultimate responsibility for compliance with regulations/legislation and other standards rests with the Board and it seeks advice from management and other appropriately qualified persons. Formal monthly Board meetings are held, along with quarterly HSEC, and Audit and Risk Committee meetings, while Remuneration Committee meetings are held as required. Financial performance is subject to a full annual audit and quarterly reviews conducted by PriceWaterhouseCoopers, and open to internal audit (usually twice a year).

Management, monitoring and transparency

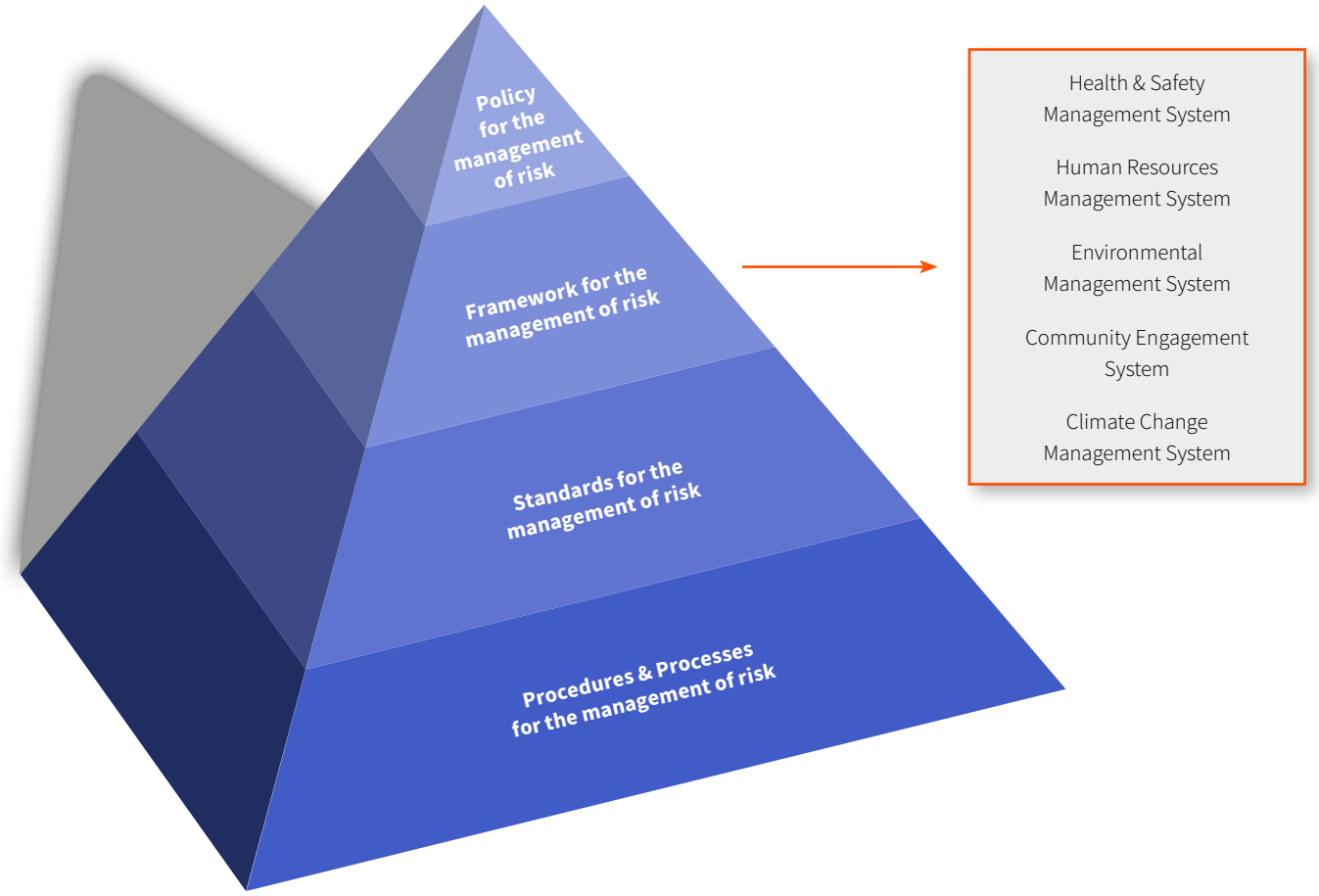
Executive Management meets formally on a weekly basis to ensure all aspects of the business are regularly considered.

Environmental and social performance is monitored by the HSEC Committee, Executive Management and also externally by local Community Consultative Committees (CCCs). Mine sites are required by regulators to make a range of planning and environmental performance information publicly available on the Centennial website. Greenhouse gas emissions are subject to an annual independent audit and are also reported publicly.

Centennial has an established suite of behavioural-based policies on a variety of issues, including an Employee Code of Conduct, Harassment and Bullying Policy and a Whistleblower Policy. In addition to being a part of our governance framework, these policies also act as protection mechanisms for our people.

There are Board-endorsed policies for Health and Safety, Environment and Community and Climate Change Response. These policies set the goals for each of the sustainability areas and lead the delivery of management systems comprising standards, plans and procedures. Each of these management systems are a reflection of the Company's established Framework for the Management of Risk.

It is important we understand and effectively manage our risks, such that we provide greater protection to our people, our environment, our communities, our customers, our assets and stakeholders. A consistent, precautionary approach to managing our risks is applied through embedding risk management processes into our business units, such that risks are identified, evaluated, managed and mitigated where possible and practical.



Risk management

Managing risk is an integral part of our business

Risk management is an iterative process of continuous improvement embedded in Centennial's business practices.

Centennial has a suite of risk management tools and processes. These range from the SLAM (Stop, Look, Assess, Manage) pocket book, which provides employees with a readily available task-level risk management process, to the formal Risk and Opportunity and Bowtie analysis templates contained within the Stature risk management software and utilised in site-based risk assessments (SBRA) and enterprise-wide risk assessments (EWRA). All of these tools and processes have been tailored to meet specific organisational contexts.

The Centennial risk management system is supported by Board-endorsed policies that cover areas including; Health and Safety, Environment and Community, Climate Change, Human Resources and Procurement. This promotes the management of risk at all stages in the life of an activity, function, project, product or asset, both from strategic and operational perspectives.

Our risk management processes are a consultative process, which include a cross-section of stakeholders who utilise a systematic process to identify, analyse and assess risks and subsequently design and implement controls to eliminate or reduce those risks where possible and practical.

To monitor the successful implementation of controls, the Stature risk management software package is interfaced with Pulse (Centennial's Enterprise Resourcing Planning system). This provides the ability to electronically delegate, schedule and monitor the progress of actions.

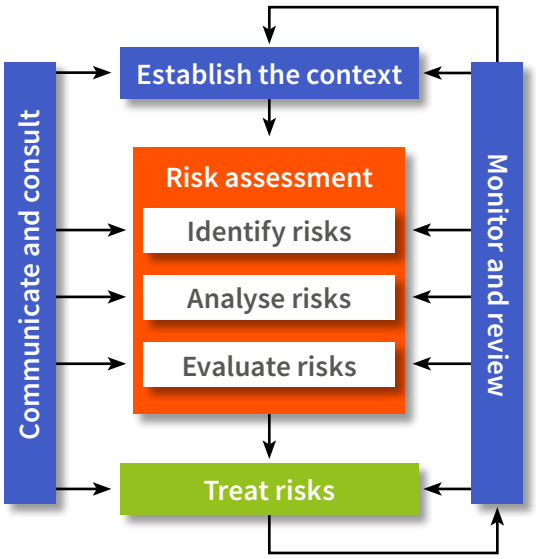
Work, Health and Safety legislation requires all operational personnel to have an understanding of risk management, commensurate with the level of responsibility held within the operation.

Centennial co-ordinates ongoing nationally recognised training in risk management principles to ensure our people are able to identify and manage the risks faced during the performance of their roles.

At Centennial we understand that through good and systematic risk management we can:

- create and protect value
- support informed decision making
- assess the impacts of both potential losses and potential gains.

The effective management of risk is vital to the continued growth and success of Centennial's business.



Innovation

Centennial's innovation platform focuses on supporting improved productivity and safety, reducing emissions and minimising impacts to the environment

We rely on research, increased automation and better communication technologies as a basis for this platform. The majority of these are wrapped up in a Centennial programme called “Step Change Productivity” or SCP. The original programme finished at the end of 2017 having achieved an almost 5% improvement on total operating times of equipment when compared to 2016. Besides improved operational performance data, other outcomes included improvements in recording, monitoring, reporting and communication systems and standardisation of key performance indicators (KPIs). SCP has set the platform to help drive an improved understanding of operational performance and assist in identifying areas where innovative solutions are required to enhance performance outcomes. The path forward for innovation in Centennial is now under the banner of “Operational Excellence”, or OpEx. The OpEx team will focus on innovations in engineering solutions and/or technology to improve the health and safety of our people, improve environmental performance and maintain a focus on productivity. Key areas for 2018 include an automation focus on:

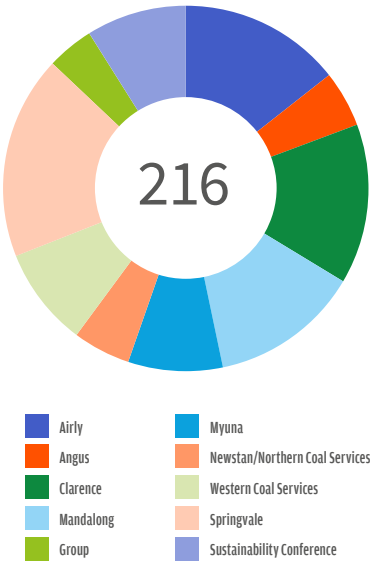
- working with key suppliers and original equipment manufacturer (OEM) to automate continuous miners and bolters, and on R&D to improve efficiency in coal transport through reduced handling and equipment in belt moves
- improving process productivity and safety through detailed mapping from supply to consumption for roof bolts and for mesh handling
- using digitisation and technology to increase operational efficiency and underground communications.

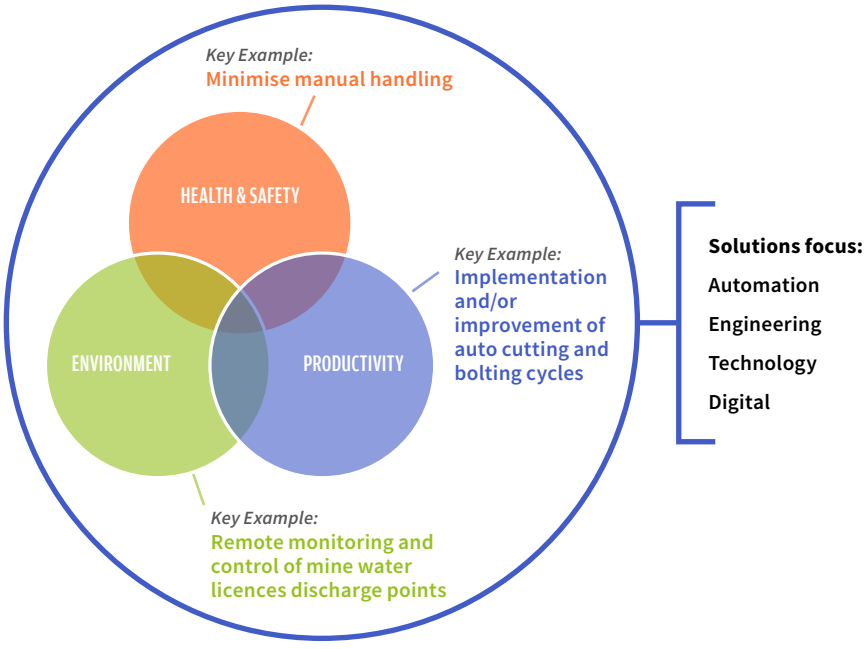
Centennial Continuous Improvement Model (CCIM)

Improving Productivity, Environmental Compliance and Health & Safety outcomes

Close engagement with site teams to identify improvement opportunities → **High impact initiatives prioritised based on key strategic issues** → **Plan and execute using Centennial Continuous Improvement Model**

Number of improvement initiatives identified at recent site workshops





Operational Excellence Case Study – Wall-flow Diesel Particulate Filter System

Underground coal mining operations are largely electrified, but diesel engines are still used for load-haul-dump (LHD) vehicles and people transporters. These vehicles emit particulates, including ultra-fine particulates and gaseous pollutants, which pose health management challenges. An underground coal mine is also a challenging explosive environment and innovative technology must address these risks.

Typical load-haul-dump (LHD) used in underground coal mines showing conventional diesel engine

The Australian Coal Industry's Research Programme (ACARP), funded by the black coal industry, was proposed by stakeholders seeking an exhaust after treatment solution that:

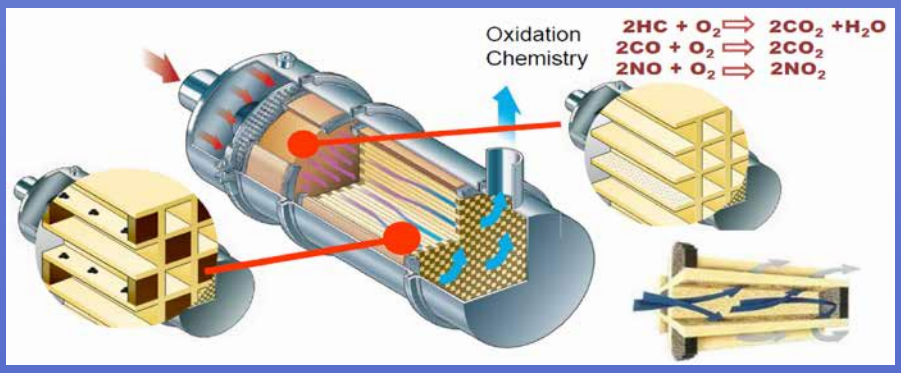
- enhances worker health through improved underground air quality
- reduces operational costs associated with currently implemented diesel particulate emissions systems.

Ventilation of exhaust gases is only a remedy. The best approach to underground air quality is point source control. The project aim was to develop wall-flow diesel particulate filter (DPF) technology, to treat diesel exhaust and reduce diesel particulates from underground machinery for commercial trials. This would, if successful, replace the conventional disposable wet filter.

The wall-flow filter technology essentially uses a catalytic converter to oxidise hydrocarbons to carbon dioxide, water and nitrogen oxide.

Development was undertaken, using a state-of-the-art engine test facility, with hardware transferred to the mine for confirmation testing cycles.

A surface trial was conducted at Centennial's Newstan Mine in July 2017. This comprised a diesel engine on-board monitoring system with pre DPF sensors (before the wall-flow system), a DPF particulate matter and nitrous oxide (NOx) monitoring system.



Wall-flow filter technology (courtesy of Orbital Corporation Ltd)

The primary outcome was particulate mass (PM 2.5) reductions in excess of 95% with the DPF system, in regulated and real-world cycles. Insulation was effective in delivering more exhaust heat to the DPF and removal of soot.

Currently, used diesel particulate filters have to be handled and bagged by employees, the filters containing concentrated particulate matter. These used filters then have to be disposed of as landfill with some being classified as hazardous waste. This technology provides a benefit to underground workers handling these items and a benefit to the environment regarding waste handling, as these filters would likely be inert and not required to be disposed of as hazardous waste.

The ACARP project has successfully demonstrated that a wall-flow DPF system can be engineered to meet the requirements of the underground coal environment. This work will continue to commericalisation under a new ACARP project in 2018.

Our digital future

Centennial foresees a future where underground mining equipment is operated by remote means, freeing up people to carry out other tasks, improving safety outcomes and allowing improved access to low-height coal seams. The path to this is being systematically progressed, starting with the continuous miner auto-cut. As continuous miners are systematically overhauled Centennial will work with the OEM to develop and implement an upgrade package that will result in continuous miners having a standard, optimised cutting cycle. The digital future will be supported by the roll-out of underground-compliant hand-held devices (such as tablets and underground-compliant mobile phones) and the requisite applications to provide its workforce with greater real-time access to information and communication tools/means to help drive improved safety and productivity outcomes.

CASE STUDY

Finance

At a glance

14.2	1,317	343	85
saleable production (Million tonnes)	**sales revenue** ($ million)	**EBITDA – earnings before interest, tax, depreciation & amortisation** ($ million)	**NSW Government royalty** ($ million)

Governance

It remains Centennial's priority to productively and efficiently grow our business to ensure our continued commercial viability, whilst striving for continual improvement in environmental and social performance.

Our approach

Financial strength and viability is at the centre of business sustainability. Centennial seeks a balanced sales portfolio between domestic and export markets. Coal contracts with domestic generators tend to be for the longer-term, with volumes and prices negotiated and settled in advance. This provides Centennial with a high degree of business certainty for a substantial portion of its output. With domestic sales primarily to mine mouth power stations, Centennial has extensive delivery infrastructure comprising private haul roads and conveyor belts. This avoids a reliance on coal transport by public road, which is a significant environmental, social and cost advantage. Recently, Centennial boosted its export infrastructure with the construction of the state-of-the-art Lidsdale Siding train loading facility, providing both market flexibility and improved environmental outcomes. The balance of Centennial's production is largely sold into Asia's premium export markets (Japan, Taiwan and Korea), where higher quality Australian coals are used to blend with coal sourced from elsewhere, providing the customer with the ability to achieve a blended price and quality. Coal is transported via rail to Port Kembla or the port of Newcastle for export. Our infrastructure, approach and geographic locations seek to maximise synergies between our operations and provide high quality reliable coal supplies to our customers.

Coal prices

Export coal is priced off the global market price, reflecting adjustments for quality, calorific value, and other specific customer-oriented properties as well as global demand and supply dynamics.

As a major exporter of coal, Australia has its own reference price known as the Newcastle FOB, which is a spot market price at the port of Newcastle. It excludes any transportation costs incurred. Domestic coal prices, on the other hand, are negotiated between producers and customers – increasingly at long-term export parity prices. However, in the case of long-term pre-existing contracts, these historical contracts may differ from global market prices, until such time as they expire over the next few years.

Our performance

As a resource company we are exposed to external financial pressures; most notably the $US coal price and the $A/$US exchange rate. However, through Centennial's long-held balanced sales strategy, the Company has, in part, a natural hedge from $A/$US volatility and a shelter from the high exchange rate.

Export prices rose in the second half of 2017, driven by disruptions in Chinese supply and restocking ahead of the northern hemisphere winter. Consequently, the Australian thermal coal index price was up by 14% from the end of 2016 to $US100 a tonne.

While the majority of Centennial's export sales are under annual pricing that are fixed in the first half of the year, the Group started to realise the benefit of higher export prices from those sales linked to the GlobalCOAL Index and spot sales in the second half. Centennial increased its proportion of export sales in response to these higher prices, resulting in the export split growing to 39% in June 2017 (2016: 37%).

In the domestic market another 1.5 million tonne legacy sales contract matured and was replaced with a new long-term contract, with prices increasing by 72%, reflecting long-term export parity prices.

Earnings before interest and tax (and unrealised foreign exchange losses on $US denominated debt) increased 98% to $289 million – primarily due to higher export prices. During 2017, Centennial sold 15.6 million tonnes of coal (100% basis), which was in line with the previous year. During the year production

records were achieved at Airly, Clarence, Myuna and Springvale, despite difficult geological conditions encountered at Clarence and Myuna. Mandalong and Springvale incurred two longwall changeovers (both with an extended second changeover).

In 2018, Centennial will continue to focus on cost control and productivity improvements. Specifically, through a focus on operational excellence, production growth, automation and digital transformation, we aim to increase our competitiveness and improve our position on the cost curve.

While social and financial pressures on coal mining continue, demand for high-quality Australian black coal remains strong, giving Centennial and Australian coal a competitive and real advantage.

Key challenges and initiatives

Centennial has continued to invest in infrastructure and equipment as a basis for longer-term sustainability. Over a number of years, we have been working on design and procurement of new technologies that increase productive capacity while also considering user comfort and operability. These technology investments, that provide greater automation and have greater energy efficiencies, continue to have positive benefits.

Among the key initiatives realised in 2017, Myuna introduced the first of the two proposed super panels into the Fassifern seam in late-August, reaching full production in September 2016, with a second super unit established in the Fassifern seam during the March 2017 quarter. Following the success of the original two super panels, a third super panel was introduced in the March 2018 quarter.

The super panel replaces an existing place-change mining panel and has enabled Myuna to successfully target lower ash plys in the Fassifern seam, improve coal quality and achieve productivity expectations.

(Note: Super panels are operating systems adopted in conditions that support shorter cut-out distances and still provide contemporary levels of productivity. This is of benefit to Myuna and extends the opportunity for increased resource recovery.)

In November, Myuna won a prestigious mining award at the 2017 Australian Mining Prospector Awards for the development (in collaboration with its employees) of an innovative mining method. The Myuna herringbone system was recognised for its ability to provide a safe and sustainable solution to a highly constrained site that was experiencing reduced productivity.

Supply chain management

Our large and complex supply chain includes various providers across Australia and around the world equipping us with everything from steel, mining equipment, roof support, materials and chemicals to conveyors, oils and fuels, general hardware, personal protective equipment and safety products. Some are transport partners and others provide non-production services.

Centennial recognises that having key suppliers aligned to our values can lead to better environmental and social outcomes, cost imperatives and reduce risk to the business.

The top five priorities of Centennial's supply chain management strategy are:

- cost-reduction strategies
- supply chain rationalisation of suppliers
- increased market competition
- health safety environment community (HSEC)
- compliance and risk.

Centennial has a Procurement Policy and management standard in place that broadly addresses sustainability.

Sustainable procurement balances economic, environmental and social considerations within the procurement process to focus on spending money efficiently, economically and ethically.

During 2017 Centennial focused on rationalising its supply chain to reduce inefficiencies and maximise economies of scale by optimising the number of suppliers under contract and continuing the procurement cost-reduction programme. These initiatives also focused on increased efficiencies by enabling robust stock control through improvement processes, allowing Centennial to track usage history, reduce obsolete inventory holdings and wastage.

The aim is to develop smarter systems to increase operational effectiveness.

In late-2017 Centennial published a revised Procurement of Goods and Services Procedure, which underpins the process of engagement of suppliers and includes approval decision steps and method(s) of engagement. This procedure will benefit Centennial by reducing risk in the supply chain through the manner in which we select and engage suppliers for the procurement of goods and services. This procedure is currently being rolled out to all Centennial personnel who have the ability to requisition an order and includes without limitation purchasing officer, warehouse personnel, commercial managers and engineering managers. This training commenced in December 2017 and has a target completion date of mid-2018. As requested by the Banpu Internal Audit Team, all non-compliances with this procedure will be reported to Banpu on a quarterly basis and a register has been established for this purpose.

The Contracts and Procurement Strategic Plan for 2018 includes a focus on Sustainability within the key strategic area of responsible contracting. A new system has been developed to include considerations of waste reduction, environmental impact, ethical sourcing, community impact and local sourcing, which will be scored when evaluating tenders and negotiating contracts with potential suppliers. The Tender Evaluation Form has been revised to incorporate these requirements. This new system also includes a due diligence protocol that is used to assess all new contracts and will include for example examination of the potential contractor's relationship history with Centennial, industrial relations history, subcontractor payment delinquency, perceived or actual conflicts of interest and their safety and environment record.

Health and safety

Safety is a core element of our values

At a glance

↓ LTIs	↓ TRIs	4 significant incidents	2 industry first projects

Governance

We take responsibility for our own and others' health and safety.

The nature of the work we do contains inherent risks and therefore it remains critical that these risks are identified and appropriately managed. Our Health and Safety Policy is available at www.centennialcoal.com.au. Each of our sites operates within a safety management system, containing processes and procedures designed to identify and mitigate risk of injury. These well-developed, fully integrated management systems support our employees in their daily work, assisting us to adopt safer work practices and prevent injury. Centennial will continue to develop and implement processes that provide support to our employees in pursuit of a safer working environment.

Because workplace injuries impact people in so many ways, including causing physical impairment, putting stress on relationships, and affecting the ability to enjoy life, it is imperative we continue to focus on health and safety. We want our people to end the day as they started, safe and free from harm.

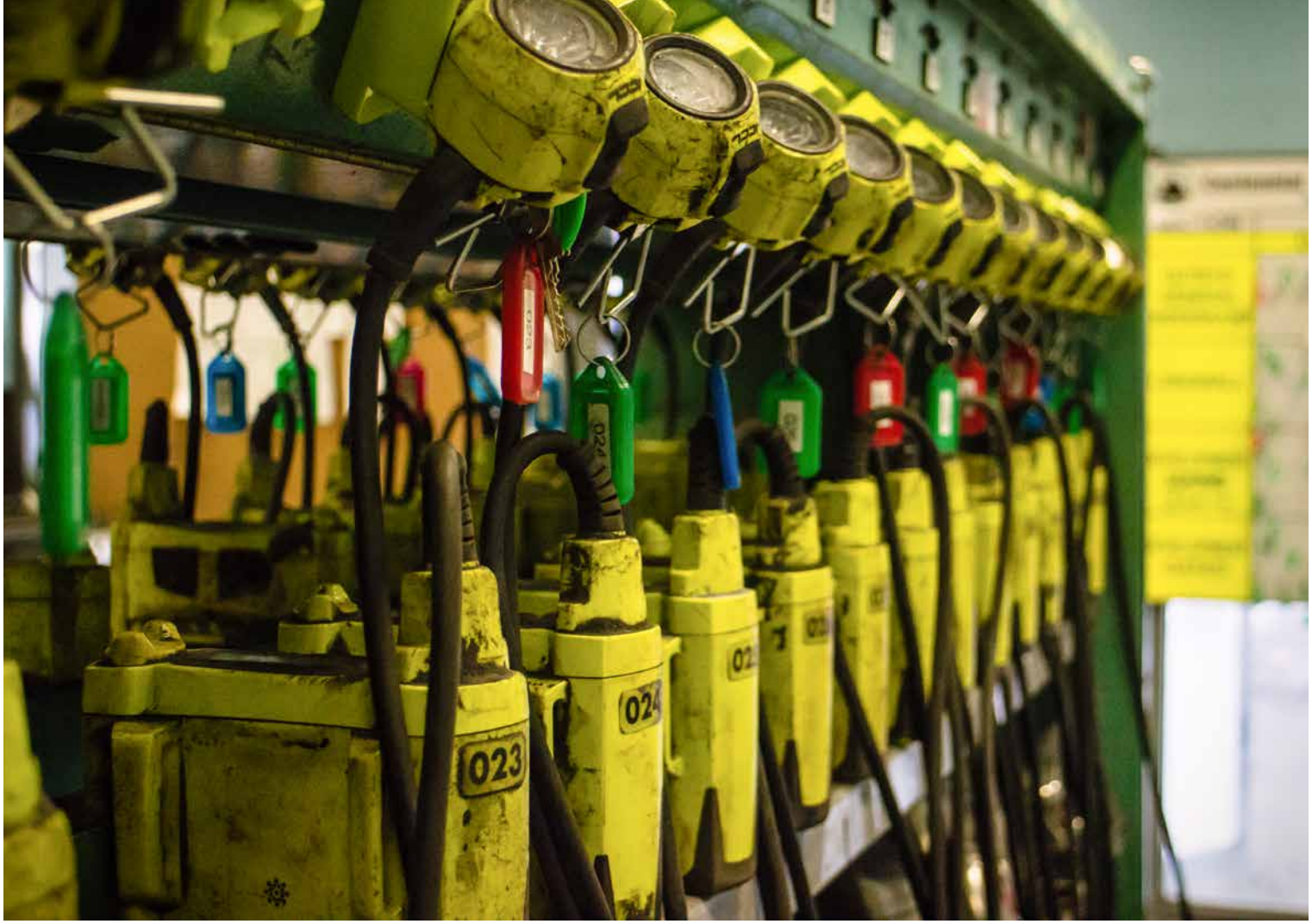
2017 summary

From a health and safety performance perspective, 2017 was an improvement on what was a disappointing year in 2016. Our total recordable injuries (TRIs) have decreased, as have our lost time injuries (LTIs).

However, there were four significant individual incidents of note during the year. These have been fully investigated using ICAM (incident cause analysis method) – this is a holistic, structured method of root cause investigation. Although there is no common root cause, the incidents were serious and unacceptable, triggering reviews of practices and updates of systems, underpinned by retraining of employees.

A fractured leg at Myuna has resulted in a retrain of the mine site workforce in hazard awareness. The amputation of two fingers in a drilling incident resulted in a prohibition notice for the relevant drilling rig. An evacuation from an elevated work platform thankfully did not result in any injury, but identified incorrect practices and unsuitable equipment resulting in a full review of the Permit to Work system. An elevated gas level at our Mandalong Mine resulted in the implementation of Human Factor Analysis Tool (HFAT) training.

This training has helped experienced incident investigators to better understand why people involved in incidents behave as they do. From this, it is hoped that more effective behavioural recommendations can be actioned to positively influence the behaviour of people to avoid incidents into the future.



Opportunities and innovations

For two years, Centennial has been involved in a significant industry research programme to determine if task rotation within an underground mining operation could impact on the prevalence of musculoskeletal injuries. The research was undertaken by Coal Services Health in partnership with the University of Newcastle. Centennial's Mandalong and Springvale Mines have been host sites for the research. The study was conducted over a 12-month period and involved three rounds of workforce survey and shift reporting on work practices. Coal Services Health was regularly on site during the study. The resultant data is being analysed and reported by the University of Newcastle. A report will be released to the industry, at the NSW Minerals Council HSEC Conference in August 2018.

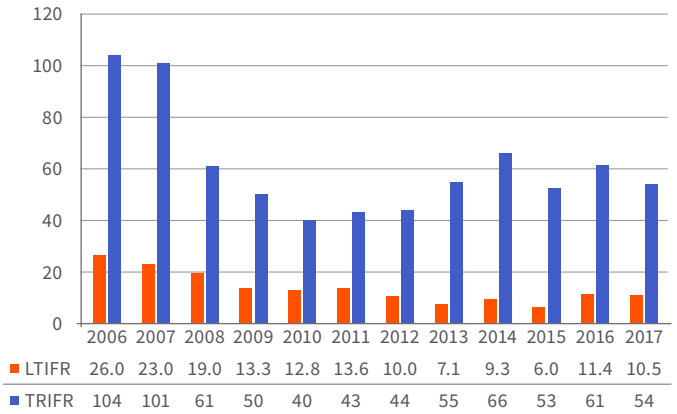
Centennial seeks to be an industry leader in the newly introduced Maintenance of Competency (MoC) requirement for mine statutory duty holders to obtain and maintain a Practicing Certificate.

The MoC has been introduced by the NSW Resources Regulator. It will have a staged implementation from November 2017 and requires that all duty holders obtain a prescribed level of continuing professional development (CPD). Rather than leave this up to an individual, Centennial is taking a company-wide approach to managing and maintaining these obligations, with a targeted training management system to be rolled out in 2018. To this end, Centennial is developing a five-year approved MoC Training Plan.

Shoulder injuries have been found to cause the biggest impact on health, manning availability and workers' compensation costs at Myuna. In an effort to more effectively manage this, an occupational therapist has been engaged to undertake task observation of the underground mining work environment to identify injury root cause. A report suggesting possible improvement opportunities is expected in 2018.

We believe there is always an opportunity to improve on safety performance and will seek to show further reductions in lag indicators in 2018.

Key indicators



	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
LTIFR	26.0	23.0	19.0	13.3	12.8	13.6	10.0	7.1	9.3	6.0	11.4	10.5
TRIFR	104	101	61	50	40	43	44	55	66	53	61	54

Note
Following manning reductions in 2015 – performance measure negatively impacted by lower manning levels/hours worked. Current year performance is indicating sustainable decrease in LTIFR.

Environment

Centennial's fundamental responsibility is to minimise our environmental impact from emissions, waste, and on our biodiversity, as well as ensure compliance with relevant legislation

At a glance

↑	2	43%	↓
non compliances	significant regulatory fines	solid waste recycled	decrease in water discharged

Governance

We understand that accessing natural resources is a privilege and not a right and we must treat these assets responsibly now and into the future.

Our aim is to go beyond compliance and improve environmental performance, while developing and retaining effective community relationships.

We assess, plan and manage our environmental impacts from exploration to mine development, through to operation and ultimate closure. Our approach uses sound science to identify risks. We aim to reduce our resource use and employ a systematic approach to compliance. All of our sites (including those on care and maintenance) are subject to environment protection licences, with specific site-based conditions applying.

Our expectations for environmental management are outlined in our Environment and Community Policy, which forms part of a broader Environmental Management Strategy. This policy is available on our website. Underpinning Centennial's environmental management is our Environmental Management System (EMS). The EMS continues to evolve and remains pivotal in guiding environmental performance. Our systems guide us in our work, providing consistent processes and standards assisting Centennial in our quest for improved environmental stewardship.

2017 summary

A key focus in 2017 has been on rectifying legacy issues at Charbon, and continuing site water management improvements at Clarence following the discharge incident in 2015.

At Charbon, the mine ceased open cut operations in 2015, however was subject to a number of regulatory sanctions in 2016 for past performance issues. In 2017, significant progress has been made on rehabilitation of the site and improvements of water pollution management infrastructure.

In July 2015 there was an environmental incident at our Clarence Colliery. The incident involved the overflow of material from a holding cell in a reject emplacement area impacting the surrounding environment and coal fines also entering the Wollangambe River within the Blue Mountains National Park.

From the day of the incident, Clarence took full responsibility for rectifying the environmental impact and engaged a specialist clean-up team. This team oversaw an extensive clean-up operation that operated for 12 months in extremely rugged conditions costing $2 million.

Clarence fully co-operated with the Environment Protection Authority (EPA) and the Office of Environment and Heritage (OEH) responding to any orders issued during the clean-up and appreciated the oversight and co-operation of both agencies.

As required by the environmental protection legislation for incidents of this nature, both the EPA and OEH commenced prosecution proceedings (May 2016) in the Land and Environment Court (LEC) against Clarence Colliery. Clarence entered a plea of guilty to the charges at the earliest available opportunity. The LEC handed down its findings in July 2017, with combined penalties of $1.05 million imposed to reflect the severity of the incident.

In its judgment, the LEC noted "Clarence Colliery has demonstrated contrition and remorse concerning the offences and has, by its conduct, taken resposibility for its actions and acknowledged the environmental harm caused". The LEC also "accepted that Clarence Colliery's good character is demonstrated by its participation in the Lithgow community".

Centennial has a significant biodiversity offsets portfolio. During 2017, progress has been made to meet regulatory requirements of having those offsets secured and protected in perpetuity.

Clarence Colliery has been involved with a detailed regulatory review of its water management and environmental protection licence (EPL), which has resulted in more stringent conditions being placed on water discharge quality. Clarence has worked consultatively with the regulator to assist its understanding of the extensive water management and treatment system and undertaken various assessments, works and improvements. Consultation with a range of agencies and stakeholders will continue in 2018 into options for reuse of the mine site discharge water for community benefit.

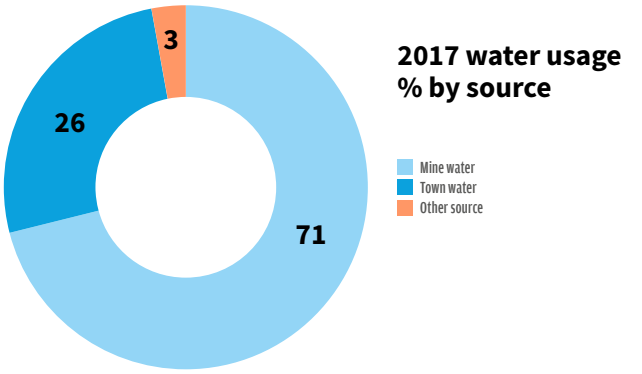
Over the past few years, Springvale has been through an extensive and protracted environmental assessment, approval and litigation process to secure its future and that of more than 600 people in the Lithgow area who rely on its operation. In 2015, mining operations were suspended while the required approvals were secured from government. After securing approval and reinstating operations, the approval was challenged by a Victoria-based environmental group (4Nature Inc). Despite the Land and Environment Court rejecting the challenge on September 2016, 4Nature Inc lodged an appeal in October 2016. The grounds for the challenge were whether the Planning Assessment Commission (PAC) complied with clause 10(1) of the State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011, which required it to be satisfied that the proposed development would have a neutral or beneficial effect on water quality (the NorBE test) in the Sydney drinking water catchment. On 2 August, the NSW Court of Appeal found the PAC applied the wrong test in determining whether Springvale met the NorBE test in the Sydney drinking water catchment. This decision placed the future of Springvale at serious risk despite the fact the plan for a $100 million-plus water treatment facility that would result in no water being discharged from the site in the future had been approved and was ready to commence construction. After much concern and anguish to employees and their families and the broader Lithgow community, the NSW Government introduced special legislation in October 2017 that resulted in securing the mine's future.

Water

Water is a shared resource, and for Centennial, risks associated with water management relate to environmental protection, community concerns, operational effects including tailings management, infrastructure performance, climatic events and excess discharge. Security of water supply is not a key concern for Centennial because with only one exception, our mines have excess water. Centennial's broad approach to water resource management encompasses community-engagement initiatives, water balance modelling, monitoring and mitigating impacts and developing alliances/partnerships with neighbouring industry to facilitate the beneficial reuse of mine water.

Each site operates its own Site Environmental Management System, under the Centennial Environmental Management System, which incorporates water management. From this, each site has a specific water management plan, which encompasses water inputs and outputs.

Where possible and where geological conditions allow, we use mine water in our mining activities, reducing the reliance on municipal water supply. In 2017, 71% of water use was mine water and 26% from town supply. A small portion (2%) was sourced from harvested rainwater from on-site dams and 1% was sourced from a production bore. About 20% of water was recycled and used mainly in coal preparation. Between 2013 and 2017, total water consumption declined by 2,545 megalitres (ML). This is mainly a result of some mines becoming non-operational.



Water future

In the process of mining, water is removed from the coal seam to allow safe operations. Centennial has worked with EnergyAustralia (EA) to develop and have approved a project to use the water currently discharged from Springvale Mine and redirect it to a water treatment facility located at EA's Mount Piper Power Station where it will be treated and used for power station cooling.

The project can transfer, via a dedicated pipeline, about 40 million litres of water daily from Springvale (and includes capacity to cater for any future water from Angus Place mine). Water treatment will be undertaken by using and upgrading existing infrastructure and building new infrastructure when required.

The treatment facility represents a $100 million-plus investment, which will not only bring environmental benefits (Springvale will be a nil discharge site) but is a significant piece of regional infrastructure and an investment in the future of Lithgow.

CASE STUDY

Waste

The most significant "waste" from Centennial's mining operations is water discharged through licensed points. Discharged water must be managed appropriately and removed from sites within regulatory limits. Waste management is relevant to all our operations because our mines are situated in areas of relatively high environmental or community value, close to a number of population centres. In particular, we must have regard for areas of sensitive receiving environments, including the delicate ecological community of the Blue Mountains World Heritage National Park, and areas where the receiving environment is within the Sydney drinking water catchment area.

Centennial manages waste through on-site water and waste management plans, under our Environmental Management System. Periodic reviews are undertaken and internal audits performed. An annual high-level risk assessment is conducted at each site and outcomes prioritised into action plans.

Water discharge

The conditions of the Environment Protection Licences that apply to our sites include water discharge quality and quantity limits. During 2017, Centennial discharged more than 16,500 megalitres (ML) of water. Almost all (more than 99.9%) of water discharged was within regulatory licence limits.

Waste management

Our constant challenge is to reduce the quantity of our waste streams, improving the amount of waste recycled and reducing hazardous waste generated. Our management approach is to maximise the value of the resources we use and to have one total waste management provider that also is engaged to sort waste streams for recovery and recycling. This has proven to be an effective process for our business over recent years as we aim to ensure less waste goes to landfill. We continued to work with our waste management provider in 2017 to seek further waste reduction opportunities. We seek to embrace new separation technologies where practical and operate within the waste hierarchy of avoidance, followed by, reuse, recycle and finally disposal as the least preferred option.

During the year the total waste contract was put to tender, with an enhanced focus on sustainability requirements and further data acquisition. At a site level, waste is managed under the umbrella of the Environmental Management System.

We have been progressively reducing the total amount of waste we produce. We reduced total waste by 1,101 tonnes between 2013 and 2017. During 2017 Centennial generated about 3,610 tonnes of solid waste, of which 43% was recycled. A further 2,256 tonnes of liquid waste (oily water) was contained and subsequently treated on-site. This is classified as hazardous waste.

Tailings management

For our three facilities that generate tailings, ground rock and process effluents, tailings dams are maintained in accordance with a Tailings Dam Management Plan. The plan describes the dams' operations and maintenance, including statutory inspections and reporting.

Centennial has developed a company standard for the planning, management and decommissioning of tailings dams and reject emplacement areas, the implementation of which continued in 2017. Each mine manager is responsible for applying the standard to their site. The 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. For example, the Airly Mine approval includes the ability to construct a new tailings facility. If this was to proceed, a pre-feasibility assessment would determine a preferred location for this facility based on a balanced assessment of the environmental, social and economic impacts and opportunities.

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 reviewed the decommissioning and closure requirements for our tailings facilities. We hold a significant rehabilitation liability and this review is part of the process for addressing that. We have dedicated resources to review our rehabilitation and mine closure requirements, developing strategy and policy for rehabilitation and reviewing our liabilities for opportunities to reduce them.

Environmental compliance

All of our sites are subject to environment protection licences from the Environmental Protection Authority (EPA) and conditions of development (consent conditions) from the Department of Planning and Environment (DPE). Compliance with these environmental regulations is always a focus. As part of this focus, Centennial has actively worked on developing, having approved and subsequently commencing construction of a water treatment plant for Springvale discharge. However, during the reporting period there has been an increase in the number of non-compliances with regulatory conditions that are primarily attributable to water quality at Springvale. There has been no material harm to the environment observed or expected; however the commissioning of the approved water treatment plant will address these matters.

A spillage of coal fines from an overland conveyor at the Western Coal Services site during 2017 resulted in two regulatory penalties totalling $17,500. The Western Coal Services site has since rectified the spillage, investigated options for future management improvements and entered into a voluntary undertaking for prevention of recurrence.

At Springvale, in September 2017, a contractor undertaking vegetation clearing (asset protection works) under power lines on the Newnes Plateau caused damage to an area of vegetation deemed to be of high conservation value. This resulted in a $15,000 penalty infringement notice from the DPE.

The DPE determined the contractor-permit-to-work process failed to adequately identify the area containing the protected vegetation, and that no physical barriers had been placed in the field to identify the location of the protected vegetation or to raise the awareness of the contractors to the location of the endangered species.

Springvale has reviewed the contractor permit to work and operating procedures to include the requirement for physical barriers to be installed before conducting any work where protected vegetation communities are located.

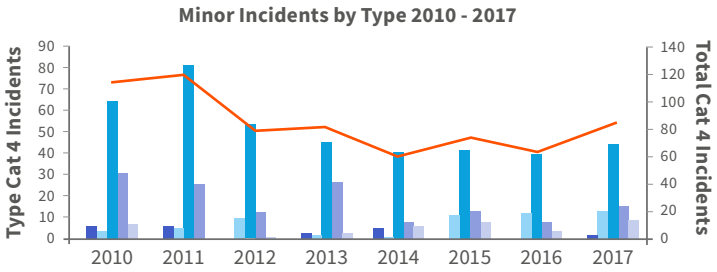
One penalty was imposed, on Ivanhoe Coal Pty Limited as the holder of a mining lease for the closed Ivanhoe Collieries, for failing to report on annual performance in the required time frame. This penalty was $2,500.

Four other penalties were received, two for Springvale and two for the closed Charbon site, for failure to pay an annual fee in the required time frame. These penalties were $1,000 each.

To rectify administrative failures such as this Centennial has captured all mining lease reporting obligations in its compliance database, which automatically generates work actions.

Key indicators

Non compliance graph



	2010	2011	2012	2013	2014	2015	2016	2017
Dust	6	6	0	3	5	0	0	2
Noise	4	5	10	2	1	11	12	13
Water	65	82	54	46	41	42	40	44
Complaint	31	26	13	27	8	13	8	15
Other	7	0	1	3	6	8	4	9
Total	113	119	78	81	61	74	64	83

Biodiversity

Centennial is a significant land holder. The majority of Centennial's land holdings are not impacted by mining operations and much of this land has high ecological value.

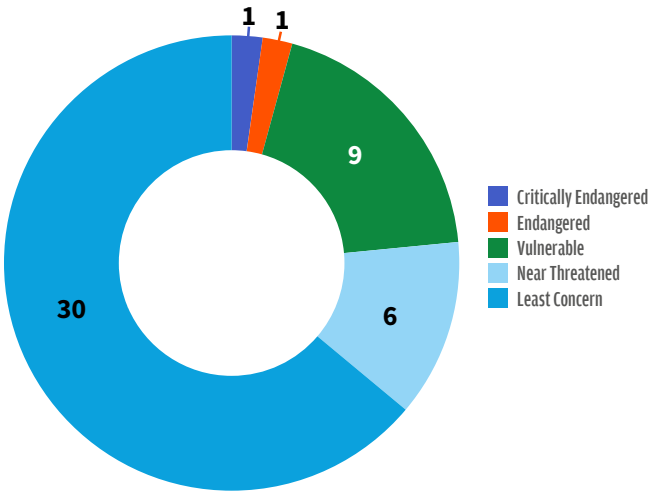
Centennial implements ecological and land management for the maintenance or improvement of values, and where feasible, seeks beneficial co-existance of agricultural grazing activities with biodiversity conservation.

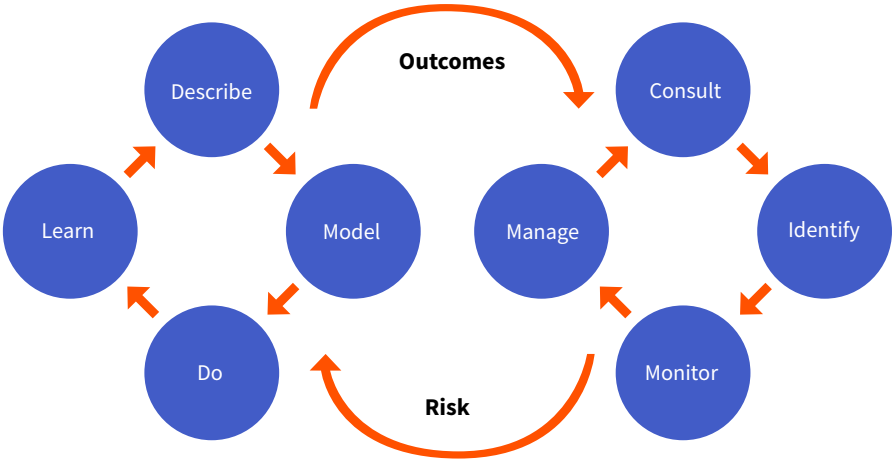
Centennial manages all actual and potential, negative and positive impacts to biodiversity under Regional Biodiversity Management Plans. These plans meet the relevant regulatory requirement for each operation. A site specific appendix identifies the baseline ecological values of the site, land management actions to improve biodiversity and an ecological monitoring programme. Where other biodiversity management plans are required by the site, for example, Biodiversity Offset Management Plan, or Extraction Plan Management, these are referred to from the Regional Management Plan.

Interaction of environmental management plans for biodiversity

In 2018, Centennial will commence an internal biodiversity risk assessment for each operation that will run through until 2019. This biodiversity risk assessment will inform the annual high-level business-risk assessments.

To avoid harm to vulnerable animal and plant species in our mining areas, Centennial monitors them in accordance with the Regional Biodiversity Management Plans. The International Union for Conservation of Nature (IUCN) "Red List of Threatened Species" (an inventory of the global conservation status of plant and animal species), together with national and state conservation lists, serve as authorities on sensitivity of habitat in areas of operations. As at the end of 2017, 47 species found in our mining areas are listed on the IUCN Red List. These take priority in our biodiversity management approach (refer to page 56).





Adaptive management framework model

Adaptive management framework

To account for uncertainties and to improve management response, all impacts to environmental values will be managed across Centennial using an Adaptive Management Framework. Adaptive management is the structured process of learning through doing, and then adapting based on what is learned.

This framework consists of the traditional adaptive management model, complemented by management outcomes.

Rehabilitation of land

Before mining begins, Centennial works with regulators to determine and develop a rehabilitation goal. This rehabilitation goal subsequently becomes part of the Mining Operations Plan (MOP). 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 practise responsible land stewardship and incrementally undertake progressive rehabilitation as areas become available, focused on completion criteria.

Our Vision 2020 target to “rehabilitate 50% of all available and suitable land" by the year 2020 is on track. As at the end of 2017, 131 hectares of the forecast 257 hectares of the identified available and suitable land has been rehabilitated. During the year 102 hectares were rehabilitated. Charbon has had considerable rehabilitation undertaken in 2017 (99 hectares), with further progressive rehabilitation to occur in 2018.

Mine closure

Mine closure management is important to Centennial as part of its social and environmental responsibility of using the land for mining purposes. The land used for mining activities must be available in the future for beneficial post-mining land uses.

A mining lease is only relinquished when all legal obligations have been satisfied and the appropriate end land use has been achieved, in line with the rehabilitation plan laid out before mining begins.

Opportunities and innovations

Water issues remain a focus for environmental management and performance. Centennial believes compliance is a precursor for sustainability and all water non-compliances are avoidable. In 2017, a project commenced to modernise technology and re-engineer all licensed discharge points (LDPs) to install early warning and mitigation options and have all LDPs digitally connected to the site control rooms. The project commenced with a risk assessment of all factors that could contribute to a water exceedance. In 2018, a review of technology gaps and preferences will be conducted and a capital works programme developed. This project will take a number of years to complete, with high-risk LDPs being addressed first.

Community

Proactive engagement is an essential element for Centennial's success

At a glance

↑	16	100%
contributions to local economy	**CCC meetings**	**attendance at Aboriginal heritage sub committee meetings**

Governance

Centennial places a priority on proactive engagement with our communities, with our community contribution managed by our Group Manager Stakeholder Engagement.

For Centennial to continue to effectively engage with our local communities and other stakeholders we need to listen to and understand the issues of importance. While listening to our people who live locally provides invaluable feedback, Centennial also engages with many community organisations. Our key community engagement and community relations building activities include:

- established Community Consultative Committees (CCCs) for each mine site
- community consultation and engagement strategies for projects and exploration activities
- sponsorship (financial and in-kind)
- active participation and support of a broad range of community organisations, activities and events
- dedicated phone and email for community contact at each site.

In conducting operations we are not satisfied with simply complying with the relevant planning consents, licences and regulations. Our challenge is to inform and educate our community to better understand our business and the contribution we deliver locally, while also listening and responding to the issues that are raised by the community.

2017 summary

During 2017, Centennial continued to strengthen its community stakeholder relationships with the communities in which we operate. Our sponsorship of community activities, events and organisations resulted in more than $200,000 being invested in our local community. This figure does not capture all of the in-kind support Centennial employees provide to the various groups and organisations across the community, which we believe is an equally important contribution. For example, Centennial has continued to support the Morisset & Toronto Meals on Wheels with 25 volunteers providing more than 160 hours of delivering meals to clients' homes. This initiative has a tremendous social cost benefit by enabling people with disabilities and those who are frail and or aged to remain in their home.

An important stakeholder in our communities are our employees. The temporary suspension of operations at Springvale in 2015, relating to the delay in approvals, provided an opportunity to assess the impact of the stand-down on employees and the local-level impacts of the mine's absence from the Lithgow economy.

Initially key themes were developed to examine the pre, during, and post stages of the stand-down. These themes were discussed in detail at a series of focus groups, involving approximately 5% of the workforce. The survey was then developed and administered in December 2016. Participation from the workforce (operations and management) was 71%. This sample size ensures the outputs have a high level of validity.

The output of the research is valuable for reasons including but not limited to:

- provide an understanding as to how this stand-down impacted on people
- support both the economic impact assessment (EIA) and social impact assessment (SIA) elements of future consent applications for the Western operations
- understand the local social and economic impacts of employment in an area such as Lithgow, rather than applying state and national level metrics in the assessment
- consider the sustainability of Centennial's workforce and employment profile of the Lithgow region into the future
- future planning for the Lithgow LGA and surrounding region
- ascertain the impact of the existing approvals pathway
- understand the immediate impact in relation to the transition away from mining on regional communities such as Lithgow.

During 2017, Centennial completed the analysis of these results. One of the interesting findings of the report is the positive contribution Springvale's employees make to the local community in which they live. **In summary the report identified that:**

- 77% of employees reside within a 15-kilometre radius of Springvale
- the 263 respondents' households comprise a total of 849 residents, with an average household size of 3.3 persons, 48% of these households are situated in the immediate Lithgow township
- tenure in the area (years in residence), at an average 31 years
- approximately 93% of respondents either fully own or are buying their present homes
- approximately 62% of the workforce reported being involved with local community, service, cultural and sports organisations
- approximately 72% of take home pay is spent in the local area.

Centennial will continue to research and survey our people, local communities and other stakeholders to ensure we understand and capture our economic and social contributions to the region.

Opportunities and innovations

Centennial's work in the area of community stakeholder engagement and social impact assessment will grow in importance in 2018 and beyond, with the NSW Government releasing new Social Impact Assessment (SIA) guidelines (September 2017). **The Guidelines apply to any new projects and or modifications assessed by the NSW Government and aim to improve:**

- how social impacts are understood, assessed and addressed
- how communities are engaged into this assessment – from a point of general understanding about the project, understanding community values and having input into the assessment process.

For the purpose of these Guidelines, a "social impact assessment" is the process of analysing, assessing and responding to the potential social impacts of a proposed development, with a view to minimising negative social impacts and enhancing positive social impacts.

The resulting analysis is an input to the overall environmental impact assessment process for the proposed development. If the proposed development is approved, the social impact assessment can provide a foundation for ongoing monitoring and adaptive management of predicted and unforeseen impacts over the life of the project. These Guidelines provide a framework for integrating social impact assessment into the development assessment and approval process under the planning system.

Community and stakeholder engagement is the manner in which social impacts are identified, understood and addressed. In order to meet the intent of the Guidelines, it is a requirement that both the SIA and consultation strategies commence in the project feasibility phase in order to prepare a scoping that will inform the Environmental Assessment Requirements (SEARs). In the past, the SIA and consultation has usually commenced post SEARs. The change in this consultation process will bring about new opportunities when engaging with community stakeholders as Centennial aims to understand and demonstrate how the community's real and perceived concerns have been taken into consideration both in the project's design and how they are proposed to be addressed via the EIS.

Centennial will continue to research and survey our people, local communities and other stakeholders to ensure we understand and capture our economic and social contributions to the region.

A decade of dedication

2017 marked a milestone in two of Centennial's key corporate/community partnerships – a decade of involvement with Morisset & Toronto Meals on Wheels and a decade of the Centennial Green Team riding to raise funds for the Westpac Rescue Helicopter Service.

Meals on Wheels

The Morisset & Toronto Meals on Wheels service covers western Lake Macquarie. It relies on an army of 300 volunteers to organise and deliver a meal every Monday, Wednesday and Friday to the homes of about 150 frail, aged and younger disabled.

Centennial has enjoyed being involved with Morisset & Toronto Meals on Wheels since 2008. Initially the relationship started with an annual financial contribution, until 2011 when the partnership expanded to include Centennial employees volunteering to deliver meals monthly from both the Morisset and Toronto kitchens. There are currently 25 people from our Fassifern office and Mandalong Mine volunteering.

Over the years Centennial has found different ways to support Meals on Wheels. At Christmas time Centennial supports Wangi Wangi Lions by purchasing its fundraising Christmas cakes, which we in turn then donate to Meals on Wheels, so a treat can be included in its Christmas deliveries.

Centennial's Health and Safety General Manager has inspected both kitchens and provided independent advice on workplace safety improvements, and our Mandalong Mine presented fire warden helmets to both kitchens.

These are small and tangible ways Centennial can support this important community asset.

Westpac Rescue Helicopter Service

Over the past decade our Lake Macquarie employees have generously donated almost $1 million through regular payroll deduction to the Westpac Rescue Helicopter. A small group of dedicated mountain bikers, representing a broad cross-section of people from those at the coalface to those at the keyboard, have taken their generosity to the rescue helicopter one step further. Whilst riders from both Lake Macquarie and Lithgow regions participate in various fundraisers, the Centennial Green team has ridden in the annual Wests Cycle Classic (Westpac Rescue Helicopter Charity Ride) for the past 10 years. Doing this in their own time, they have peddled through tough off-road terrain for five to seven days each year, covering thousands of kilometres and helping raise more than $1 million for a worthy community cause.

CASE STUDY

Delegations

In 2017, Centennial hosted a delegation of mining officials from 12 African nations who are studying mineral and energy economics in Canberra. The students are part of a Department of Foreign Affairs and Trade/Australian National University delegation supported by the Minerals Council of Australia.

The delegates were provided the opportunity of touring our underground sites in the Western region as well as gaining an insight into the training technology at the Western Mines Rescue Station. The visits took place on 8 April and 19 May and totalled 60 visitors.

Rock art preservation

Charbon is a former underground (bord and pillar) and open-cut coal mining operation. Located on the site is a small rock shelter with examples of Aboriginal painted hand stencilling.

Developed in collaboration with Registered Aboriginal parties in order to protect the art from further vandalism (the rock art had been previously vandalised with graffiti) and minimising any potential dust deposition impacts from the open-cut operations, a geo-textile covering was simply placed over the rock shelter.

The fine art conservation company Artcare, with its expertise in the assessment and preservation of painted rock sites, was engaged to examine the performance of the geo-textile covering that was placed over the entrance to the shelter.

Artcare's report has found that while the site does contain dust deposits, no discernible impact from coal mining-related dust was found. The use of a simple geo-textile covering has had a positive influence and not resulted in any long-term negative impact. In order to further preserve the site, the following actions have been recommended:

- remove all graffiti from the site
- remove dust from all surfaces
- remove termite and insect nests from rear wall.

A meeting with Registered Aboriginal Parties will be held in mid-2018 to discuss the outcome of this report and implementation of the recommended actions.

CASE STUDY

Indigenous engagement

Indigenous engagement occurs in accordance with an Aboriginal Cultural Heritage Management Plan (ACHMP) for the Northern and Western regions. The ACHMP sets out a consistent approach to Centennial's engagement with the local Aboriginal communities regarding their cultural heritage, as well as identifying consistent minimum standards and processes for Aboriginal cultural heritage identification, monitoring and management across our operations. Each ACHMP sets out a requirement to establish an Aboriginal Heritage Sub-Committee that includes representation from registered Aboriginal groups.

Centennial monitors Indigenous cultural heritage sites to ensure there is no long-term impact on these sites due to mining activities and that any plans to protect sites are in place and continue to be effective.

Our people

Our greatest asset and critical to our success



At a glance

↑ **employees**

↓ **employee turnover**

hosted 18 apprentices and 5 trainees

Ride on

Craig Flynn lives in Lithgow and is currently the Health Safety and Training Co-ordinator at Springvale. Originally a Centennial operator and tradesman, he is enjoying the challenges that come with being part of the Safety and Training department.

Away from Springvale, Craig has been president of the Central Tablelands Mountain Bike club since 2004 as a result of wanting to give something back to a sport he really enjoys.

"I originally became involved in the club through trail advocacy," he says. "I was trying to maintain access and improve access to local trails. From there I began organising races and social events. I get a lot of satisfaction out of seeing people enjoy a trail we have built or an event we have hosted, as well as helping new riders learn skills and seeing local riders progressing through to compete at state and national level." Through the 1980s and '90s the Central Tablelands Mountain Bike club had been involved in state, national and international events but due to the loss of key personnel and difficulties with trail access it went into a hiatus. But working with land managers Craig was able to secure venues and revitalise the club. Lithgow now has been part of the state mountain bike series every year since 2004 and hosted rounds of the national series in 2005-2007, as well as various other large events from endurance races to charity rides.

These events have a direct impact on the community and a Lithgow tourism study found the 2005 National Downhill event injected between $200,000 and $600,000 into the local economy on race weekend. The events also promote the area as a riding destination. "Springvale mine and Centennial Coal have been long-time supporters of our club and their generous donations, both in kind and monetary, have allowed our small club to flourish and compete with much larger clubs around the country while keeping our members' participation costs low," says Craig. "Since 2011 we have been able to offer free entry to local club races to our junior members to help encourage kids into active lifestyles." In 2013 the club took over the running of a large charity ride after the original organising body collapsed. Centennial's support of The Tour de Range allowed the club to grow the event through 2014-15-16 with money raised going directly to individuals at need in the community.

"Centennial is a large part of the Lithgow community and this was reflected in the level of support the community gave back during the Planning and Assessment Committee hearings over Springvale's extension project," says Craig.

Here to help

Originally from the UK, mining engineer Peter Cook now lives in Maitland and has been with Centennial since July 2006.

Peter worked for British Coal in South Wales and Nottinghamshire, but due to the contraction in the UK coal industry he immigrated to Australia in 1993. His first job in Australia was with a contractor developing the drifts for Dartbrook coal mine near Aberdeen. He then worked at several other coal mines within the Hunter Valley in both production and technical roles.

Since 2009, Peter has been Project Manager for the Mandalong Southern Extension Project. Initially this involved exploring for coal, undertaking mine-planning tasks and completing feasibility studies. The final mine layout was then taken through the NSW planning process to obtain development consent and finally a mining lease for the southern extension area.

The project has now moved into a construction phase where an access road for two new ventilation shafts has been built and a section of TransGrid's 330kV transmission line is currently being deviated to allow for future mining at Mandalong.

While working with Centennial, Peter has mentored several graduates and vacation students who have passed through the project team over the years. He volunteers with Centennial's contribution to Meals on Wheels in the Morisset and Toronto areas and he has also mentored young adults through the Community Activities Lake Macquarie driving scheme, Youth Frontiers in Maitland and Max Potential in Cessnock.

Max Potential youth leadership programme pairs young people with volunteer coaches to develop their skills, complete a community service project that will benefit their local area, and obtain a Certificate I in Volunteering.

With Peter as his coach, Kurri Kurri High School student Rhys Field worked to devise a computer programme that helps parents assist Year 8 students with their maths homework.

Peter says being part of Max Potential is a great experience for participants and coaches. "Rhys is making a difference in people's lives," says Peter. "Putting back into the community can be very satisfying, and it's also fun. When you help people you feel good."

As well as being an active member of his local community, Peter also believes in environmental stewardship and powers his home with solar panels and a battery storage system.

Governance

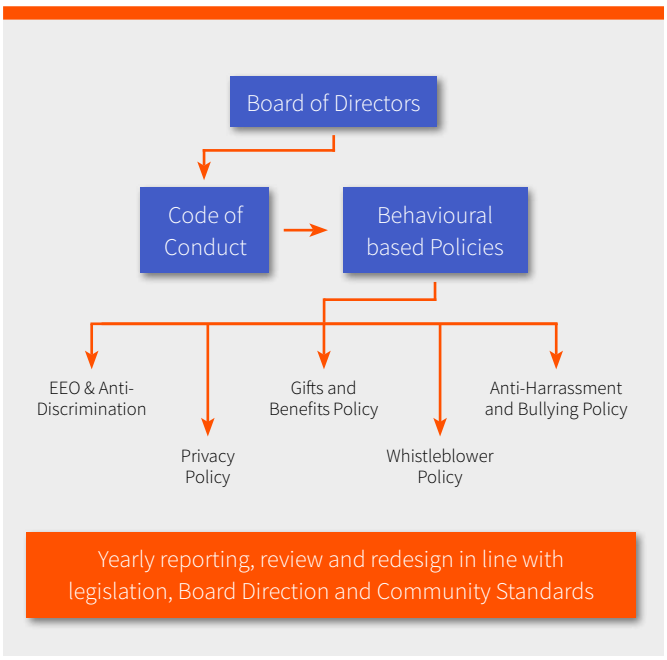
Centennial is a firm believer that our people are critical to our success.

We have formal and informal processes in place to ensure we directly engage with our people in an open, transparent and honest manner. The pathways that exist between management and staff to allow this to occur are:

- annual staff performance development reviews, which provide the opportunity for feedback and improvement
- quarterly reviews of staff performance
- employee surveys
- health, safety and environmental committee (HSEC) meetings
- informal meetings between supervisors and staff.

A programme of regular engagement to discuss prevailing business conditions continued in 2017. This included personal messages from the CEO and a series of regular mine-site discussions facilitated by general managers, mine managers and human resources (HR). Mine managers also hold quarterly mine-performance informations sessions for the workforce.

Centennial has a suite of human resource policies on a variety of issues, including an Employee Code of Conduct, Harassment and Bullying Policy and a Whistleblower Policy. In addition to being a part of the Company's governance framework, these policies also act as protection mechanisms for our people. our policies are provided through our intranet and to new employees through an electronic on-boarding system.



2017 Summary

During July 2017, Centennial undertook a milestone programme of integrating the baseline social values of its parent company, Banpu, into the Centennial ethos. The programme involved all management and staff and for many, this was the first time they had been exposed to the Executive Management of Banpu. More than 280 people interacted directly with the Executive to understand the importance and reverence paid to the corporate social values. The programme is known as the “Banpu Spirit”, and is based on four core values and attributes that characterise Banpu’s corporate culture; those that have delivered great achievements to the Company and will lead to future success:

Innovation Integrity Care Synergy

BANPU spirit

Banpu Spirit will be introduced to the remainder of Centennial's workforce (more than 1200 employees) during 2018.

Centennial has actively participated in the design and structure of a new Banpu Global HR Platform. Recognising the importance of people in our Company, the Global HR Platform seeks to standardise approaches and systems, job grading and descriptions as well as consistent performance review processes. Further development and implementation will occur in 2018.

Employment contracts and Enterprise Agreements (EAs) form the basis for a positive and effective employee/employer relationship. In 2017, the staff management level has agreed on a new employment contract and a number of underground/ site EAs have been agreed. A roster change at Clarence has been successfully implemented after a collaborative approach between mine site management and the union. The change has resulted in an increase in available production time and has been considered as a win-win for both employee and employer.

Training and development is a platform for future success and is an investment in employee development that will provide the basis for succession planning. Our training and development plan enhances our employees' skill sets, grooms future leaders and assists to sustain our values and culture.

Mates at hand

Springvale employees have had to withstand many workplace challenges over recent years, with an eight-week stand-down of operations in 2015 while waiting to secure the appropriate government approvals, through to a court ruling compromising the mine's ability to operate. They have proven themselves to be resilient, committed and loyal. In early 2016 the workforce was faced with another situation that was both sad and confronting, the suicide of a colleague. Thankfully, this was not something many had faced before, however it highlighted the gaps in knowledge and understanding most had with respect to suicide. As a result, Springvale became involved in the "MATES in Mining" programme.

MATES in Mining is an independent charity, fully supported by the unions and the mining industry and is born out of the successful MATES in Construction programme. MATES in Mining is a community development initiative focused on suicide prevention and mental health in the mining industry across Australia.

The MATES programme uses resilience training as a tool to raise awareness about suicide, that we can notice when a MATE may be doing it tough and that we can all be part of the solution.

Support is then provided through clear pathways to assist case management processes that ensure workers in need of help are connected to the appropriate people, and on-site visits by field officers to assist the site.

It uses the simple idea that suicide is everyone's business; building communities of MATES who look out for MATES, who take action because they know what to look out for, engage their MATES to talk with a MATE, and do what MATES do best – help a MATE. Looking out for workmates safety is a fundamental part of work in an underground coal mine, and this programme leverages that and takes it to another level to include mental health.

MATES in Mining provides a programme of training that is unique to mining workers and is designed around the culture and issues associated with the industry. The first part of the programme is a general awareness education module. This has been undertaken by all employees at Springvale. Some 30% of employees have elected to continue to the "connector" model where workers on site can volunteer to help someone in crisis by connecting them to professional help.

MATES in Mining helpline: 1300 642 111.

CASE STUDY

Opportunities and innovations

To support the CEO's concepts of "Year of Design" and "Year of Change", a review of both the senior management and the staff performance management system has commenced. It is intended this modified system will drive attention to our strategic priorities, ensuring all management is aligned with the overall Company expectations. This will be further developed and implemented in 2018.

Our staff employees have the opportunity to undertake diploma courses as part of their career development. The diploma courses provide our people with high level management, safety and project skill. It is from this talent pool that succession plans are developed. Success is evaluated on the attainment of qualification and the application of skills.

Engaged frontline team leaders are essential to develop a workforce that is committed to achieving mutual goals. Consequently, Centennial provides Certificate IV Frontline Management training to improve the leadership and initiative skills of team leaders. This assists them to effectively lead their team members, while achieving a nationally accredited qualification.

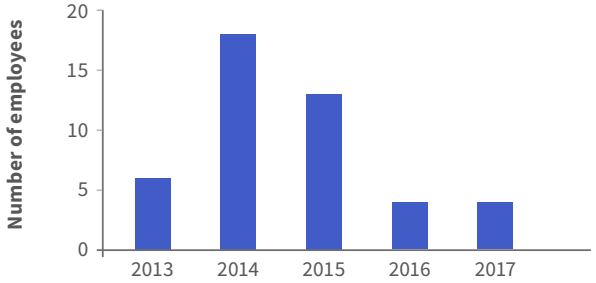
There is an opportunity to improve the processes to capture data about training and development, which we will investigate in 2018.

Key goals and indicators

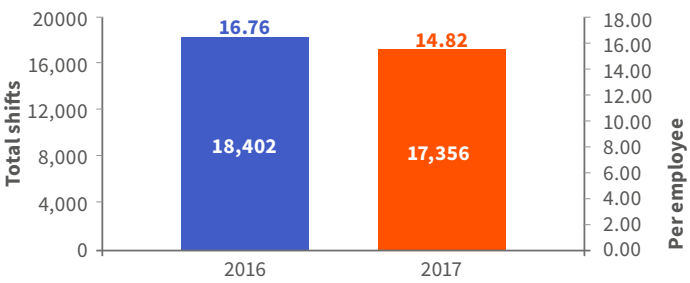
Centennial understands that a high-performing and stable workforce, with low turnover of employees, is crucial for long-term sustainable growth. Total labour turnover of 4% during 2017 remained the same as the previous year, significantly lower than previous years where industry uncertainty was evident.

In 2017 there was an average of 14.82 lost shifts per employee of a total of 17,356 lost shifts, compared to an average of 16.76 lost shifts per employee in 2016, of a total of 18,402 lost shifts. This reduction is a result of proactively and consistently monitoring absenteeism, whilst working with the sites and site managers.

Employee turnover %



Total Lost Shifts (absenteeism)



Lost shifts include personal/carers leave, unpaid leave, absent without leave, workers compensation, rehabilitation work related and rehabilitation non-work related.

Climate change

Centennial's response to climate change is supported by a strategy of active research and engagement of regulators and industry

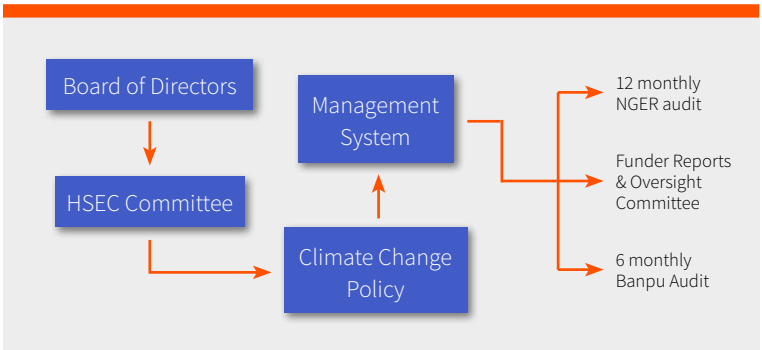
At a glance

↑	↑	1	2
in total emissions	**in emissions rate**	**safeguard exceedance**	**industry leading projects**

Governance

Our response to climate change remains an important and high-priority initiative. Our strategy is to remain actively engaged on this issue with government bodies, industry, peer organisations and research institutes.

Centennial supports an active and effective greenhouse gas (GHG) policy regime that allows Australia to meet its climate change commitments while also providing reliable and affordable fuel for energy.



2017 Summary

There has been an increase in total emissions of greenhouse gas in 2017. Mandalong is the single biggest contributor to greenhouse gas emissions in Centennial. This is due to the methane gas levels in the coal seam. Some of this methane is drained before mining, and in a concentrated form is then able to be flared to convert it to the less potent greenhouse gas, carbon dioxide. The remaining gas emission is in a dilute form, known as ventilation air methane (VAM). There is currently no proven safe and effective means of mitigating this VAM. In 2017, the mine experienced a geological change in the mining and surrounding strata. This change came with significantly increased levels of methane gas at the higher end of the drainage system capability. As the flaring system can cause periodic disruptions to the drainage system, the safest option for the mine was to shut down the flaring system. This reduced the risk of gas build-up in the mine, but resulted in greater levels of emissions than the safeguard limit allowed for and increased the total emissions for Centennial. As the greenhouse emission rate per tonne of coal produced was lower than previous years, the mine was granted a variation to exceed the safeguard baseline for 2017.

As mentioned there is no proven safe and effective means of mitigating VAM. However, Centennial has been involved with two research and development (R&D) projects to attempt to provide a safe and effective mitigation. These R&D projects have involved the use of reverse thermal oxidation technology to convert dilute methane to carbon dioxide. The longest-running project, funded by Coal Innovation NSW, has reached a significant decision point. It is a 10-15m3/sec demonstration unit that has been built at Mandalong. Research to date has identified structural and design improvements that would be needed to allow appropriate operation of the unit to sustained experimentation. In parallel, the other R&D project funded by the Commonwealth Coal Mine Abatement Technology Support package (CMATS) and the Australian Coal Association Low Emissions Technology (ACALET), has identified a more effective pathway, to answering the research proposition of proving a safe and effective mitigation, than on-site demonstration. The two projects have come to a mutual decision point as to how best to answer the research proposition moving forward. It is hoped that a decision on the future of the research can be made and then progressed in 2018.

Opportunities and innovations

With the increased high concentration gas at Mandalong there is an opportunity to use it for electricity generation. In 2018, Centennial will work with a third-party expert to examine the commercial and practical realities of turning mine gas into electricity.

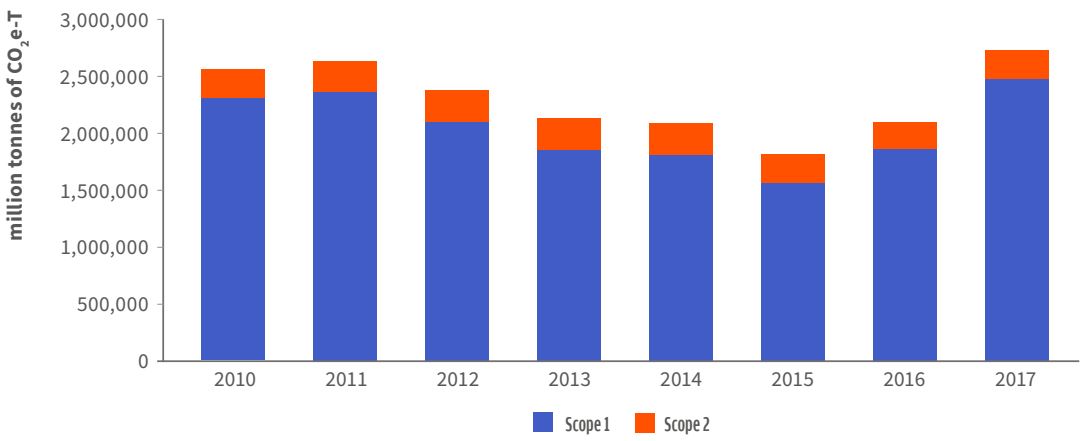
Energy future

As a large industrial energy user, Centennial has not been immune to the significant upswing in electricity supply costs. As a result, Centennial has commenced a feasibility assessment of solar generation for self consumption. Centennial holds significant land holdings and has substantial existing electricity reticulation systems; both of which form a solid basis for establishment of solar systems. This feasibility will be developed further in 2018.

CASE STUDY

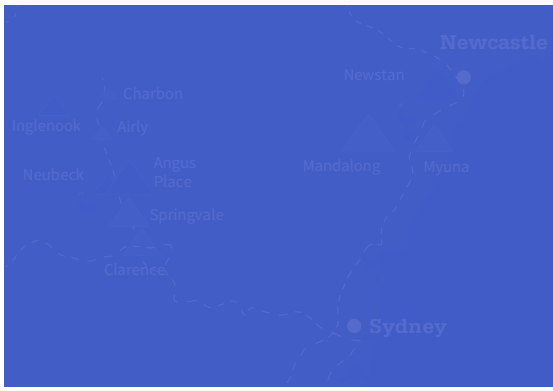
Key indicators

Greenhouse gas emissions



Scope 1 emissions - direct emissions from within the organisation's boundary

Scope 2 emissions - indirect emissions from purchased electricity



Airly

"2017 was a pivotal year for Airly. The mine produced its highest recorded annual tonnage, significantly without environmental or safety incident. This success is due to the commitment and dedication of the Airly workforce."

Dennis Wallace, Mine Manager

HIGHLIGHTS

There were a number of records achieved in 2017:

Our **best total** recordable injury performance

Our **lowest** recorded injury severity rate

Highest recorded annual tonnage

Highest recorded annual sales

Behind the scenes some important milestones were reached in the subsidence monitoring arena with the cessation of the pillar stability monitoring in our 200 panel. No impacts of any kind have been noted as a result of mine subsidence during 2017 due to the very small movements involved.

Environmentally, our focus continued to further improve water management and efficiency. Only one water discharge event occurred after an intense rainfall event late in the year, which was only slightly above the required limits

Throughout the year Airly was subject to multiple audits from the Resources Regulator, with no significant issues being identified.

The mine experienced better than anticipated geotechnical conditions. Predictive monitoring, proactive and well-informed on-ground management and a newly revised Strata Management Plan prevented any risk to personnel after a minor roof-fall.

Extraction was completed in 120 Area without strata incident. Pillar monitoring in this area showed rapid development of pillar stability after quartering. This confirmed the pillar design parameters were appropriate.

Areas for focus

To assist in the proactive monitoring of subsidence, Airly commenced the implementation of the remote subsidence monitoring. LIDAR and 3D photogrammetry monitoring commenced in June and a second round was completed in December. We await results for comparison of the two sets of images to determine natural background movements of the cliffs and pagoda features.


PORTAL 4


ONE
WAY


© Osm Photography

Springvale

"With the challenge to our right to operate, we know this year has been a traumatic time for our workforce, their families and the local community, and we acknowledge the support of all advocates. We are thankful that our future at Springvale has now been secured."

Brian Nicholls, Mine Manager

HIGHLIGHTS

1. Focus on visible leadership, developing relationships and giving timely and concise information during a period of uncertainty for the workforce.

2. Recorded a "mine best" longwall relocation from LW420 to LW421.

3. Introduced the MATES in Mining programme, an initiative focused on suicide prevention and mental health in the mining industry across Australia.

4. Adaptive management applied to allow a change in the mine plan and movement into the southern lease area ahead of plan.

5. **Record breaking year**

   Productivity and optimisation improvements contributing to a **50% improvement** in development operating rates.

6. Successful management of floor heave removal through the introduction of a task-specific continuous miner.

Areas for focus

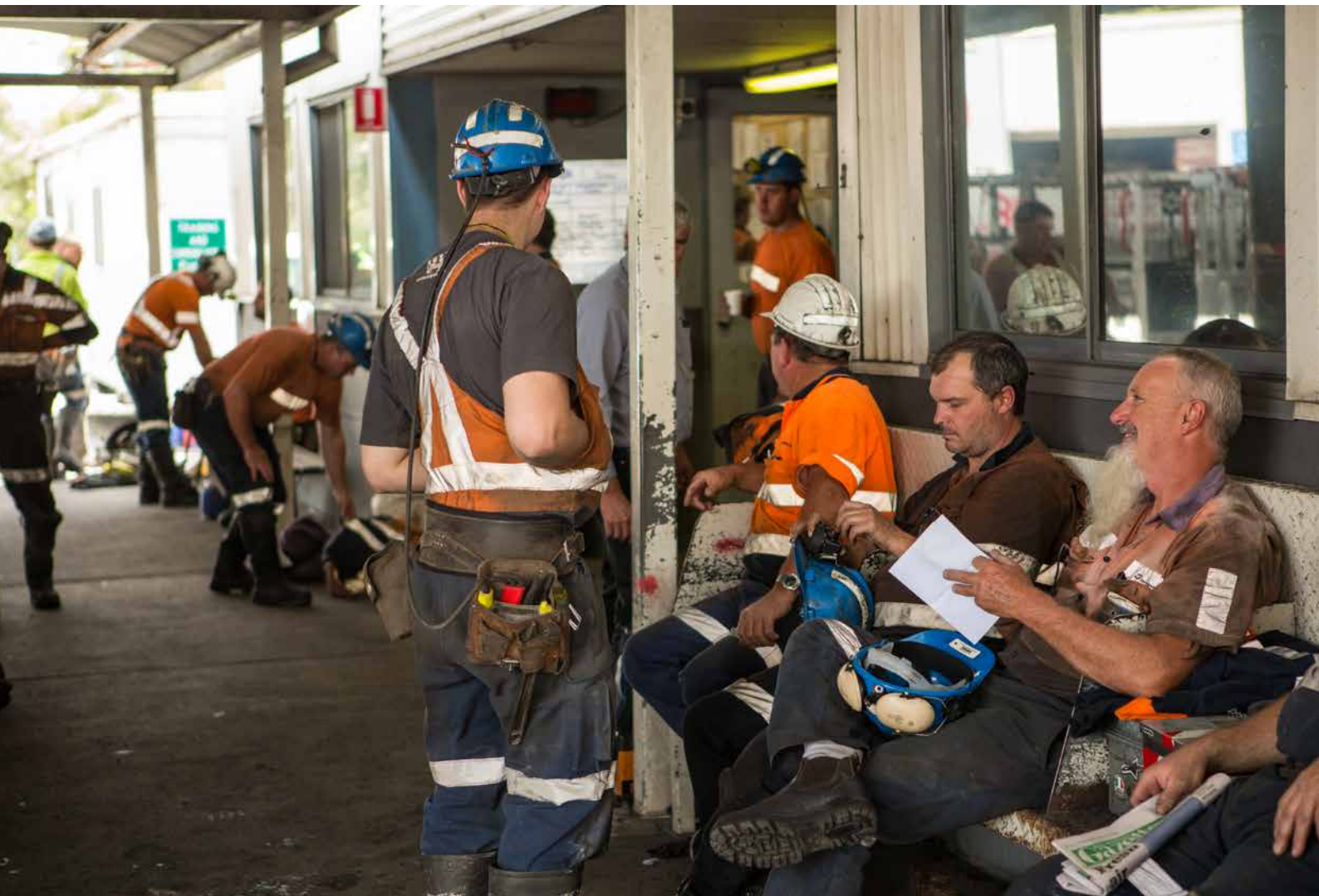
While there were no significant incidents, safety performance was disappointing in 2017. A change in reporting processes and proactive approach to describe all return-to-work options to doctors has commenced. Together with visible leadership and the Safety Poster Campaign, this will form the basis for improved performance in 2018.

Seek faster, safer and more reliable drilling and bolting by working with Komatsu on the automation of drilling through the electro-hydraulic bolter project.

Working with major mine supplier Komatsu to develop and implement Continuous Miner automation.

Continue to work with EnergyAustralia and support Veolia (water treatment plant constructor and operator) to deliver the Springvale Mt Piper water treatment plant.


PTS23



Clarence

"While 2017 was not an easy year for Clarence, with difficult and unusual geology to navigate, the hard work carried out places the mine in a good position to achieve its goals in 2018."

Jacques Le Roux, Mine Manager

HIGHLIGHTS

1. Introduced the Safety Poster Campaign as a form of personalising work place safety. The total recordable injury frequency rate was reduced when compared to the 2016 rate.

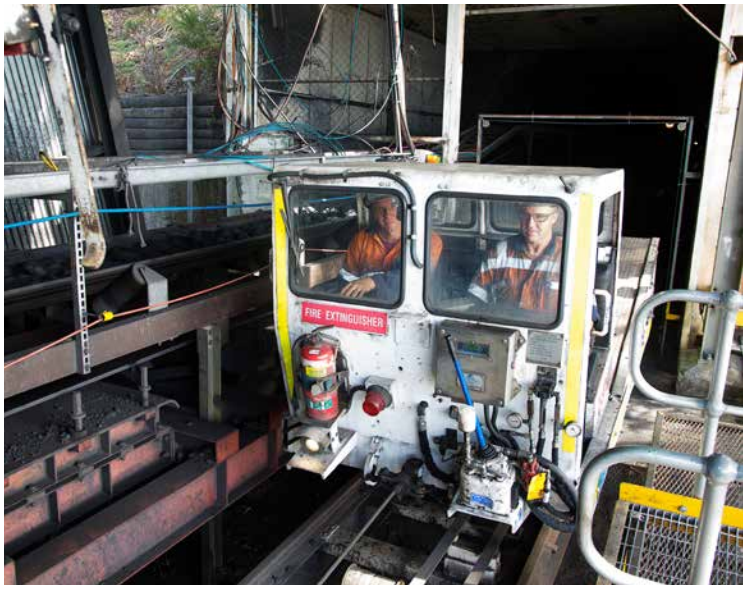
2. Geology was challenging, causing significant disturbances in the mine. Along with faults, dykes and very hard coal, a unique feature was intersected – a diatreme measuring some 600m by 200m. This is a volcanic feature that is very unusual in the sedimentary geology of coal mines and typically more associated with diamond deposits. This particular diatreme had low magnetic susceptibility and therefore was difficult to identify in pre mining geological assessment. Detailed geological investigations together with the flexibility of the mining system and adaptability of the workforce reduced the impact on total production results.

3. The FCT had another successful year with operational availability greatly improved after its rebuild in 2016.

4. Successfully completed a significant overhaul programme for mobile fleet, on time and on budget.

5. Industrial relations were positive as employees and management worked together to implement a new, more efficient roster and reduce absenteeism.

6. Worked in consultation with the EPA to finalise new discharge limits on water released from the mine. The new limits are more stringent and require ongoing improvements to the existing water treatment plant. However, performance has been good even with the more stringent requirements.



Areas for focus

While there were no significant incidents, safety performance was disappointing in 2017 with an increase in lost time injuries when compared to 2016. The mine will seek ways of being even more proactive in this area. The mine looks forward to welcoming back Ben Houlison, a former employee injured in a site incident in 2006, as part of his advocacy role for industrial workplace safety for Work Cover NSW, to deliver a safety talk to our employees in early 2018.

Reject management will be a focus through avoidance (loading fine coal as product rather than treating as waste), construction of a new emplacement area (REA) and rehabilitation of REA 3.

Continued improvement in water discharge quality through water treatment plant changes as well as investigating alternative uses for water.

Preparing for another overhaul of the FCT to maintain higher levels of productivity and efficiency.

Mandalong

"2017 has been a challenging year, particularly due to the unexpected increase in methane gas levels. Mandalong Mine has risen to the challenge, with improvements in gas capture, gas plant capacity and levels of methane destruction. During the period, Mandalong commenced longwall development in the Southern Extension Area, with first longwall extraction in the area to commence in early 2019."

John Turner, Mine Manager

HIGHLIGHTS

1. Extracted Longwalls 21, 22 and commenced extraction of Longwall 23. During this time responded to the challenges of increased methane levels with operating systems designed to maximise production whilst maintaining methane concentrations at an acceptable level.

2. Made significant improvements to capacity of gas drainage infrastructure and underground drainage systems in response to the increased levels of methane being experienced during longwall retreat. During this time gas flare performance was optimised with methane destruction levels at record levels.

3. Led Centennial in the development and implementation of a revised incident investigation form.

4. Conducted a Bowtie analysis of a major risk area that was the first stage of Critical Control Management within Centennial.

5. Commenced development of the first longwall in the Southern extension area, Longwall 25, with exploration confirming it can reach its design length.

6. Commenced working with a supplier to install gas-fired electricity generation.

7. Commenced the construction of the Mandalong South shaft access road and shaft site.

8. Senior staff trained in Work Health & Safety Prosecutions, Compliance and Enforcement in response to new WHS legislation.

9. Implemented improved dust suppression for the longwall through new technology.

Areas for focus

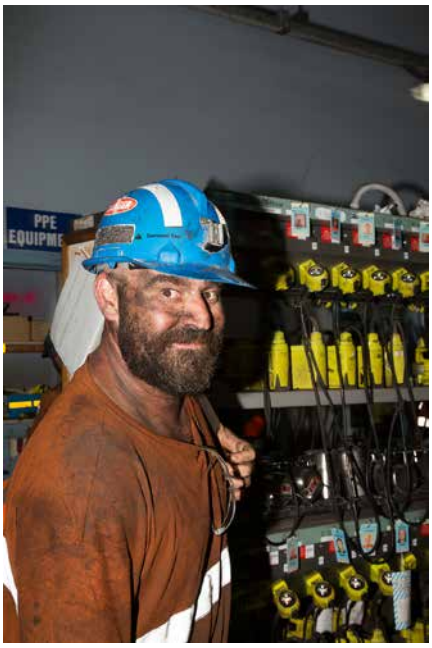
Continuing work on understanding mechanisms of injury and prevent workplace injuries.

Continue work on methane management in response to the unexpected increase.

Introduction of a time-management system.

Development of process-map automation.

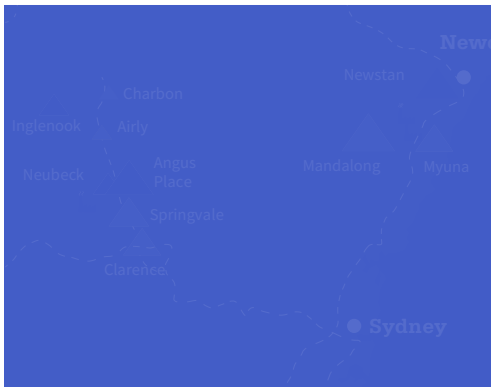
Challenge the effectiveness and value of contractors throughout the business.



MANDALONG WINS FIRST AID COMP

Ten teams comprising rescue brigadesmen, emergency-response and first aid officers participated in a series of complex and simulated scenarios ranging from burns and breaks to amputation and snakebite. The scenarios were as close to real life as possible and required teams to manage environmental and equipment hazards as well as multiple injuries and distressed casualties.

The Mandalong team also won a number of individual challenges. The team demonstrated exceptional skills, and the tightly contested competition reassured those working in the mining industry that they will be well attended to should they find themselves in an emergency situation.



Myuna

"While 2017 was a challenging year for Myuna, the mine continued to build towards being a long-term sustainable operation. A third super unit will enable us to record our highest production year ever and place the mine in a good position to achieve its goals in 2018 and beyond."

Mal Yule, Mine Manager

HIGHLIGHTS

1. Introduced second super unit, consisting of two bolter miners in one panel, with a year-on-year improvement of 312,000 tonnes compared with 2016.

2. Due to challenging geological conditions, Myuna suspended coal production in the Great Northern seam, and relocated all the production units to the Fassifern seam. To facilitate this, Myuna had to construct three inter-seam ventilation shafts, which were completed in-house.

3. The mine had an extensive overhaul programme focusing on the equipment required for the two implemented super units.

4. Implemented a weekend night shift roster in two of the three operational panels. This reduced the “not scheduled” time of the operation by more than 10%, which increased the operating time accordingly.

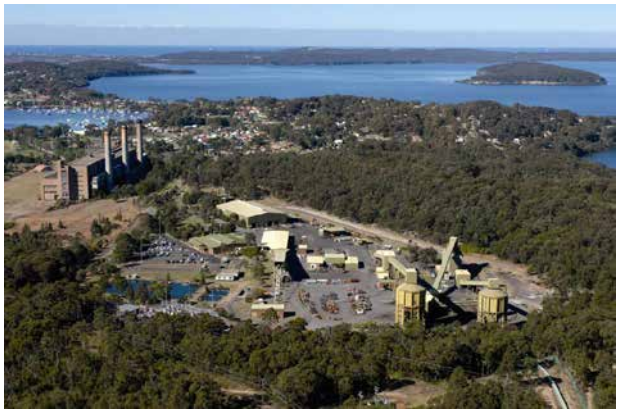
5. Safety performance showed an improvement in 2017. $41 million saved from equipment exchange.

6. No reportable environmental incidents or non-compliances in 2017, down from two in 2016, and no community complaints during 2017.

Areas for focus

Complete the implementation of the third super unit, scheduled for early 2018.

As part of a statewide approach, the Resource Regulator undertook various targeted assessment programmes (TAP) and planned inspections at Myuna. As a result, the Regulator issued a number of improvement notices, which will be areas for focus in 2018.



MYUNA WINS AWARD FOR MINING INNOVATION

The Myuna herringbone system was recognised at the 2017 Australian Mining Prospect Awards for its ability to provide a safe and sustainable solution to a highly constrained site experiencing reduced productivity.

The dual-bolter miner super panel was selected as the mining method. The Myuna-designed herringbone system involved unsupported cuts for improved strata control, which lowered costs and also increased productivity by 80%. The herringbone system has also significantly improved workforce culture. Due to the ease of the mining system as a result of the structured cut-and-bolt process, manual handling has reduced and conditions improved.

It enables the mine to continue to meet the coal quality needs of its customer, Eraring Power Station, and provide long-term secure employment.

FACTS & FIGURES

Reduction in strata control costs by up to 85% of cable bolt support.

Greater than 80% improvement in productivity.

Significantly reduced the amount of machine movements with the bolter miners and the downtime associated with road repairs.

Roster changes resulting in a 50% increase in planned maintenance time.

Non-operating sites

Angus Place – care and maintenance

"Although our mine is on care and maintenance, a considerable amount of work continues at Angus Place. We continue to focus on future access and safety by completing a detailed programme of secondary support in the Angus Place East pit bottom area, with the installation of almost 9,500 bolts. As testament to our sustainability mindset, this project came in under budget. Mine ventilation has been improved after we successfully recovered the shaft following a previous failure. Our focus on compliance remains, with the requirements for Safety Management System components under the new Work Health and Safety legislation being addressed and, reflecting the focus and importance given to water management by mine-site personnel, no environmental incidents occurred during 2017. Our community engagement remains important in this stage of care and maintenance and the committee forum is working well. To be sustainable, the mine needs a future plan that addresses fiscal, environmental and social imperatives. To that end, we have commenced an assessment of future feasibility of mining in the Angus Place East area. Our team is small, but dynamic and committed and we look forward to continuing to contribute to Centennial." **Terry O'Brien, Mine Manager**

Newstan – care and maintenance

"Since Newstan moved to care and maintenance in 2014, we have worked on maintaining standards in safety and environmental performance. The site has been lost time injury (LTI) free since 2014, with our co-existing operation of Northern Coal Services having been LTI free for more than five years. For the first year since the introduction of an environment protection licence, we have been fully compliant with that licence. This is due to continual improvement of site water management infrastructure and practices. We are taking a sustainability mindset into designing the Newstan Extension Project – seeking a future-proof mine where cost-effective coal is extracted, energy is generated on site and greenhouse emissions are minimised." **Grant Watson, Mine Manager**

Charbon – rehabilitation

"As we seek to rehabilitate the Charbon site, a number of legacy issues associated with a mine that is more than 90 years old require close and careful management. In 2017, relevant and contemporary approvals were issued for old reject emplacement areas, a new mine operations plan focusing on a five-year rehabilitation programme was approved and implemented and progressive rehabilitation has brought about good results in the southern areas. There is a small team of people working at the Charbon site and there have been no safety incidents in 2017. Effective and compliant environmental management in the rehabilitation phase remains our biggest focus." **Bob Miller, Mine Manager**

David Moult was CEO and managing director of Centennial for seven years before he stepped down in April 2017. Before this David was the chief operating officer for Centennial for many years, joining the Company after stints in the US and his native UK. His contribution to the success of Centennial is both substantial and significant.

Bob Miller, a long-serving senior member of the Centennial team, has retired afer 50 years in mining. Undoubtedly a familiar face to many in the industry, Bob worked at Lithgow, South Coast and internationally. He was a special part of Centennial and his knowledge, guidance and mentoring ability is appreciated and valued.

RECOGNITIONS

Memberships

Company	Position Held by Employee
ACARP Committee re collision avoidance and Proximity detection for underground coal mining machines	Committee Member
ACARP Underground Strata	Industry Advisor
Australian Coal Association Limited Project (ACARP)	Director
Australian Coal Association Limited Project (ACARP) - Research Committee	Member
Australian Coal Association Limited Project (ACARP) - Underground Committee	Member
Australian Coal Association Low Emissions Technology Pty Ltd (ACALET)	Chair
Coal Mining Abatement Technology Support Package (CMATSP) - Project Oversight Committee	Member
Coal Services - NSW Mines Rescue Working Group	Group Member
Coal Services - Airborne Contaminants and Diesel Particulate Sub Committee	Committee Member
Coal Services Pty Limited	Chair
Coal Services Pty Limited - Finance and Investment Committee	Member
Coal Services Pty Limited - Audit and Risk Management Committee	Member
Coal Services Pty Limited - Mines Rescue Board	Chair
Dept. Trade and Investment - Mine Safety/Competency Unit	Convenor of the Undermanager examination panel
Engineers Australia Organisation	Assessor
Executive Committee NSW Minerals Council	Committee Member
Hunter Medical Research Institute Foundation	Committee Member
Hunter TAFE Foundation	Director
MCA Climate Change Committee	Committee Member
MCA Coal Forum	Member
MCA OHS Committee	Committee Member
Mine Managers Association of Australia	Vice-President
Mining Competence Board	Board Member
NCIG Holdings Pty Limited	Director
Newcastle Coal Infrastructure Group (NCIG)	Director
Newcastle Knights Pty Ltd	Director
NSW Freight Advisory Council	Advisory Council Member
NSW Minerals Council Board	Director
NSW Minerals Council Environment and Community Committee	Committee Member
NSW Minerals Council OHS Committee	Committee Member
NSW Underground Geotechnical Society (NUGS)	Executive Committee Member
Port Kembla Coal Terminal Limited	Director
University of Queensland Centre for Mined Land Rehabilitation Advisory Board	Member (advisory position only)
Westpac Rescue Helicopter Service	Director

Performance data – people

People	2013	2014	2015	2016	2017
Number of employees					
Male	1,717	1,493	1,353	1,415	1,496
Female	64	59	56	58	63
Total	1,781	1,552	1,409	1,473	1,559
Number of employees by employment category[1]					
Mine workers	808	712	630	645	689
Electrical Trades	178	149	133	139	148
Mechanical Trades	215	176	158	171	180
Washery	12	24	24	44	44
Deputies	173	147	131	134	143
Staff – Male	290	249	240	251	260
Staff – Female	56	51	51	51	57
Senior Management – Male	41	36	37	31	32
Senior Management – Female	8	8	5	7	6
Number of employees by region					
North	879	770	712	741	797
West	860	747	664	699	731
Sydney	42	35	33	33	31
Number of employees by employment type					
Permanent	1,750	1,533	1,397	1,415	1,488
Fixed term	13	1	0	46	57
Part time	18	18	12	12	14
Employee Age Distribution (years)					
Under 30	254	200	173	170	184
30-39	424	402	368	380	415
40-49	436	406	377	404	435
Over 50	667	544	491	519	525
Number and rate of employee turnover by gender[2]					
Total number and per cent	111 (6%)	286 (18%)	184 (13%)	51 (4%)	65 (4%)
Male	106 (95%)	279 (98%)	180 (98%)	50 (98%)	62 (95%)
Female	5 (5%)	7 (2%)	4 (2%)	1 (2%)	3 (5%)
Number and rate of employee turnover by age group					
Under 30	10 (9%)	42 (15%)	15 (8%)	13 (25%)	11 (17%)
30-39	10 (9%)	32 (11%)	28 (15%)	9 (18%)	10 (15%)
40-49	14 (13%)	39 (14%)	26 (14%)	8 (16%)	7 (11%)
Over 50	77 (69%)	173 (60%)	115 (63%)	21 (41%)	37 (57%)
Number and rate of employee turnover by region					
North	63 (57%)	136 (48%)	62 (34%)	21 (41%)	26 (40%)
West	47 (42%)	144 (50%)	117 (64%)	30 (59%)	34 (52%)
Sydney	1 (1%)	6 (2%)	5 (2%)	0 (0%)	5 (8%)
Number and rate of new employee hires by gender					
Total number	67	46	22	108	150
Male	66 (99%)	44 (96%)	20 (91%)	105 (97%)	142 (95%)
Female	1 (1%)	2 (4%)	2 (9%)	3 (3%)	8 (5%)
Number and rate of new employee hires by age group					
Under 30	38 (57%)	18 (39%)	11 (50%)	45 (42%)	60 (40%)
30-39	13 (19%)	17 (37%)	7 (32%)	27 (25%)	51 (34%)
40-49	7 (10%)	8 (17%)	3 (14%)	16 (15%)	27 (18%)
Over 50	9 (13%)	3 (7%)	1 (4%)	20 (18%)	12 (8%)
Number and rate of new employee hires by region					
North	41 (61%)	38 (83%)	11 (50%)	48 (44%)	81 (54%)
West	24 (36%)	8 (17%)	10 (49%)	60 (56%)	67 (45%)
Sydney	2 (3%)	0 (0%)	0 (0%)	0 (0%)	2 (1%)

[1] Female employees are staff or senior management
[2] Voluntary and retrenched employees

Performance data – environment

Product	Unit	2013	2014	2015	2016	2017
Product – by type						
ROM	Tonnes	17,629,305	19,095,875	15,402,771	14,911,562	14,728,636
Saleable coal	Tonnes	16,511,925	17,956,223	14,589,925	14,480,144	14,227,876
Material						
Material – by type						
Lubricant oil	Litre	1,593,137	1,319,217	1,144,987	1,046,009	1,021,480
Lubricant grease	Kg	46,810	64,801	48,580	19,626	14,341
SF6 (Company)	Kg					175
Energy						
Energy consumption – by fuel type						
Direct energy						
Coal	GJ	0	0	0	0	NA
Diesel (Company)	GJ	172,590	162,026	142,924	129,491	144,191
Diesel (Contractor)	GJ	213,056	194,704	109,601	46,139	79,686
Gasoline (Company)	GJ	4,937	4,706	3,819	4,046	3,444
Gasoline (Contractor)	GJ					NA
Waste gas	GJ	0	0	0	0	NA
Natural gas	GJ	0	0	0	0	NA
Biomass	GJ	0	0	0	0	NA
Solar	GJ	0	0	0	0	NA
Wind	GJ	0	0	0	0	NA
Hydro	GJ	0	0	0	0	NA
Geothermal	GJ	0	0	0	0	NA
Indirect energy						
Electricity purchased (Company)	GJ	1,149,665	1,155,540	1,068,839	1,010,749	1,074,774
Electricity purchased (Contractor)	GJ					NA
Heating purchased	GJ	0	0	0	0	NA
Cooling purchased	GJ	0	0	0	0	NA
Steam purchased	GJ	0	0	0	0	NA
GHG Emissions						
Direct (Scope 1) GHG emissions [1]						
CO_2	Tonnes of CO_2e	106,015	95,828	84,533	85,211	82,418
CH_4	Tonnes of CO_2e	1,765,182	1,733,414	1,495,085	1,800,277	2,419,855
N_2O	Tonnes of CO_2e	82	88	68	58	62
HFCs	Tonnes of CO_2e	0	0	0	0	NA
PFCs	Tonnes of CO_2e					NA
SF_6	Tonnes of CO_2e	42	39	42	39	35
NF_3	Tonnes of CO_2e					NA
Biogenic CO_2	Tonnes of CO_2e	0	0	0	0	NA
Indirect (Scope 2) GHG emissions [1]						
Total GHG emissions (Scope 2)	Tonnes of CO_2e	279,357	277,623	252,647	235,841	249,446
Indirect (Scope 3) GHG emissions [2]						
Total GHG emissions (Scope 3)	Tonnes of CO_2e	40,731,348	45,608,668	36,971,653	36,492,690	35,930,303

[1] Centennial currently uses Global Warming Potentials (GWP) from the Intergovernmental Panel on Climate Change (IPCC) Assessment Report 4 (AR4)
[2] Our Scope 3 emissions have been calculated in line with the National Greenhouse Account Factors (July 2017)

Air Quality	Unit	2013	2014	2015	2016	2017
Air emissions – by type						
NOx emission	Tonnes				230	190
SOx emission	Tonnes				0.2	0.13
Persistent organic pollutants (POP) emission	Tonnes				0	NA
Volatile organic compounds (VOC) emission	Tonnes				26	25
Particulate matter (PM) emission	Tonnes				340	349
Water Resource						
Water withdrawn – by source						
Surface fresh water	ML					NA
Salt/blackish water	ML	0	0	0		NA
Ground water	ML	0	0	0		21
Rain water	ML	398	150	47	52	48
Waste water from external organization	ML	0	0	0		NA
Municipal water	ML	620	640	655	634	544
Mine water	ML	3,362	4,052	4,230	1,433	1,512
Other source (please specify)	ML					
Water recycled and reused						
Recycled back in the same process	ML	290	329	232	155	521
Recycled and reused in different process	ML					
Effluent						
Water discharged – by destination						
Reused by external organization	ML	0	0	0	0	0
Subsurface water	ML	0	0	0	0	0
Surface water	ML	12,074	17,938	19,220	22,527	16,578
Ocean	ML	0	0	0	0	0
Sewer	ML	0	0	0	0	0
Compliance status of water quality						
pH	% Compliance status				99.5%	100.0%
TSS	% Compliance status				99.3%	99.9%
Fe	% Compliance status				100.0%	100.0%
Mn	% Compliance status				100.0%	100.0%
Arsenic	% Compliance status				79.4%	100.0%
EC	% Compliance status					99.9%
Cobalt	% Compliance status					99.9%
Nickel	% Compliance status					99.9%
Zinc	% Compliance status					99.9%
Land						
Land disturbed and rehabilitated						
Amount of land own	Hectare	16,392	16,197	16,042	15,958	15,335
Accumulated area disturbed	Hectare	821	1,007	1,038	1,056	992
Area disturbed during the year	Hectare				1	19
Accumulated area rehabilitated	Hectare				NA	NA
Area rehabilitated during the year	Hectare	22	21	13	11	102

Biodiversity	Unit	2013	2014	2015	2016	2017
High biodiversity area & BMP						
High biodiversity area						
Number of sites owned or operated by company	Site	7	6	6	5	5
Number of site operations located inside protected area	Site				0	0
Number of site operations located adjacent to protected area	Site				0	0
Number of site operations contain portion of protected area	Site				5	5
Number of site operations located in relation to high biodiversity area outside protected area	Site					0
BMP implementation						
Sites operations implemented Biodiversity Management Plan (BMP)	Site				3	5

Waste						
Hazardous waste - by disposal						
Reuse	Tonnes	0	0	0	0	0
Recycle	Tonnes	1,465	1,137	743	743	722
Recovery (including energy recovery)	Tonnes	0	0	0	0	0
Incineration	Tonnes	0	0	0	0	0
Deep well injection	Tonnes	0	0	0	0	0
Landfill	Tonnes	0	0	0	0	0
On-site storage	Tonnes	1,360	2,032	1,326	2,532	2,256
Other (please specify)	Tonnes	28	19	11	15	254
Non-hazardous waste - by disposal						
Reuse	Tonnes	0	0	0	0	0
Recycle	Tonnes	2,536	1,733	2,411	1,459	1,236
Compositing	Tonnes	0	0	0	0	0
Recovery (including energy recovery)	Tonnes	0	0	0	0	0
Incineration	Tonnes	0	0	0	0	0
Deep well injection	Tonnes	0	0	0	0	0
Landfill	Tonnes	2,552	2,909	2,509	2,404	2,372
On-site storage	Tonnes	0	0	0	0	0
Other (please specify)	Tonnes	0	0	0	0	0
Transport of hazardous waste						
Hazardous waste transported						
Hazardous waste imported from external sources	Tonnes				0	0
Hazardous waste exported to external sources	Tonnes				758	976
Hazardous waste transported among the company's sites	Tonnes				0	0
Hazardous waste treated						
Hazardous waste treated within company	Tonnes				2,532	2,256
Hazardous waste treated outside company	Tonnes				758	976

Tailings & Mineral Waste	Unit	2013	2014	2015	2016	2017
Tailings						
Tailings generated	Tonnes dry weight				322,843	333,596
Mineral waste (overburden)						
Total overburden generated	BCM	0	0	0	0	0
Potential Acid Forming (PAF) material generated	BCM	2,536	1,733	2,411	1,459	1,236
Significant spill - by material						
Oil spill	Case	0	0	0	0	0
	Litre	0	0	0	0	0
Waste spill	Case	0	0	0	0	0
	Litre	0	0	0	0	0
Chemical spill	Case	0	0	0	0	0
	Litre	0	0	0	0	0
Tailings spill	Case	0	0	1	0	0
	Litre	0	0	180,150	0	0
Others spills (please specify)	Case	0	0	0	0	0
	Litre	0	0	0	0	0
Return on Environmental Investment						
Environmental expenditures						
Capital investment	AUD	15.0 M	1.9 M	0.6 M	0.8 M	1.2M
Operating expense	AUD	11.1 M	11.1 M	12.7 M	13.0 M	14.6M
Compliance						
Environmental non-compliance [3]						
Significant fines/penalty ($15,000 and above/case)	Case	0	2	1	2	2
	AUD	0	245,000	1,153,000	30,000	30,000
Non-monetary sanctions	Case				0	2

[3] Centennial reported four significant non-compliances in 2016. On review and additional clarification of the meaning of "significant non-compliances" by Centennial's parent company Banpu ($15,000 and above), at the end of 2017 Centennial reviewed the number of non-compliances from four to two. Additionally non-compliances are recorded against the year the incident occurred for consistency and not when a fine was levied.

Performance data – financial

Financial	2013	2014	2015	2016	2017
Saleable Production (million tonnes)	16.5	18	14.6	14.5	14.2
Sales Revenue ($ million)	1,171	1,243	973	1,039	1,317
EBITDA – Earnings before interest, tax, depreciation & amortisation ($ million)	144	246	131	177	343
NSW Government Royalty ($ million)	77.6	87.6	69.0	67.0	84.5

Performance data – safety

Data	Unit	2014			2015			2016			2017		
		Employee	Contractor	Combined	Employee	Contractor	Combined	Employee	Contractor	Combined	Employee	Contractor	Combined
Fatal Injuries	Person	0	0	0	0	0	0	0	0	0	0	0	0
Lost Time Injury (LTI)	Person	37	6	43	22	1	23	37	0	37	28	7	35
Restricted Work Duty Injury (RWDI)	Person			0			0			0	104	16	120
Medical Treatment Injury (MTI)	Person										22	3	25
First Aid	Person			0			0			0	100	16	116
Near miss	Case			0			0			0	2	0	2
Total Recordable Injury (TRI)	Person	287	18	305	191	10	201	195	5	200	154	26	180
Working Time	People Hour	3,949,168	685,826	4,634,994	3,137,188	690,087	3,827,275	2,710,279	549,445	3,259,724	2,589,765	732,391	3,322,156
TRI Frequency Rate													
TRIFR	Person/ million people-hour	72.67	26.25	65.80	60.88	14.49	52.52	71.95	9.10	61.35	59.46	35.50	54.18
LTI Frequency Rate													
LTIFR	Person/ million people Hour	9.37	8.75	9.28	7.01	1.45	6.01	13.65	0.00	11.35	10.81	9.56	10.54
Lost Day	Day			0			0			0	2,969		2,969
Lost Time Rate	Day/ million people hour	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,146.44	0.00	893.70
Occupational illness	Person			0			0			0			0
Total Recordable Occupational illness	Person/ million people hour	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Content index

GRI Disclosure	Omissions	Other source or comments	Page no.
Universal standard disclosures			
Organisational profile			
102-1 Name of the organisation		Centennial Coal Company Limited	
102-2 Activities, brands, products and services		Centennial Coal – Who We Are http://www.centennialcoal.com.au/About-Us/Who-We-Are.aspx ASIC – Statutory Accounts	
102-3 Location of headquarters		Level 18, 1 Market Street Sydney NSW 2000 Australia	
102-4 Location of operations		Centennial Coal – Who We Are http://www.centennialcoal.com.au/About-Us/Who-We-Are.aspx ASIC – Statutory Accounts	
102-5 Ownership and legal form		Centennial Coal – Who We Are http://www.centennialcoal.com.au/About-Us/Who-We-Are.aspx ASIC – Statutory Accounts	
102-6 Markets serviced		Centennial Coal – Who We Are http://www.centennialcoal.com.au/About-Us/Who-We-Are.aspx ASIC – Statutory Accounts	
102-7 Scale of the organisation		Centennial Coal – Who We Are http://www.centennialcoal.com.au/About-Us/Who-We-Are.aspx ASIC – Statutory Accounts	
102-8 Information on employees and other workers			28-31, 46
102-9 Supply chain			15
102-13 Membership of associations			45
Strategy			
102-14 Statement from senior decision-maker			3
Ethics and integrity			
102-16 Values, principles, standards and norms of behaviour		Centennial Coal – Who We Are http://www.centennialcoal.com.au/About-Us/Who-We-Are.aspx Code of conduct and HR policies are available to all employees on our intranet.	
102-17 Mechanisms for advice and concerns about ethics		Centennial has a Policy and Strategy that details its approach to managing potential improper conduct, including whistleblower protection and options for reporting. Centennial subscribes to an anonymous and independent fraud and misconduct whistleblower reporting hotline.	

GRI Disclosure	Omissions	Other source or comments	Page no.
Governance			
102-18 Governance structure			8
Stakeholder engagement			
102-41 Collective bargaining agreements		77% of the workforce are covered by collective bargaining agreements	
102-43 Approach to stakeholder engagement			24
Reporting practice			
102-46 Defining report content and topic Boundaries	Explanation of topic Boundaries Explanation of Reporting Principles		5
102-47 List of material topics			5
102-48 Restatements of information			50
102-50 Reporting period		Calendar year 2017	
102-51 Date of most recent report		2016	
102-52 Reporting cycle		January 2017-December 2017	
102-53 Contact point for questions regarding the report		sustainability@centennialcoal.com.au (back cover)	
102-55 GRI Content index			
102-56 External assurance		Information in regard to greenhouse gas emissions and energy used and produced was subject to an external assurance process during the reporting period.	
Emissions			
103 Management approach	Evaluation of management approach		32
305-1 Direct (Scope 1) GHG emissions			33, 47
305-2 Energy indirect (Scope 2) GHG emissions			33, 47
305-3 Other indirect (Scope 3) GHG emissions			47

GRI Disclosure	Omissions	Other source or comments	Page no.
Energy			
103 Management approach	Evaluation of management approach		32
302-1 Energy consumption within the organisation			47
Water			
103 Management approach	Evaluation of management approach		20
303-1 Water withdrawal by source	Standards, methodologies and assumptions used		20, 48
303-3 Water recycled and reused			20, 48
Effluents and waste			
306-1 Management approach			21
306-1 Water discharge by quality and destination	Destination Treatment method Standards, methodologies, and assumptions used		21, 48
306-2 Waste by type and disposal method	How waste disposal method has been determined		21, 49-50
306-4 Transport of hazardous waste	Standards, methodologies, and assumptions used		49
Environmental compliance			
103 Management approach	Evaluation of management approach		18, 22
306-3 Significant spills			50
307-1 Non-compliance with environmental laws and regulations			22, 50
Biodiversity			
103 Management approach	Evaluation of management approach		22
304-1 Areas of biodiversity			49
304-4 IUCN Red List Species			56

GRI Disclosure	Omissions	Other source or comments	Page no.
Employment			
103 Management approach	Evaluation of management approach		29
404-3 Percentage of employees receiving regular performance and career development reviews			29
Health and safety			
103 Management approach			16
403-2 Types of injury and rates of injury, occupational disease, lost dates, absenteeism, and number of work related fatalities	Occupational disease rate Breakdown by region and gender System of rules applied in recording and reporting accident statistics		16-17, 51
Community engagement			
103 Management approach	Evaluation of management approach		24
413-1 Operations with local community engagement, impact assessments and development programmes	Local community development programmes	100% of operations implemented local community engagement and impact assessments	25
Rights of indigenous peoples			
103 Management approach	Evaluation of management approach		27
411-1 Incidents of violations involving rights of indigenous peoples		Nil	
Economic performance			
103 Management approach	Evaluation of management approach		13
201-1 Direct economic value generated and distributed	Economic value distributed		13, 51
Economic value retained			
201-4 Financial assistance received from government			33

IUCN red list species

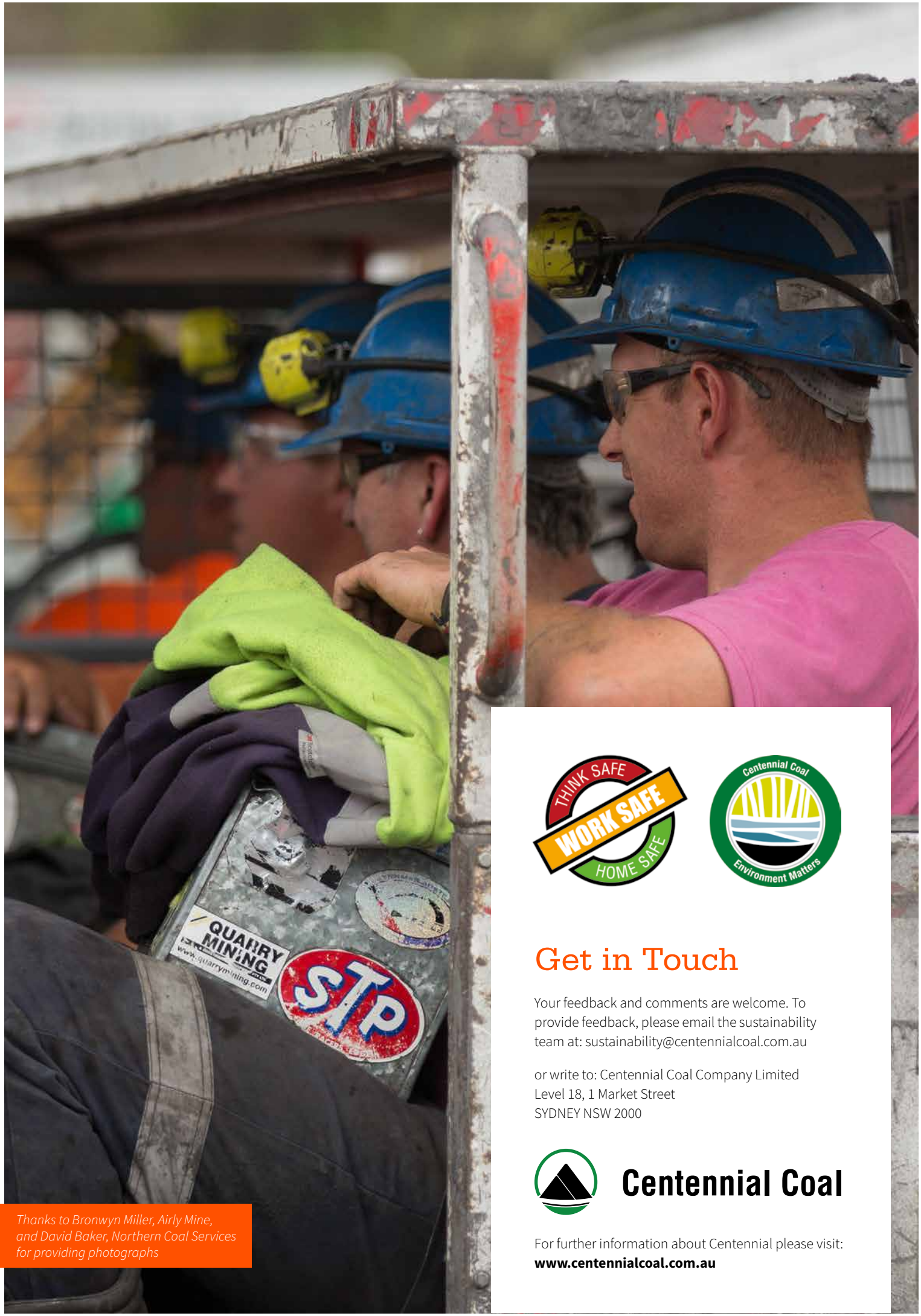
Family Name	Species Scientific Name	Common Name	IUCN Status	State Listing (BC Act)	National Listing (EPBC Act)
Meliphagidae	Anthochaera phrygia	Regent Honeyeater	Critically Endangered	Critically Endangered	Critically Endangered
Scincidae	Eulamprus leuraensis	Blue Mountains Water Skink	Endangered	Endangered	Endangered
Myobatrachidae	Pseudophryne australis	Red-crowned Toadlet	Vulnerable	Vulnerable	Not listed
Meliphagidae	Grantiella picta	Painted Honeyeater	Vulnerable	Vulnerable	Vulnerable
Myobatrachidae	Heleioporus australiacus	Giant Burrowing Frog	Vulnerable	Vulnerable	Vulnerable
Myobatrachidae	Mixophyes balbus	Stuttering Frog	Vulnerable	Endangered	Vulnerable
Pseudocheiridae	Petauroides volans	Greater Glider	Vulnerable	Not listed	Vulnerable
Phascolarctidae	Phascolarctos cinereus	Koala	Vulnerable	Vulnerable	Vulnerable
Molossidae	Mormopterus norfolkensis	East-coast Freetail Bat	Vulnerable	Vulnerable	Not listed
Pteropodidae	Pteropus poliocephalus	Grey-headed Flying-fox	Vulnerable	Vulnerable	Not listed
Elapidae	Hoplocephalus bungaroides	Broad-headed Snake	Vulnerable	Endangered	Vulnerable
Petroicidae	Petroica phoenicea	Flame Robin	Near Threatened	Vulnerable	Not listed
Dasyuridae	Dasyurus maculatus maculatus	Spotted-tailed Quoll	Near Threatened	Vulnerable	Endangered
Petauridae	Petaurus australis	Yellow-bellied Glider	Near Threatened	Vulnerable	Not listed
Vespertilionidae	Miniopterus schreibersii oceanensis	Eastern Bentwing Bat	Near Threatened	Vulnerable	Not listed
Vespertilionidae	Chalinolobus dwyeri	Large eared pied Bat	Near Threatened	Vulnerable	Vulnerable
Elapidae	Hoplocephalus stephensii	Stephen's Banded Snake	Near Threatened	Vulnerable	Not listed
Psittacidae	Glossopsitta pusilla	Little Lorikeet	Least Concern	Vulnerable	Not listed
Cacatuidae	Callocephalon fimbriatum	Gang-gang Cockatoo	Least Concern	Vulnerable	Not listed
Cacatuidae	Calyptorhynchus lathami	Glossy Black Cockatoo	Least Concern	Vulnerable	Not listed
Climacteridae	Climacteris picumnus	Brown Treecreeper	Least Concern	Vulnerable	Not listed
Pomatostomidae	Pomatostomus temporalis temporalis	Grey-crowned Babbler	Least Concern	Vulnerable	Not listed
Pachycephalidae	Pachycephala inornata	Gilbert's Whistler	Least Concern	Vulnerable	Not listed
Acanthizidae	Chthonicola sagittatus	Speckled Warbler	Least Concern	Vulnerable	Not listed
Estrildidae	Stagonopleura guttata	Diamond Firetail	Least Concern	Vulnerable	Not listed
Neosittidae	Daphoenositta chrysoptera	Varied Sittella	Least Concern	Vulnerable	Not listed
Petroicidae	Melanodryas cucullata	Hooded Robin	Least Concern	Vulnerable	Not listed
Petroicidae	Petroica boodang	Scarlet Robin	Least Concern	Vulnerable	Not listed
Meliphagidae	Melithreptus gularis	Black-chinned Honeyeater	Least Concern	Vulnerable	Not listed
Artamidae	Artamus cyanopterus	Dusky Woodswallow	Least Concern	Vulnerable	Not listed
Psittacidae	Neophema pulchella	Turquoise Parrot	Least Concern	Vulnerable	Not listed
Accipitridae	Haliaeetus leucogaster	White-bellied Sea Eagle	Least Concern	Vulnerable	Not listed
Strigidae	Ninox strenua	Powerful Owl	Least Concern	Vulnerable	Not listed
Tytonidae	Tyto tenebricosa	Sooty Owl	Least Concern	Vulnerable	Not listed
Tytonidae	Tyto novaehollandiae	Masked Owl	Least Concern	Vulnerable	Not listed
Strigidae	Ninox connivens	Barking Owl	Least Concern	Vulnerable	Not listed
Petauridae	Petaurus norfolcensis	Squirrel Glider	Least Concern	Vulnerable	Not listed
Strigidae	Cercartetus nanus	Eastern pygmy Possum	Least Concern	Vulnerable	Not listed
Vespertilionidae	Miniopterus australis	Little Bentwing Bat	Least Concern	Vulnerable	Not listed
Vespertilionidae	Myotis macropus	Southern Myotis	Least Concern	Vulnerable	Not listed
Emballonuridae	Saccolaimus flaviventris	Yellow-bellied Sheathtail Bat	Least Concern	Vulnerable	Not listed
Vespertilionidae	Scoteanax rueppellii	Greater Broad-nosed Bat	Least Concern	Vulnerable	Not listed
Vespertilionidae	Falsistrellus tasmaniensis	Eastern False Pipistrelle	Least Concern	Vulnerable	Not listed
Vespertilionidae	Vespadelus troughtoni	Eastern Cave Bat	Least Concern	Vulnerable	Not listed
Vespertilionidae	Phoniscus papuensis	Golden-tipped Bat	Least Concern	Vulnerable	Not listed
Varanidae	Varanus rosenbergi	Heath Monitor	Least Concern	Vulnerable	Not listed
Muridae	Pseudomys gracilicaudatus	Eastern Chestnut Mouse	Least Concern	Vulnerable	Not listed
Vespertilionidae	Nyctophilus corbeni	Greater Long-eared Bat	Not listed at all	Vulnerable	Vulnerable

IUCN - International Union for the Conservation of Nature
BC Act - Biodiversity Conservation Act, 2016
EPBC Act - Environment Protection & Biodiversity Conservation Act, 1999

About this report

Approach

This Sustainability Report references the GRI Standards. Centennial's greenhouse and energy data has been reasonably assured. We plan to extend this assurance to other data sets in the coming reporting periods.



Thanks to Bronwyn Miller, Airly Mine, and David Baker, Northern Coal Services for providing photographs

Get in Touch

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

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