



a mining and metals company

APPIN MINE

COMMUNITY HANDBOOK

✉ community@gm3.au ☎ 1800 102 210

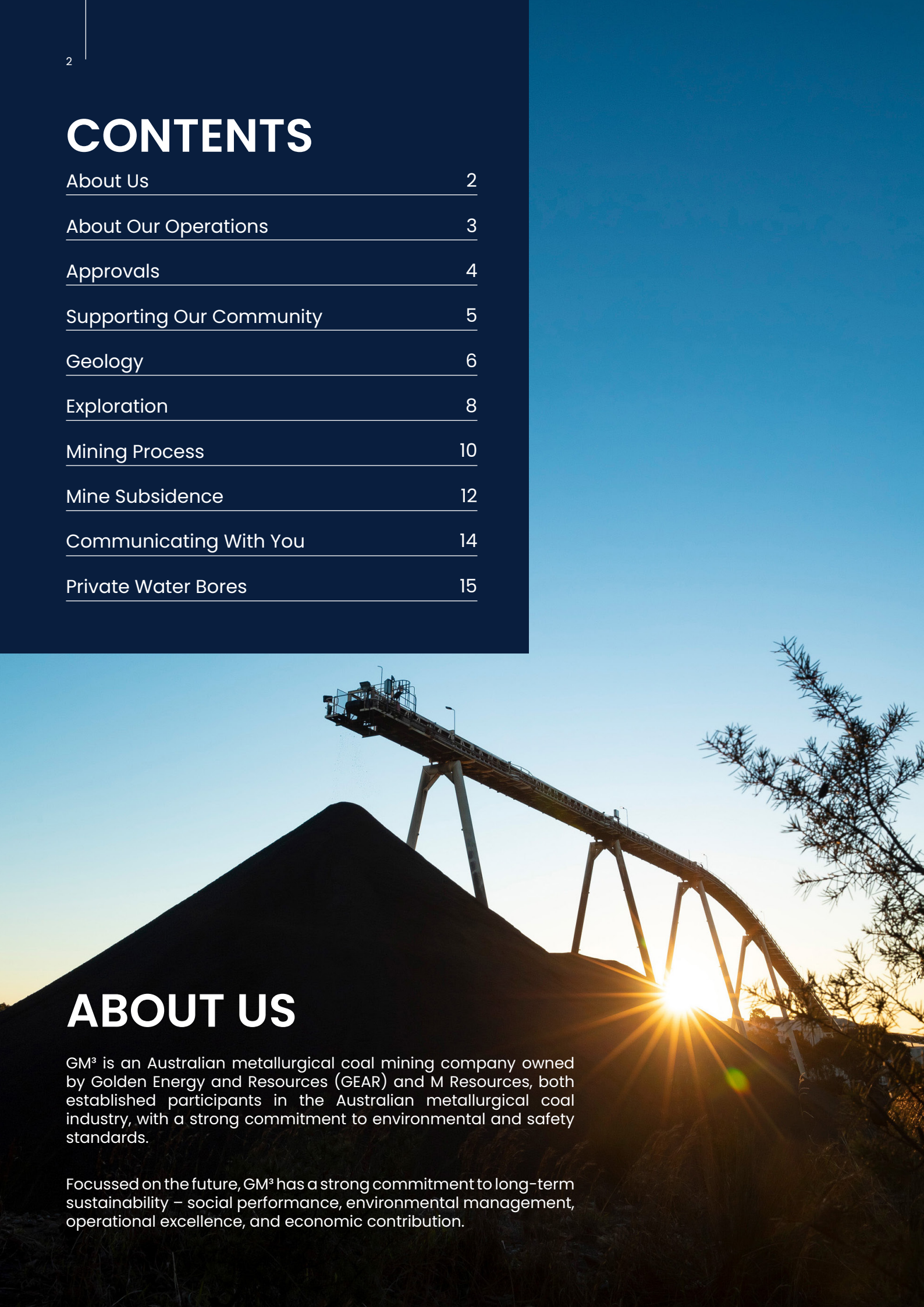
CONTENTS

About Us	2
About Our Operations	3
Approvals	4
Supporting Our Community	5
Geology	6
Exploration	8
Mining Process	10
Mine Subsidence	12
Communicating With You	14
Private Water Bores	15

ABOUT US

GM³ is an Australian metallurgical coal mining company owned by Golden Energy and Resources (GEAR) and M Resources, both established participants in the Australian metallurgical coal industry, with a strong commitment to environmental and safety standards.

Focussed on the future, GM³ has a strong commitment to long-term sustainability – social performance, environmental management, operational excellence, and economic contribution.



APPROVALS

Several levels of approval are required before mining can begin. These approvals ensure mining is carefully planned and carried out safely and responsibly.

Exploration Licences

Before mining can occur, we need to first understand where the resource is, its quality and the geological conditions of the area. This is done through exploration, which takes place in licensed areas using a range of techniques.

The information collected during exploration helps our technical team identify areas most suitable for mining and supports safe, efficient and responsible planning. Importantly, where we explore does not necessarily mean that mining will follow – it is used to inform future planning. Our exploration activities follow strict guidelines and approvals under the *NSW Mining Act 1992*.

Mining Leases

A mining lease provides the legal right to extract a resource from a defined area. These leases are issued under the *NSW Mining Act 1992* and include conditions relating to environmental management, rehabilitation and operational performance.

Development Consent / Project Approval

Mining projects require approval under the *NSW Environmental Planning and Assessment Act 1979*. Depending on when a project was approved, this may be in the form of a development consent or a project approval. Dendrobium Mine operates under a Development Consent, while Appin Mine operates under a Project Approval (MP 08_0150). Newer mining projects are typically approved as State Significant Development. These approvals carry detailed conditions to manage environmental impacts and support positive social and economic outcomes.

Mining cannot commence unless the relevant planning approval and mining title requirements are in place.

Extraction Plans

Extraction plans are prepared once project approval has been granted, and are used to manage potential subsidence from underground mining. An individual extraction plan typically covers multiple longwall blocks.

Extraction plans outline how mining will be carried out in a specific area, including the position of each underground longwall block and how potential environmental and subsidence impacts will be managed. The Plan is submitted to the NSW Department of Planning, Housing and Infrastructure for approval before mining in that area can begin.



SUPPORTING OUR COMMUNITY

Appin Mine has been operating since 1962, and is proud to be a longstanding part of the Wollondilly region. We want to contribute to the communities around our operations and, in local areas, support those activities that are important to our people.

We create value in the communities where we operate and make a positive contribution by providing raw materials for manufacturing, paying taxes and royalties, providing jobs, developing local suppliers, and investing in community programs.

We believe trust and transparency are essential to the way we operate. This means being in touch with the broader community, considering different

perspectives and working together to create shared value. We facilitate regular, open, and inclusive dialogue to understand the expectations, needs, concerns and interests of our stakeholders. The Appin Mine Community Consultative Committee meet regularly to openly discuss our activities, performance, community engagement, community investment and any other matters important to the local community.

We also work closely with landholders. Our community portal offers transparency on our operation and individualised online support specific to private properties.

OUR CONTRIBUTION*



Provide jobs for
2,000+
people, with the majority
of our workforce living
locally.



Contribute more than
A\$150m
in royalties and
taxes to the NSW
government annually.



Supported over
150
community
partnerships.

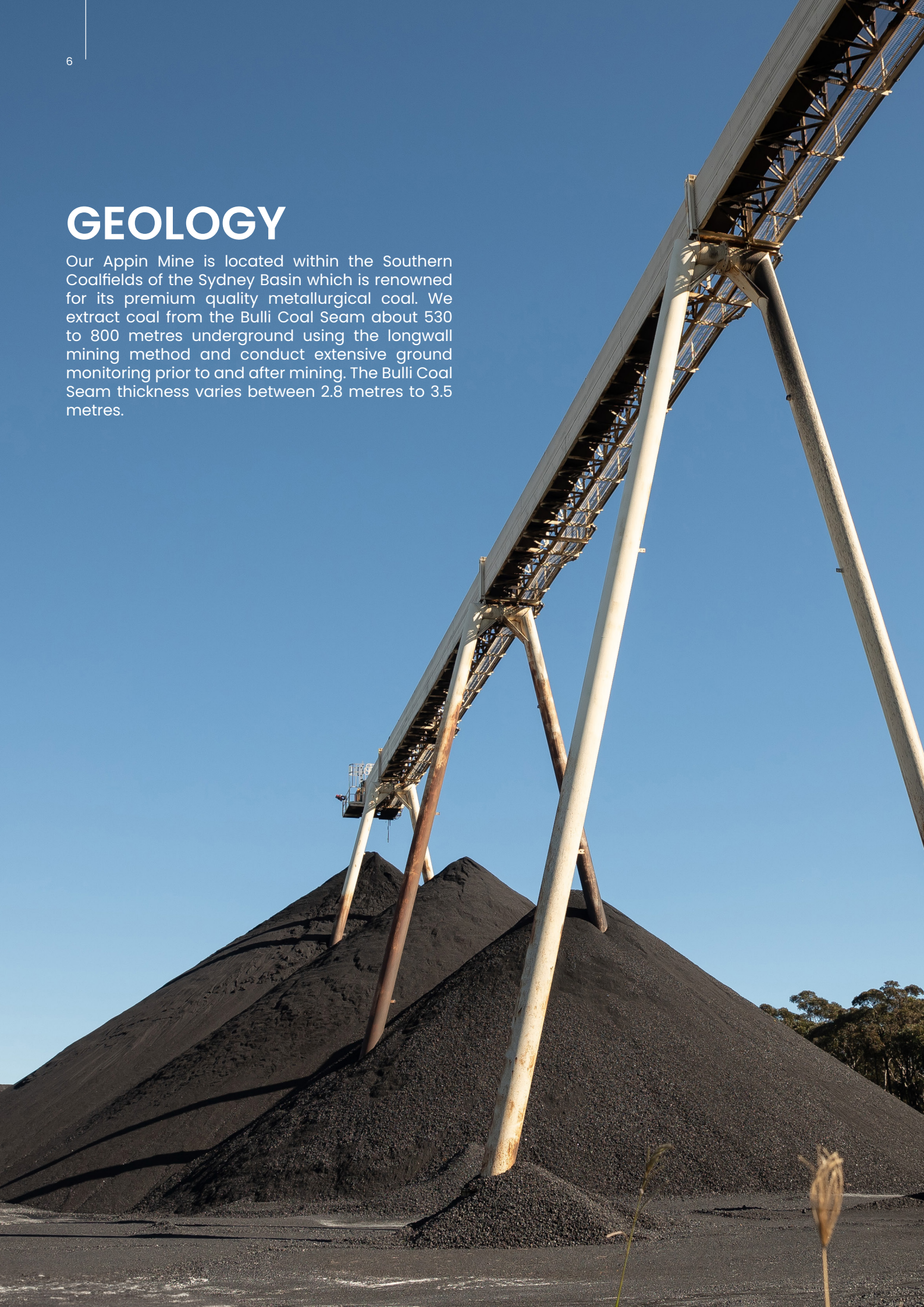


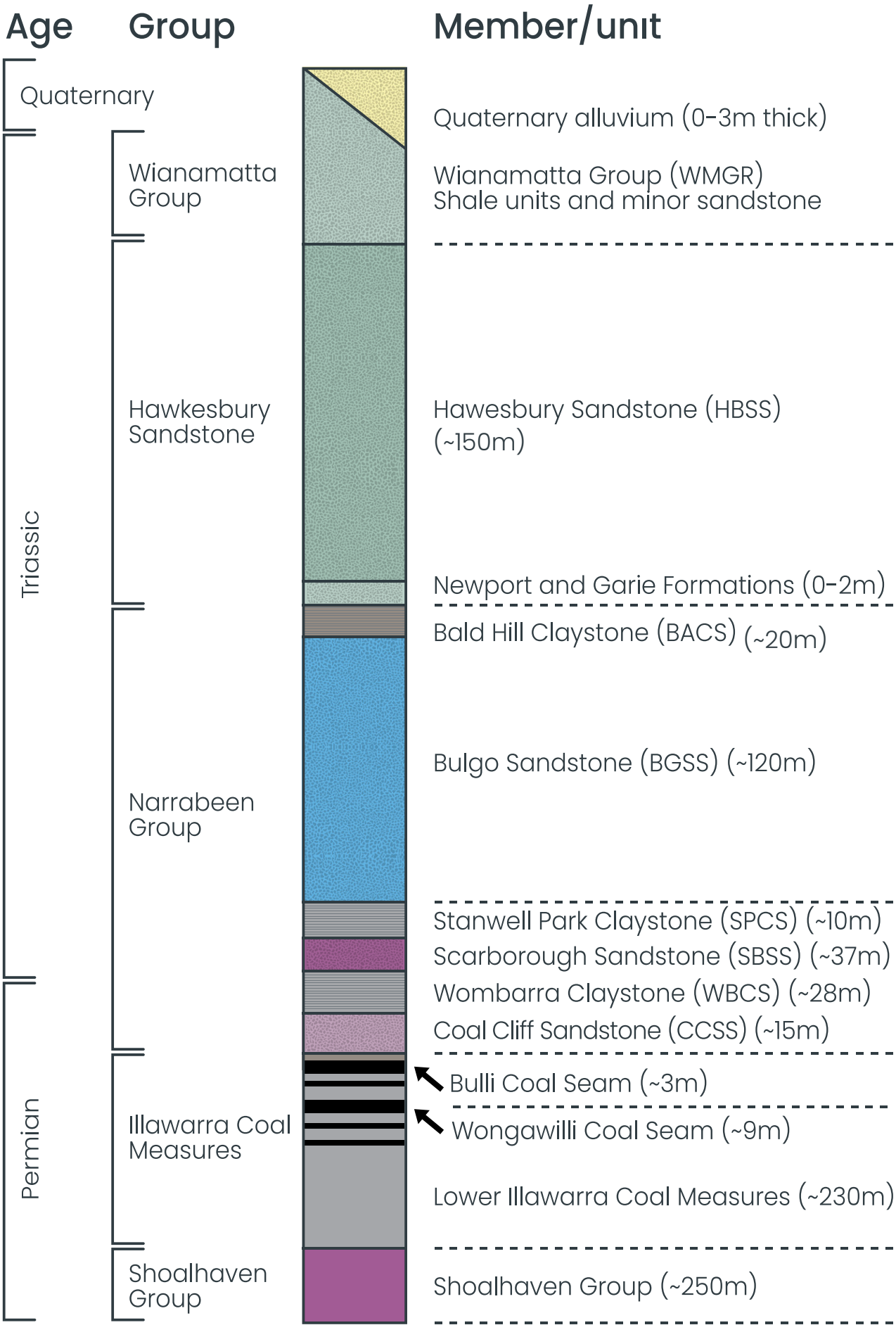
Inject approximately
A\$340m
into the local economy
each year, partnering
with more than 200
locally-based suppliers.

**Figures represent company-wide contributions across all GM³ operations.*

GEOLOGY

Our Appin Mine is located within the Southern Coalfields of the Sydney Basin which is renowned for its premium quality metallurgical coal. We extract coal from the Bulli Coal Seam about 530 to 800 metres underground using the longwall mining method and conduct extensive ground monitoring prior to and after mining. The Bulli Coal Seam thickness varies between 2.8 metres to 3.5 metres.





EXPLORATION

Before we can mine coal, we need to understand where the resource is, the quality of the resource and the geological features of the coal seam. We gain this understanding by exploring areas in advance of mining using a range of techniques.

To conduct any exploration activities on private property, we must obtain approval from the state government, follow strict government guidelines, and seek agreements with landholders for access.

These agreements with landholders detail how and when we would access the property, consideration of potential impacts and compensation.

Did you know?

We have held 15 Exploration Licences for more than 20 years, with exploration activities in the Wollondilly region occurring since the 1920s.



BOREHOLE DRILLING

Borehole drilling is an exploration technique that involves drilling a vertical hole between 400 to 800 metres deep and about 10cm in diameter to intersect coal seams. A sample of the coal seam is then extracted in the drilling process and transported to a laboratory for testing. Once completed, the hole is sealed with grout and the disturbed land is rehabilitated.

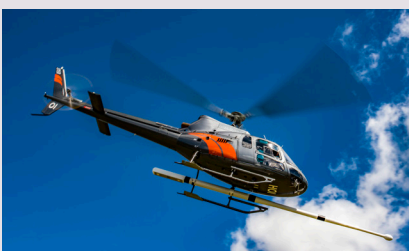
Throughout the borehole drilling process, our community team are in regular contact with landholders to provide updates and offer support for any questions or concerns.

To learn more about our Exploration Program, visit:
**[community.gm3.au/
appin-mine-exploration](http://community.gm3.au/appin-mine-exploration)**



BOREHOLE DRILLING PROCESS

- 1 Land Access and Compensation Agreement** – Before any drilling activity occurs on private property, we contact the landholder to discuss the option to drill and enter a Land Access and Compensation Agreement.
- 2 Site Inspection** – We meet with the landholder and visit the proposed location approximately 4-6 weeks before any site preparation commences. This is an opportunity to review the location, confirm the site access points and talk through the process in person.
- 3 Site preparation** – We prepare the site to receive the drill rig. This includes installing a temporary fence, clearing the track of tree branches (if necessary), levelling the site and preparing the borehole site. We prepare and line a 'cellar' which is a 1 cubic meter hole in the ground where the drill rig will be positioned. We also deliver equipment such as water tanks and containers and have water trucks access the site to fill the tanks.
- 4 Mobilisation** – The drill rig and its ancillary equipment is delivered to site after the site preparation is complete. This involves a few trucks and light vehicles accessing the drill site. The timing of drill rig arrival is discussed with the landholder.
- 5 Drilling** – Drilling commences and will continue for approximately 8 weeks, depending on the geology in the area. Light vehicles and water trucks will regularly access the site during this time.
- 6 Post-drilling Test** – After the drilling is complete and the coal sample collected, we may conduct various types of testing in the hole. Testing usually includes:
(a) Geophysical logging – measures the rock properties;
(b) Permeability and packer testing – measures how groundwater moves through the strata, including the coal seam; and
(c) Piezometer installation – provides water data for a determined period after drilling.
- 7 Rehabilitation** – After drilling and testing is complete, we will remove all equipment and rehabilitate the site. Excavators, light vehicles, and flat-bed trucks will access the site during this process. We use industry leading practices such as surface water tanks and site design to minimise ground disturbance which reduce the impact on landholders.
- 8 Monitoring** – If a monitoring device (for example, a piezometer) is installed as part of the post-drilling testing stage, we will continue to collect data into the future and a piece of equipment known as a standpipe will remain on top of the borehole. We can access the piezometer data remotely and do not require regular access to the site. Access may be required for maintenance or in the event of an equipment fault. Access arrangements will be communicated and agreed upon with the landowner prior to accessing the site.



SEISMIC SURVEY

Seismic surveys are used to produce a detailed image of the underground geology, using vibrations. The difference between 2D and 3D seismic is the level of detail obtained from the survey. Sensors (or 'geophones') are laid along the ground surface to measure the vibration response from the numerous rock formations. Various methods are used to induce the vibrations which may include handheld machines and trucks. For more information and for future surveying dates, visit our Community Portal.

AEROMAGNETIC SURVEY

A low flying plane or helicopter with special monitoring equipment collects magnetic field data. This method provides a lot of data over a large area and can be used to plan more targeted exploration activities including borehole drilling.

MINING PROCESS

Appin Mine uses longwall mining to extract coal from the Bulli Seam. The process involves developing underground roadways, extracting coal using longwall equipment, and transporting coal to the surface for processing.

1



DEVELOPMENT

Before we start mining, we develop underground roadways to provide access for workers, machinery, and services such as water, ventilation and electricity. These roadways shape the rectangle 'longwalls' to be mined. The development roadways do not create subsidence.

2

LONGWALL MINING

The longwall mining method involves extracting coal from the large, rectangular blocks defined by the roadways.

Coal is cut using a shearer, which shaves coal from the longwall. The shearer operates across the longwall face – moving forward on tracks as coal is continuously removed. The removed coal falls onto a conveyor behind the shearer to transport it to the surface.



To support the roof of the longwall during the mining process, large mechanical roof supports or 'chocks' hold up the area where the shearer is working. The chocks move with the shearer and allow the roof to safely fall behind the working area, forming what is known as the 'goaf'. Goaf formation is what causes movement on the surface known as subsidence.

3



PROCESSING

Coal is transported from underground to the surface using a series of conveyors. Once it reaches the surface, it is washed and processed at our West Cliff Coal Preparation Plant.

Processing includes crushing the coal, screening it for size and washing it to remove unwanted materials such as shale and other rocks. There are commonly two outputs from the coal preparation process: 1) clean coal and 2) non-coal material – known as coal wash. The clean coal is transported to the Port Kembla Coal Terminal by truck (coal from Appin Mine) or rail (coal from Dendrobium Mine). The coal wash is transported to an approved stockpiling area or repurposed for beneficial reuse such as road construction or as engineering fill on local development projects.

The high-quality clean coal is exported to domestic and international customers, including BlueScope Steel.

MINE SUBSIDENCE

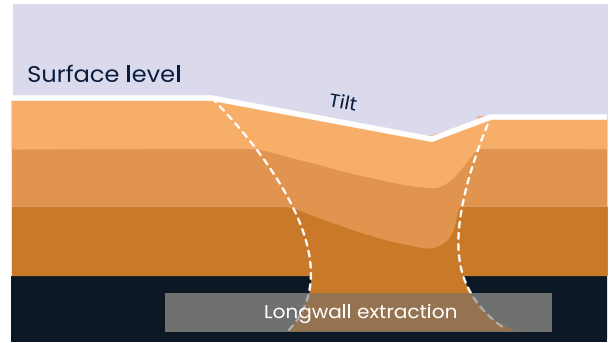
After the coal is removed, the land above can move to fill the space left behind. This movement on the surface is known as subsidence. Subsidence is gradual and is usually not noticeable. If you live close to an area that is being mined, you may experience mine subsidence.

ACTIVE SUBSIDENCE PERIOD

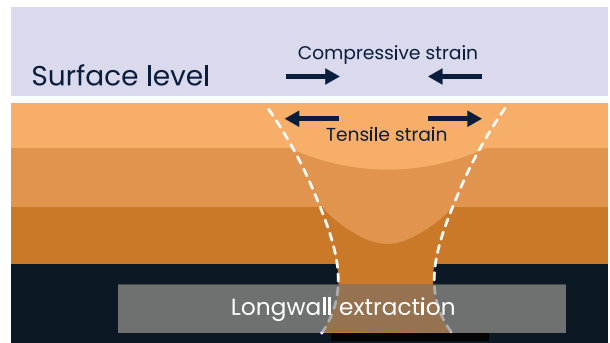
When mining a longwall, we expect most subsidence movement at a property between when the face of the longwall is 150 metres before the property and 450 metres past the property. We call this the 'active subsidence period'. The active subsidence period generally lasts about three months subject to the size and location of the property in relation to the longwall panel, the depth of cover, local geological conditions, and the average rate of longwall production.

INCREMENTAL SUBSIDENCE

A property may experience multiple active subsidence periods as nearby longwalls progress past the property, known as 'incremental subsidence'. This means that the land area may be impacted by mine subsidence from more than one longwall. On average, a property may experience subsidence impacts from one longwall panel prior to extraction directly beneath the property and up to three longwall panels after, depending on its location relative to the mining face and cumulative ground movement effects.

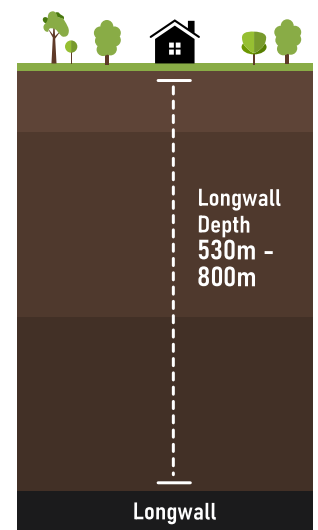
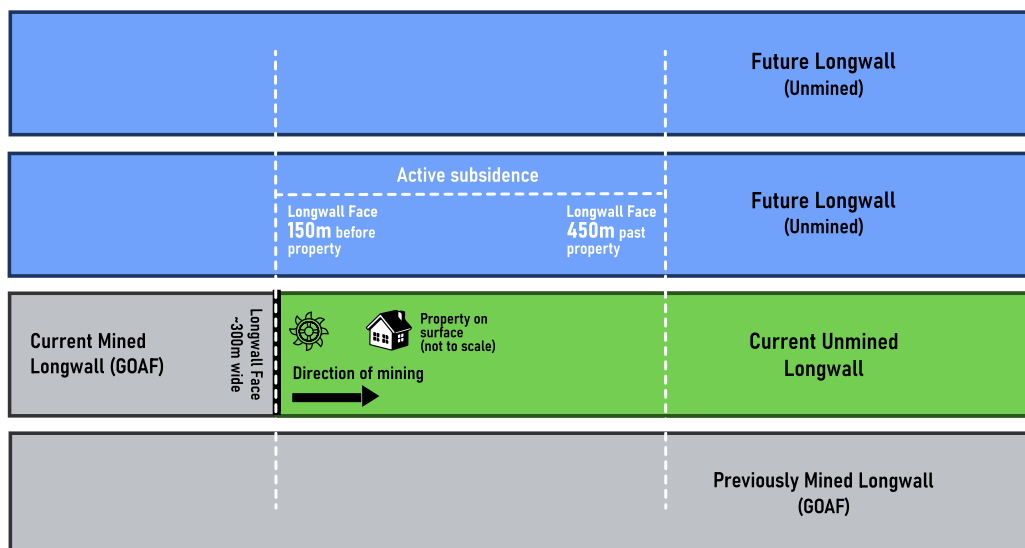


TILT occurs when there is a change in the slope of the land. It can be temporary or permanent. Structures are generally only affected by tilt if they remain at a significant angle once subsidence is complete.



STRAIN is a change in the length of the ground. Usually all the ground moves together so it is not noticeable. Occasionally buildings may shift with the ground movement. Sometimes minor damage can occur including jamming of windows and doors, cracks in brickwork and internal walls,

ACTIVE SUBSIDENCE PERIOD – AERIAL VIEW



MONITORING MINE SUBSIDENCE

PRE-MINING INSPECTIONS

Both Subsidence Advisory NSW and GM³ may require access to private property to prepare for mining.

Subsidence Advisory NSW – Pre Mining Inspection

Subsidence Advisory NSW undertake mandatory Pre Mining Inspections (PMI) for properties located in designated zones where underground coal mining is planned.

A PMI is an independent assessment of existing property condition, conducted by Subsidence Advisory NSW directly or a nominated consultant. A PMI provides a clear basis for comparing property condition before and after mining activity and enables an informed claim assessment process.

Properties within mandatory PMI zones will be notified by Subsidence Advisory NSW via mail, email, or in person. There are no costs to the landholder to have a PMI conducted. PMI costs are charged to the mining company by Subsidence Advisory NSW. PMI reports are not shared with the mining company, unless a claim is lodged and reaches the assessment stage.

Landholders are not eligible to lodge a claim for compensation if a mandatory PMI was notified to them and was refused.

GM³ – Property Subsidence Management Plan

GM³ prepares a Property Subsidence Management Plan (PSMP) in relation to private property assets such as houses and farm dams, in consultation with the landholder. The aim of the PSMP is to manage the potential subsidence impacts on property and infrastructure.

The PSMP is a baseline assessment involving a series of inspections to ensure property conditions are accurately recorded and any ground movement can be clearly identified. These inspections also identify potential hazards that may require mitigation or monitoring to be implemented by GM³ or the landholder before and throughout mining. The hazard identification and risk management activities relate to our obligations to comply with relevant Work Health and Safety legislation.

PSMPs will be developed prior to potential subsidence effects at the property, subject to landholder participation in the process. Any mitigation measures will be developed in consultation with the landholder and, where required, Subsidence Advisory NSW and the

NSW Resources Regulator. GM³ will liaise directly with landholders to explain the purpose of the inspections and coordinate access in a respectful and transparent manner.

PSMP inspections vary depending on what built and natural features are on the property. Inspections may include:

- **Structural inspection** – A condition report and assessment of structures such as houses and sheds, involving a visual inspection inside and outside. Tanks, driveways and retaining walls will also be inspected.
- **Geotechnical inspection** – A condition report of dams and an assessment of steep slopes, involving a visual inspection of the land.
- **Groundwater borehole inspection** – A review and baseline monitoring of any groundwater bores on the property.
- **Survey** – Monitoring of subsidence around built features. This may involve installation of physical survey marks and multiple surveys during mining.

Copies of PSMP inspection reports will be provided to landholders for their records. Updates to the PSMP may be required if there are significant changes to the property, such as renovations, to ensure records remain current.

There are no costs to the landholder associated with a PSMP. All PSMP-related costs are charged to the mining company.

My property has been damaged by subsidence – what do I do?

Landholder rights are protected by law and you can seek compensation to fix damage caused by mine subsidence through the New South Wales government agency, Subsidence Advisory NSW.

Signs of damage from mine subsidence range from hairline cracks and jammed doors and windows, to impacts on retaining walls. Generally, buildings impacted by mine subsidence remain safe and can be used until they are repaired.

To lodge a claim with Subsidence Advisory NSW and learn more about the process, call (02) 4677 6500 or visit www.subsidenceadvisory.nsw.gov.au.

Claims for damage must be raised within 12 months of the damage first being observed.

Subsidence Advisory NSW will manage the claim throughout the process and liaise with us as required. This ensures an independent process is maintained.

COMMUNICATING WITH YOU

We recognise that landholders want to be informed of our activities. Before mining under private property, we make every effort to meet with impacted landholders to discuss what to expect once mining commences.

We communicate with landholders whose properties are within the subsidence area of the extraction plan.

HOW AND WHEN WE WILL CONTACT YOU

We aim to contact landholders prior to the first longwall with the potential to generate subsidence impacts at their property. This engagement may include written correspondence, door knocking and face-to-face meetings. We provide details for a secure online portal specific to the property to provide mining updates, monitoring information and relevant documents throughout the process.

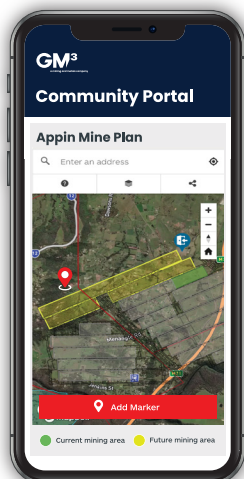
PROPERTY INSPECTIONS

Property inspections, where required, are arranged in consultation with landholders and scheduled based on availability. All inspection reports and related documents are uploaded and stored in the secure online portal. Contractors do not attend private property unless GM³ has arranged access with landholders in advance.

We advise landholders when their property is within the active subsidence period, as this is the most likely time when mine subsidence may occur.

KEEPING YOUR DETAILS UP TO DATE

If you want to ensure we have your correct postal address and email, get in touch with us through our free Community Call Line on 1800 102 210 or email community@gm3.au.



COMMUNITY PORTAL

Visit our Community Portal to learn more about our operations, current projects and community grants.

Use our interactive map to search your property and view its location in relation to the mine plan.

www.community.gm3.au



PRIVATE WATER BORES



GROUNDWATER

We understand access to groundwater is important to landholders in the area, and we consider any potential change to characteristics of the underground aquifer as part of our proactive approach to subsidence management.

The quality and quantity of groundwater can vary widely across New South Wales. In the Wollondilly region aquifers of the Hawkesbury Sandstone provide the main source of usable groundwater.

APPROVED WATER BORES

If a landholder wishes to install a water bore, a Water Supply Work Approval is required. This includes approval to take water under a Basic Landholder Right. This ensures that the construction or use of the bore does not impact on the water source, environment or other water users.

If your water bore does not have a Water Supply Work Approval, GM³ encourages you to contact the NSW Natural Resources Access Regulator (NRAR) to discuss your licencing and approval options. A decision will then be handed down by NRAR regarding future approvals and conditions of the water bore.

POTENTIAL CHANGES TO AQUIFER CHARACTERISTICS

In many areas, the Bald Hill Claystone can act as a low-permeability layer between the Hawkesbury Sandstone aquifer and the Bulli Coal Seam. Potential impacts to groundwater are assessed and managed through the approved subsidence and groundwater management processes.

The Hawkesbury Sandstone is where many local water bores are located. Groundwater quality and yield can vary between bores and over time due to natural geological conditions, bore construction, usage patterns and local groundwater characteristics. Some bores may contain naturally occurring minerals, such as iron, which can cause staining or require ongoing maintenance.

As part of our proactive management of water bore impacts, we engage with landholders early to develop plans to minimise potential impacts to water access, including bore optimisation strategies to ensure access to water is maintained.

MONITORING WATER BORES

Baseline monitoring of water bores is required in areas where underground mining is likely within the next five years. The baseline monitoring process typically consists of installing flowmeters and other monitoring devices on water bores and collecting data including standing water level, pumping cycles and water usage. The data assists us to understand the water bore performance and harvest requirements prior to mining.

Assessing this data, we consult with the landholder on a redesign of the water bore pumping system configuration and associated infrastructure to mitigate potential mining impacts to the aquifer.

If an impact occurs during the mining process, we consult further with the landholder to develop a Water Management Plan to cover interim arrangements, such as water deliveries, until further measures can be practically implemented.

Landholder rights are protected under the *Mining Act 1992* and the Compensatory Water Supply provisions provided by the NSW Government under the Bulli Seam Operations' Project Approval.

IMPORTANT: To report changes to your water bore, safety and for serviceability issues on your property attributed to mine subsidence, please contact us on our free Community Call Line on 1800 102 210 or email community@gm3.au.



GM³

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