



# Resident Information Pack

# Tahmoor South Information Pack

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Tahmoor Coal Pty Ltd (Tahmoor Coal) is committed to ensuring the community is informed and up to date with our mining operations. Tahmoor Coal is planning to commence mining in an area known as Tahmoor South Domain in October 2022.

The purpose of this Resident Information Pack is to help answer any questions you may have regarding mine subsidence and your property. The Information Pack contains the following information:

- Tahmoor Coal's current mine plan.
- Information about longwall mining and subsidence management by Tahmoor Coal.
- How to arrange a pre-mining inspection (at no cost to the property owner) prior to mining commencing.
- An outline of the claims process for any potential damages that may occur due to longwall mining.
- Frequently asked questions.

Should you have any further questions a Tahmoor Coal representative would be happy to answer and discuss with you directly.

# Tahmoor South Snapshot

- الما ي Inject \$137.5 million into the local economy
- Q Continued stable employment in the region
- Reduced impact to native vegetation and water sources
- Continuing participation in community initiatives
- Continiuing partnerships with local schools, businesses and sporting teams

# Tahmoor Coal Operations

Tahmoor Coal Mine is an underground coal mine that began operations in 1979. The Mine has approval to produce up to four million tonnes of Run of Mine (ROM) coal per annum.

Coal is mined from within the Bulli seam, producing coking coal for steel production. Product coal is transported via rail to Port Kembla for Australian domestic customers and export customers. The current mining operations, in the Tahmoor North lease area, are forecast to continue until August 2022, when the mining operations will move to a new mining domain (Tahmoor South) near Bargo.

Tahmoor Coal currently employs approximately 400 employees and contractors. The operation supports many local and regional businesses and services.

Tahmoor Coal is a proud supporter of local charities and service organisations through its sustainable development program and sponsorships.

## Longwall Mining

Coal is extracted at Tahmoor Coal by a longwall shearer and conveyed to the surface by a series of conveyors. A typical schematic diagram of longwall mining at Tahmoor Coal is shown on Figure 1.

The area immediately in front of the coal face is supported by a series of hydraulic roof supports, which temporarily hold up the roof and provides a working space for the shearing machinery and the face conveyor. After each slice of coal is removed, the hydraulic roof supports, the face conveyor and the shearing machinery is moved forward.

When coal is extracted using this method, the roof immediately above the seam is allowed to collapse into the void that is left as the face retreats. This void is referred to as the goaf. As the roof collapses into the goaf behind the roof supports, the overlaying strata collapses and results in subsidence of the surface area above.

Annual Production For Tahmoor Coal 2020 SALEABLE COAL **1.345 million tonnes** 

# Underground Coal Mining Terms

The coal mining industry has a number of mining specific terms and phrases that are commonly used. Below is a brief introduction to some of these common terms at Tahmoor Coal.

| Block                        | A dimensional delineation of the mineral deposit; as in "a block of coal" or, "coal blocked out for extraction".  |
|------------------------------|---|
| Coal face                    | The current working place for coal extraction.  |
| Coal Preparation Plant (CPP) | Processing plant where coal is sized, washed and prepared for the market.   |
| Coal seam                    | Naturally formed underground layer of coal.   |
| Continuous miner             | The electric powered cutting machine used to remove coal from the active mining face and load it into the shuttle car.  |
| Conveyor                     | The means of transporting coal from the coal face to the underground bin or surface. It consists of a belt being driven by a motor over a roller assembly.      |
| Cover depth                  | The depth from the surface to the mine workings.  |
| Development                  | The operations involved in preparing the coal seam for extraction.  |
| Downcast                     | A shaft or other mine opening down to the underground workings in which fresh air from the surface passes.  |
| Drift                        | An inclined access opening from the surface to the coal seam.   |
| Exploration                  | The search for mineral deposits and the work done to prove or establish the extent of a mineral deposit.  |
| First workings               | The driving of headings (underground roadways) in the solid coal seam prior to the commencement of extraction.  |
| Gate Road                    | An underground roadway leading to a working place in longwall mining.   |
| Goaf                         | The underground area abandoned and left to collapse after the extraction of coal.   |
| Heading                      | An underground roadway formed in the direction of a development panel.  |
| Longwall                     | A system of mining coal in which the seam is extracted on a broad front or long face using a coal shearer and the roof is supported by hydraulic roof supports. |
| Longwall Panel               | A block of coal to be mined by longwall defined by gate roads and coal seam thickness.  |
| Panel                        | Underground workings are broken up into a number of panels which are working places for each mining crew.   |
| Run of mine (ROM)            | Raw coal production; the unprocessed mined coal that is conveyed to the CPP. ROM may consist of coal and rock.  |
| Shaft                        | A vertical opening connecting the surface with the underground workings.  |
| Subsidence                   | The vertical lowering or collapse of the ground surface following coal extraction.  |
| Upcast                       | A shaft or other mine opening through which air returns to the surface after ventilating the underground workings.  |



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# Tahmoor South Mine Plan

Figure 2 outlines the proposed longwalls and mining timeframes for Tahmoor South. Please note this is subject to change pending relevant approvals and operations.

The predicted 20mm Subsidence Area outlines the area that may be potentially impacted by subsidence from the mining of the longwalls. If you live within the predicted 20mm Subsidence Area (blue line in figure 2 below) please contact us to arrange a free pre-mining inspection.

The pink hashed line in figure 2 demonstrates the possible set back commencement location of LW3B and LW4B to avoid mining directly under Dog Trap Creek.

#### Figure 2: Tahmoor South Mine Plan



# What is Subsidence?

Mine subsidence refers to any surface ground movements associated with underground mining. Typically, mine subsidence refers to a vertical movement at a particular point. This occurs when material is removed from an underground mine and the earth above the mine adjusts to the altered landscape. Figure 3 below demonstrates a cross view of mine subsidence effects.

The amount of subsidence varies across the area mined beneath, with greatest subsidence occurring towards the centre of the mined area, and gradually reducing to outside the mined area. If subsidence occurs uniformly across an area, it is unlikely that any impacts would be noticed. However, differential subsidence results in tilting and bending of the ground. These differential movements can result in mine subsidence-related impacts to surface features.

Mine subsidence commonly also results in horizontal movements. Differential horizontal movement causes ground strain. Small horizontal movements may be experienced at points on the surface that are some distance away from the mining activity.

## Types of Subsidence

Mine subsidence movements can be described using the following parameters:

**Vertical Subsidence** – this is the lowering of the land and all surface infrastructure. If the infrastructure lowers by the same amount, it would have little or no effect on the structure, unless it is located in a flood prone area. Subsidence develops very gradually, and it is not readily apparent.

**Tilt** – a small change of slope on the surface arising from the surface lowering unevenly. Generally tilt does not lead to structural damage.

**Strain** – the tensile stretching or comprehensive squeezing of the land surface as it lowers to the new level, relative to the land surrounding it.

**Curvature** – the bending of the land surface as it lowers to the new level.

# What does this subsidence mean at the surface?

Subsidence can result in a change to surface and sub-surface conditions. The effects of subsidence may not be noticeable because the undulation of the natural surface is much greater and tends to mask subsidence movements.

The level of impact that can occur to surface and sub-surface features depends on the magnitude of movement that occurs, and the sensitivity of each feature to these movements. Some features, such as houses, can be sensitive to ground tilt, curvature and strain.

#### Regulations

Mine subsidence is tightly regulated in NSW. During the assessment of the Tahmoor South longwalls the potential impacts of subsidence on surface features are to be assessed, including impacts on man-made



#### Figure 3: Cross view mine subsidence effects

features (e.g. buildings, pipelines, dams and bridges) and natural environmental features (e.g. rivers, cliffs, aquifers and ecosystems). Extraction Plans must be prepared and approved, outlining what management techniques will be used to keep impacts within acceptable levels.

Many government agencies are involved in the approval of an Extraction Plan including the NSW Department of Planning, Industry & Environment. This provides a whole-of-government approach, which allows all mine subsidence related issues to be considered in the process.

#### Subsidence Management

Potential impacts from subsidence have been successfully managed by Tahmoor Coal for many years, including the Main Southern Railway, Picton Industrial Area, houses, shops, agriculture and infrastructure such as water, gas, power and telecommunications infrastructure. Subsidence can be managed in a number of ways, including;

- Mine Design;
- Pre-mining strengthening works;
- Monitoring during mining; and
- Post subsidence remediation works.

# Subsidence Impacts from Tahmoor South Longwalls

Tahmoor Coal has previously mined longwalls 22 to 32 beneath the township of Tahmoor, Thirlmere and Picton, and observed subsidence impacts between 0.6m to 1.2m.

Following the completion of the Western Domain longwall mining in Picton, mining of Tahmoor South Longwall 1A is expected to commence in the Bargo area in October 2022.

The predicted maximum subsidence for the Tahmoor South longwalls is between 0.8m to 1.6m. Extensive ground monitoring and surveys will be undertaken before, during and after mining.

#### Possible Impacts on Houses & Other Structures

Vertical subsidence is the lowering of the land and the buildings on it. If a whole building lowers by the same amount, it has little or no effect on the building itself. Vertical subsidence varies from very small amounts (less than 20mm) more than 250m away from a mining area, to a maximum of about 1600mm near the middle of a longwall. These changes result in slight tilting and bending of the land and the buildings on it, as well as stretching and compressing.

These changes develop very gradually over many weeks, and they are not readily apparent to the naked eye.

The variation in subsidence movements does, at times result in impacts to houses and other structures, mainly in the form of cracks. The way a structure has been designed and built (for example, wooden house on piers or double brick on a concrete slab) will determine what impact subsidence may have on a structure.



Expanded view of Surface



# Subsidence Monitoring and Management

Tahmoor Coal has previously directly mined beneath or adjacent to more than 1,900 houses and civil structures, commercial and retail properties, the Main Southern Railway and local roads and bridges. Tahmoor Coal has implemented extensive measures prior to, during and after mining to ensure that the health and safety of people have not been put at risk due to mine subsidence. Management strategies for the successful mining beneath structures include:

- Regular consultation with the community before, during and after mining;
- Site-specific investigations for identified properties;
- Implementation of mitigation measures as suggested by specialist engineers;
- Ground surveys along streets; and
- Detailed visual inspections.

Tahmoor Coal has engaged a team of specialists to visually inspect, monitor and survey surface and below surface infrastructure to not only ensure there is no risk to public safety but also monitor change and discuss any concerns residents may have. Our dedicated team includes:

- Mine Subsidence Engineers;
- Structural Engineers;
- Geotechnical Engineers;
- Environmental Specialists;
- Surveyors; and
- Building Inspectors.

#### Pre-mining inspection

Tahmoor Coal encourages property owners in areas where underground mining is planned in the near future to have a Pre-Mining Inspection (PMI) carried out on their property. PMIs are free of charge and facilitate a straight forward claims process if a property is impacted by subsidence.

The purpose of a PMI is to determine the condition of a property prior to mining. PMIs are an added protection for property owners to ensure they receive adequate compensation to return their property to its pre-mining condition should it be impacted by subsidence.

The inspector undertaking the PMI will document the condition of the property using photographs and survey levels. Once completed property owners are given a copy of the PMI detailed report. This report can be used as a reference to identify potential damage once mining has occurred.

#### Property Hazard Inspection

The Work Health and Safety (Mines) Regulations 2014, in relation to subsidence, requires Tahmoor Coal to identify and control hazards that may cause harm to people from subsidence. Tahmoor Coal risk management process includes hazard identification via a preliminary risk screening process that involves a visual inspection of each property within the active subsidence area from publicly accessible viewpoints and a more detailed property hazard inspection, where the consent of the property owner is provided.

Tahmoor Coal offers all property owners within the active subsidence area, a free property hazard inspection that will be undertaken by a qualified structural engineer.

### How to request a pre-mining inspection and a Property Hazard Inspection

To request a PMI and/or a Property Hazard Inspection simply contact Tahmoor Coal. An inspection time will then be arranged.

#### Subsidence Damage

The signs of mine subsidence damage to buildings and other structures can range from cracking to walls and jammed doors to more significant structural issues. Generally, buildings damaged by mine subsidence remain safe and serviceable until they are repaired.

The extent of damage will vary depending on the location of the building in proximity to the mine workings and other subsidence related factors.

#### Duty to Disclose

Impacts to property improvements are covered by the *Coal Mine Subsidence Compensation Act 2017*, however, please consult with your insurance agency and mortgagee to determine if you have an obligation to disclose to them that mining will occur beneath your property.

Under the *Mining Act 1992*, Tahmoor Coal is responsible for providing compensation to property owners for compensable loss with the exception of compensation provided by Subsidence Advisory NSW (SA NSW). This means that Tahmoor Coal has the responsibility for providing compensation for impacts caused by mining within the Tahmoor Mining Leases upon property features that are not man-made. These features can include but are not limited to:

- Surface of the land;
- Crops, trees, grasses and other vegetation;
- Stock;
- Other business usage; and
- Surface drainage.



# Subsidence Advisory NSW

Subsidence Advisory NSW (SA NSW) is the NSW Government Agency responsible for administering the *Coal Mine Subsidence Compensation Act 2017*. SA NSW has two core functions:

- To provide compensation or manage the provision of compensation where surface developments are damaged by mine subsidence following extraction of coal or shale in NSW; and
- 2. To regulate surface development within mine subsidence districts to reduce the risk of mine subsidence damage.

SA NSW provides expert advice to property owners,

government departments, councils, community organisations and industries within coal mining areas of NSW. This advice aims to provide compatibility between surface development and underground mining.

# Changes to the Mine Subsidence Compensation Act 1961

Changes to the mine subsidence system in NSW took effect from 1 January 2018 following a review of the former *Mine Subsidence Compensation Act 1961*. The changes make the mine subsidence compensation processes easier for property owners and provide a more equitable model for mining.



#### **1. Property damage** Property impacted

by mine subsidence.

2. Claim lodged Property owner lodges claim through Subsidence Advisory NSW (SA NSW) ePortal.

3. Claim management

SA NSW Case Advisor is assigned to claim to provide support to property owner throughout the process.



#### 4. Preliminary assessment

SA NSW assesses whether property is in zone of an active or non-active mine. Mine Proprietor notified of claims in their area. Property owner notified if claim is not within influence of mining.



#### 7. Claim determination

SA NSW (non-active mines) or Mine Proprietor (active mines) determines claim and, if accepted, prepares offer of compensation in accordance with the expert assessments.



#### 6. Expert assessment

Expert assesses if damage is the result of subsidence and, if so, a cost estimate for repairs is prepared.

#### 5. Continuing subsidence

For claims in active mining areas, SA NSW will assess whether subsidence is complete using survey data. If not, the claim will be put on hold until subsidence has ceased.



### 8. Claimant notified

SA NSW forwards claim determination, compensation offer (if applicable) and expert reports to property owner for acceptance.



9. Claim settled Property owner signs deed of release and compensation is provided.



### Review

Option to request an independent review by the Secretary of DCS or their delegate.

#### Appeal Secretary determination can be appealed to the Land and Environment Court by either party.

Figure 5: Mine Subsidence Claims Process

Subsidence Advisory NSW's online portal

SA NSW has an online portal for end-to-end management of claims, building and subdivision applications.

You can use the portal to lodge, track and manage compensation claims for subsidence damage and applications to build or subdivide in mine subsidence districts. Find out more at www.subsidenceadvisory.nsw.gov.au.

#### Claiming compensation for subsidence damage

If your home or structure is impacted as a result of subsidence your rights are protected under the *Coal Mine Subsidence Compensation Act 2017.* 

An overview of the claims process is shown in Figure 5 above.

## Subsidence Advisory NSW

www.subsidenceadvisory.nsw.gov.au

**Picton Office** 99 Menangle Street, Picton NSW 2571 PO Box 40, Picton 2571

Phone 02 4677 6500 Hours 8.30am-4.30pm Mon-Fri

> 24 Hour Emergency Call 1800 248 083

A free confidential counselling service is available for residents impacted by mining. For further details please contact Tahmoor Coal **(02) 4640 0100**.

# Frequently Asked Questions

# How do I find out when mining is occurring near my property?

To receive regular mining updates please contact Tahmoor Coal to be placed on our contact database.

#### What if I am a tenant?

If you are a tenant, please make sure you keep your landlord or managing agent informed if you notice any changes to your property that may be from mine subsidence.

Alternatively, if you receive information regarding your property from either Tahmoor Coal or SA NSW and you are a tenant please forward the information onto your landlord or managing agent.

It is important that not only the tenant receives information, but the owner and / or Managing Agent is also kept informed about mining operations.

#### What are the advantages of a pre-mining inspection?

The purpose of a PMI is to determine the condition of a property prior to mining. PMIs are an added protection for property owners to ensure they receive adequate compensation to return their property to its pre-mining condition should it be impacted by subsidence.

#### Who manages my claim?

All claims are managed by a SA NSW Case Advisor who will provide property owners with focused support and a dedicated point of contact throughout the process.

#### What happens if the mine ceases to operate?

If the mine ceases to operate, claims for compensation would continue to be managed in accordance with the CSMC Act.

Mining companies are required to pay levies into a Coal Mine Subsidence Compensation Fund which is managed and controlled by SA NSW. Levy amounts are estimated and paid annually, with the value based on coal extraction rates.

Any subsidence-related compensation to home owners would be paid by SA NSW via the fund, ensuring security to homeowners, irrespective of the mine company financial status.

There is also a rehabilitation security deposit held by the Resources Regulator for Tahmoor Coal (as is required of all title holders), that ensures adequate funds are available to complete rehabilitation and subsidence repairs in the unlikely event of unexpected closure of the mine.



### How to stay in touch

Contact Us: 02 4640 0100 (within office hours)

1800 154 415 (after hours)

Email: tahmoorenquiries@simecgfg.com

Web: www.tahmoorcoal.com.au

#### Environment and Community team:

- Zina Ainsworth, Environment & Community Manager
- Amanda Bateman, Community Liaison Specialist
- Ross Barber, Project Manager
- April Hudson, Approvals Specialist
- Thomas O'Brien, Environmental Specialist

#### Tahmoor Coal Community Consultative Committee

The Tahmoor Coal Community Consultative Committee (TCCCC) provides a forum for open discussion between representatives of Tahmoor Coal Mine, the community, local council and other stakeholders on issues directly relating to the mine's operations, environmental performance and community relations.

The TCCCC is independently chaired by Michael Muston and membership consists of up to seven representatives from the local area, who meet on a quarterly basis.

The current list of members and their contact information is available at www.tahmoorcoal.com.au.

Michael Muston, TCCCC Independent Chairperson Email: gem@1earth.net

#### **Emergency Numbers**

Fire 000 Ambulance 000 Police 000 Gas 131 909 Electricity 131 002 Sydney Water 131 090 Telstra 132 203



T: (02) 4640 0100 E: tahmoorenquiries@simecgfg.com W: www.tahmoorcoal.com.au

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