



## MAXWELL PROJECT

### Scoping Report In Support of a Request for Secretary's Environmental Assessment Requirements

August 2018



**Malabar Coal Limited**

Level 26, 259 George Street  
Sydney NSW 2000

<http://malabarcoal.com.au/>

**Project Enquiries**

Donna McLaughlin  
Manager Environment and Community  
Phone: (02) 6542 0283  
Email: [info@malabarcoal.com.au](mailto:info@malabarcoal.com.au)

## EXECUTIVE SUMMARY

Malabar Coal Limited (Malabar) acquired Exploration Licence (EL) 5460 and existing infrastructure within Coal Lease (CL) 229, Mining Lease (ML) 1531 and CL 395 (known as the 'Maxwell Infrastructure') in February 2018.

As part of its acquisition of EL 5460, Malabar committed to develop the resource solely as an underground mining operation.

EL 5460 and the Maxwell Infrastructure are located in the Upper Hunter Valley of New South Wales (NSW), east-southeast of Denman and south-southwest of Muswellbrook.

### Overview of the Project

Maxwell Ventures (Management) Pty Ltd, a wholly owned subsidiary of Malabar, is seeking consent to develop an underground coal mining operation, referred to as the Maxwell Project (the Project).

The Project would involve underground coal mining within EL 5460. The requirement to construct new infrastructure would be greatly reduced as the Project would make use of the substantial facilities that already exist at the Maxwell Infrastructure location.

The Maxwell Underground mine entry and constrained associated infrastructure would be located behind a prominent east-west ridge and therefore would not be visible from properties located along the Golden Highway.

The Project would extract approximately 150 million tonnes of run-of-mine coal over a period of approximately 26 years.

The Project would produce high quality coals with at least 75% of coal produced capable of being used in the making of steel (coking coals). The balance would be export thermal coals suitable for the new generation High Efficiency, Low Emissions power generators.

If approved, the Project would produce the following benefits for the local area, for NSW more broadly and for the national economy:

- generation of approximately **350 new direct, long-term jobs** for the region, along with many more indirect jobs;
- **annual export sales in the vicinity of \$700 million** annually;
- **support for local businesses** from the initial capital expenditure and the substantial ongoing operating inputs;
- substantial **corporate tax contributions**;
- payment of approximately **\$1.3 billion in royalties** to the NSW Government over the initial 26 years of mining;
- **certainty** around future development within EL 5460;
- support for continued rehabilitation activities within CL 229, ML 1531 and CL 395, including **reduction in the volume of final voids** through emplacement of reject material generated by coal processing activities; and
- ongoing financial **support for community groups** as demonstrated by Malabar for more than five years.



Plate ES-1 – EL 5460 from above the Proposed Location of the Maxwell Underground Mine Entry

As a separate project, and in parallel with this Project, Malabar intends to submit a development application for a solar farm, known as “the Maxwell Solar Project”. The solar panels would be located on areas of previous open cut mining disturbance within CL 229.

The Maxwell Solar Project would have an installed capacity of 25 MW and would provide additional employment opportunities in the local district during construction and operation. The Maxwell Solar Project would allow for a beneficial use of an area previously subject to open cut mining. It would also be located adjacent to a major electricity generating hub in NSW (Liddell and Bayswater Power Stations) and in proximity to high voltage power lines.

The Maxwell Solar Project would not constrain or negatively impact the development of this Project. The development of the Maxwell Solar Project would be subject to separate assessments and approvals, however potential cumulative impacts would be assessed where relevant.

#### **Purpose of this Document**

This document has been prepared to provide a description of the Project to key State regulatory agencies to initiate the preparation of the Secretary's Environmental Assessment Requirements (SEARs). The SEARs will identify any further matters that will need to be addressed in the Project's Environmental Impact Statement (EIS).

Separately, Malabar will lodge an application for a Gateway Certificate to the Mining and Petroleum Gateway Panel. The Project will also be referred to the Commonwealth Minister for the Environment and Energy for consideration as to whether the Project meets the criteria of a 'Controlled Action' and requires approval under the Commonwealth *Environment Protection and Biodiversity Conservation Act, 1999*.

Assessment of the potential environmental issues in the EIS will include consideration of:

- existing environment using sufficient baseline data;
- potential impacts of all stages of the Project including relevant cumulative impacts;
- measures that could be implemented to avoid, mitigate, rehabilitate/remediate, monitor and/or offset the potential impacts of the Project; and
- contingency plans and/or adaptive management for managing any potentially significant residual risks to the environment.

A community and stakeholder engagement program will be implemented for the Project to support the development of the EIS, including a Social Impact Assessment.

Assessments for the EIS would consider applicable policies, guidelines and plans included in the NSW Government's *Indicative Secretary's Environmental Assessment Requirements for State Significant Mining Developments*.

The Project is State Significant Development, and therefore Development Consent will be sought under the NSW *Environmental Planning and Assessment Act, 1979* from the NSW Minister for Planning or the Independent Planning Commission.



**Plate ES-2 – Malabar's Team at the Maxwell Infrastructure**

## TABLE OF CONTENTS

EXECUTIVE SUMMARY	ES-1
1 INTRODUCTION	1
1.1 BACKGROUND	1
1.2 PURPOSE OF THIS DOCUMENT	1
1.3 STRUCTURE OF THIS DOCUMENT	1
1.4 PROJECT OVERVIEW	3
2 PROPONENT DETAILS	4
3 PROJECT DETAILS	4
3.1 TARGET RESOURCE	4
3.2 LOCAL AND REGIONAL CONTEXT	7
3.3 PROJECT DESCRIPTION	10
3.4 MANAGEMENT COMMITMENTS	15
3.5 PROJECT SCHEDULE	16
3.6 RELATIONSHIP WITH OTHER DEVELOPMENTS	16
3.7 PROJECT RATIONALE AND ALTERNATIVES CONSIDERED	16
4 STRATEGIC AND STATUTORY CONTEXT	18
4.1 COMPATIBILITY WITH EXISTING LAND USES	18
4.2 PERMISSIBILITY AND STRATEGIC PLANNING	18
4.3 OTHER APPROVALS AND LICENCES	20
5 MATTERS AND IMPACTS	21
5.1 OVERVIEW	21
5.2 KEY ISSUES AND OTHER ISSUES FOR INCLUSION IN THE ENVIRONMENTAL IMPACT STATEMENT	21
5.3 CUMULATIVE IMPACT ASSESSMENT	26
6 COMMUNITY AND OTHER STAKEHOLDER ENGAGEMENT	26
6.1 CONSULTATION UNDERTAKEN TO DATE	26
6.2 COMMUNITY AND STAKEHOLDER ENGAGEMENT PROGRAM	27
7 CONCLUSION	28
8 REFERENCES	29

## LIST OF TABLES

Table 1	Mining and Exploration Tenements Related to the Project
Table 2	Seam Characteristics of the Underground Mining Area
Table 3	Overview of the Maxwell Project
Table 4	Key Potential Environmental Issues, Proposed Level and Scope of Assessment and Preliminary Strategies to Address Potential Impacts

## LIST OF FIGURES

Figure 1	Regional Location
Figure 2	Project General Arrangement
Figure 3	Geology of the Project Area
Figure 4	Land Uses Surrounding EL 5460
Figure 5	Indicative Underground Mining Layout
Figure 6	Existing Maxwell Infrastructure

## LIST OF PLATES

Plate 1	Maxwell Infrastructure
Plate 2	Agricultural Land in EL 5460
Plate 3	Edderton Road

## LIST OF ATTACHMENTS

Attachment A	Provisional Development Application Area and Preliminary Schedule of Lands
Attachment B	Key Outputs of the Scoping Worksheet
Attachment C	SIA Scoping Report

# 1 INTRODUCTION

## 1.1 BACKGROUND

Maxwell Ventures (Management) Pty Ltd, a wholly owned subsidiary of Malabar Coal Limited (Malabar), is seeking consent to develop an underground coal mining operation, referred to as the Maxwell Project (the Project).

The Project is located in the Upper Hunter Valley of New South Wales (NSW), east-southeast of Denman and south-southwest of Muswellbrook (Figure 1).

Malabar owns and manages the existing infrastructure within Coal Lease (CL) 229, Mining Lease (ML) 1531 and CL 395 (known as the 'Maxwell Infrastructure'). The Maxwell Infrastructure includes an existing coal handling and preparation plant (CHPP), rail facilities and other infrastructure and services (including water management infrastructure, administration buildings, workshops and services).

The Project would include the use of the substantial existing Maxwell Infrastructure (Plate 1), along with the development of some new infrastructure.



Plate 1 – Maxwell Infrastructure

## 1.2 PURPOSE OF THIS DOCUMENT

This document has been prepared to provide a description of the Project to key State regulatory agencies to initiate the preparation of the Secretary's Environmental Assessment Requirements (SEARs) in accordance with clause 3 of Schedule 2 of the NSW *Environmental Planning and Assessment Regulation, 2000* (EP&A Regulation). The SEARs will identify any further matters that will need to be addressed in the Environmental Impact Statement (EIS).

Separately, Malabar will lodge an application for a Gateway Certificate to the Mining and Petroleum Gateway Panel (Gateway Panel) in relation to development on biophysical strategic agricultural land. The Project will also be referred to the Commonwealth Minister for the Environment and Energy for consideration as to whether the Project meets the criteria of a 'Controlled Action' and requires approval under the EPBC Act.

The SEARs will be prepared by the NSW Department of Planning and Environment (DP&E) in consideration of:

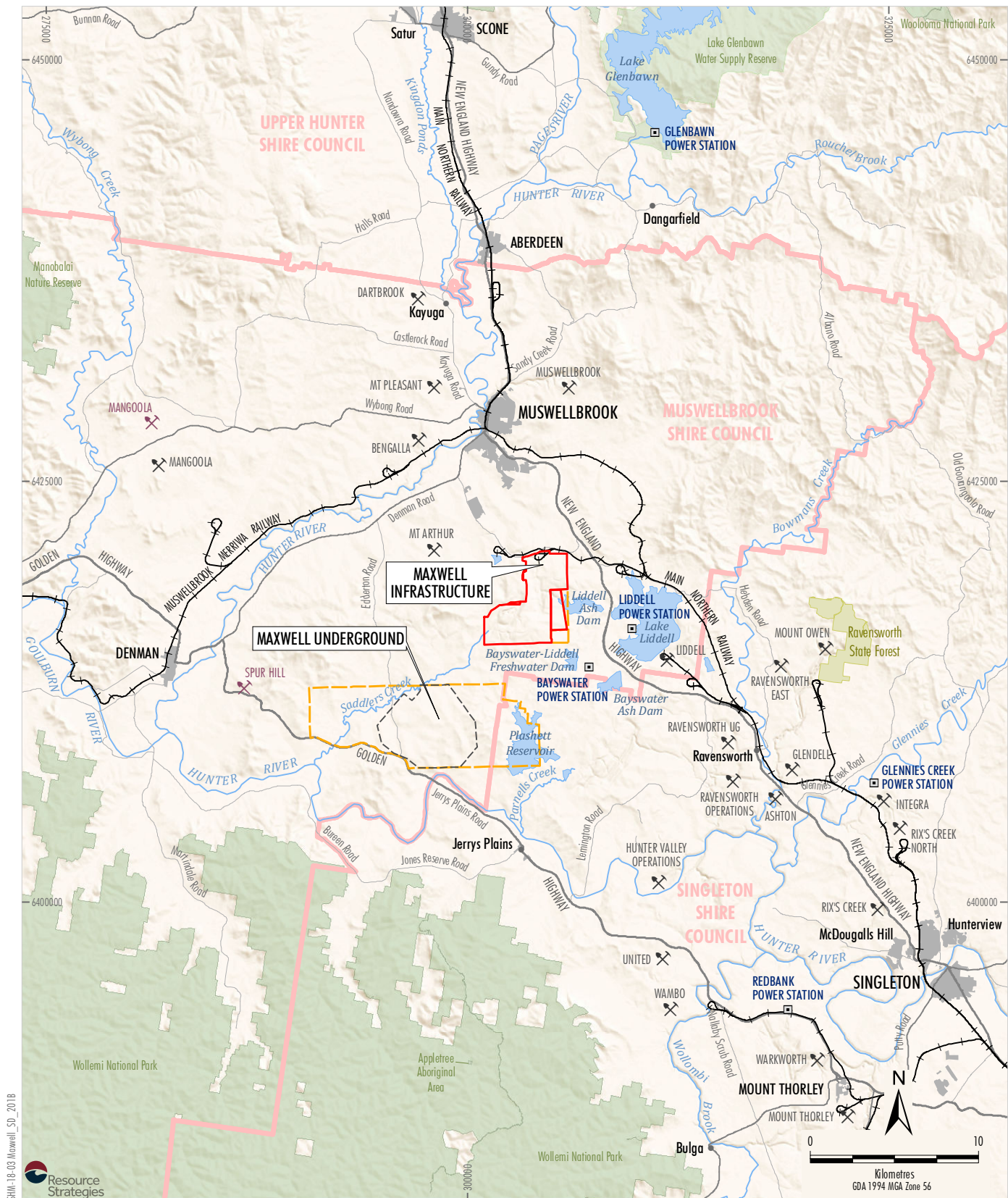
- this document;
- key issues raised by relevant regulatory agencies;
- *Indicative Secretary's Environmental Assessment Requirements for State Significant Mining Developments* (NSW Government, 2015a);
- any recommendations of the Gateway Panel set out in the Gateway Certificate;
- the decision of the Commonwealth Minister for the Environment and Energy regarding the referral of the relevant 'Action' under the EPBC Act; and
- applicable guidelines and statutory considerations.

## 1.3 STRUCTURE OF THIS DOCUMENT

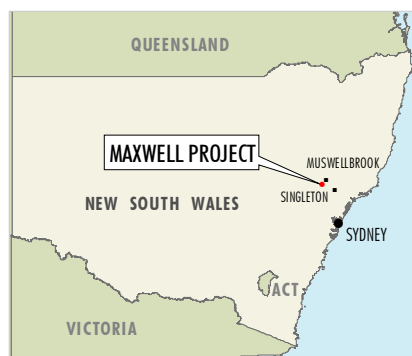
This document has been prepared in consideration of the *Mine Application Guideline* (NSW Government, 2015b) and the Draft *Scoping an Environmental Impact Statement* guideline (NSW Government, 2017a).

The document is structured as follows:

Section 1	Introduction – provides a summary of the Project and describes the purpose and structure of this Scoping Report.
Section 2	Proponent Details – identifies the proponent and the people that contributed to this Scoping Report.
Section 3	Project Description and Project Rationale – describes the local and regional context of the Project, provides a description of the Project, indicates the types of activities that would be undertaken, and describes the rationale for the Project.



SHA-18-03 Maxwell\_S0\_2018



**MALABAR COAL**

**MAXWELL PROJECT**

**Regional Location**

**Figure 1**

Section 4	Strategic and Statutory Context – describes how the Project will fit with existing land uses in the area, outlines the permissibility of the Project and identifies potentially relevant statutory planning instruments and strategic planning documents.
Section 5	Matter and Impacts – identifies key environmental issues of particular relevance to the Project, outlines the proposed level and scope of environmental assessment, and identifies strategies to address the impacts identified.
Section 6	Community and Other Stakeholder Engagement – outlines consultation with relevant stakeholders that has already been undertaken and is proposed to be carried out for the Project.
Section 7	Conclusion – provides a summary of what is proposed to be included in the EIS.
Section 8	References.

## 1.4 PROJECT OVERVIEW

The Project would involve an underground mining operation that would produce high quality coals over a period of approximately 26 years.

**At least 75% of coal produced would be capable of being used in the making of steel. The balance would be export thermal coals suitable for the new generation High Efficiency, Low Emissions power generators.**

The Project underground mining area is located entirely within EL 5460.

The Project would include the following activities:

- underground bord and pillar mining with pillar extraction in the Whynot Seam;
- underground longwall extraction in the Woodlands Hill Seam, Arrowfield Seam and Bowfield Seam;
- development and use of mine access drifts and underground roadways and shafts to access and service the underground mining areas;
- development and use of a mine entry and associated infrastructure, services and facilities that support underground mining and coal handling activities and provide for personnel and materials access to the underground mine;
- establishment of an internal access road from Thomas Mitchell Drive to the underground mine entry;
- establishment of power transmission infrastructure including power lines and substations;
- establishment of infrastructure associated with mine ventilation and gas management;
- use of the existing water management systems;
- progressive development of dams, sumps, pumps, pipelines, water storages, water treatment and other water management infrastructure;
- production of up to 8 million tonnes per annum (Mtpa) of run-of-mine (ROM) coal;
- construction and use of a conveyor system to transport coal from the underground mine entry area to the existing CHPP at the Maxwell Infrastructure for processing;
- transportation of early ROM coal via internal roads from the mine entry area to the existing CHPP;
- handling and processing of coal and loading of coal onto trains at the existing Maxwell Infrastructure;
- transport of product coal via the existing Antiene Rail Spur and Main Northern Railway to market or to the Port of Newcastle for export, or via conveyor to the Bayswater and/or Liddell Power Stations;
- emplacement of coarse rejects and tailings and brine within existing voids in CL 229 and ML 1531;
- continued use of existing facilities and services at the Maxwell Infrastructure, with minor upgrades;
- monitoring, rehabilitation and remediation of subsidence and other mining effects;
- management of subsidence impacts on Edderton Road;
- rehabilitation activities within CL 229, ML 1531 and CL 395, including the rehabilitation of reject and tailings emplacement areas;
- exploration activities within EL 5460 and Authorisation (AUTH) 173; and
- other associated minor infrastructure, plant, equipment and activities.

An indicative Project general arrangement showing the underground mining area and key infrastructure is provided on Figure 2. Additional detail on each of the main Project components is provided in Section 3.

Malabar intends to consolidate Project Approval 06\_0202 into one new Development Consent, including the Project.

## 2 PROPONENT DETAILS

Maxwell Ventures (Management) Pty Ltd (ACN 002 028 257), a wholly owned subsidiary of Malabar, is the proponent for the Project and will be the applicant for any mining lease application<sup>1</sup>. The registered address for Maxwell Ventures (Management) Pty Ltd is:

Maxwell Ventures (Management) Pty Ltd  
Level 26, 259 George Street  
Sydney NSW 2000

The Malabar website is:

<http://malabarcoal.com.au/>

The Maxwell Infrastructure is located at Thomas Mitchell Drive, Muswellbrook NSW, 2333.

The Community Liaison Officer for the Project is:

Donna McLaughlin  
Manager Environment and Community  
Phone: (02) 6542 0283  
Email: [info@malabarcoal.com.au](mailto:info@malabarcoal.com.au)

This document has been prepared with input from William Dean (General Manager – Projects, Malabar), Resource Strategies and Elliott Whiteing.

## 3 PROJECT DETAILS

### 3.1 TARGET RESOURCE

The Project would target coal seams within the Wittingham Coal Measures.

The Project would produce high quality coals with at least 75% of coal produced capable of being used in the making of steel (coking coals). The balance would be export thermal coals suitable for the new generation High Efficiency, Low Emissions power generators.

Further information on resource recovery and the characteristics of the coal resource are provided below.

### Mining and Exploration Tenements

Table 1 provides details of the mining and exploration tenements related to the Project held by subsidiaries of Malabar.

**Table 1**  
**Mining and Exploration Tenements Related to the Project**

Tenement Reference	Expiry
<i>Maxwell Infrastructure</i>	
CL 229*	02/02/2024
CL 395	21/01/2029
ML 1531	25/02/2024
AUTH 173	31/08/2018
<i>Maxwell Underground</i>	
EL 5460	02/04/2022

AUTH – Authorisation.

CL – Coal Lease.

EL – Exploration Licence.

ML – Mining Lease.

\* Hunter Valley Energy Coal Pty Ltd holds a sublease over a portion of CL 229. Activities within this sublease do not form part of the Project.

### Geology

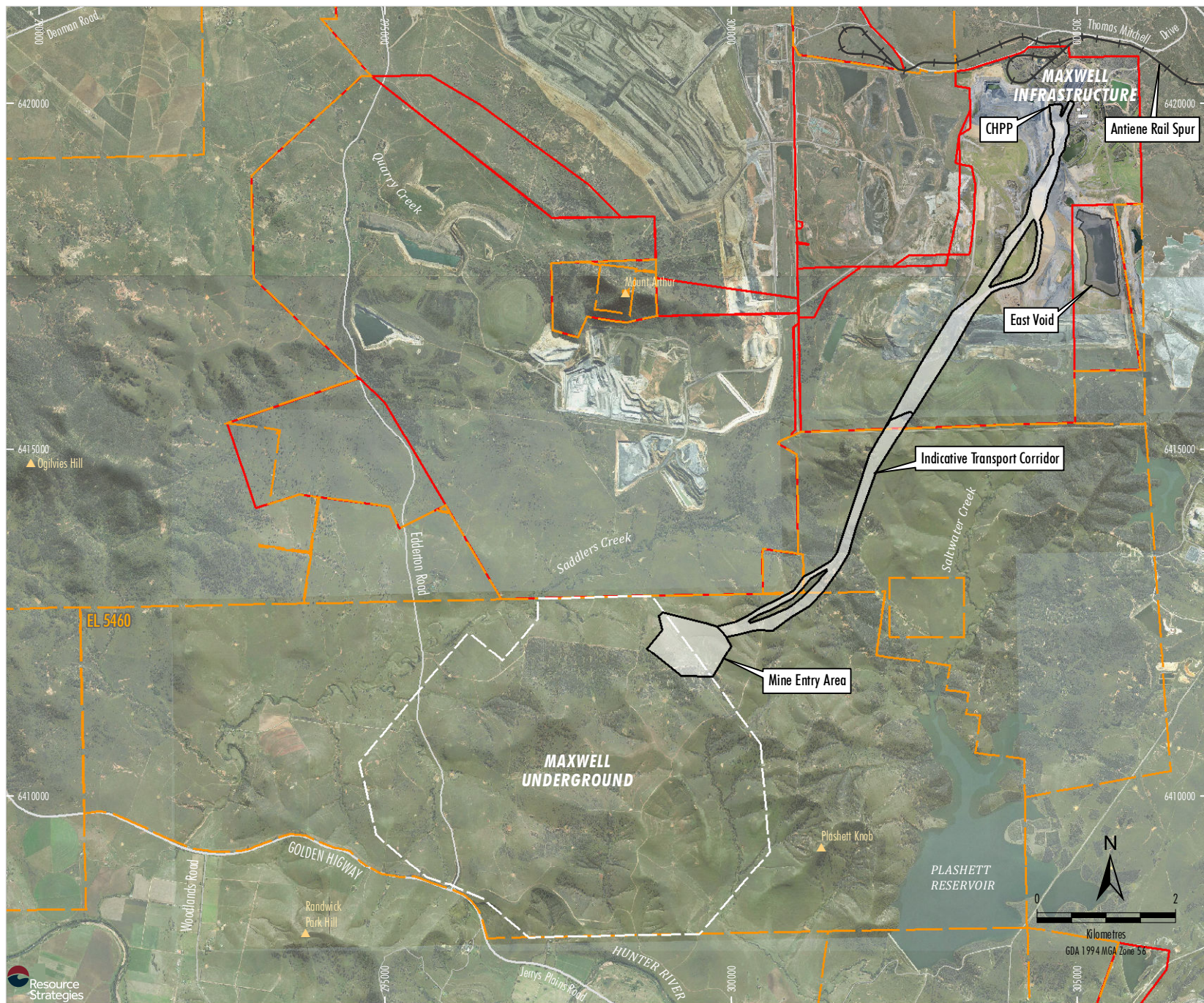
The Project is located in the Hunter Coalfield in the northern part of the Permo-Triassic Sydney Basin, which forms the southern portion of the Sydney-Gunnedah-Bowen Basin (Department of Mineral Resources [DMR], 1988).

The Wittingham Coal Measures occur widely within the Hunter Coalfield and contain many recoverable seams. The Project targets mining of the Whynot, Woodlands Hill, Arrowfield and Bowfield Seams.

The target seams are within the Jerrys Plains Subgroup, forming part of the upper and middle units of the Wittingham Coal Measures (Figure 3).

Above the target seams, the stratigraphy of the area consists of a sequence of sandstone, siltstone and laminate units within the Wittingham Coal Measures (Figure 3).

<sup>1</sup> References to Malabar throughout this document should be read as a reference to the proponent.



MALABAR COAL  
 MAXWELL PROJECT  
 Project General Arrangement

Figure 2

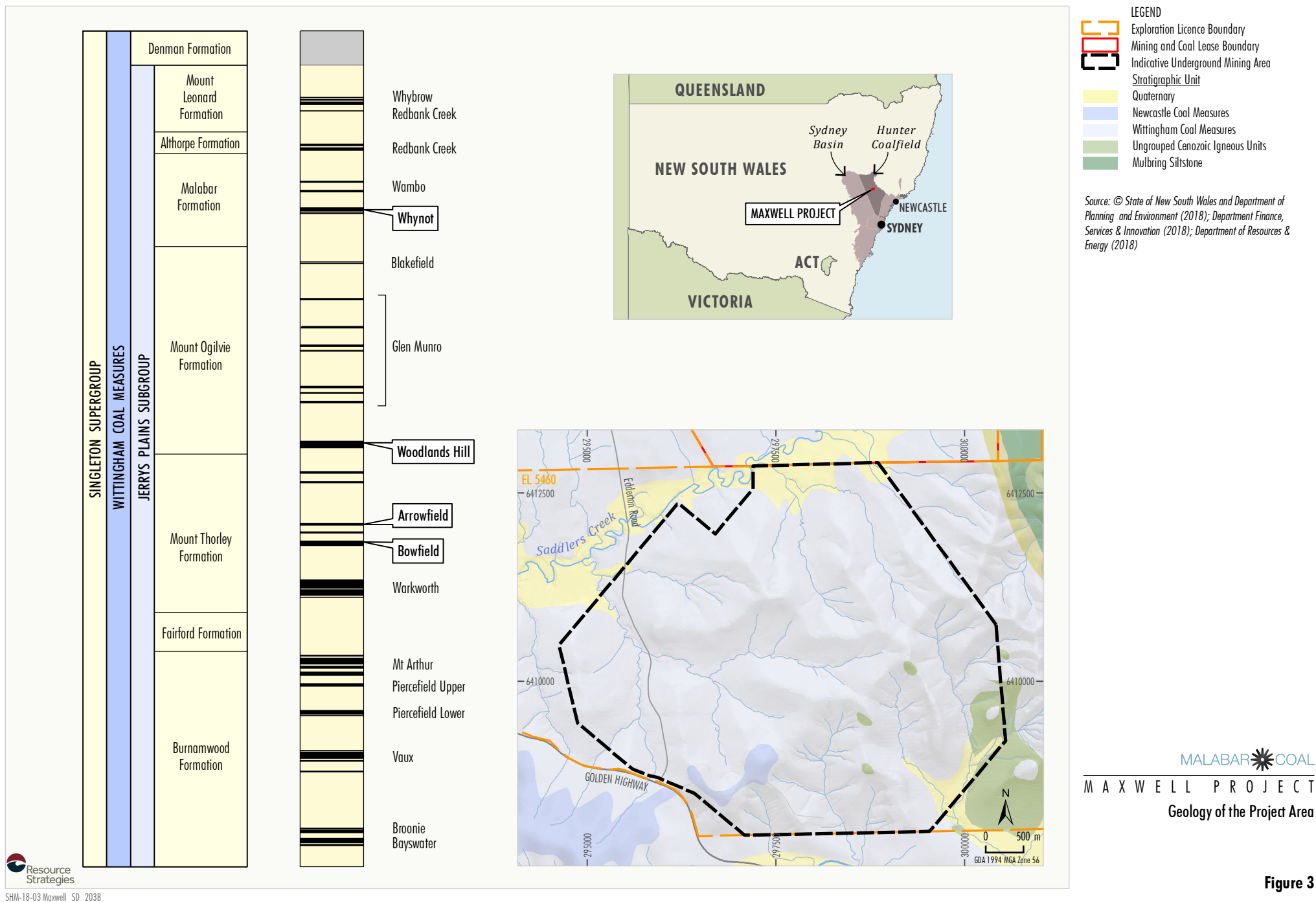


Figure 3

A summary of the characteristics of the target seams is provided in Table 2.

**Table 2**  
**Seam Characteristics of the Underground Mining Area**

Seam	Depth of Cover (m)	Working Section Thickness (m)
Whynot Seam*	40 – 180	1.3 – 2.3
Woodlands Hill Seam	125 – 365	1.7 – 3.5
Arrowfield Seam	170 – 415	2.1 – 3.7
Bowfield Seam	215 – 425	2.2 – 3.3

m – metres.

\* Secondary extraction would not occur at depths of cover less than 50 m.

### Exploration Methods

Exploration in the Project area commenced in the late 1940s, with exploration occurring in several phases since that time. EL 5460 has been systematically explored since its grant in 1998.

To date, exploration has been focused on the area targeted by Malabar for underground mining. This area is covered by an approximate 250 m x 250 m grid of exploration boreholes.

In total, more than 950 exploration boreholes have been drilled. In addition to this, approximately 75% of the area is also covered by 3D seismic survey.

Exploration activities would continue to be undertaken over the life of the Project as input to detailed mine planning and engineering studies to refine the understanding of geological structures and coal quality.

### Coal Resource

The total measured, indicated and inferred coal resource within EL 5460 is approximately 771 million tonnes (Mt).

The Project would recover approximately 150 Mt of ROM coal from the target coal seams.

There is the potential to recover additional coal beyond the life of the Project, subject to separate assessments and approvals.

### Resource Recovery

Malabar will seek to maximise resource recovery using underground mining methods within geological, environmental and tenement constraints. At this stage, the Project would not be expected to have a significant impact on future extraction or recovery of coal.

Outcomes of environmental assessment studies would also be considered during mine planning conducted in parallel with the EIS.

## 3.2 REGIONAL AND LOCAL CONTEXT

The Project is located in the Upper Hunter Valley of NSW, east-southeast of Denman and south-southwest of Muswellbrook (Figure 1). The Project underground mining area is located entirely within EL 5460.

**All freehold land within the Project underground mining area is owned by Malabar (Figure 4).**

A preliminary Schedule of Lands for the provisional Development Application Area is provided in Attachment A<sup>2</sup>. The provisional Development Application Area is located in the Muswellbrook Local Government Area (LGA).

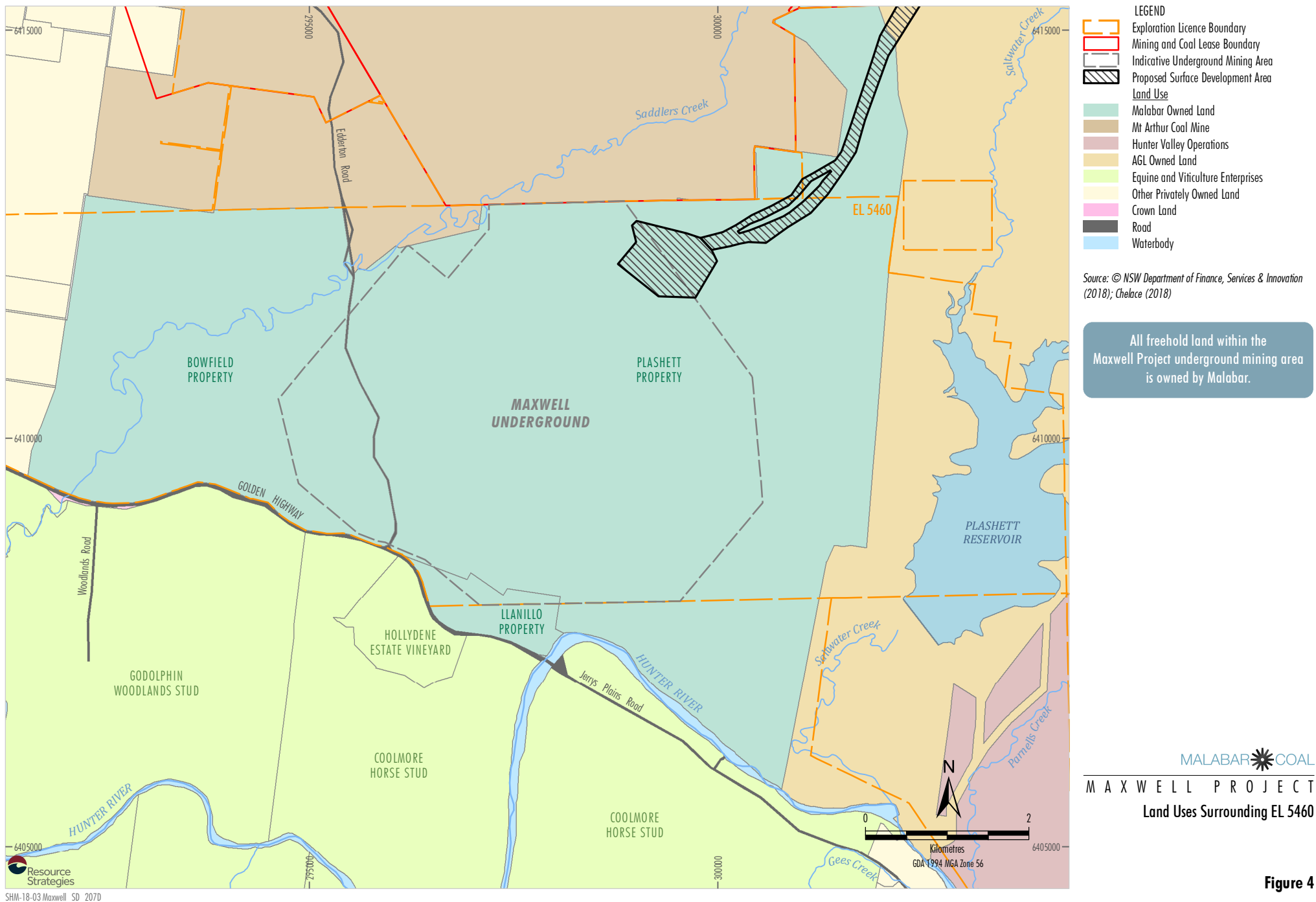
The Maxwell Infrastructure is located within an industrial precinct to the east of Mt Arthur Mine and west of the AGL's Liddell Power Station. Access to the Maxwell Infrastructure is from Thomas Mitchell Drive, which connects the New England Highway with Denman Road.

There are a number of mining operations in the Upper Hunter surrounding the Project (Figure 1).

### Project Underground Mining Area

The landform above the Project underground mining area consists of undulating foothills to moderately-sloping hills over open paddock grazing land. Surface elevations vary from a low point of approximately 110 metres above Australian Height Datum (mAHD) to a high point of approximately 240 mAHD along a north-east to south-west trending ridgeline.

<sup>2</sup> The Development Application Area may be subject to change following detailed engineering and mine planning, environmental assessment and consideration of alternatives conducted for the EIS.



**Figure 4**

The Project underground mining area is located to the south-east of Saddlers Creek, which is a tributary of the Hunter River (Figure 2). The Hunter River flows in an easterly direction to the south of the Project underground mining area. The land generally falls towards the Hunter in the south-east of the mining area and towards Saddlers Creek in the north-west.

The land within the Project underground mining area is primarily cleared, open paddock grazing land (Plate 2), with some areas of remnant forest and open woodland.



**Plate 2 – Agricultural Land in EL 5460**

Existing development within and immediately surrounding the Project underground mining area includes:

- the Golden Highway (State Route 84) to the south;
- Edderton Road;
- electrical infrastructure (Ausgrid power lines);
- telecommunications infrastructure (buried copper cables); and
- agricultural infrastructure, including farm dams, land contouring, access tracks and fencing.

Neighbouring equine businesses include the Coolmore Stud and Godolphin Woodlands Stud. These internationally-owned, thoroughbred horse breeding studs are located south of the Project area and the Hunter River (Figure 4). The Hollydene Estate vineyard, winery, restaurant and cellar door is also located south of the Project area (Figure 4).

### ***Environmentally Sensitive Areas***

A preliminary investigation of environmentally sensitive areas of State significance (as defined in the *State Environmental Planning Policy (State and Regional Development) 2011* [State and Regional Development SEPP]) with respect to the Project has identified the following:

- The provisional Development Application Area includes land mapped as 'Environmentally Sensitive Land' under the *Muswellbrook Local Environmental Plan 2009* (Muswellbrook LEP).
- The provisional Development Application Area is not within coastal waters of the State.
- No lands protected or preserved under *State Environmental Planning Policy No. 14 - Coastal Wetlands* or *State Environmental Planning Policy No. 26 - Littoral Rainforests* occur within the provisional Development Application Area.
- No lands reserved as an aquatic reserve under the *NSW Fisheries Management Act, 1994* or as a marine park under the *NSW Marine Parks Act, 1997* occur within the provisional Development Application Area.
- No lands within a wetland of international significance declared under the Ramsar Convention on Wetlands or lands within a World Heritage area declared under the World Heritage Convention occur in or near the provisional Development Application Area.
- No lands identified in an Environmental Planning Instrument as being of high Aboriginal cultural significance have been identified within the provisional Development Application Area.
- No lands reserved as a state conservation area under the *NSW National Parks and Wildlife Act, 1974* occur within the provisional Development Application Area.
- No lands, places, buildings or structures listed on the State Heritage Register under the *NSW Heritage Act, 1977* occur within the Development Application Area.
- No lands declared as critical habitat under the *NSW Threatened Species Conservation Act, 1995* or *Fisheries Management Act, 1994* occur within the provisional Development Application Area.
- There is no Crown land within the provisional Development Application Area that is not currently covered by Project Approval 06\_0202.

### 3.3 PROJECT DESCRIPTION

Table 3 provides a summary of activities associated with the Project.

#### 3.3.1 Project Development and Construction Activities

Construction activities would generally be undertaken 24 hours per day, 7 days per week, including surface construction activities.

The initial construction and development phase of the Project would be approximately 12 months and would include the following activities.

##### *Site Access and Site Services to the Maxwell Underground Mine Entry*

- Installation of temporary erosion and sediment controls.
- Establishment of temporary vehicle accesses.
- Establishment of administration and other infrastructure to support construction activities.
- Construction of water management infrastructure, including sumps, pumps, pipelines and water storages.
- Construction of a permanent site access from Thomas Mitchell Drive to the Maxwell underground mine entry location.
- Construction and installation of ancillary infrastructure and services for the Maxwell underground mine entry (e.g. power transmission infrastructure, site security).

##### *Maxwell Underground Mine Access and Underground Development*

- Excavation of an entry area (access floor and wall above the portal), portals and mine access drifts.
- Use of excavated waste rock from the entry area and access drifts as construction fill (e.g. for hardstand areas, dam embankments and road construction).
- Installation of the underground mine's ventilation infrastructure.
- Delivery, assembly and installation of mining equipment, including continuous miners.
- Development of underground main roadways and gateroads for longwall panels.
- Installation of underground conveying and coal sizing systems.

##### *Infrastructure at the Maxwell Underground Mine Entry*

- Construction and development of surface conveyors, ROM coal stockpiles and coal sizing facility.
- Construction of administration, meeting rooms, bathhouse, workshop, fuel storage, laydown and parking facilities and other ancillary infrastructure.

##### *Coal Handling Infrastructure*

- Transport of ROM coal via internal road during the development stage of the Project, (reduced tonnages), while the overland conveyor is constructed and commissioned.

##### *Other Development Activities*

Other development activities that would occur over the life of the Project would include:

- Construction of an overland conveyor and ancillary infrastructure to transport ROM coal from the underground mine entry to the existing CHPP.
- Construction of power transmission infrastructure including power lines and substations.
- Delivery, assembly and installation of mining equipment, including a longwall machine.
- Construction of ventilation infrastructure and gas management systems.
- Progressive development and augmentation of sumps, pumps, pipelines, water storages, water treatment and other water management equipment and structures.
- Progressive development of the underground conveyor systems and services.
- Off-site maintenance, replacements and upgrades to roadway development machines and longwall mining machinery.
- Upgrades of existing Maxwell Infrastructure.

#### 3.3.2 Underground Mining Operations

The Project would involve extraction of coal from four seams within the Wittingham Coal Measures using the following underground mining methods:

- bord and pillar with partial pillar extraction in the Whynot Seam; and
- longwall extraction in the Woodlands Hill Seam, Arrowfield Seam and Bowfield Seam.

**Table 3**  
**Overview of the Maxwell Project**

Component	Description
Mining Method	Underground extraction using “bord and pillar” and “longwall” mining methods.
Resource	Coal seams in the Wittingham Coal Measures within EL 5460 (Whynot Seam, Woodlands Hill Seam, Arrowfield Seam and Bowfield Seam).
Annual Production	Up to 8 million tonnes of ROM coal per annum.
Mine Life	26 years of coal extraction.
Total Resource Recovered	150 million tonnes of ROM coal.
Coal Handling and Preparation	<p>Transport of coal from underground faces to the mine entry via an underground conveyor network.</p> <p>A coal surge stockpile at the underground mine entry would be used prior to transporting ROM coal to the Maxwell Infrastructure CHPP.</p> <p>Transportation of initial ROM coal via internal roads, while an overland conveyor is constructed and commissioned. Subsequently, ROM coal would be transported via the overland conveyor system.</p> <p>Handling and processing of up to 8 million tonnes of ROM coal per annum.</p>
Management of Reject Material (i.e. Stone-derived Material)	Emplacement of coarse rejects and tailings primarily within the existing “East Void” in ML 1531 at the Maxwell Infrastructure precinct.
General Infrastructure	<p>Use of existing Maxwell Infrastructure with minor upgrades.</p> <p>Development of underground mine entries and associated facilities that support the underground mining activities, provides for personnel and materials access to the underground mine and includes coal handling and sizing facilities.</p> <p>Development of infrastructure for power, ventilation and gas management for the underground mine.</p>
Product Transport	<p>Transport of product coal to market or to the Port of Newcastle for export via the Antiene Rail Spur and Main Northern Railway or via conveyor to the Bayswater and/or Liddell Power Stations.<sup>1</sup></p> <p>Transport of up to 7 million tonnes of product coal per annum along the rail loop (up to 12 train movements per day).</p>
Water Management	<p>Development of a water management strategy based on a detailed site water balance. Water management may include recycling of water on-site, storage of water on-site (including in voids), licensed water extraction and/or consideration of treatment and beneficial use.</p> <p>Augmentations and extensions to existing water management infrastructure and development of new water management storages, sumps, pumps, pipelines, sediment control, mine dewatering, water treatment and wastewater treatment infrastructure.</p>
Workforce	<p>During operation, the Project would directly employ approximately 350 personnel.</p> <p>Additional employment would be generated by Project construction activities and during operations (e.g. cleaners, security personnel, etc.). This additional employment would be quantified and assessed in the EIS.</p>
Hours of Operation	Operated on a continuous basis, 24 hours per day, seven days per week.
Key Environmental Mitigation Measures	To be determined through the environmental assessment and stakeholder consultation process.
Capital Investment Value	To be determined through the detailed mine planning process and provided with the Development Application.

<sup>1</sup> Consistent with the current approval for the Antiene Rail Spur (DA 106-04-00), coal may be hauled on public roads under emergency or special situations with the prior written permission of the Secretary of DP&E, Roads and Maritime Services and Muswellbrook Shire Council.

The Project would produce up to 8 Mtpa of ROM coal. Underground mining activities would be undertaken 24 hours per day, seven days per week.

The conceptual layout for each seam is provided on Figure 5.

During the development of the EIS and over the life of the Project, the mining layout may vary from that shown on Figure 5 to account for factors that include: localised geological features; mine economics; coal market demand; detailed mine design considerations; and adaptive management.

The mining layout would be modified within the Project boundaries where required and would be documented in the relevant Mining Operations Plan and Extraction Plans.

#### **Associated Infrastructure and Activities**

Other associated infrastructure and activities would include:

- personnel and materials access via drifts from the underground mine entry area;
- materials handling and transport systems to convey coal from the longwall and development faces to the surface;
- underground equipment (e.g. shearers, continuous miners, conveyors, bins) and mobile fleet (e.g. load haul dump vehicles, drill rigs, shuttle cars, personnel carriers);
- ventilation systems for intake and exhaust air from the underground mining areas;
- gas monitoring systems, and gas management and abatement activities;
- water supply for equipment cooling and dust suppression;
- water management systems to transfer groundwater and process water that accumulates in the underground workings to the surface;
- storage and handling of materials used by underground mining equipment (e.g. hydraulic fluids); and
- monitoring, rehabilitation and remediation of subsidence and other mining effects.

The final location of surface infrastructure would be determined through detailed mine planning, environmental assessment outcomes and consideration of alternatives, and would be documented in the EIS.

#### **3.3.3 Infrastructure and Services**

The Project would include the use of the existing Maxwell Infrastructure and the development of new infrastructure.

Key existing infrastructure at the Maxwell Infrastructure location (Figure 6) includes:

- site access road from Thomas Mitchell Drive;
- CHPP, which includes:
  - ROM coal stockpile and ROM hopper;
  - Coal Preparation Plant (CPP); and
  - product coal stockpiles with mechanical stacking and reclaim;
- train load-out facility and rail loop (connecting to the Antiene Rail Spur);
- administration, employee amenities, training centre, emergency services, workshops, store and carpark facilities;
- electrical distribution infrastructure; and
- site water management infrastructure (including water storages, pumps and pipelines and a wastewater treatment facility).

The Project would incorporate minor upgrades and additions to existing infrastructure, which would be documented in the EIS.

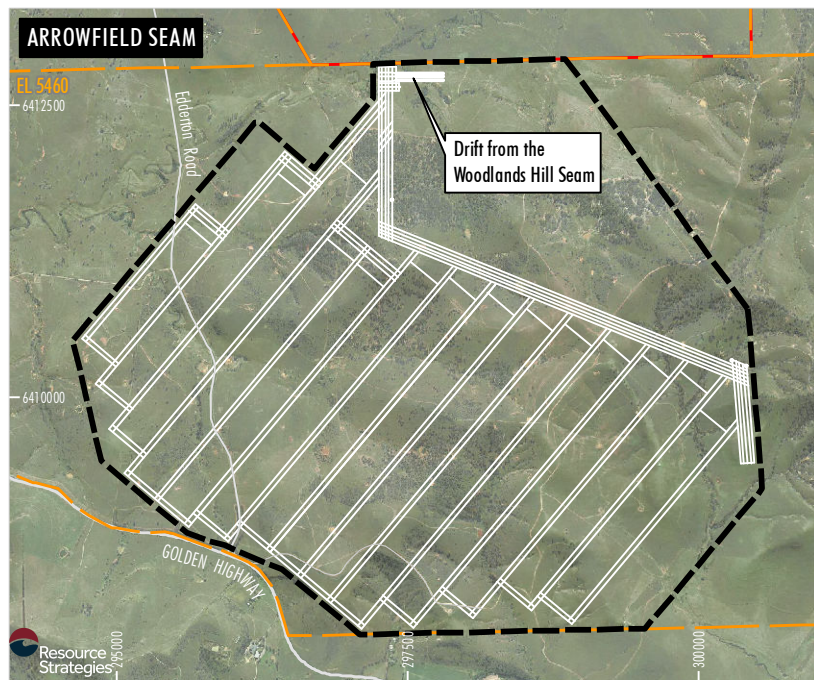
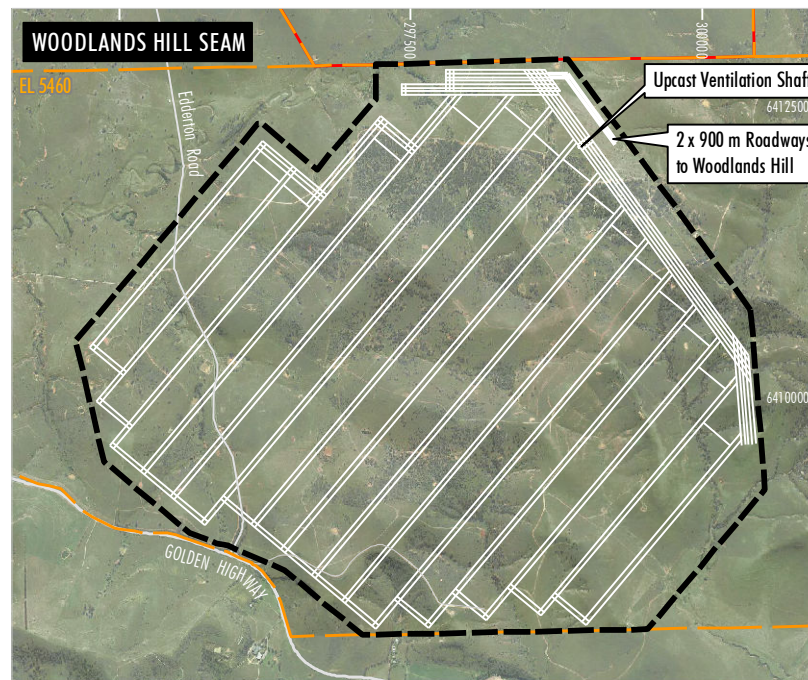
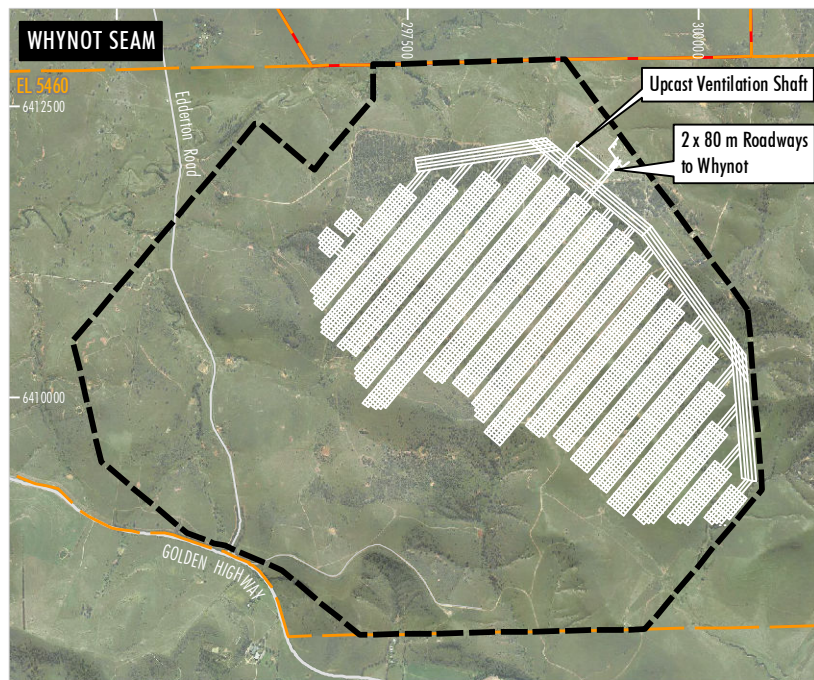
#### **3.3.4 Coal Processing, Handling and Transport**

**The Project would include the use of the substantial existing Maxwell Infrastructure for handling, processing and transportation of coal for the life of the Project.**

An overland coal conveyor would be constructed and operated to transport sized ROM coal from the mine entry to the existing CHPP at the Maxwell Infrastructure (Figure 2). Some modification to the ROM stockpiling and handling equipment would be required to cater for delivery of coal via conveyor.

ROM coal during the development stage of the Project would be transported via internal roads along a similar route as the proposed overland conveyor. This would cease when the overland conveyor is constructed and commissioned.

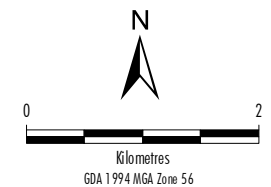
ROM coal would be handled at the existing CHPP, and beneficiated through the CPP or bypassed directly to the product coal stockpile.



**LEGEND**

- Exploration Licence Boundary
- Mining and Coal Lease Boundary
- Indicative Underground Mining Area
- Indicative Underground Mining Layout

Source: © State of New South Wales and Department of Planning and Environment (2018); © Department Finance, Services & Innovation (2018)  
Orthophoto: June 2011

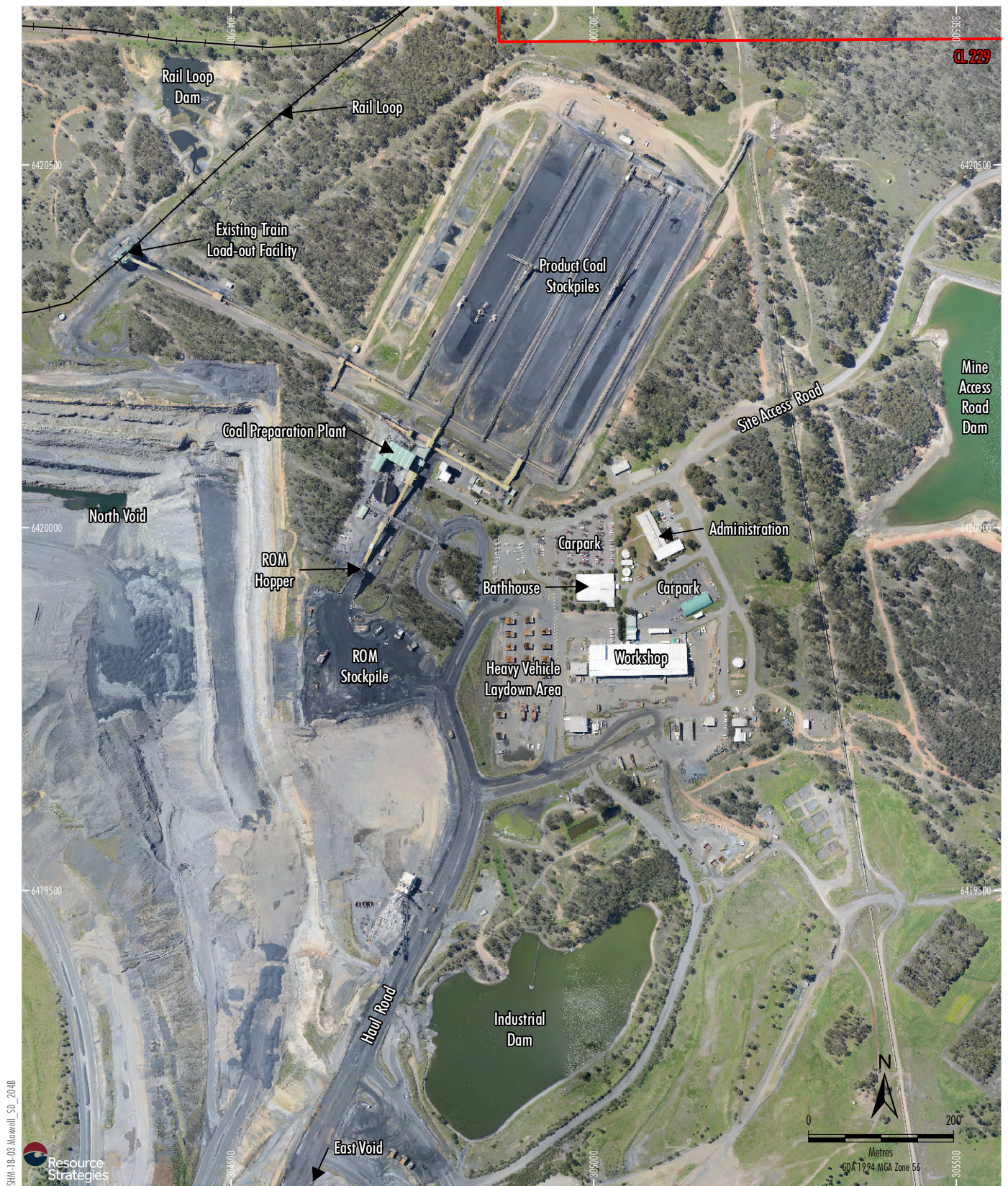


**MALABAR COAL**

**MAXWELL PROJECT**

Indicative Underground Mining Layout

**Figure 5**



The Maxwell Project would include the use of the substantial existing Maxwell Infrastructure for the handling, processing and transportation of coal mined from Maxwell Underground.

MALABAR  COAL

MAXWELL PROJECT

Existing Maxwell Infrastructure

Figure 6

From the product coal stockpile, product coal would be conveyed to the train load-out facility, located over the rail loop, for loading onto trains.

Product coal would be transported via the existing Antiene Rail Spur and Main Northern Railway to market or to the Port of Newcastle for export or via conveyor to the Bayswater and/or Liddell Power Stations.

Consistent with the current approval for the Antiene Rail Spur (DA 106-04-00), coal may be hauled on public roads under emergency or special situations with the prior written permission of the Secretary of the DP&E, Roads and Maritime Services and Muswellbrook Shire Council.

### 3.3.5 Management of CHPP Reject Material

Approximately 18 million bank cubic metres of CHPP reject material would be produced over the life of the Project, including coarse rejects and tailings.

This CHPP reject material would primarily be emplaced within the existing East Void in ML 1531 at the Maxwell Infrastructure.

Malabar is currently investigating the most efficient process to transport and emplace reject material. While the preference is for a 'co-disposal' process where all material is pumped to the disposal area, some coarse rejects may be trucked via the currently installed coarse reject system and placed within one of the open cut voids.

At the conclusion of the Project, emplacement areas would be capped and rehabilitation completed, unless consent for continued emplacement is granted.

Malabar will continue to investigate beneficial uses for the voids in CL 229 and ML 1531. This will include CHPP reject material from possible future underground mining activities undertaken by Malabar within EL 5460 and EL 7429 (Spur Hill) and engagement with other mining and industrial facilities in the region (subject to separate assessments and approvals).

### 3.3.6 Water Management

The Maxwell Infrastructure incorporates water management infrastructure to separate: clean water; oily water; and mine-affected water.

The Project would involve the use of the existing infrastructure with minor augmentations and extensions. New water management infrastructure would also be developed at the underground mine entry and for other Project activities.

The Project would involve the use of a combination of mine water, recycled treated mine water and potable water in underground and surface operations.

Water and brine from water treatment activities would be stored within existing voids in CL 229 and ML 1531.

Final water supply requirements for the Project would be subject to the outcomes of a detailed water balance that would be presented in the EIS.

### 3.3.7 Other Activities

Potential subsidence impacts on Edderton Road (Plate 3) would be managed through either road maintenance or realignment of the road around the underground mining area. These options would be evaluated further, and the preferred option would be presented in the EIS.



**Plate 3 – Edderton Road**

Other activities that would be conducted as a component of the Project include monitoring, remediation of subsidence impacts, rehabilitation of surface disturbance, and minor associated infrastructure and activities.

The Project would also include the continued rehabilitation of existing mining disturbance areas within CL 229, ML 1531 and CL 395, including overburden emplacement areas, and eventual relinquishment of areas not required to support the Project. A detailed rehabilitation strategy for these areas will be presented in the EIS.

### 3.4 MANAGEMENT COMMITMENTS

Preliminary strategies to address potential impacts associated with the Project are outlined in Section 5. These strategies would be developed and refined through the environmental assessment process.

### 3.5 PROJECT SCHEDULE

It is anticipated that construction and operational activities associated with the Project would commence as soon as practicable after all necessary consents, approvals and licences for the Project have been obtained.

The initial construction phase of the Project would be approximately 12 months.

The Project would extract coal over a period of approximately 26 years.

### 3.6 RELATIONSHIP WITH OTHER DEVELOPMENTS

Malabar intends to consolidate current rehabilitation activities under Project Approval 06\_0202 at the former Drayton Mine into the Project's Development Consent.

The Project would also involve the use of the Antiene Rail Spur, which is shared with the Mt Arthur Mine, and is regulated under a separate Development Consent (DA 106-04-00). The Project would operate within current rail limits on the Antiene Rail Spur over an extended period.

As a separate project, and in parallel with this Project, Malabar intends to submit a development application for a solar farm, known as "the Maxwell Solar Project". The solar panels would be located on areas of previous open cut mining disturbance within CL 229.

The Maxwell Solar Project would have an installed capacity of 25 megawatts (MW) and would provide additional employment opportunities in the local district during construction and operation. The Maxwell Solar Project would allow for a beneficial use of an area previously subject to open cut mining. It would also be located adjacent to a major electricity generating hub in NSW (Liddell and Bayswater Power Stations) and in proximity to high voltage power lines.

The Maxwell Solar Project would not constrain or negatively impact the development of this Project. The development of the Maxwell Solar Project would be subject to separate assessments and approvals, however potential cumulative impacts would be assessed where relevant.

Malabar also owns and operates the Spur Hill Project in the adjacent EL 7429 (Figure 1). There is potential for future integration of the Maxwell Project and Spur Hill Project. The development of the Spur Hill Project resource would be informed by further investigations into the geology in the area where EL 5460 meets EL 7429. Any future integration of the Maxwell Project and Spur Hill Project would be subject to future separate assessments and approvals.

### 3.7 PROJECT RATIONALE AND ALTERNATIVES CONSIDERED

#### 3.7.1 Project Rationale

The Project would facilitate the underground mining, processing and sale of coal within EL 5460.

Malabar has elected to proceed with the Project as proposed due to:

- Substantial capital savings associated with the use of the existing Maxwell Infrastructure.
- The proximity of the Project underground mining area to the existing Maxwell Infrastructure.
- The extensive geological and geotechnical data available within the target area in EL 5460 (Section 3.1).
- The short development time to first underground coal and full employment.
- Extraction of a significant coal resource that provides an attractive return on investment.

The *Strategic Statement on NSW Coal* (NSW Government, 2014) recognises the value of coal production to the NSW economy, including:

- The long history of coal mining in NSW, and its close ties with communities in the Hunter.
- The potential for coal production to deliver significant economic benefits to local communities, including jobs and investment.
- Coal production's significant contribution to export earnings as the State's biggest single export earner.

The Project would produce the following benefits for the local area, for NSW more broadly and for the national economy:

- generation of approximately 350 new direct, long-term jobs for the region, along with many more indirect jobs;
- annual export sales in the vicinity of \$700 million annually;
- support for local businesses from the initial capital expenditure and the substantial ongoing operating inputs;
- substantial corporate tax contributions;
- payment of approximately \$1.3 billion in royalties to the NSW Government over the initial 26 years of mining;
- certainty around future development within EL 5460;
- support for continued rehabilitation activities within CL 229, ML 1531 and CL 395, including reduction in the volume of final voids through emplacement of reject material generated by coal processing activities; and
- ongoing financial support for community groups as demonstrated by Malabar for more than five years.

Full consideration of the Project on social, environmental and economic grounds, including consideration of the principles of ecologically sustainable development, consideration of alternatives and a cost-benefit analysis, would be included in the EIS. This evaluation would consider the *Guidelines for Economic Assessment of Mining and Coal Seam Gas Proposals* (NSW Government, 2015c).

### 3.7.2 Alternatives Considered

As part of its acquisition of EL 5460, Malabar committed to develop the Project solely as an underground mining operation.

Open cut mining is prohibited within EL 5460 under the *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007* (Mining SEPP) and the conditions of EL 5460.

The Project would minimise impacts to amenity, air quality, biodiversity, land, heritage and the road and rail network through the use of the existing Maxwell Infrastructure (including the site access road, CHPP and Antiene Rail Spur). This would avoid the development of additional infrastructure required to support an underground mining operation within EL 5460.

The location of mine entry for the Project (Figure 2) has been selected in consideration of:

- locating the mine entry away from sensitive receptors, and in a natural valley that mitigates and minimises alteration of the visual landscape (particularly from sensitive viewsheds); and
- minimising the length of underground roadways required to access the coal seams.

The proposed scale of the Project, if approved, would provide sufficient investment certainty for Malabar. The significant resource definition and exploration drilling conducted in EL 5460 to date indicates that the target coal seams are the optimal seams for an underground mining operation.

Bord and pillar mining methods (with pillar extraction) are proposed in the Whynot Seam to:

- minimise the time to first coal; and
- allow the extraction of a resource with a thinner working section and lower depth of cover compared to the other target seams.

Due to the coal thickness and continuity, and the depths of cover, longwall mining methods are proposed in the Woodlands Hill, Arrowfield and Bowfield seams to maximise coal recovery and efficiency.

The Project mine layout would be designed to avoid direct subsidence impacts on the Hunter River alluvium and Saddlers Creek.

The Project would operate within existing rail limits on the Antiene Rail Spur and would not involve substantial changes to the CHPP infrastructure. This mitigates potential amenity impacts on residences in the vicinity of the Maxwell Infrastructure.

### 3.7.3 Alternatives to be Considered

Further consideration of alternatives to location, scale, methods and management would be undertaken as a component of comprehensive assessment undertaken for the EIS. These alternatives will include:

- panel layout, panel width and pillar width, in consideration of detailed geology, mine economics, safety, subsidence and environmental aspects;
- measures to avoid, mitigate, rehabilitate/remediate, monitor and/or offset the potential impacts of the Project; and
- options for the emplacement of coarse and fine rejects within existing voids (e.g. co-disposal) (Section 3.3.5).

## 4 STRATEGIC AND STATUTORY CONTEXT

### 4.1 COMPATIBILITY WITH EXISTING LAND USES

The Project is a permissible land use under NSW legislation and can be assessed on its specific merits (Section 4.2).

Open cut mining is prohibited within EL 5460 under an amendment to the Mining SEPP enacted in December 2017. The proposed prohibition applies only to open cut mining as the key reasons for the refusal of previous applications for open cut mining were noise and dust impacts, both of which would be significantly less for underground mining (NSW Government, 2017b).

All freehold land within the Project underground mining area is owned by Malabar. Current grazing activities above the underground mining areas can be managed and would continue.

**Malabar considers the Project can be designed to allow for underground mining in EL 5460 to co-exist with its near neighbours, including neighbouring equine and viticulture businesses.**

**This means that the community and the local, State and Commonwealth Governments can realise the benefits of diverse economic and employment opportunities. This will be assessed in the EIS.**

## 4.2 PERMISSIBILITY AND STRATEGIC PLANNING

### *Applicability of Part 4 of the Environmental Planning and Assessment Act, 1979*

Division 4.1 of the EP&A Act creates a threefold classification of development under the Act. The threefold classification is:

- development that may be carried out without development consent;
- development that may be carried out with development consent; and
- development that is prohibited.

The Project falls into the classification of development that may be carried out with development consent.

Development Consent for the Project would be sought under the State Significant Development provisions (i.e. Division 4.7) under Part 4 of the EP&A Act. The EP&A Act and EP&A Regulation generally set the framework for planning and environmental assessment in NSW.

Under section 4.36 of the EP&A Act, a class of development, such as mining, may be declared as State Significant Development by a State Environmental Planning Policy (SEPP).

Clause 8 of the State and Regional Development SEPP provides that the development is declared to be State Significant Development for the purposes of the EP&A Act if:

- the development on the land concerned is, by the operation of an environmental planning instrument, not permissible without Development Consent under Part 4 of the EP&A Act (first criterion); and
- the development is specified in Schedule 1 or 2 (second criterion).

With respect to the first criterion identified above, the Project may be carried out only with Development Consent under Part 4 of the EP&A Act, pursuant to clause 7 of the Mining SEPP (described further below).

In regard to the second criterion identified above, development for the purpose of mining that is coal or minerals sands mining, or has a capital investment value of more than \$30 million, is specified in Schedule 1, Item 5 as being State Significant Development.

The Project is development for the purpose of coal mining and also has a capital investment value of more than \$30 million. Therefore, the development would be State Significant Development. Development Consent would be sought from the NSW Minister for Planning or the Independent Planning Commission (IPC).

### **Permissibility of the Project**

Section 4.38 of the EP&A Act provides that development consent may not be granted under Division 4.7 of Part 4 if the development is *wholly* prohibited by an environmental planning instrument, but may be granted despite the development being *partly* prohibited by an environmental planning instrument.

The provisional Development Application Area is covered by the Muswellbrook LEP.

The provisional Development Application Area includes land zoned under the Muswellbrook LEP as:

- Zone RU1 (Primary Production);
- Zone E3 (Environmental Management); and
- Zone SP2 (Power Station) (the East Void).

Subject to the application of the Mining SEPP (as discussed below), underground mining would be prohibited under the Muswellbrook LEP in these zones.

Clause 4 of the Mining SEPP relevantly provides:

#### **4 Land to which Policy applies**

*This Policy applies to the State.*

Clause 5(3) of the Mining SEPP gives it primacy where there is any inconsistency between the provisions in the Mining SEPP and the provisions in any other environmental planning instrument (subject to limited exceptions).

The practical effect of clause 5(3) for the Project is that if there is any inconsistency between the provisions of the Mining SEPP and those contained in the Muswellbrook LEP, the provisions of the Mining SEPP will prevail.

Clauses 6 and 7 of the Mining SEPP provide what types of mining development are permissible without development consent and what types are permissible only with development consent.

In this regard, clause 7(1) states:

### **7 Development permissible with consent**

#### **(1) Mining**

*Development for any of the following purposes may be carried out only with development consent:*

- (a) *underground mining carried out on any land,*

...

- (d) *facilities for the processing or transportation of minerals or mineral bearing ores on land on which mining may be carried out (with or without development consent), but only if they were mined from that land or adjoining land,*

...

The term 'underground mining' in the Mining SEPP is given an extended definition in clause 3(2) as follows:

#### **underground mining means:**

- (a) *mining carried out beneath the earth's surface, including bord and pillar mining, longwall mining, top-level caving, sub-level caving and auger mining, and*
- (b) *shafts, drill holes, gas and water drainage works, surface rehabilitation works and access pits associated with that mining (whether carried out on or beneath the earth's surface),*

*but does not include open cut mining.*

The effect of clause 7(1)(a), in conjunction with the operation of clause 5(3) of the Mining SEPP, is that notwithstanding any prohibition in the Muswellbrook LEP, development for the purpose of underground mining and facilities for the processing and transportation of coal may be carried out with development consent.

Accordingly, the Minister would not be precluded from granting approval under section 4.38 of the EP&A Act for the Project in respect of those parts of the Project land where mining is prohibited under the Muswellbrook LEP.

## Planning Provisions

*State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007*

The EIS would include detailed consideration of the aims of the Mining SEPP (Part 1) and the matters for consideration in Part 3 of the Mining SEPP based on the final description of the Project and impact assessment.

A preliminary review of the Project against the Mining SEPP did not identify any matters that could prevent the Project from proceeding.

Maxwell Ventures (Management) Pty Ltd will make an application for a Gateway Certificate under clause 17F of the Mining SEPP for the Project mining activities that would be carried out outside the existing mining leases.

### *State Environmental Planning Policies*

In addition to the Mining SEPP, the following SEPPs may potentially be relevant to the Project:

- State and Regional Development SEPP;
- *State Environmental Planning Policy (Infrastructure) 2007*;
- *State Environmental Planning Policy No. 33 (Hazardous and Offensive Development)* (SEPP 33);
- *State Environmental Planning Policy No. 44 - Koala Habitat Protection*; and
- *State Environmental Planning Policy No. 55 (Remediation of Land)*.

Relevant provisions and objectives of the above SEPPs would be considered in the preparation of the EIS.

## Planning Strategies

The following strategic planning documents would be considered in the planning of the Project and the preparation of the EIS:

- *Hunter Regional Plan 2036* (NSW Government, 2016);
- *Upper Hunter Strategic Regional Land Use Plan* (NSW Government, 2012) (recommended for review in NSW Government [2016]); and
- *Muswellbrook Shire Council Community Strategic Plan 2017-2027* (Muswellbrook Shire Council, 2017).

## 4.3 OTHER APPROVALS AND LICENCES

### *Mining Act, 1992*

Malabar will lodge a Mining Lease Application (MLA) separately with the NSW Division of Resources and Geoscience (DRG) (within the DP&E) for the Project.

Under the NSW *Mining Act, 1992*, environmental protection and rehabilitation are regulated by conditions included in all mining leases, including requirements for the submission of a Mining Operations Plan prior to the commencement of operations, and subsequent Annual Environmental Management Reports.

Under section 4.42(1)(c) of the EP&A Act, if the Project is approved as State Significant Development, the grant of one or more mining leases under the *Mining Act, 1992* cannot be refused if those leases are necessary for the carrying out of the approved Project and are to be substantially consistent with the Project's development consent.

### *Protection of the Environment Operations Act, 1997*

The NSW *Protection of the Environment Operations Act, 1997* (PoEO Act) and the NSW *Protection of the Environment Operations (General) Regulation, 2009* set out the general obligations for environmental regulation in NSW.

The Maxwell Infrastructure currently operates under EPL 1323, granted under the PoEO Act. The EPL contains conditions that relate to emission and discharge limits, environmental monitoring and reporting. If approved, the Project would require a variation of EPL 1323.

### *Roads Act, 1993*

If the Project is approved, Malabar Coal would apply for the necessary consents under section 138 of the *Roads Act, 1993* associated with either mining under, or realigning, Edderton Road (Section 3.3.7).

In accordance with section 4.42(1)(f) of the EP&A Act, if the Project is approved as State Significant Development, the grant of a consent under section 138 of the *Roads Act, 1993* cannot be refused if that consent is necessary for the carrying out of the approved Project and is to be substantially consistent with the Project's development consent.

### ***Water Management Act, 2000***

Under section 4.41(1)(g) of the EP&A Act, if the Project is approved as State Significant Development, water use approvals under section 89, water management work approvals under section 90, or activity approvals (excluding aquifer interference approvals) under section 91 of the *Water Management Act, 2000* would not be required for the Project.

The EIS would include consideration of the Project against the water management principles and access licence dealing principles under the *Water Management Act, 2000*. The EIS would also identify water access licences required for each water source associated with the Project.

### ***Coal Mine Subsidence Compensation Act, 2017***

The *Coal Mine Subsidence Compensation Act, 2017* (CMSC Act) commenced on 1 January 2018, and provides a scheme for the provision of compensation for damage caused by subsidence resulting from coal mine operations, and the assessment and management of risks associated with subsidence resulting from coal mine operations.

At all times while the Project is an active mine, Malabar (or the relevant proprietor) would be liable to pay compensation in relation to damage caused by subsidence arising from the Project on improvements or goods under Part 2 of the CMSC Act. Any claims for compensation by another party under the CMSC Act would be lodged with Subsidence Advisory NSW.

The Project is not located within a Mine Subsidence District declared under section 20 of the CMSC Act, and the regulations made under the CMSC Act.

### ***Commonwealth Environment Protection and Biodiversity Conservation Act, 1999***

The Project is being referred to the Commonwealth Minister for the Environment and Energy for consideration as to whether the Project is a 'Controlled Action' and requires approval under the EPBC Act.

If the Project is assessed under the assessment bilateral agreement with the NSW Government for impacts on water resources, the NSW and Commonwealth Governments will jointly obtain the advice of the Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development on the Project.

## **5 MATTERS AND IMPACTS**

### **5.1 OVERVIEW**

The DP&E has published a draft Scoping Worksheet that includes a generic checklist of matters to assist proponents to: consider all matters; filter out any matters that are not relevant to the project; and inform the likely level of assessment required in the EIS.

The Scoping Worksheet has been reviewed to identify the key potential environmental issues associated with the construction and operation of the Project. Key potential environmental issues are those environmental aspects that will require Project-specific assessment to assess the potential impacts and develop measures to avoid, mitigate and/or monitor the potential impacts of the Project.

The proposed level and scope of assessments have been identified (Attachment B) to assist the DP&E with issuing of the SEARs for the Project under clause 3 of Schedule 2 of the EP&A Regulation. The proposed level and scope of assessments were determined based upon:

- understanding of the local and regional context and the Project (Section 3);
- feedback from stakeholder consultation undertaken to date;
- baseline environmental data; and
- experience from previous environmental management and approvals processes at the site and throughout NSW.

### **5.2 KEY ISSUES AND OTHER ISSUES FOR INCLUSION IN THE ENVIRONMENTAL IMPACT STATEMENT**

The key environmental issues identified are provided in Table 4 with a preliminary list of study requirements to address these issues.

Recognised specialists will be commissioned to conduct the studies outlined in Table 4, and independent peer review will be conducted for select key studies in consideration of the draft *Peer Review* guideline (NSW Government, 2017d) (or its latest version).

**Table 4**  
**Key Potential Environmental Issues, Proposed Level and Scope of Assessment and Preliminary Strategies to Address Potential Impacts**

Environmental/Social Matter		Proposed Level and Scope of Assessment	Preliminary Strategies to Address Potential Impacts (To be refined during detailed impact assessment)
Amenity	Acoustic	<ul style="list-style-type: none"> <li>Modelling and assessment of potential noise impacts as a result of construction and mining operations, including road and rail traffic.</li> <li>Assessment of potential <b>cumulative impacts</b> resulting from the Project and nearby developments and mines.</li> <li>Investigation of measures to avoid, mitigate and/or monitor the potential impacts of the Project.</li> <li><b>Focused engagement</b> with near neighbours concerned about potential impacts on acoustic amenity.</li> </ul>	<ul style="list-style-type: none"> <li>Continued use of existing mine infrastructure and locating new mine infrastructure away from sensitive receptors.</li> <li>Reasonable and feasible mitigation measures on-site to minimise noise generation during construction and operation.</li> <li>Noise monitoring network.</li> <li>Compliance with the <i>Noise Policy for Industry</i> and the <i>Voluntary Land Acquisition and Mitigation Policy for State Significant Mining, Petroleum and Extractive Industry Developments</i>.</li> </ul>
Access	Road and Rail Network	<ul style="list-style-type: none"> <li>Assessment of changes in traffic volumes on the surrounding road network.</li> <li>Assessment of potential <b>cumulative impacts</b> on the road network resulting from the Project and nearby developments and mines.</li> <li>Investigation of measures to avoid, mitigate and/or monitor the potential impacts of the Project.</li> <li><b>Focused engagement</b> with near neighbours concerned about potential impacts on the road or rail network.</li> </ul>	<ul style="list-style-type: none"> <li>Use of the existing site access road from Thomas Mitchell Drive.</li> <li>Maintaining current rail limits on the Antiene Rail Spur.</li> </ul>
Built Environment	Public Infrastructure	<ul style="list-style-type: none"> <li>Subsidence assessment of potential subsidence effects on Edderton Road.</li> <li><b>Focused engagement</b> with Muswellbrook Shire Council and other stakeholders regarding the management of Edderton Road.</li> <li>Development of management measures to maintain safety and (wherever practical) serviceability, and to fully repair any damage.</li> </ul>	<ul style="list-style-type: none"> <li>Road maintenance along the existing alignment or realignment of the road around the underground mining area (with the preferred option to be presented in the EIS).</li> </ul>
Heritage	Cultural	<ul style="list-style-type: none"> <li>Assessment of potential impacts on Aboriginal and non-Aboriginal cultural heritage and landscapes.</li> <li>Assessment of potential <b>cumulative impacts</b> resulting from the Project and other known or potential impacts on cultural heritage and landscapes.</li> <li>Investigation of measures to avoid, mitigate, monitor and manage the potential impacts of the Project.</li> <li><b>Focused engagement</b> with interested stakeholders.</li> </ul>	<ul style="list-style-type: none"> <li>Continued use of existing mine infrastructure and locating new mine infrastructure in an area that has limited effect on the landscape as a whole (due to its limited extent and location away from highly visible areas).</li> </ul>

**Table 4 (Continued)**  
**Key Potential Environmental Issues, Proposed Level and Scope of Assessment and Preliminary Strategies to Address Potential Impacts**

Environmental/Social Matter		Proposed Level and Scope of Assessment	Preliminary Strategies to Address Potential Impacts (To be refined during detailed impact assessment)
Heritage (Cont.)	Aboriginal Cultural	<ul style="list-style-type: none"> <li>Subsidence assessment of potential subsidence effects on items of Aboriginal heritage.</li> <li>Assessment of impacts on items of Aboriginal heritage and Aboriginal cultural values in accordance with NSW Department of Environment, Climate Change and Water (DECCW) (2010) and NSW Department of Environment and Conservation (2005).</li> <li>Assessment of potential <b>cumulative impacts</b> resulting from the Project and other known or potential impacts on Aboriginal heritage.</li> <li>Investigation of measures to avoid, mitigate, monitor and manage the potential impacts of the Project.</li> <li><b>Focused engagement</b> with interested Aboriginal parties.</li> </ul>	<ul style="list-style-type: none"> <li>Consideration of environmental assessment outcomes during detailed mine planning (e.g. locations of Aboriginal heritage sites).</li> <li>Involvement of Aboriginal stakeholders during the assessment and operational phases.</li> <li>Surface disturbance protocols (including salvage or demarcation of sites where applicable).</li> <li>Development of subsidence performance measures for any significant heritage sites.</li> <li>Adaptive management approach to achieve subsidence performance measures.</li> <li>Development and implementation of Extraction Plans to mitigate, monitor and manage potential subsidence impacts on Aboriginal heritage.</li> </ul>
	Built	<ul style="list-style-type: none"> <li>Assessment of potential subsidence impacts on identified built features of historic heritage significance.</li> <li>Investigation of measures to avoid, mitigate, monitor and manage the potential impacts of the Project.</li> </ul>	<ul style="list-style-type: none"> <li>Development and implementation of Extraction Plans to mitigate, monitor, manage and remediate potential subsidence impacts on built heritage.</li> </ul>
Community	Services and Facilities Cohesion, Capital and Resilience Housing	<ul style="list-style-type: none"> <li>Preparation of a Social Impact Assessment (SIA) in accordance with the <i>Social impact assessment guideline – For State significant mining, petroleum production and extractive industry development</i> (SIA Guideline) (NSW Government, 2017c).</li> <li>Assessment of potential <b>cumulative impacts</b> resulting from the Project and nearby developments and mines.</li> <li>Investigation of measures to avoid, mitigate and/or monitor the potential impacts of the Project.</li> <li><b>Focused engagement</b> as outlined in the SIA engagement plan (Attachment C).</li> </ul>	<ul style="list-style-type: none"> <li>Development of a Project design that mitigates amenity impacts on surrounding equine and viticulture businesses.</li> <li>Development and implementation of strategies to increase local employment and support of local businesses.</li> <li>Long-term community contributions plan that expands as the Project transitions through its development phases of: approvals; construction; and operations.</li> </ul>

**Table 4 (Continued)**  
**Key Potential Environmental Issues, Proposed Level and Scope of Assessment and Preliminary Strategies to Address Potential Impacts**

Environmental/Social Matter		Proposed Level and Scope of Assessment	Preliminary Strategies to Address Potential Impacts (To be refined during detailed impact assessment)
Economic	Natural Resource Use Livelihood Opportunity Cost	<ul style="list-style-type: none"> <li>Economic assessment of potential impacts on the regional and NSW economy and a cost-benefit analysis.</li> <li>Project justification, including consideration of alternatives, principles of ecologically sustainable development and the objects of the EP&amp;A Act.</li> <li>Consideration of the significance of the coal resource.</li> <li><b>Focused engagement</b> with other industries and businesses in the area, including the equine industry, viticulture industry, retail and hospitality businesses and mining-related support services.</li> </ul>	<ul style="list-style-type: none"> <li>Development of a Project design that mitigates amenity impacts on surrounding equine and viticulture businesses.</li> <li>Strategies to increase local employment and support of local businesses.</li> <li>Long-term community contributions plan that expands as the Project transitions through its development phases of: approvals; construction; and operations.</li> </ul>
Air	Particulate Matter	<ul style="list-style-type: none"> <li>Modelling and assessment of potential air quality impacts as a result of Project activities.</li> <li>Assessment of potential <b>cumulative impacts</b> resulting from the Project and nearby developments and mines.</li> <li>Investigation of measures to avoid, mitigate and/or monitor the potential impacts of the Project.</li> <li><b>Focused engagement</b> with near neighbours concerned about potential particulate matter impacts.</li> </ul>	<ul style="list-style-type: none"> <li>Continued use of existing mine infrastructure and locating new mine infrastructure away from sensitive receptors.</li> <li>Best practice mitigation measures to minimise dust generation during construction and operation.</li> <li>Air quality monitoring network.</li> </ul>
Biodiversity	Native Vegetation Native Fauna	<ul style="list-style-type: none"> <li>Augmentation of previous flora and fauna surveys in consideration of relevant survey guidelines.</li> <li>Assessment of potential impacts on any terrestrial and aquatic species, populations, ecological communities or their habitats, including subsidence, groundwater and surface water assessments.</li> <li>Assessment of alternative locations of surface infrastructure in consideration of potential impacts on ecology.</li> <li>Assessment of potential <b>cumulative impacts</b> resulting from the Project and other vegetation and habitat disturbance in the region.</li> <li>Identification of measures that would be implemented to maintain or improve the biodiversity values of the surrounding region in the medium to long-term.</li> </ul>	<ul style="list-style-type: none"> <li>Consideration of environmental assessment outcomes during detailed mine planning (including minimisation of vegetation disturbance, particularly disturbance of areas with higher ecological value).</li> <li>Surface disturbance protocols (including pre-clearance surveys).</li> <li>Weed and feral animal control measures.</li> <li>Rehabilitation strategy for the Project.</li> <li>Implementation of offset and compensatory measures in accordance with NSW and Commonwealth Government policies.</li> </ul>

**Table 4 (Continued)**  
**Key Potential Environmental Issues, Proposed Level and Scope of Assessment and Preliminary Strategies to Address Potential Impacts**

Environmental/Social Matter		Proposed Level and Scope of Assessment	Preliminary Strategies to Address Potential Impacts (To be refined during detailed impact assessment)
Land	Stability and/or Structure Soil Chemistry Capability Topography	<ul style="list-style-type: none"> <li>Detailed assessment of the agricultural resources and agricultural production of the Project area, based on site-specific soil analysis and current agricultural enterprises.</li> <li>Risk-based assessment of potential impacts on agricultural resources and industries.</li> <li>Incorporation of the results of other specialist studies, including subsidence assessment and groundwater assessment.</li> <li>Investigation of measures to avoid, mitigate, monitor and/or remediate potential impacts of the Project.</li> </ul>	<ul style="list-style-type: none"> <li>Development and implementation of Extraction Plans to mitigate, monitor and manage potential subsidence impacts on agricultural land.</li> <li>Remediation of subsidence-related impacts on agricultural land, for example, surface crack repair works and repairs to fencing.</li> <li>Strategies to maintain agricultural production on land owned by Malabar.</li> </ul>
Water	Water Quality Water Availability Hydrological Flows	<ul style="list-style-type: none"> <li>Assessment of the impacts of the Project on the quantity and quality of the region's water resources, connectivity between water sources, water-dependent assets and water-related infrastructure.</li> <li>Groundwater assessment, including numerical modelling and consideration of the Aquifer Interference Policy.</li> <li>Detailed site water balance for the Project, incorporating all sources of water inflow and development of a water management strategy for the life of the Project.</li> <li>Assessment of potential <b>cumulative impacts</b> resulting from the Project and nearby developments and mines.</li> <li>Investigation of measures to avoid, mitigate, remediate, monitor and/or offset the potential impacts of the Project.</li> <li>Expert peer reviews of the assessments.</li> <li><b>Focused engagement</b> with near neighbours concerned about potential impacts on water availability.</li> </ul>	<ul style="list-style-type: none"> <li>Development and implementation of Extraction Plans to mitigate, monitor, remediate, manage and offset potential impacts on water resources.</li> <li>Groundwater and surface water monitoring networks.</li> <li>Water management strategy for the Project based on regular reviews of the site water balance.</li> <li>Erosion and sediment control during construction and operation.</li> <li>Appropriate subsidence control/remediation measures along drainage lines.</li> <li>Appropriate licensing in accordance with the legislative requirements of the <i>Water Management Act, 2000</i>.</li> <li>Mitigation (e.g. bore re-conditioning, alternative water supply) or other contingency measures in the event that groundwater users are adversely affected by the Project.</li> </ul>
Risks	Undermining	<ul style="list-style-type: none"> <li>Prediction of subsidence movements as a result of the Project.</li> <li>Integrated assessment of potential subsidence impacts and environmental consequences on land, heritage, biodiversity water and the built environment (as outlined above).</li> </ul>	<ul style="list-style-type: none"> <li>Development and implementation of Extraction Plans to mitigate, monitor, manage and remediate potential subsidence impacts.</li> </ul>

In addition to consideration of the key potential environmental issues, potential impacts on the following other environmental aspects will also be addressed as a component of the EIS:

- visual amenity (to demonstrate there would be no material alteration of the visual landscape from sensitive viewsheds);
- potential subsidence impacts on utilities, other built features and steep slopes;
- atmospheric emissions (also known as greenhouse gas emissions);
- flooding;
- management of bushfire risk; and
- preliminary hazard analysis in accordance with SEPP 33.

Assessment of the key potential environmental issues and the other potential impacts identified above will include consideration of:

- existing environment using sufficient baseline data;
- potential impacts of all stages of the Project including relevant cumulative impacts;
- measures that could be implemented to avoid, mitigate, rehabilitate/remediate, monitor and/or offset the potential impacts of the Project; and
- contingency plans and/or adaptive management for managing any potentially significant residual risks to the environment.

Assessments for the EIS would consider applicable policies, guidelines and plans included in the *Indicative Secretary's Environmental Assessment Requirements for State Significant Mining Developments* (NSW Government, 2015a).

### 5.3 CUMULATIVE IMPACT ASSESSMENT

Table 4 outlines the environmental assessment matters that will include a cumulative impact assessment.

Cumulative impact assessments in the EIS will:

- take into consideration past, present and reasonably foreseeable planned development that are relevant due to their proximity and/or potential to interact with potential Project impacts;

- outline how cumulative impacts may be managed through strategic planning or policy (e.g. water licensing and the Hunter River Salinity Trading Scheme); and
- document how cumulative impacts have been considered and, to the fullest extent possible, the Project's relative contribution to those cumulative impacts.

## 6 COMMUNITY AND OTHER STAKEHOLDER ENGAGEMENT

### 6.1 CONSULTATION UNDERTAKEN TO DATE

Malabar has engaged with government agencies, community members and other interested parties regarding the Project, prior to and since taking control of EL 5460 in February 2018.

Consultation undertaken to date in relation to the Project has included:

- Keeping the community informed of key Project milestones and Malabar's intentions through notices in the local media in October 2017 and April 2018.
- Distribution of a community newsletter providing a Project update to local residents and other stakeholders in June 2018 and placement of the newsletter on the Malabar website.
- Conducting a SIA scoping survey across June and July 2018 (Attachment C).
- Creation of a dedicated website ([www.malabarcoal.com.au](http://www.malabarcoal.com.au)) and phone line ([02] 6542 0283) to provide Project information to interested parties.
- Regular meetings with the Maxwell Infrastructure, Spur Hill and Antiene Rail Spur Community Consultative Committees (CCCs) (with meeting minutes provided on the website and emailed to interested parties).
- Active, ongoing consultation with lessees and near neighbours proximal to the Project through meetings, property visits (by arrangement), phone calls and emails.
- Public notification of the intention to lodge an application for a Gateway Certificate in the local media between 30 May and 1 June 2018.

- Conceptual Project Development Plan meeting with representatives of the Division of Resources and Geoscience (DRG) (within the DP&E) on 23 May 2018.
- A meeting with representatives of the DP&E on 13 June 2018.
- A briefing with representatives of the NSW Resources Regulator on 10 July 2018.
- A meeting with representatives of the NSW Office of Environment and Heritage (OEH) on 17 July 2018.
- A meeting with representatives of the Coolmore Stud on 12 June 2018.
- A meeting with representatives of the Godolphin Woodlands Stud on 28 June 2018.
- Publication of a notice and distribution of letters inviting registrations of interest in the Aboriginal Cultural Heritage Assessment (ACHA) consultation process in June 2018.
- Ongoing engagement and briefings with Muswellbrook Shire Council and Singleton Council.
- Ongoing consultation with industry groups and private enterprise within the Hunter region.
- Ongoing consultation with surrounding mining and power generation companies.

**Malabar is committed to contributing to the local community.**

Over the last five years, Malabar has provided donations, sponsorship or support to the following community organisations:

- Denman Public School;
- St Joseph's Primary School (including the NSWMC EnviroSmart Grant);
- Denman Aged Care;
- Dalswinton Rural Fire Service;
- Upper Hunter Education Fund;
- Upper Hunter Wine and Food Affair;
- Denman's Children's Centre;
- Denman and Sandy Hollow Junior Rugby League Football Club;
- Denman Rugby League Football Club;
- Denman Junior Cricket Club;
- Denman Basketball;
- Denman Men's Shed Association;
- Denman Pony Club;
- Denman & District Development Association;
- Merton Living;
- Upper Hunter Show; and
- Lions Club of Denman.

## 6.2 COMMUNITY AND STAKEHOLDER ENGAGEMENT PROGRAM

The EIS would be supported by a Social Impact Assessment (SIA) prepared in accordance with the SIA Guideline (NSW Government, 2017c).

A community and stakeholder engagement program has been developed for the Project that would support both the EIS and SIA processes. Key objectives of this program are to:

- engage with Project stakeholders about the progress and nature of the Project;
- recognise and respond to local interests or concerns regarding the Project; and
- continue the ongoing dialogue between Malabar and local landholders and neighbours.

The issues raised and outcomes of the community and stakeholder engagement program would be reported in the EIS and SIA.

Attachment C provides a SIA Scoping Report prepared by Elliott Whiteing in consideration of the SIA Guideline. The SIA Scoping Report:

- identifies the Project's area of social influence, including people that may be affected by the project; and
- identifies social impacts needing further investigation in the SIA and assigns a proportionate level of assessment.

The engagement program would include, but not be limited to, the following government agencies and authorities:

- DP&E;
- Commonwealth Department of the Environment and Energy (DEE);
- Muswellbrook Shire Council;
- Singleton Council;

- OEH (including the Heritage Division);
- DRG;
- NSW Environment Protection Authority (EPA);
- NSW Resources Regulator;
- NSW Department of Industry – Water;
- NSW Natural Resources Access Regulator (NRAR);
- NSW Department of Primary Industries (DPI) (including DPI Lands and Forestry, DPI Agriculture and DPI Fisheries);
- NSW Health;
- Transport for NSW (including Roads and Maritime Services);
- Subsidence Advisory NSW;
- Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development (IESC); and
- Hunter Local Land Services.

The stakeholder engagement program also recognises other key stakeholders including:

- Muswellbrook, Denman and Jerrys Plains communities;
- the Aboriginal community;
- other industries and businesses in the area, including the equine industry, viticulture industry, retail and hospitality businesses and mining-related support services;
- neighbouring mining and power generation operations (Mt Arthur Mine and AGL's Liddell and Bayswater Power Stations);
- local, State and Federal elected representatives;
- interested non-Government organisations;
- infrastructure owners (such as Ausgrid and Telstra); and
- potential downstream infrastructure providers (e.g. Australian Rail Track Corporation [ARTC], coal chain operators, Port Waratah Coal Services).

The engagement program would include the use of a variety of engagement mechanisms. The timing and exact nature of consultation activities would be informed by, and adapt to, feedback received from stakeholders during development of the EIS and SIA.

In summary, engagement mechanisms for the Project may include:

- public availability of key documents (e.g. this Scoping Document and the EIS);
- provision of up-to-date Project information on the Malabar website ([www.malabarcoal.com.au](http://www.malabarcoal.com.au));
- ongoing consultation with the local community and landowners, including through relevant CCCs;
- meetings with relevant government agencies and other stakeholders (e.g. near neighbours);
- consultation with the Aboriginal community in consideration of the requirements of the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW, 2010); and
- community newsletters and mechanisms for the community to obtain further information and provide feedback (e.g. information sessions).

## 7 CONCLUSION

An EIS will be prepared for the Project in accordance with the SEARs and in consideration of feedback obtained during the community and stakeholder engagement program.

It is proposed that this EIS will include the following:

Executive Summary	A summary of the Project and the key conclusions of the EIS.
Section 1	An introduction to the Project and the EIS.
Section 2	Description of the various components and stages of the Project.
Section 3	Outline of the strategic planning context and statutory provisions relevant to the Project.
Section 4	Description of the consultation and engagement undertaken in relation to the EIS and SIA and ongoing community involvement.

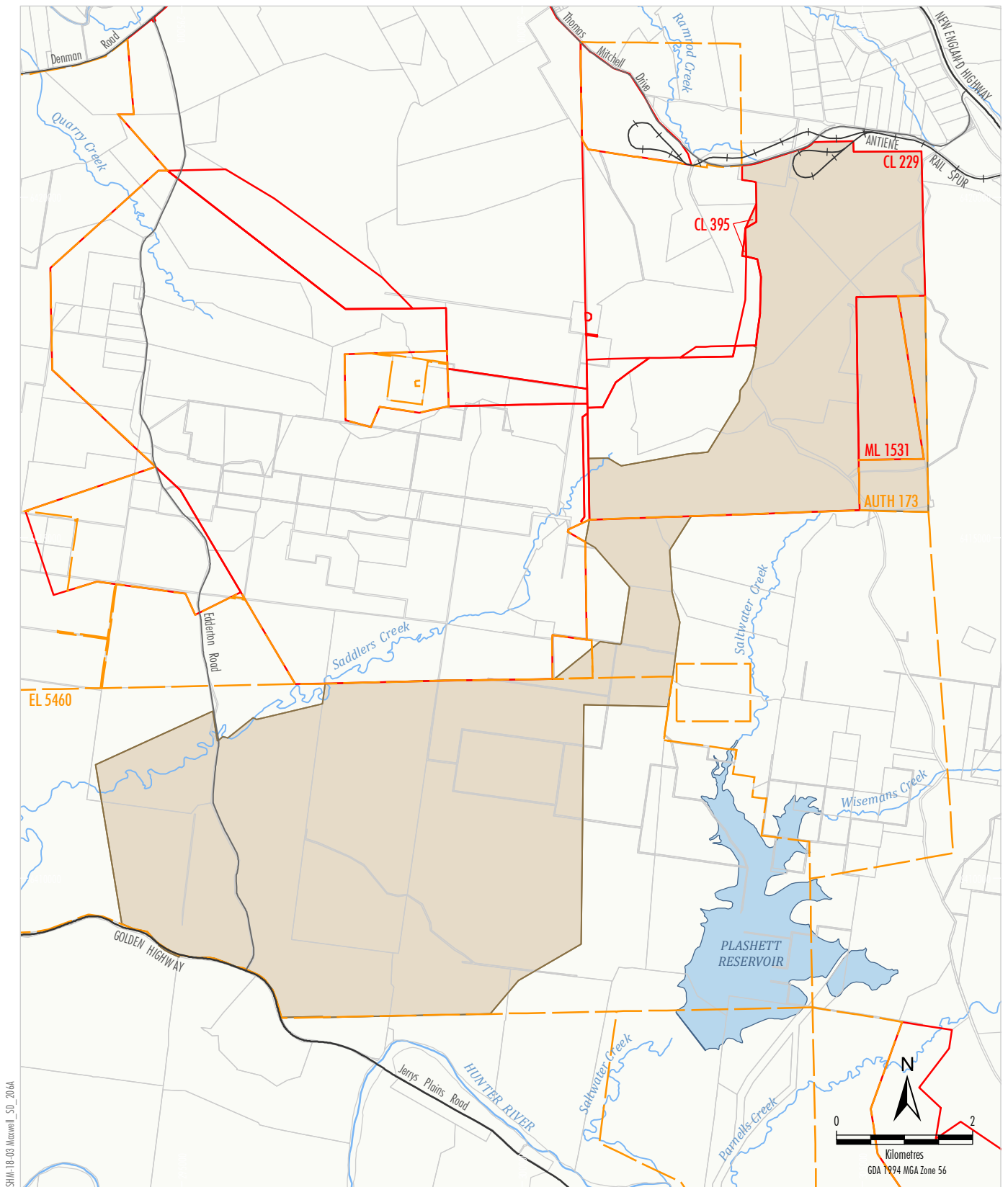
Section 5	Details of the environmental assessment of the Project, including a description of the existing environment, an assessment of potential impacts and a description of measures that would be implemented to avoid, minimise, mitigate, offset, manage and/or monitor the potential impacts of the Project.	NSW Government (2012) <i>Upper Hunter Strategic Regional Land Use Plan</i> .  NSW Government (2014) <i>Strategic Statement on NSW Coal</i> .  NSW Government (2015a) <i>Indicative Secretary's Environmental Assessment Requirements for State Significant Mining Developments</i> .
Section 6	Description of rehabilitation of the Project and mine closure.	NSW Government (2015b) <i>Mine Application Guideline – Specific development application requirements for State significant mining and extractive industry developments under the Environmental Planning and Assessment Act 1979</i> .
Section 7	A summary of the proposed environmental management, mitigation, monitoring and reporting in relation to the Project.	
Section 8	Description of how the project (when compared with other alternatives) is in the public interest and balances impacts, strategic needs, and benefits.	NSW Government (2015c) <i>Guidelines for Economic Assessment of Mining and Coal Seam Gas Proposals</i> .  NSW Government (2016) <i>Hunter Regional Plan 2036</i> .
Section 9	List of the documents referenced in Sections 1 to 8 of the EIS.	NSW Government (2017a) <i>Scoping an Environmental Impact Statement – Draft Environmental Impact Assessment Guidance Series</i> . June 2017.
Section 10	Definition of the abbreviations, acronyms and terms used in Sections 1 to 8 of the EIS.	
Attachments	Supporting information for the EIS, such as the Development Application Area, peer review letters and Capital Investment Value estimate.	NSW Government (2017b) <i>Proposed Jerrys Plains open cut mining prohibition – Submissions Report</i> . December 2017.  NSW Government (2017c) <i>Social impact assessment guideline – For State significant mining, petroleum production and extractive industry development</i> . September 2017.
Appendices	Studies into key potential environmental issues and other environmental aspects (if relevant) as outlined in Section 5 of the EIS.	NSW Government (2017d) <i>Peer Review – Draft Environmental Impact Assessment Guidance Series</i> . June 2017.

## 8 REFERENCES

- Department of Environment and Conservation (2005) *Draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation*.
- Department of Environment, Climate Change and Water (2010) *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010*.
- Department of Mineral Resources (1988) *The Hunter Coalfield Notes to Accompany the 1:100,000 Hunter Coalfield Geological Map*.
- Muswellbrook Shire Council (2017) *Muswellbrook Shire Council Community Strategic Plan 2017-2027*.

ATTACHMENT A

PROVISIONAL DEVELOPMENT APPLICATION AREA AND  
PRELIMINARY SCHEDULE OF LANDS



Source: © NSW Department of Finance, Services & Innovation (2017)

- LEGEND**
- Exploration Licence Boundary
  - Mining and Coal Lease Boundary
  - Railway
  - Cadastral Boundary
  - Provisional Development Application Area

MALABAR  COAL

MAXWELL PROJECT

Provisional Development Application Area

**Figure A-1**

**Table A-1**  
**Preliminary Schedule of Lands**

Tenure Type	Lot	Deposited Plan (DP)	Lot Owner/Description
Freehold	4	701496	Malabar Coal (Drayton Management) Pty Ltd
Freehold	9	701496	Malabar Coal (Drayton Management) Pty Ltd
Freehold	10	701496	Malabar Coal (Drayton Management) Pty Ltd
Freehold	12	701496	Malabar Coal (Drayton Management) Pty Ltd
Freehold	13	701496	Malabar Coal (Drayton Management) Pty Ltd
Freehold	14	701496	Malabar Coal (Drayton Management) Pty Ltd
Freehold	6	701496	Malabar Coal (Drayton Management) Pty Ltd & Malabar Coal (Drayton) Pty Ltd
Freehold	21	545087	Malabar Coal (Drayton Management) Pty Ltd & Malabar Coal (Drayton) Pty Ltd
Freehold	64	850818	Malabar Coal (Drayton Management) Pty Ltd & Malabar Coal (Drayton) Pty Ltd
Freehold	65	850818	Malabar Coal (Drayton Management) Pty Ltd & Malabar Coal (Drayton) Pty Ltd
Freehold	1	1159371	Malabar Coal (Maxwell Management) Pty Ltd
Freehold	1	1179733	Malabar Coal (Maxwell Management) Pty Ltd
Freehold	1	1211789	Malabar Coal (Maxwell Management) Pty Ltd
Freehold	2	616024	Malabar Coal (Maxwell Management) Pty Ltd
Freehold	2	1159371	Malabar Coal (Maxwell Management) Pty Ltd
Freehold	3	1004725	Malabar Coal (Maxwell Management) Pty Ltd
Freehold	5	843635	Malabar Coal (Maxwell Management) Pty Ltd
Freehold	8	843635	Malabar Coal (Maxwell Management) Pty Ltd
Freehold	22	1018587	Malabar Coal (Maxwell Management) Pty Ltd
Freehold	321	625513	Malabar Coal (Maxwell Management) Pty Ltd
Freehold	1	790994	AGL Macquarie Pty Ltd
Freehold	1	1095515	AGL Macquarie Pty Ltd
Freehold	2	774681	AGL Macquarie Pty Ltd
Freehold	2	1095515	AGL Macquarie Pty Ltd
Freehold	2	1193252	AGL Macquarie Pty Ltd
Freehold	3	1193253	AGL Macquarie Pty Ltd
Crown	1	247510	The State of New South Wales
Road	-	-	Edderton Road
Road	-	-	Golden Highway
Muswellbrook Shire Council or Department of Lands (Crown)	-	-	Various Council and Crown Public and Unformed Roads located within, between or adjacent to the above Parcels of Land
Freehold	-	-	Any Unidentified Historical Title Residues located within, between or adjacent to the above Parcels of Land
Crown	-	-	Creeks or Streams located within, between or adjacent to the above Parcels of Land
Crown	-	-	Any Unidentified Crown Land or Crown Land Historical Title Residues located within, between or adjacent to the above Parcels of Land

Note: Lots listed based on May 2018 NSW Digital Cadastral Data Base (DCDB) boundaries and have not been surveyed or further investigated. Ownership shown has been sourced from title searches conducted in June 2018.

ATTACHMENT B

KEY OUTPUTS OF THE SCOPING WORKSHEET

Environmental Impact Statement (EIS) scoping worksheet for:			Maxwell Project					
What matters might be impacted?			What activities might cause an impact?				How will the impact be managed?	What are the community and other stakeholder views?
Social and environmental matters I.e. natural or human assets or values aggregated at the level most appropriate for informing management and assessment requirements			Without any mitigation, is the proposal likely to impact on the matter?	If there is a 'likely' impact: 1. list the activities expected to cause the impact; and 2. if applicable, list the receptor being impacted and its status. <i>E.g. construction noise will be heard at nearby school</i>  If 'unlikely', briefly explain why. Has the impact been actively avoided through project design or site location?	Does the impact need assessment in the EIS?	Is the impact, without mitigation, expected to have a material cumulative effect with other impacts (including from other projects)?	What safeguards and management measures are expected to be required to address the impact?	Are there community or other stakeholder concerns regarding the impact or activity?
What does the proposal mean for people?	AMENITY	acoustic	Likely	The Project would involve noise-generating activities, which will require detailed modelling and assessment to determine potential noise impacts. The Project would include project-specific measures to minimise and mitigate noise impacts (including locating new infrastructure away from sensitive receptors).	Yes	Yes	Project Specific	Yes
		visual	Unlikely	The Project would involve the continued use of existing mine infrastructure and the development of new mine infrastructure, which would be designed to have no material effect on the visual landscape as a whole. This approach would be presented in detail in the EIS.				Yes
		odour	Unlikely	Impacts are actively avoided through site location, given the distance between the ventilation infrastructure and any sensitive receptor.				No
		microclimate	Unlikely	Impacts are actively avoided through site location, as the proposed surface development is sufficiently distant from sensitive receptors to avoid potential microclimate impacts.				No
	ACCESS	access to property	Unlikely	The Project would not alter vehicular, pedestrian or cyclist access to any public or private property.				No
		utilities	Likely	The Project would involve potential subsidence effects on Ausgrid low voltage powerlines and Telstra copper cables that would require management.	Yes	No	Standard	No
		road and rail network	Likely	The Project would generate additional traffic movements associated with employees, deliveries and visitors. Project-related traffic is expected to be similar to traffic generated during previous open cut mining activities near the Maxwell Infrastructure. The potential impacts on the road network require further assessment. The Project would also involve the transportation of product coal via rail, within the existing rail limits on the Antiene rail spur.	Yes	Yes	Project Specific	Yes
		offsite parking	Unlikely	Sufficient parking would be provided on Malabar owned land, and the Project would not affect access to, or the availability of, parking off-site and in surrounding areas.				No
	BUILT ENVIRONMENT	public domain	Unlikely	There are no communal, shared spaces in the vicinity of the Project that would be directly or indirectly impacted.				No
		public infrastructure	Likely	The Project would involve underground mining and subsidence along the current alignment of Edderton Road. This would require management during mining through either road maintenance along the existing alignment or realignment of the road around the underground mining area.	Yes	No	Project Specific	Yes
		other built assets	Likely	The Project would involve underground mining and the subsidence of other built features, predominantly owned by Malabar. These would require management during mining.	Yes	No	Standard	No
	HERITAGE	natural	Unlikely	The Project is located within the Muswellbrook Jerrys Plains Landscape Conservation Area recognised by the National Trust Register, which is a non-statutory register. The landscape includes natural features such as the Hunter River and its alluvial flats, views and vistas of the river flats, bluffs of the Wollemi National Park, and undulating rolling hills. The Project design includes significant measures to mitigate impacts to the broader Muswellbrook Jerrys Plains Landscape Conservation Area.				Yes
		cultural	Likely	It is recognised that the broader area has cultural significance for both Aboriginal and non-Aboriginal people. The Project is also located within the Muswellbrook Jerrys Plains Landscape Conservation Area recognised by the National Trust Register, which is a non-statutory register. Potential impacts on cultural heritage would be assessed in the EIS.	Yes	Yes	Project Specific	Yes
		Aboriginal cultural	Likely	The Project area has Aboriginal cultural values that will require assessment in consultation with the Aboriginal community.	Yes	Yes	Project Specific	Yes
		built	Likely	Items of identified local significance have the potential to be directly or indirectly impacted by the Project. This requires further assessment and the development of project-specific mitigation and management measures.	Yes	No	Project Specific	No
	COMMUNITY	health	Unlikely	Potential health impacts can be mitigated through compliance with relevant NSW policies related to air quality and noise, which forms part of the Project design.				No
		safety	Unlikely	Risks to the safety of Malabar personnel and contractors and to the general community would be managed under the <i>Work Health and Safety (Mines and Petroleum Sites) Act 2013</i> .				No
		services and facilities		The Project may affect demand for, and access to, services and facilities. This will be assessed further in the EIS.	Yes	Yes	Project Specific	No
		cohesion, capital and resilience		Ongoing engagement through the SIA process (as part of the EIS) will be required to assess any potential impacts on cohesion, capital and resilience.	Yes	Yes	Unknown	Yes
		housing		Project demand for housing may further constrain the availability of rental housing. This will be assessed through the SIA process (as part of the EIS).	Yes	Yes	Standard	Yes

Environmental Impact Statement (EIS) scoping worksheet for:				Maxwell Project					
What matters might be impacted?			What activities might cause an impact?					How will the impact be managed?	What are the community and other stakeholder views?
Social and environmental matters I.e. natural or human assets or values aggregated at the level most appropriate for informing management and assessment requirements			Without any mitigation, is the proposal likely to impact on the matter?	If there is a 'likely' impact: 1. list the activities expected to cause the impact; and 2. if applicable, list the receptor being impacted and its status. <i>E.g. construction noise will be heard at nearby school</i>  If 'unlikely', briefly explain why. Has the impact been actively avoided through project design or site location?		Does the impact need assessment in the EIS?	Is the impact, without mitigation, expected to have a material cumulative effect with other impacts (including from other projects)?	What safeguards and management measures are expected to be required to address the impact?	Are there community or other stakeholder concerns regarding the impact or activity?
What does the proposal mean for people?	ECONOMIC	natural resource use	Likely	The Project would involve the extraction of coal and the payment of associated royalties to the State of NSW. The Project would also have potential impacts on other natural resources (e.g. groundwater) which will require further assessment.		Yes	No	Project Specific	No
		livelihood	Likely	The Project would create significant long-term employment opportunities. The equine industry has raised concerns regarding potential impacts on the economic viability and international reputation of the Coolmore and Woodlands Studs, and the Hunter thoroughbred industry more broadly, which will be addressed through engagement and in the EIS.		Yes	No	Project Specific	Yes
		opportunity cost	Likely	The opportunity costs associated with proceeding, and not proceeding, with the Project will require further assessment in the EIS.		Yes	No	Project Specific	Yes
What does the proposal mean for the natural environment?	AIR	particulate matter	Likely	The Project would involve dust generating activities which will require detailed modelling and assessment to determine potential particulate matter impacts. The Project would include project-specific measures to minimise and mitigate particulate matter impacts (including locating new infrastructure away from sensitive receptors).		Yes	Yes	Project Specific	Yes
		gases	Unlikely	Impacts are actively avoided through site location given the distance between the ventilation infrastructure and combustion engines and any sensitive receptor.					No
		atmospheric emissions	Likely	The Project would directly and indirectly generate greenhouse gas emissions, which would require consideration and assessment.		Yes	Yes	Standard	Yes
	BIODIVERSITY	native vegetation	Likely	The Project would involve the disturbance of native vegetation which will require assessment in accordance with the Biodiversity Assessment Method.		Yes	Yes	Project Specific	No
		native fauna	Likely	The Project would involve the disturbance of native fauna habitat which will require assessment in accordance with the Biodiversity Assessment Method.		Yes	Yes	Project Specific	No
	LAND	stability and/or structure	Likely	The Project has the potential to affect soil stability and/or structure through direct disturbance (e.g. alteration of structure beneath hardstand areas) and potential subsidence impacts. This requires assessment and the development of project-specific mitigation and management measures in the EIS.		Yes	No	Project Specific	No
		soil chemistry	Likely	The Project has the potential to affect chemical properties of the soil as a result of direct disturbance. This requires assessment and the development of project-specific mitigation and management measures in the EIS.		Yes	No	Project Specific	No
		capability	Likely	The Project has the potential to affect land capability through direct disturbance (e.g. alteration of structure beneath hardstand areas) and potential subsidence impacts. This requires assessment and the development of project-specific mitigation and management measures in the EIS.		Yes	No	Project Specific	No
		topography	Likely	The Project would involve underground mining that would result in surface subsidence. The Project would also involve emplacing CHPP rejects from processing of Project coal within existing final voids.		Yes	No	Project Specific	No
	WATER	water quality	Likely	The Project may have potential water quality impacts. This requires detailed assessment and the development of project-specific mitigation and management measures in the EIS.		Yes	Yes	Project Specific	No
		water availability	Likely	The Project would use surface water and groundwater resources that are shared with other users and the environment. This requires detailed assessment and the development of project-specific mitigation and management measures, including licensing, in the EIS. Recycled mine water would be preferentially used for water supply on-site.		Yes	Yes	Project Specific	Yes
		hydrological flows	Likely	The Project has the potential to modify the movement of water across the landscape. This requires detailed assessment and the development of project-specific mitigation and management measures in the EIS.		Yes	Yes	Project Specific	No

Environmental Impact Statement (EIS) scoping worksheet for:			Maxwell Project					
What matters might be impacted?			What activities might cause an impact?				How will the impact be managed?	What are the community and other stakeholder views?
Social and environmental matters I.e. natural or human assets or values aggregated at the level most appropriate for informing management and assessment requirements			Without any mitigation, is the proposal likely to impact on the matter?	If there is a 'likely' impact: 1. list the activities expected to cause the impact; and 2. if applicable, list the receptor being impacted and its status. <i>E.g. construction noise will be heard at nearby school</i>  If 'unlikely', briefly explain why. Has the impact been actively avoided through project design or site location?	Does the impact need assessment in the EIS?	Is the impact, without mitigation, expected to have a material cumulative effect with other impacts (including from other projects)?	What safeguards and management measures are expected to be required to address the impact?	Are there community or other stakeholder concerns regarding the impact or activity?
What risks does the proposal face?	RISKS	coastal hazards	n/a	The Project is not located in a coastal zone				
		flood waters	Unlikely	The Project is not expected to involve activities within flood prone areas, however this would be confirmed and presented in the EIS.				No
		bushfire	Likely	Fires originating in nearby rural areas and reserved areas could pose a significant risk to Project infrastructure and Malabar staff, contractors and equipment. Malabar would implement standard bushfire control measures.	Yes	No	Standard	No
		undermining	Likely	The Project would involve underground mining activities. This requires detailed assessment and the development of project-specific mitigation and management measures in the EIS. All freehold tenure within the Project indicative underground mining area is held by Malabar.	Yes	No	Project Specific	No
		steep slopes	Likely	The Project would involve subsidence of small areas of steep slope. This requires assessment in the EIS.	Yes	No	Standard	No

ATTACHMENT C  
SIA SCOPING REPORT

Please refer to separate document

