



# Centennial Coal

*Airly*



## ENVIRONMENTAL ASSESSMENT

*Airly Mine*

*Extension of Time*

Section 75W Modification to Development Consent DA 162/91

June 2014



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**Centennial Coal**  
*Airly*

## **Airly Mine**

Section 75W Modification to Development Consent DA 162/91

### **Environmental Assessment**

Prepared on behalf of:

**Centennial Airly Pty Limited**

By:

**Centennial Coal Company Limited**

Level 18, BT Tower, 1 Market Street  
Sydney NSW 2000

Phone: 02 9266 2700

**June 2014**

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## Submission of Environmental Assessment

Prepared under Section 75W of the *Environmental Planning and Assessment Act 1979*

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### **EA Prepared By:**

Name: Mary-Anne Crawford  
Group Manager Approvals

Qualifications: BAppSc(EnvSc), Masters Env Law

Company: Centennial Coal Company Limited

Address: Level 18, BT Tower, 1 Market Street, Sydney, NSW, 2000

### **Development Application:**

Proponent Name: Centennial Airly Pty Limited

Proponent Address: Level 18, BT Tower, 1 Market Street, Sydney NSW, 2000

Land to be Developed: Airly Mine  
319 Glen Davis Road, CAPERTEE, 2846, NSW  
Local Government Area of Lithgow  
Refer to existing Schedule of Land for DA162/91

Development Description: Modification to development consent DA162/91 to extent the time for the existing development consent by 12 months, to October 2015.

### **Declaration:**

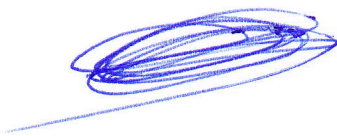
I hereby certify that I have prepared the contents of this document and to the best of my knowledge:

It contains all available information that is relevant to the environmental assessment of the proposed development to which the document relates; and

It is true in all material particulars and does not, by its presentation or omission of information, materially mislead.

Name: Mary-Anne Crawford (Centennial Coal Company Limited)

Signature:



Date: 6 June 2014

## EXECUTIVE SUMMARY

### Background

The Airly Mine is an existing underground mining operation located in the Western Coalfields approximately 40 kilometres north northwest of Lithgow, New South Wales. The mine's current consent allows extraction of 1.8 million tonnes of coal per annum (Mtpa) for supply to both domestic and international markets by rail. Centennial Airly Pty Limited (Centennial Airly) is the operator of Airly Mine and is a wholly owned subsidiary of Centennial Coal Company Pty Limited. Airly Mine's development consent (DA 162/91) was granted on 14 April 1993 pursuant to Section 101 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) and has been subject to two modifications since. This development consent (DA 162/91) will expire in October 2014. A development consent is required to ensure Airly Mine is approved for operations beyond this date.

The Airly Mine was granted development consent, DA 162/91, on 14 April 1993 pursuant to section 101 of the Environmental Planning and Assessment Act 1979. DA162/91 authorises the extraction of up to 1.8 Mtpa of run-of-mine (ROM) coal within the existing mining lease area, Mining Lease (ML) 1331.

Two modifications to DA 162/91 were approved and allowed an increased amount of trial mining coal throughput of up to 500,000 tonnes per annum for 2 years to be transported to Mount Piper Station by road (MOD 1), and for the construction and operation of a 66 kV power line to the pit top (MOD 2).

The main components of Airly Mine's existing operations are an underground mine and the surface facilities area. The underground part of the mine is accessed via the surface facilities area. Mine access is off Glen Davis Road, approximately 3 kilometres northeast of Capertee.

### Proposed Modification

Relevant to this modification, Schedule 2, Condition 2 of the development consent DA 162/91 states:

*'The duration of this consent is limited to twenty-one (21) years from the granting of the Mining Lease.'*

The relevant 'mining lease' being referred to in DA 162/91 is Mining Lease (ML) 1331, which was issued on 12 October 1993 and expires on 12 October 2014. In December 2012, Centennial Airly was placed into care and maintenance, thereby projecting this anticipated extraction beyond the life of the current development consent. In March 2014, Centennial Airly was placed back onto full production, an act resulting in a review of the forecasted mine schedule for 2014.

As a result, Centennial Airly seeks, through this Modification under Section 75W of the EP&A Act, to extend the approved mining operations until 31 October 2015.

### Potential Impacts

There are no changes proposed to the current approved operations as a result of this modification.

To confirm that the subsidence impacts are within those approved under DA 162/91, a subsidence assessment has been undertaken for the mine plan proposed as part of this modification, based on mine design criteria to achieve subsidence predictions of:

- Vertical subsidence to be no greater than 125 mm
- A maximum tilt of 2.5 mm/m
- A maximum strain of 2.0 mm/m.

As a result of the mine design criteria, the Modification is anticipated to pose negligible environmental impacts and less than those previously assessed and approved under DA 162/91.

## Conclusion

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This Modification involves sustained underground development that will be achieved through the continued use of existing surface and underground infrastructure. The proposed Modification does not require any other changes to existing operations.

Lithgow has a long history with mining and power generation and today the economic base of Lithgow is still recognised as being the energy and resources sector. These sectors are major local employers and subsequently make a significant contribution to the overall economy including retail and accommodation via direct and indirect employment opportunities. The sustainability of the mining sector and its related employment is vital to the broader economic wellbeing of the area.

The Modification will allow for continued operations at the Airly Mine, and in addition to sustaining current employment levels, the Modification will enable assessment of the Airly Mine Extension Project currently being assessed (SSD 12\_5581). As a coal mine, Airly Mine aims to maximise returns through the mineral wealth within existing lease areas, whilst minimising environmental and social impacts. Airly Mine acknowledges the need to co-exist with its regional community as well as underpin the economic opportunity the mine represents.

Based on the subsidence assessment undertaken to support this application, the Modification is anticipated to pose negligible environmental impacts, and as such poses negligible impacts beyond those already approved under DA 162/91.

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## APPENDICES

**Appendix 1 – Development Consent DA 162/91**

**Appendix 2 – Proposed Mining Schedule**

**Appendix 3 – Subsidence Predictions and Impact Assessment (Golder Associates Pty Ltd, 2014)**

## 1.0 INTRODUCTION

### 1.1 Background

The Airly Mine is an existing underground mining operation located in the Western Coalfields approximately 40 kilometres north northwest of Lithgow, New South Wales (refer **Figure 1**). The mine's current consent allows extraction of 1.8 million tonnes of coal per annum for supply to both domestic and international markets by rail. Centennial Airly Pty Limited (Centennial Airly) is the operator of Airly Mine and is a wholly owned subsidiary of Centennial Coal Company Pty Limited. Airly Mine's development consent (DA 162/91) will expire on 12 October 2014. A development consent is required to ensure Airly Mine is approved for operations beyond this date.

The Airly Mine was granted development consent, DA 162/91, on 14 April 1993 pursuant to Section 101 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). DA162/91 authorises the extraction of up to 1.8 Mtpa of run-of-mine (ROM) coal within the existing mining lease area, Mining Lease (ML) 1331.

Two modifications to DA 162/91 were approved and allowed an increased amount of trial mining coal throughput of up to 500,000 tonnes per annum for 2 years to be transported to Mount Piper Station by road (MOD 1), and for the construction and operation of a 66 kV power line to the pit top (MOD 2). A copy of the consolidated development consent DA 162/91 is contained within **Appendix 1**.

The main components of Airly Mine's existing operations are an underground mine and the surface facilities area. The underground part of the mine is accessed via the surface facilities area. Mine access is off Glen Davis Road, approximately 3 kilometres northeast of Capertee.

On 28 April 2014, Centennial Airly lodged a State Significant Development Application (SSD 12\_5581) with NSW Planning and Environment (NSW P&E). This application was to, amongst other things, continue the Airly Mine for a period of up to 25 years from the date of consent.

Centennial Airly proposes to modify DA162/91 pursuant to Section 75W of the EP&A Act to allow for the continuation of mining within the approved mine plan for a period of 12 months beyond the expiry date of DA 162/91.

The proposed Modification does not include any physical works or changes to the existing mining operation. The Project Application Area is detailed further in **Section 2.2**, and is illustrated on **Figure 2**.

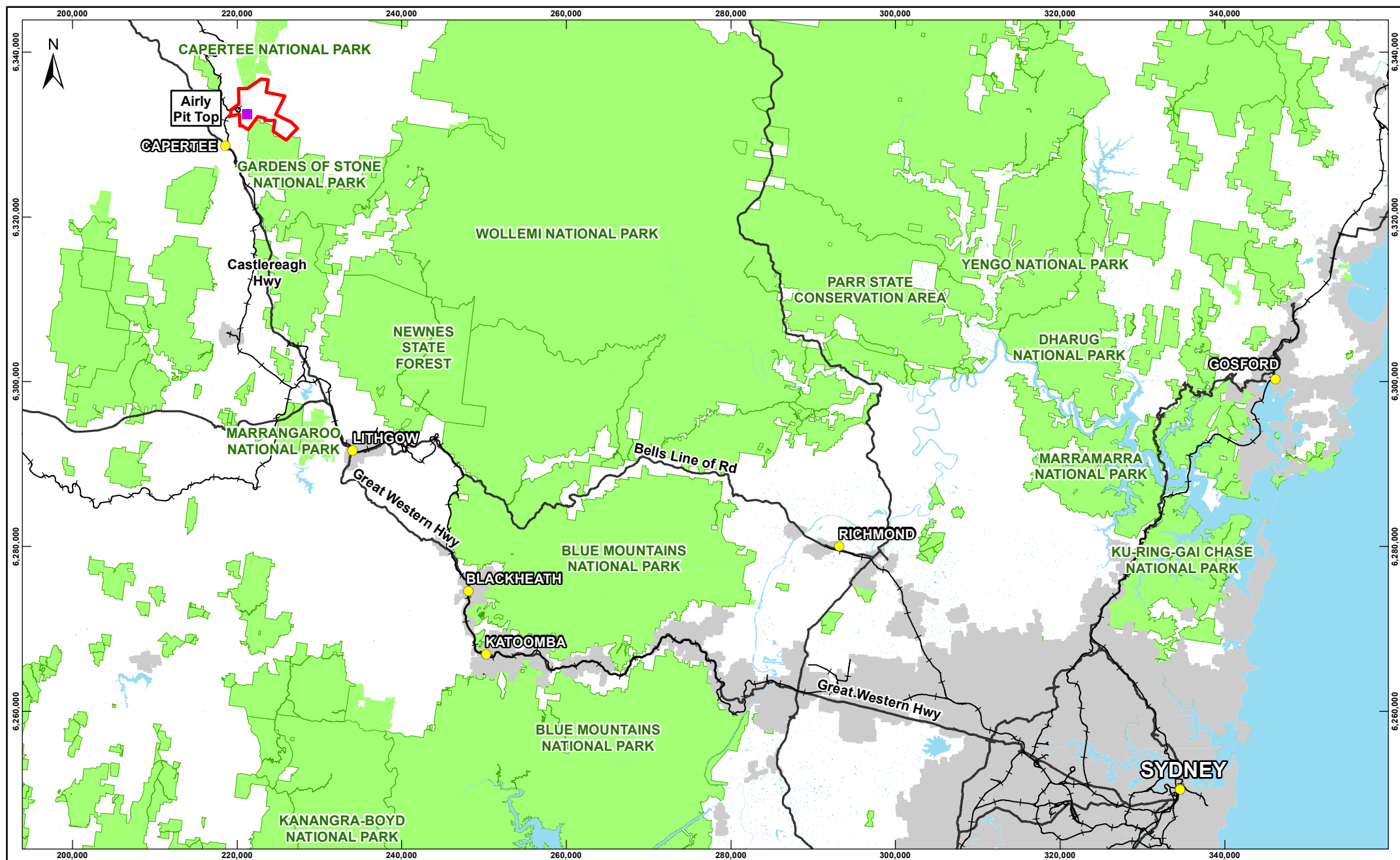
### 1.2 The Applicant

Airly Mine is owned by Centennial Coal Company Limited (Centennial Coal). Airly Mine is operated by Centennial Airly, for and on behalf of Centennial Coal. Centennial Airly is the applicant for the Modification. The relevant postal address is:

Centennial Airly Pty Limited  
Level 18, BT Tower,  
1 Market Street  
Sydney NSW 2000.

### 1.3 Document Purpose

This Environmental Assessment (EA) has been prepared by Centennial Coal to support the application to modify DA162/91 pursuant to Section 75W of the EP&A Act. In addition to describing the proposed Modification, this EA contains an assessment of the mine design to achieve subsidence outcomes that will result in negligible environmental and social impacts (refer Section 6 and Appendix 2). This has been achieved through the review of relevant risk assessments, a mine design review to confirm proposed subsidence levels and environmental impacts are within those already approved, mitigation and management measures (where required) and stakeholder consultation.



LEGEND	
	Project Application Area
	Town
	Rail
	Main Road
	Urban Area
	Waterbody
	State Forest / Reserve / Park

Coordinate System: GDA 1994 MGA Zone 56

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**Figure 1:  
Regional  
Location Plan**



PLOTFILE No.

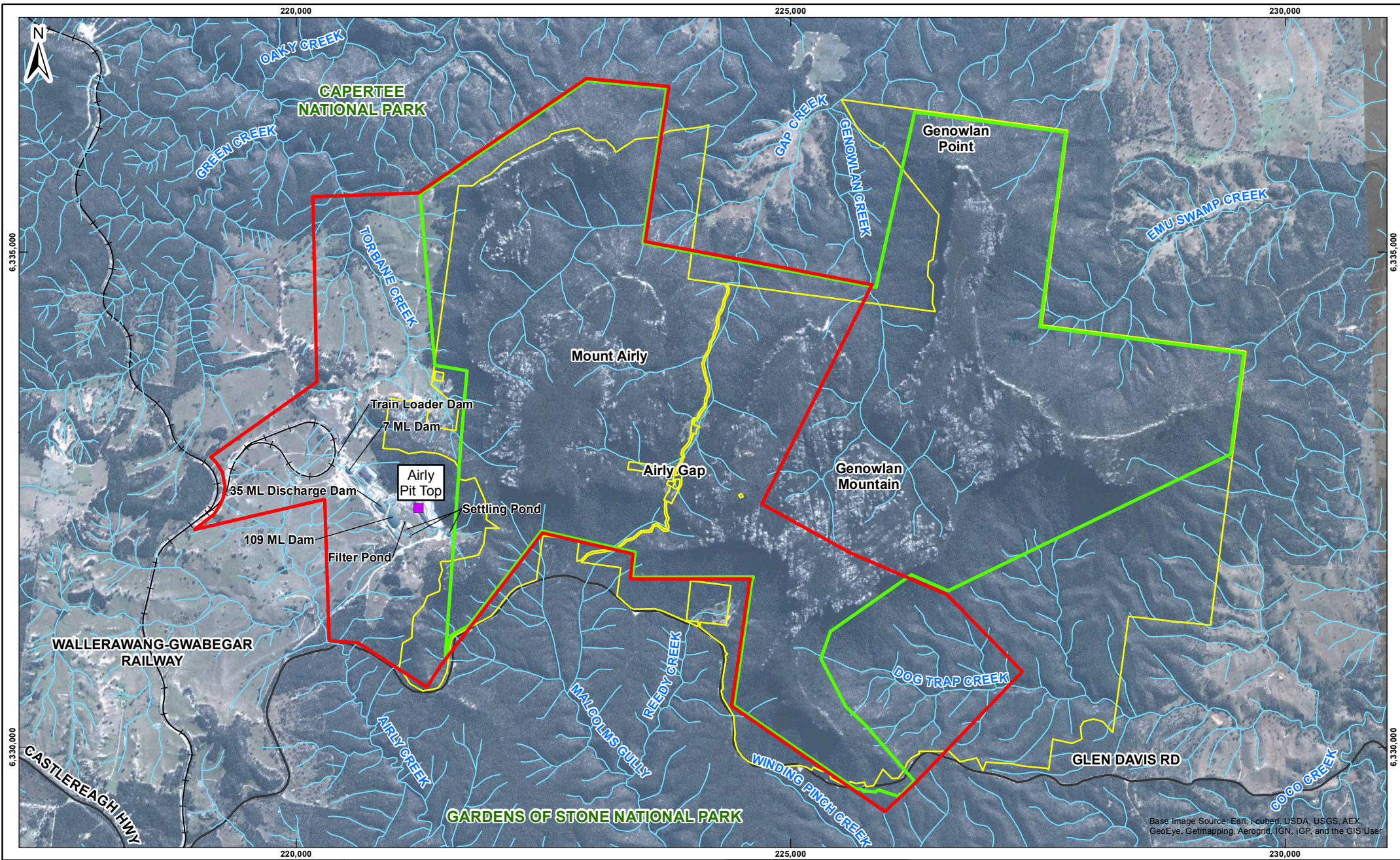


**Centennial Coal**  
Airly








DRG No. 1

A4





#### LEGEND

- |   |   |
|---|---|
|  Project Application Area                         |  Watercourse |
|  A232 Authorisation Boundary (Offset for Clarity) |  Rail        |
|  Mugil Murum-ban State Conservation Area          |  Main Road   |
|   |  Dam         |

Coordinate System: GDA 1994 MGA Zone 56

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**Figure 2:**  
**Project Application Area**  
**and Mining Tenements**



PLOTFILE No.



**Centennial Coal**  
Airly

DRG No. 2

**A4**



## 1.4 Overview of the Modification

The overall objective of the Modification is to obtain an approval for Airly Mine which allows for continued operations up to and including 31 October 2015, allowing for adequate assessment of the Airly Mine Extension Project (SSD 12\_5581). The approximate mine plan proposed as part of this modification is included in **Appendix 2**.

To ensure that the impacts associated with the mine plan for this modification are within the impact approved under DA 162/91, the proposed modification is seeking to undertake first workings development, retaining long term stable pillars with a system factor of safety greater than or equal to 2.0. The mine design supporting this will result in negligible environmental and social impacts, and no impact above that approved under DA 162/91.

The modification does not propose any changes to the existing approved operations.

## 1.5 Director General's Requirements

No Director-General's Requirements (DGRs) were issued for the proposed modification.

On 9 April 2014, the then NSW Planning and Infrastructure advised the following matters to be considered within the EA:

*The Airly EA should indicate those areas where and how the mine plan has been modified to take into consideration contemporary environmental standards and describe the resultant reduction in anticipated environmental impact. In a similar manner as provided with your letter, a table should be utilised that compares the elements of the existing approved operations with those of the proposed modification.*

These requirements have been addressed in Sections 3 and 6 of this EA.

## 1.6 Project Approval Modification Process

The NSW planning system is currently under review, and an interim new assessment system for projects of State significance commenced in NSW on 1 October 2011 following the repeal of Part 3A of the EP&A Act. Transitional provisions have been put into place, with Schedule 6A of the EP&A Act containing savings and transitional arrangements for Part 3A projects. Pursuant to Schedule 6A, Section 75W of Part 3A continues to apply to modifications of the development consents referred to in Clause 8J(8) of the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation).

Clause 8J(8) of the EP&A Regulation provides a mechanism whereby major projects approved under Part 4 of the EP&A Act can be modified under Section 75W, stating that:

*(8) For the purposes only of modification, the following development consents are taken to be approvals under Part 3A of the Act and section 75W of the Act applies to any modification of such a consent:*

- (a) a development consent granted by the Minister under section 100A or 101 of the Act,*
- (b) a development consent granted by the Minister under State Environmental Planning Policy No 34 - Major Employment-Generating Industrial Development,*
- (c) a development consent granted by the Minister under Part 4 of the Act (relating to State significant development) before 1 August 2005 or under clause 89 of Schedule 6 to the Act,*
- (d) a development consent granted by the Land and Environment Court, if the original consent authority was the Minister and the consent was of a kind referred to in paragraph (c).*

Development Consent DA 162/91 was granted by the then Minister for Planning on 14 April 1993 under Section 101 of Part 4 of the EP&A Act. Pursuant to Clause 12 of Schedule 6A of the EP&A Act, Airly Mine's development

consent can therefore be modified under Section 75W. The development consent, if so modified, does not become an approval under Part 3A of the Act.

## **1.7 Interrelated Centennial Coal Projects**

Airly Mine is the subject of a development assessment currently in progress for the Airly Mine Extension Project (Airly MEP). An Environmental Impact Statement (EIS) has been compiled to address the DGRs issued by NSW P&I for State Significant Development (SSD) proposal SSD 12\_5581 for continued mining operations at Airly Mine. The DGRs, re-issued on 4 February 2014, also contain the requirements of the Commonwealth Department of the Environment in relation to the referral EPBC 2013/7076. The State Significant Development application is seeking the approval for the Airly MEP, including the continued extension of underground mining and associated surface operations.

## 2.0 SITE DESCRIPTION

### 2.1 Site Location

Airly Mine is an existing underground mining operation located in the western coalfield of New South Wales (NSW), approximately 40 kilometres northwest of the City of Lithgow.

The Airly Mine pit top is accessed via the Castlereagh Highway and is located 5 kilometres north-east of the village of Capertee. The underground mine is situated directly below a sandstone plateau of undulating unpopulated bushland forming the Mugii Murum-ban State Conservation Area. Access to this area is via forest tracks. Airly Mine is located within the Lithgow City Council Local Government Area (LGA).

Airly Mine is bordered by the Capertee National Park to the north, the Castlereagh Highway to the west, the Capertee Valley to the east and the Gardens of Stone National Park to the south.

The location of Airly Mine is illustrated in **Figure 1**.

### 2.2 Project Application Area

The majority of the Project Application Area (**Figure 2**) exists within the Mugii Murum-ban State Conservation Area and is the existing development consent (ML 1331) boundary. The mining to be undertaken within this proposed Modification aligns to the forecast mining proposed to be undertaken between March 2014 and October 2015.

### 2.3 Land Use and Ownership

Land use in the vicinity of the Airly Mine consists of rural residential, grazing, underground coal mining, coal handling infrastructure, transport infrastructure, commercial forestry, recreation and nature conservation within the Mugii Murum-ban SCA and nearby National Parks. Excelsior Limestone Mine, operated by Sibelco Australia, is located 5 kilometres northwest of the Airly pit top. Centennial Coal owns property extending from the pit top, past the Wallerawang-Gwabegar rail line to the Castlereagh Highway in the west. The property is mostly cleared land and is used for cattle grazing.

The land use within the Project Application Area is dominated by the Mugii Murum-ban SCA (3,062 ha) used for recreational and conservation purposes.

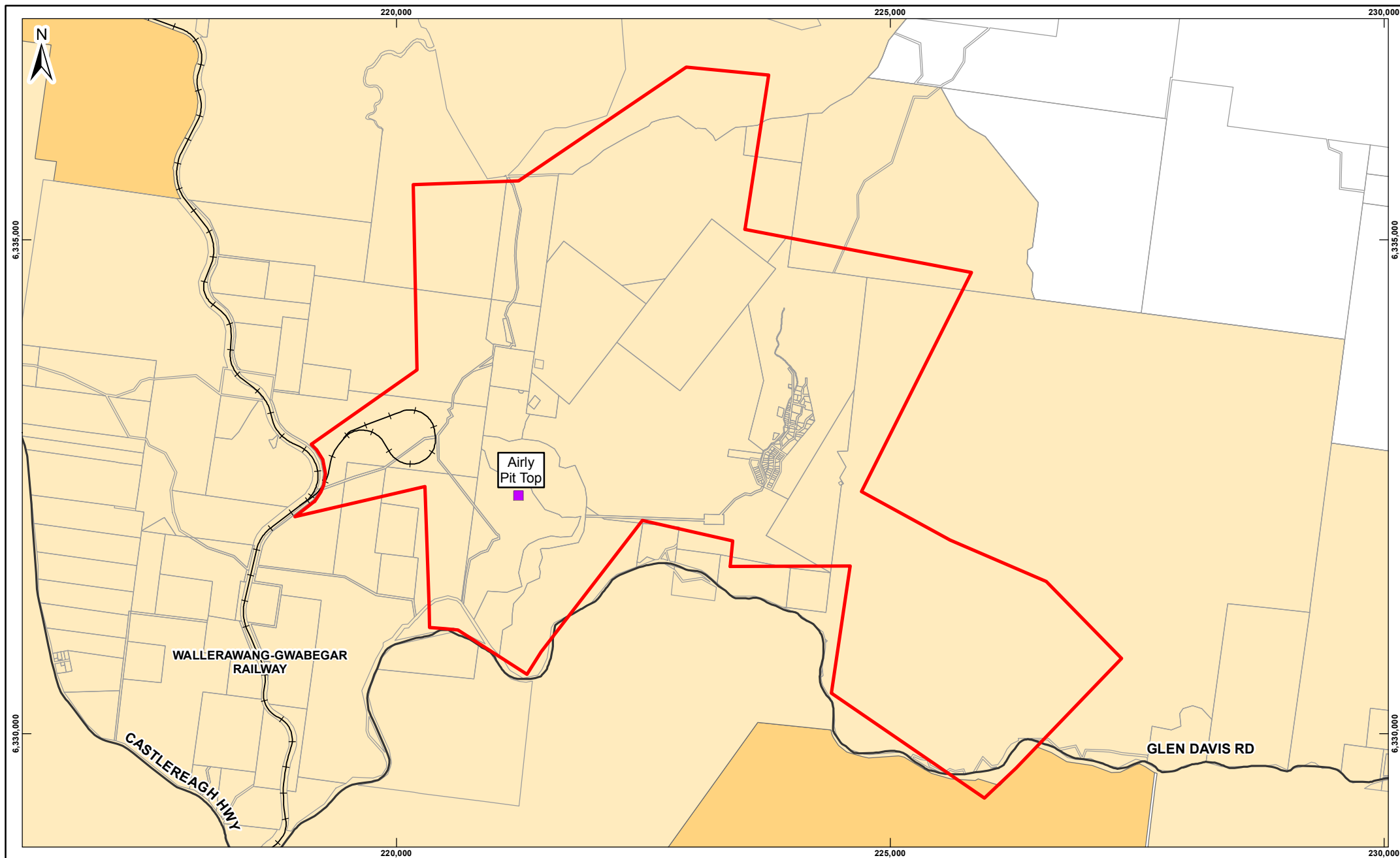
Land ownership within and surrounding the Project Application Area consists of Crown Land, land owned by Centennial Coal, privately owned land and land owned and managed by the National Parks and Wildlife Service NSW.

### 2.4 Land Zoning

Under the Lithgow LEP, land within the Project Application Area is zoned as 1(a) Rural (General) and Rural (Forestry) 1(f) (refer **Figure 3**).

### 2.5 Geology, Topography and Hydrology

The Project Application Area is characterised by a steep and rugged topography with areas of cliffs and rock outcrops. The topography is dominated by Mount Airly and Genowlan Mountain. Site elevation varies from in excess of 1000 metres on Mount Airly to 700 metres to the west of Mount Airly and less than 400 metres to the southeast of the pit top. Slopes surrounding Mount Airly exceed 50%. There are small areas of flatter land on plateaus. To the west of Mount Airly there are undulating areas within the Project Application Area with slopes typically between 3-20%.



LEGEND	
	Project Application Area
	Rail
	Main Road
	Cadastral Boundary
	Rural (General) 1(a)
	Rural (Forestry) 1(f)

Coordinate System: GDA 1994 MGA Zone 56

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**Figure 3:  
Land Zoning  
(Lithgow LEP 1994)**



PLOTFILE No.	
<b>Centennial Coal</b> Airly	
DRG No. 3	A4



The Project Application Area is dominated by Mount Airly but also contains portions of Genowlan Mountain in the east. The two mountains, which form the Mount Airly-Genowlan Mountain mesa complex, are separated by a low saddle known as Airly Gap, through which Gap Creek flows north beyond the outlier to join Genowlan Creek, which rises in Genowlan Mountain and eventually flows into the Capertee River. The perimeter of the mesas is characterized by intermittent sheer and benched cliffs abutted by talus slopes.

The Project Application Area sits more broadly within the landscape of the Capertee Valley. This valley is a large, broad-floored canyon measuring over 30 kilometres from north to south and east to west. The valley is surrounded by sandstone cliffs and steep talus slopes similar to those found on Mount Airly and Genowlan Mountain and these mountains sit as one of three distinct mesa complexes within the Capertee Valley.

Both Mount Airly and Genowlan Mountain are clearly visible for tens of kilometres in all directions. Much of the Capertee Valley has been cleared for agricultural use. The more rugged western and southwestern portion of the valley is less cleared and there remains significant portions of forested land. The Project Application Area is almost entirely covered by forest with only the western and north western portions being cleared land, owned by Centennial Airly Pty Limited.

Airly Mine lies within and at the northern edge of the Western Coalfields where the high sandstone terrain characteristic of the Blue Mountains, breaks up into separate mesas and sandstone ridges. Airly Mine is located in a region that is comprised of deeply incised gorges with cliffs and pagodas, narrow incised valleys surrounded by sandstone and conglomerate rocks. The coal deposit underlying the Project Application Area is contained entirely within the Mount Airly-Genowlan Mountain mesa that is a Permo-Triassic outlier of coal bearing strata capped by approximately 200 metres of Narrabeen Group cliff forming sandstones (mostly the Grose Sandstone).

Underlying the Narrabeen Group is the Permian Illawarra Coal Measures which contain a number of coal seams including the Irondale, Lidsdale and Lithgow listed in Table 1 and shown schematically in Figure 4. Lithology consists of a mixture of sandstone, claystone, mudstone and conglomerate. Regionally, the coal measures dip 0.5 degrees to 1 degree to the east and northeast.

Triassic Narrabeen Group strata cover most of the upper half of the plateau and form rugged escarpments Table 1 summarises the relevant stratigraphic units. Small isolated outliers of Tertiary basalt cap the highest points of the plateau.

Rocks of the Narrabeen Group located near the surface belong to the Grose Sub-group and include the Banks Wall Sandstone, which is the uppermost stratigraphic unit.

As illustrated in **Table 1**, the Illawarra Coal Measures are underlain by the Shoalhaven Group which consists of siltstone and lithic sandstone conglomerate, which overlays the Devonian metamorphic strata containing shale, sandstone and limestone. The Permian Illawarra Coal Measures outcrop around the perimeter of the plateau. The Illawarra Coal Measures contain the coal seams proposed to be mined in the proposed Modification. The only coal seam deemed to be of any significant economic importance is the Lithgow Seam, which is located in the lower part of the Illawarra Coal Measures. All of the existing and proposed workings at Airly Mine are located in the Lithgow Seam.

Surface runoff from the northern section of the Project Application Area drains into Gap Creek and Genowlan Creek. The two creeks, which are groundwater fed in parts, drain northward approximately 2 kilometres before converging into the greater Genowlan Creek. Genowlan Creek continues to drain in a north easterly direction until its confluence with the Capertee River approximately 8 kilometres downstream. The Gap-Genowlan Creek sub-catchment occupies the largest portion of the Project Application Area with 1,558 ha draining to the creek system. Based on water quality sampling data, these creeks are generally fresh and slightly acidic.

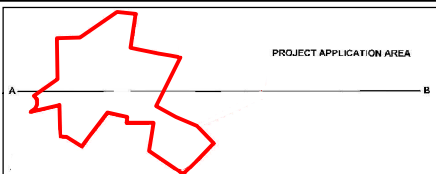
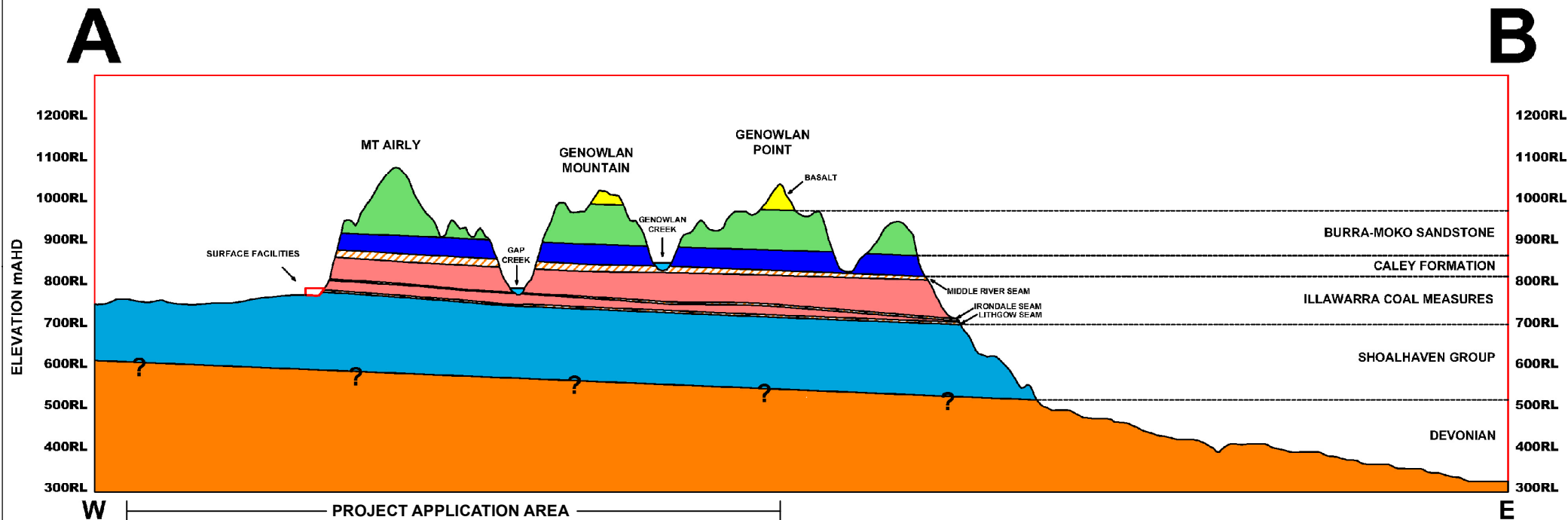
**Table 1: Generalised Stratigraphic Column within the Project Application Area**

Period		Group	Sub-group	Formation
Tertiary				Flood basalt
Triassic		Narrabeen	Grose	Burra-Moko Head Sandstone
				Caley Formation
Permian	Late	Illawarra Coal Measures	Wallerawang	Middle River Seam
			Charbon	Moolarben Seam
				Baal Bone Formation
				Upper Irondale Seam
				Irondale Seam
				Long Swamp Formation
			Cullen Bullen	Lidsdale Seam
				Lithgow Seam
				Marangaroo Conglomerate
			Nile	Gundangaroo Formation
				Coorongoo Creek Sandstone
				Mount Marsden Claystone
	Early	Shoalhaven		Berry Siltstone
				Snapper Point Formation
Lower Devonian				Shales, tuffs and limestones

## 2.6 Climate

The climate in the region is typical of a cool temperate mountain climate, characterised by cold winters and warm summers. The highest temperatures occur throughout December, January and February, with the coolest temperatures occurring in July. Snow and/or sleet are common in winter months. The warmest month of the year is January with a mean maximum temperature of 28.5°C and a mean minimum of 13.6°C. The coolest monthly is July with a mean maximum temperature of 11.8°C and a mean minimum temperature of 0.9°C.

The period of rainfall data used for this assessment extended from January 1901 to December 2012. The monthly rainfall averages ranged from a low of approximately 45 mm in May to a high of approximately 67 mm in January, averaged over the period of 112 years.



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SCALE	NOT TO SCALE



**Figure 4:**  
**Typical Stratigraphy**  
**at Airly Mine**

PLOTFILE No.



**Centennial Coal**  
 Airly

DRG No. 4

**A4**

### 3.0 EXISTING AND PROPOSED MINE OPERATIONS

#### 3.1 Overview

The development consent (DA 162/91) permits a 1.8 million tonnes of ROM coal per annum (Mtpa) production underground mine with transport of coal from the full production mine by rail. It also allowed trial mining at the mine with approval to transport 300,000 tonne of ROM coal by road to the Mount Piper Power Station for twelve months.

Centennial Coal purchased the Airly Coal Project in late 1997 and commenced project construction on 3 March 1998. In May 1998, the main pollution control ponds, access road, Airly Creek crossing and culverts and the initial pit top facilities were constructed and completed. The approved trial mining operation was developed in 1998 and the coal was transported to Mount Piper Station in December 1998, which triggered the Trial Mine phase. In 1999, the consent was modified to allow up to 500,000 tonne of coal to be transported by road to Mount Piper Station for a period of two years.

The Trial Mine phase period lapsed on 30 June 2002 and the mine was then placed on care and maintenance. In mid-2008, Centennial Coal commenced detailed planning for the future development and operation of the mine. In February 2009, the construction of the rail loop and permanent infrastructure to support the mine into its full operational phase commenced. The constructions works, undertaken within the approved footprint, took into consideration contemporary environmental standards.

The first full scale coal production occurred on the 14 December 2009, with the first train load of coal leaving Airly on 22 April 2010 destined for export via Port Kembla. Production gradually increased during 2011 with the construction of mine infrastructure, ventilation fans and the underground to surface trunk conveyor.

Presently, Airly Mine uses bord and pillar mining techniques to extract up to 1.8 Mtpa from the Lithgow seam. The principal components of Airly Mine's existing operations are an underground mine, the surface facilities area and a groundwater monitoring network within the Mugii Murum-ban State Conservation Area.

Airly Mine is approved to undertake activities summarized in **Table 2**. This table also provides an overview of the proposed modification.

No changes are proposed to the existing surface or underground infrastructure. No changes are proposed to the operations at Airly Mine. No change is proposed to the approved mining footprint and mining zones, shown in **Figure 5**.

**Table 2: Approved, Existing and Proposed Activities at the Airly Mine**

Key Feature	Approved and Existing Operation	The Modification
<b>Mine Life</b>	Development consent (DA 162/91) is limited to 21 years from the granting of ML 1331, and expires on 12 October 2014.	Extend the life of the existing consent to 31 October 2015.
<b>Hours of Operation</b>	The mine operates 24 hours per day, 7 days per week.	No change.
<b>Production</b>	1.8 Mtpa of ROM coal	No change.
<b>Mine Method and Design</b>	<p>The development consent allows for:</p> <ul style="list-style-type: none"> <li>no mining in the 50 m coal barrier;</li> <li>first workings only where the depth of cover is less than 50m;</li> <li>partial extraction beneath Environmental Protection Zones (refer <b>Figure 5</b>;</li> <li>full extraction in areas outside Environmental Protection Zones with</li> </ul>	<p>There <u>will be no change</u> to the following:</p> <ul style="list-style-type: none"> <li>no mining in the 50 m coal barrier;</li> <li>first workings only where the depth of cover is less than 50 m</li> <li>Partial extraction beneath Environmental Protection Zones (refer to <b>Figure 5</b>)</li> <li>Full extraction in areas outside Environmental Protection Zones with supercritical void widths</li> <li>maximum subsidence of 1.8 m;</li> </ul>

Key Feature	Approved and Existing Operation	The Modification
	<p>supercritical void widths (refer <b>Figure 4</b>);</p> <ul style="list-style-type: none"> <li>• maximum subsidence of 1.8 m;</li> <li>• maximum tensile strains of 25.5 mm/m;</li> <li>• maximum compressive strains of 42.5 mm/m; and</li> <li>• maximum tilt of 85 mm/m.</li> </ul>	<ul style="list-style-type: none"> <li>• maximum tensile strains of 25.5 mm/m;</li> <li>• maximum compressive strains of 42.5 mm/m; and</li> <li>• maximum tilt of 85 mm/m.</li> </ul> <p>The mine plan for this modification has been designed with long term stable pillars with a minimum system factor of safety of 2.0. Mine design criteria to establish long term stable pillars are detailed in <b>Appendix 2</b> for each Panel.</p> <p>Mining will be limited to that identified in <b>Appendix 2</b>. Subsidence predictions will be within those approved.</p>
<b>Project Application Area</b>	Mining Lease ML1331 boundary	No change
<b>Underground Mine Access</b>	A series of portals at the pit top box cut and the eastern portal southwest of Mount Genowlan.	<p>There will be no change to the existing pit top mine access.</p> <p>The eastern portal has not been constructed and is not proposed as part of this modification.</p>
<b>Airly Pit Top Infrastructure</b>	<p>The pit top is approved to include the following:</p> <ul style="list-style-type: none"> <li>• bath house, office and assembly building;</li> <li>• wash-down facilities, workshop and service building;</li> <li>• workforce, materials and ventilation portals, store building; training centre;</li> <li>• bulk storage area, cable store;</li> <li>• potable water provision and sewage treatment plant;</li> <li>• hardstand areas, haul roads, car-parking areas, helicopter-pad;</li> <li>• diesel, fuel and oil storage and refueling facilities;</li> <li>• fire station and associated fire-fighting equipment</li> <li>• compressor room, main fan;</li> <li>• water management structures;</li> <li>• electrical distribution network</li> </ul>	No change
<b>Product Coal</b>	Steaming coal	No change.
<b>Employment</b>	120 personnel.	No change
<b>Coal destination</b>	Domestic and export steaming coal.	No change.
<b>Coal Stockpile</b>	30,000 tonne emergency ROM stockpile 200,000 tonne product stockpile	No change
<b>Coal Handling and Preparation Plant (CHPP)</b>	A CHPP with a capacity of 500 tph.	No change.
<b>Reject Management</b>	4.3 Mt coarse reject emplacement area (REA) tailings dam.	No change. No rejects emplacement has been built as the beneficiation circuit of the CHPP has not been built. It should be noted that no reject is proposed to be produced as part of this modification.
<b>Electrical Services</b>	66 kV electricity line	No change
<b>Train Loading</b>	A balloon loop, train load out and a rail surge bin	No change.

Key Feature	Approved and Existing Operation	The Modification
<b>Wallerawang Unloading System</b>	Upgrade to a balloon loop; provision of an underground rail unloading facility; and transfer conveyor.	No change. Not proposed as part of this modification
<b>Product Coal Transport</b>	All coal will leave the site by rail.	No change.
<b>Land Preparation</b>	Land preparation at the pit top, REA, tailings dam, and Eastern Portal.	No change
<b>Ventilation</b>	A ventilation facility at the pit top, with movement to the eastern portal.	No change
Water Management	Diversion of clean and dirty water, harvest clean water for use at the mine	No change

### 3.2 Existing Approvals

The Airly Mine was approved on the 14 April 1993 pursuant to section 101 of the *Environmental Planning and Assessment Act 1979*. DA162/91 authorises the extraction of up to 1.8 Mpta of run-of-mine (ROM) coal within the existing mining lease area, ML 1331. DA162/91 is due to lapse on 12 October 2014.

DA162/91 has been modified twice (once in 1999 and once in 2010). Modification 1 related to the development of trial mine with coal haulage along public roads to the Mount Piper Power Station. Trial mining was initially approved for a period of 1 year and extended to 2 years in Modification 1. Modification 2 permitted the construction and operation of an electricity supply line and substation to support the mine.

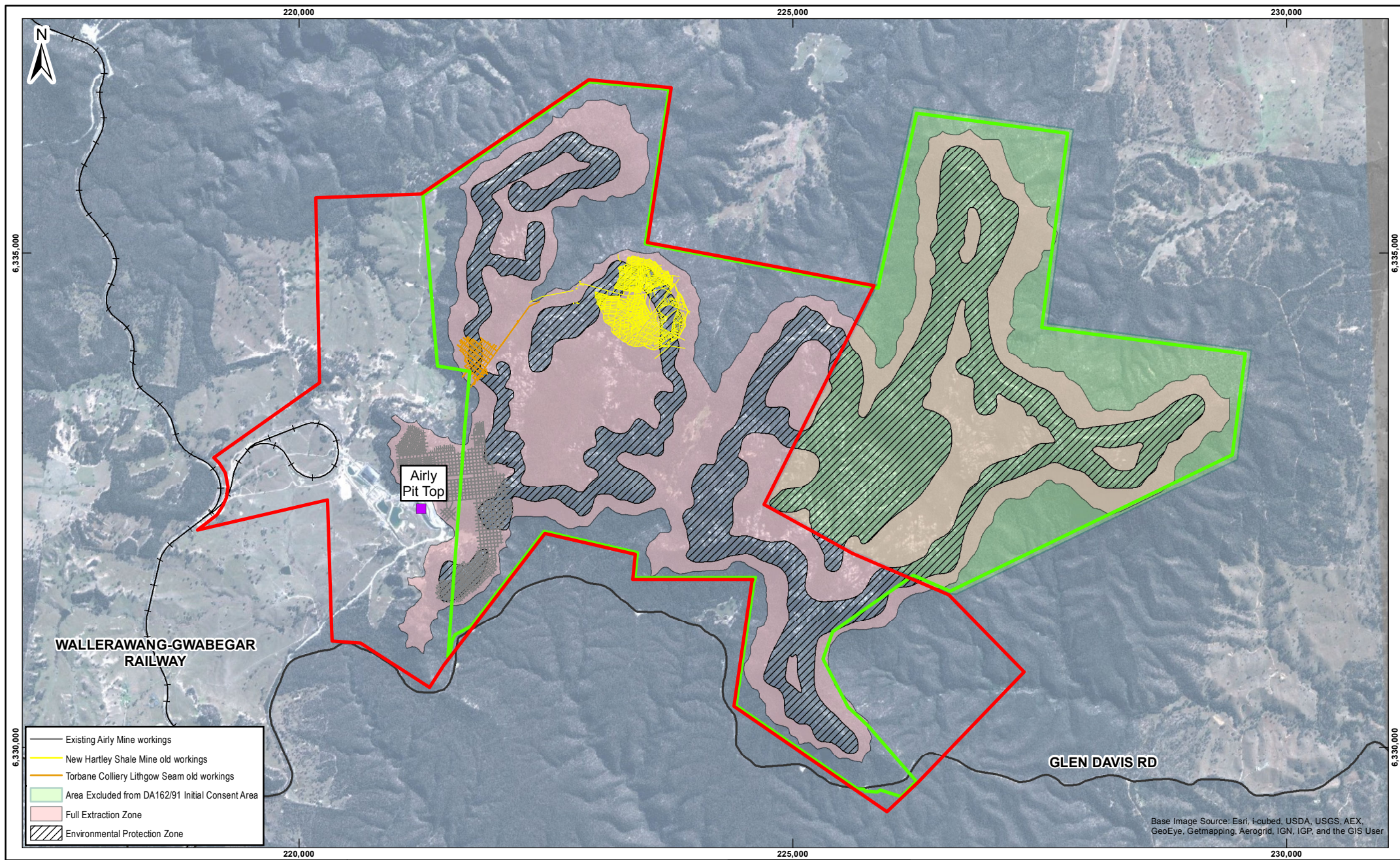
Airly Mine operates under Environment Protection License (EPL) 12374, which permits coal handling to a scale of up to 2 million tonnes per annum and coal production up to a scale of 2 million tonnes per annum.

Approved Mining Authorities held by Airly Mine include ML1331 and A232.

No mining is proposed in the area of A232 that is not within ML1331 under this modification.

**Tables 3, 4 and 5** contain lists of the current consents, leases and licences relevant to Airly Mine.





#### LEGEND

- Project Application Area
- A232 Authorisation Boundary (Offset for Clarity)
- Rail
- Main Road

Coordinate System: GDA 1994 MGA Zone 56

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 WITHOUT PRIOR WRITTEN PERMISSION

DATE	28/05/2014
SEAM	LITHGOW
REFERENCE	137623024-R Rev 0
SCALE	1:50,000



**Figure 5:  
Approved (DA162/91)  
Mining Zones**



PLOTFILE No.



**Centennial Coal**  
Airly

DRG No. 5

A4



**Table 3 – Airly Mine Development Consent and Modifications**

Ref No.	Description	Issue/Consent Date	Expiry/ Review Date
DA162/91	Development consent for underground mine and associated surface infrastructure (refer Table 2)	14 April 1993	12 October 2014
DA162/91 (MOD 1)	Modification of DA162/91 to include: <ul style="list-style-type: none"> <li>extension of the Trial Mine phase from twelve months to two years;</li> <li>increased road haulage of ROM coal from 300,000 tonnes to 500,000 tonnes of ROM coal per year to Mount Piper Station for a maximum period of two years; and</li> <li>minor additional modifications in relation to establishment of the access road to the pit top.</li> </ul>	7 December 1999	1 July 2000
DA162/91 (MOD 2)	Modification of DA162/91 to include: <ul style="list-style-type: none"> <li>establishment of a 15 m wide easement for the full length (approximately 3.85 kilometres) of the proposed power-line route.</li> <li>construction of 66 kV power-line with the easement including:</li> <li>installation of poles and stays, insulators, fittings and conductors;</li> <li>construction of barriers at road crossings;</li> <li>circuit metering yard;</li> <li>connection to the Integral Energy take-off point;</li> <li>construction of a maintenance track within the easement and □ ground disturbance (for excavation of footings,</li> <li>construction, and maintenance track) and tree clearing.</li> </ul>	21 August 2009	12 October 2014

**Table 4 – Other Regulatory Requirements Applicable to Airly Mine**

Type	File/Approval Number	Regulatory Authority	Issue Date	Details
Environment Protection Licence	EPL12374	Environmental Protection Authority		Requirements to monitor dust and water discharge quantity/quality from the identified Licensed Discharge Points (LDPs) LDP001, LDP002 and LDP003.
Groundwater Monitoring Bore Licences	10BL604518	NSW Office of Water	14/02/11	Monitoring site ARP01
	10BL604520		14/02/11	Monitoring site ARP02A and ARP03A
	10BL604521		14/02/11	Monitoring site ARP04 and ARP05
	10BL605352		28/03/13	Monitoring site ARP06, ARP07, ARP08 and ARP09
Water Access Licence	WAL24386	NSW Office of Water	17/02/11	Extraction 158 ML per annum
Water Access Licence	WAL36565	NSW Office of Water	11/02/14	Extraction 120 ML per annum
EPBC Approval		Department of Environment, Water, Heritage and the Art (now Department of the Environment)	07/05/09	Removal of trees as part of the rail loop construction



**Table 5 – Airly Mine Mining Authorities**

Reference	Title	Title Holder	Expiry Date
ML 1331	Covers approximately 2,744 ha and generally excludes the surface down to 20 m, but includes the surface down to unlimited depth in the areas where surface infrastructure is present or has been approved.	Centennial Airly Pty Limited	12 October 2014
A232	Covers an area of approximately 3,054 ha and allows for prospecting activities with depth restriction from surface to 900 m below AHD where it is not underlain by ML1331	Centennial Airly Pty Limited	20 October 2014

There are no changes proposed to any existing approvals as a result of this modification. An application for renewal for both ML1331 and A232 has been made and, as such, the titles continue to have full effect beyond the expiry date, until a decision on renewal is made.

### 3.3 Environmental Management

Airly Mine's Environmental Management System (EMS) has been developed in accordance with the Centennial Coal Environmental Management System Framework (October 2011). The EMS sets down procedures and standards for the management of areas of environmental significance and mechanisms whereby the environmental performance of Airly Mine can be measured and assessed, and appropriate action taken where necessary. The EMS has been developed and implemented in accordance with all regulatory requirements, and consistent with the International Standard ISO14001, while providing a means for continued improvement in the environmental performance of the Airly Mine.

As part of the EMS, Centennial Airly maintains a number of Environmental Management Plans and procedures as outlined in **Table 6** below.

ML1331 requires the preparation of an Annual Environmental Management Report to address environmental management during the year including reporting on the progress of mining activity and the environmental performance at Airly Mine.

**Table 6: Environmental Management and Monitoring Plans**

Management or Monitoring Plan	Purpose
Mining Operations Plan	Covers activities at Airly Mine during operations. This document has been prepared in accordance with the <i>Guidelines to the Mining, Rehabilitation and environmental Management Process</i> prepared by the NSW Department of Mineral Resources, Updated April 2012.
Landscape and Rehabilitation Management Plan	To minimise and manage potential landscape and rehabilitation issues and to return the land to a pre-operation state or better, in line with the relevant consent conditions and in consultation with relevant stakeholders.
Stakeholder Engagement Plan	To effectively communicate with relevant stakeholders, define responsibilities for stakeholder engagement, monitor and manage feedback from stakeholders and maintain a complaints protocol.
Environmental Monitoring Plan	Provides details of monitoring and reporting of the various management plans
Air Quality Management Plan	This plan provides for the monitoring and management of air quality.
Noise Management Plan	This programme sets out procedures for monitoring noise impacts.
Water Management Plan	This plan coordinates the management of water within the Airly Mine lease area in an efficient and sustainable manner.
Borehole Construction Environmental Management Plan	Project specific plan developed to ensure appropriate environmental management practices are followed during borehole construction.

Management or Monitoring Plan	Purpose
Pollution Incident Response Management Plan	Plan relating to the key actions to minimize the occurrence of a pollution incident and to manage a pollution incident if one occurs. The plan has been prepared to manage the impact to human health and the environment (on and off site)
Waste Minimisation and Management Plan	To achieve waste minimization through maximizing re-use and recycling, to ensure environmentally responsible disposal of waste materials and to ensure environmental protection throughout all stages of waste handling, storage, collection and disposal.
Contractor Management Plan	This plan ensures that all activities carried out on behalf of Centennial Airly comply with internal and external practices and guidelines.
Fire Management Plan	These set out the procedures for reporting fire and for the inspection and maintenance of firebreaks and asset protection zones at the pit top.
Ventilation Management System	In accordance with Clause 21 of the <i>Coal Mine Health and Safety Regulation 2006</i> , Centennial Airly has implemented a Ventilation Management System to ensure as far as reasonably practicable the safety of all persons present at the coal operation with regard to mine ventilation.
Strata Failure Management System	In accordance with Clause 28b (ii) of the <i>Coal Mine Health and Safety Regulation 2006</i> the objectives of this management system are to ensure as far as reasonably practicable the safety of all persons present at the coal operation with regard to underground strata.
Coal Mine Particulate Matter Report	This includes an emissions estimation and the identification and justification of particulate control measures for the site.

The environmental management plans are backed by an environmental monitoring network, which includes monitoring of noise, dust, surface water, groundwater, ecology and subsidence. As required under the *Protection of the Environment Operations Act 1997* results are reported monthly on the Centennial (Airly Mine) web page.

Environmental monitoring is conducted in accordance with DA 162/91, EPL 12374, ML 1331 and A232. Compliance against the limits set out in EPL 12374 is reviewed monthly and non-compliances documented in the following reports:

- Annual Environmental Management Reports;
- Annual Returns for EPL12374;
- National Pollutant Inventory reports; and
- Monthly Environmental Monitoring Reports.

## 4.0 REGULATORY FRAMEWORK

The proposed Modification has been assessed with full consideration of the applicable legislative requirements of the Commonwealth and State, along with the local planning and environmental frameworks of the Lithgow LGA, where applicable. This section describes the relevant regulatory framework and the application to the Modification.

### 4.1 Approval Pathway and Permissibility

Development consent DA162/91 was granted to Novacoal Australia Pty Ltd for the Airly Coal Project by the then Minister for Planning on 14 April 1993 under section 101 of Part 4 of the EP&A Act. Centennial Airly, the operator of Airly Mine, now seeks a modification to DA 162/91 pursuant to the provisions of Section 75W of the EP&A Act to allow for Extension of Time to the consent.

Although Part 3A was repealed on 1 October 2011, Schedule 6A of the EP&A Act provides savings provisions whereby Section 75W of Part 3A continues to apply to modifications of the Part 4 development consents referred to in clause 8J(8) of the EP&A Regulation. Clause 8J(8) provides a mechanism whereby projects approved under Part 4 of the EP&A Act can be modified under Section 75W in cases where the development would have been a Part 3A Project but for the operation of clause 6(2)(a) of State Environmental Planning Policy (Major Development) 2005 (SEPP Major Development 2005). Coal mining is a class of development listed in Schedule 1 of the SEPP Major Development 2005, and as such would be a Project to which Part 3A applies.

*(Note: Although Schedule 1 of SEPP Major Development 2005 has been repealed, Schedule 6A of the EP&A Act allows for the continuation of the provisions of this relevant section of the SEPP).*

The Minister for Planning (or his delegate) determines applications to modify approvals under Section 75W of the EP&A Act.

Sub-clause 7(1)(a) of State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007 states that development for the purpose of underground mining (which includes mine related development) may be carried out on any land with development consent.

Development consent DA162/92, if modified, will not become an approval under Part 3A, but will remain development consent under Part 4.

Following correspondence with the then NSW P&I (refer Section 1.5), no DGRs were issued for the proposed modification.

### 4.2 Commonwealth Legislation

#### 4.2.1 Environment Protection and Biodiversity Conservation Act 1999

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) is administered by the Commonwealth Department of the Environment (DoE) and provides a legal framework to protect and manage nationally important flora, fauna, ecological communities and heritage places defined as matters of 'national environmental significance' (NES). An action that "has, will have or is likely to have a significant impact on a matter of National Environmental Significance" may not be undertaken without prior approval from the Commonwealth Minister, as provided under Part 9 of the EPBC Act. Approval under the EPBC Act is also required where actions are proposed on, or will affect, Commonwealth land and its environment.

In June 2013 Centennial Airly lodged a referral with the Department of the Environment for the Airly MEP. Following consultation with the Department of the Environment, the referral was subsequently resubmitted in December 2013 to exclude mining activities that would be undertaken between the date of the referral and the expiry of DA 162/91. On 3 January 2014, the Department of the Environment declared the Airly MEP (EPBC 6891) a

Controlled Action, using the Bilateral Assessment Agreement between the NSW Government and the Commonwealth.

Centennial Airly has notified the Department of the Environment of the need to submit a variation to the referral that takes into consideration this modified mine plan.

#### 4.2.2 National Greenhouse and Energy Reporting Act 2007

The *National Greenhouse and Energy Reporting Act 2007* (NGER Act) provides a single national framework for the reporting and dissemination of information about the greenhouse gas emissions, greenhouse gas projects, and energy use and production of corporations. It makes registration and reporting mandatory for corporations whose energy production, energy use or greenhouse gas emissions meet specified thresholds. Centennial reports emissions from the corporation on an annual basis, including those from Airly Mine, in accordance with the NGER Act.

#### 4.2.3 Native Title Act 1993

The *Native Title Act 1993* recognises that Aboriginal people have rights and interests to land and waters which derive from their traditional laws and customs. Native title may be recognised in places where Indigenous people continue to follow their traditional laws and customs and have maintained a link with their traditional country. It can be negotiated through a Native Title Claim, an Indigenous Land Use Agreement (ILUA) or future act agreements.

### 4.3 New South Wales State Legislation

#### 4.3.1 Environmental Planning and Assessment Act 1979

##### Objects of the EP&A Act

The EP&A Act is the principal piece of legislation overseeing the assessment and determination of development proposals in NSW. It aims to encourage the proper management, development and conservation of resources, environmental protection and ecologically sustainable development.

The objects of the EP&A Act generally seek to promote management and conservation of natural and artificial resources, while also permitting appropriate development to occur. The principles of ecologically sustainable development and public participation are also objects of the EP&A Act. The consistency of the Project with these objects is summarised in **Table 7**.

**Table 7 - Objects of the EP&A Act**

Objects of the EP&A Act	Consistency of the Proposed Modification
(a) <i>to encourage:</i>	
(i) <i>the proper management, development and conservation of natural and artificial resources, including agricultural land, natural areas, forests, minerals, water, cities, towns and villages for the purpose of promoting the social and economic welfare of the community and a better environment,</i>	Relevant consultants have been engaged to assess and report on the potential for the proposed Modification to impact upon the natural and artificial resources within the vicinity of the Project Application Area. A subsidence assessment to support the proposed mine plan is included in <b>Section 6</b> .
(ii) <i>the promotion and co-ordination of the orderly and economic use and development of land,</i>	The orderly and economic use of land is best served by development which is permissible under the relevant planning regime and predominantly in accordance with the prevailing planning controls. The proposed Modification comprises a permissible development which is consistent with the statutory

Objects of the EP&A Act	Consistency of the Proposed Modification
	and strategic planning controls.
(iii) the protection, provision and co-ordination of communication and utility services,	Not applicable to the proposed Modification.
(iv) the provision of land for public purposes,	Not applicable to the proposed Modification.
(v) the provision and co-ordination of community services and facilities, and	Not applicable to the proposed Modification.
(vi) the protection of the environment, including the protection and conservation of native animals and plants, including threatened species, populations and ecological communities, and their habitats, and	Relevant consultants have been engaged to assess and report on the potential for the proposed Modification to impact upon the local environment. There are no additional impacts, above those already approved, proposed as a result of this modification.
(vii) ecologically sustainable development, and	The proposed Modification is consistent with the principles of ecological sustainable development as outlined in <b>Section 8</b> , addressing both this object of the EP&A Act and clause 7(1)(f) in Schedule 2 of the EP&A Regulation.
(viii) the provision and maintenance of affordable housing, and	Not applicable to the proposed Modification.
(b) to promote the sharing of the responsibility for environmental planning between the different levels of government in the State, and	Not applicable to the proposed Modification.
(c) to provide increased opportunity for public involvement and participation in environmental planning and assessment.	As outlined in <b>Section 6</b> , Airly Mine has undertaken significant consultation in relation to the Airly MEP with government agencies, the local community and other stakeholders. This consultation process is ongoing. Any relevant public representations will need to be considered by the NSW P&E during the assessment of this proposed Modification.

### 4.3.2 Other Key NSW State Legislation

The existing approvals relevant to the Project are described in **Section 3**.

The Extension of Time Modification will require the use of existing approvals, licences and/or authorities under various other pieces of NSW State legislation. **Table 9** lists the key relevant pieces of NSW State legislation and indicates the implications, if any, for the Project.

**Table 8 – Relevant NSW State Legislation**

NSW State Legislative Act	Project Implications (approvals, licences and/or authorities)
<i>Protection of the Environment Operations Act 1997</i> (POEO Act)	The proposed Modification will continue to operate under the approved limits within EPL 12374.

NSW State Legislative Act	Project Implications (approvals, licences and/or authorities)
<i>Mining Act 1992</i>	Mining Lease (ML) 1331 permits the extraction of coal within the Project Application Area. Schedule 1 of the <i>Mining Act 1992</i> provides for the consultation required with respect to the granting of mining leases. Division 2 provides that landowner consent is not required to accompany an application for development consent. However, section 47J of the <i>National Parks and Wildlife Act 1974</i> requires that a mining lease interest cannot be granted without the concurrence of the Minister for the Environment and Heritage. Given that ML1331 has been granted, the concurrence of the Minister for the Environment is not required.
<i>Water Management Act 2000</i> (WM Act)	<p>The WM Act is intended to ensure that water resources are conserved and properly managed for sustainable use benefitting both present and future generations. Water sharing plans prepared in accordance with the WM Act include rules for protecting the environment and administering water licencing and trading. The Project Application Area is within an area covered by two water sharing plans:</p> <ul style="list-style-type: none"> <li>• Water Sharing Plan for the Greater Metropolitan Region Unregulated River Source 2011.</li> <li>• Water Sharing Plan for the Greater Metropolitan Region Groundwater Sources 2011.</li> </ul> <p>In accordance with clause 4(1) of the <i>Water Sharing Plan for the Greater Metropolitan Region Unregulated River Water Sources 2011</i> the Project Application Area falls within the Hawkesbury and Lower Nepean Rivers Water Source.</p> <p>In accordance with clause 4(1) of the <i>Water Sharing Plan for the Greater Metropolitan Region Groundwater Sources 2011</i> the Project Application Area falls within Sydney Basin North Groundwater Source.</p> <p>Airly Mine holds two water access licences including:</p> <ul style="list-style-type: none"> <li>• WAL36565 for 120 ML in the Sydney Basin North Groundwater Source granted in February 2014 for the site's existing production bore;</li> <li>• WAL24386 for 158ML.</li> </ul> <p>No additional water licences are required as part of this proposed Modification.</p>
<i>Coal Mine Health and Safety Act 2002</i> (CMH&S Act)	Centennial Airly currently holds all necessary approvals under the CMH&S Act, which aims to assist in securing and promoting the health, safety and welfare of people at work at coal operations.
<i>Mine Subsidence Compensation Act 1961</i>	The Project Application Area is not located within a Mine Subsidence District.
<i>Dams Safety Act 1978</i>	Not relevant to this modification.
<i>Crown Lands Act 1989</i>	There is Crown land within the Project Application Area. The proposed Modification will not require a licence to use Crown Land under the provisions of the <i>Crown Lands Act 1989</i> .
<i>Roads Act 1993</i>	Not relevant to this modification.
<i>Threatened Species Conservation Act 1995</i> (TSC Act)	Not relevant to this modification.
<i>National Parks and Wildlife Act 1974</i> (NPW Act)	The NPW Act contains provisions for the protection and management of national parks, historic sites, nature reserves and Aboriginal heritage. No approvals under the NPW Act are required for this modification.
<i>Aboriginal Land Rights Act 1983</i>	Not relevant to this modification.

NSW State Legislative Act	Project Implications (approvals, licences and/or authorities)
<i>Heritage Act 1977</i>	Not relevant to this modification.
<i>Contaminated Land Management Act 1997</i>	Not relevant to this modification.

### 4.3.3 State Environmental Planning Policies

State Environmental Planning Policies (SEPPs) are Environmental Planning Instruments - prepared by the Minister to address issues significant to NSW. The SEPPs outlined in the below sub-sections contain provisions that are relevant to the Development Continuity Project and therefore are matters to be taken into consideration by the consent authority.

#### SEPP (Mining, Petroleum Production and Extractive Industries) 2007

*SEPP (Mining, Petroleum Production and Extractive Industries) 2007* (Mining SEPP) aims to provide for the proper management and development of mineral, petroleum and extractive material resources for the social and economic welfare of NSW.

Part 3 of the Mining SEPP stipulates matters for consideration by the consent authority before determining an application for consent in respect of development for the purposes of mining. Specifically, Clauses 12 to 17 (inclusive) requires consideration to be given to the significance of the resource, the compatibility of projects with other surrounding land uses, including the existing and potential extraction of minerals, natural resource management and environmental management, resource recovery, transportation and rehabilitation.

The information presented in this EA addresses each of the matters for consideration prescribed in the abovementioned clauses. Emphasis has been placed on anticipation and prevention of potential environmental and social impacts, with various mitigation measures, management strategies, and monitoring activities proposed to minimise adverse impacts.

The *Environmental Planning and Assessment Regulation 2000* was amended on 4 October 2013 to include, amongst other things, a new clause 50A that requires a development application relating to mining to include a site verification certificate demonstrating that the land the subject of the application is not on biophysical strategic agricultural land. A site verification certificate is required for all land that is not mapped as biophysical strategic agricultural land on the Strategic Agricultural Land Map.

This requirement extends to modifications of consent, as such; an application for a site verification certificate has been made.

#### SEPP (Infrastructure) 2007

*SEPP (Infrastructure) 2007* (Infrastructure SEPP) aims to facilitate the effective delivery of infrastructure across NSW by improving regulatory certainty and efficiency through a consistent planning regime and greater flexibility in the location of infrastructure and service facilities.

The Infrastructure SEPP is not considered to be applicable to the Modification.

#### SEPP No. 55 – Remediation of Land

*SEPP No. 55 – Remediation of Land* (Land SEPP) provides for a state-wide planning approach to the remediation of contaminated land in order to reduce the risk to human health or any other aspect of the environment.

The Remediation of Land SEPP is not considered to be applicable to the Modification.

## **SEPP No. 44 – Koala Habitat Protection**

*SEPP No. 44 – Koala Habitat Protection* provides for the protection of koala habitat by ensuring that areas subject to development proposals are considered for their value as habitat or potential habitat for koalas. The Greater Lithgow LGA is listed under Schedule 1 of SEPP No. 44 as an area to which the SEPP applies.

The Koala Habitat Protection SEPP is not considered to be applicable to the Modification, as the proposed mining is within that approved under DA162/91.

## **SEPP No. 33 – Hazardous and Offensive Development**

*SEPP No. 33 - Hazardous and Offensive Development* (SEPP 33) regulates, amongst other things, the determination of development applications to carry out what is defined in SEPP 33 as development for the purposes of a "potentially hazardous industry" or "potentially offensive industry".

The Hazardous and Offensive Development SEPP is not considered to be applicable to the Modification.

### **4.3.4 Local Environmental Plans**

Local Environmental Plans are instruments that guide planning decisions for LGAs and allow Councils to manage the ways in which land is used through zoning and development consents.

#### **Lithgow City Local Environmental Plan 1994**

The aims of the *Lithgow City Local Environmental Plan 1994* (Lithgow City LEP) include the encouragement of the proper management, development and conservation of natural resources and the built environment within the City of Lithgow, by protecting, enhancing or conserving, amongst other things, timber, minerals, soil, water quality, stream environment and other natural resources.

The land use zoning of the Project Application Area pursuant to the Lithgow City LEP is Zone No 1(a) Rural (General) and Zone No. 1(f) Rural (Forestry). Development for the purposes of "mining" is permissible with development consent under the Lithgow City LEP within Zone No 1(a) Rural (General) and Zone No. 1(f) Rural (Forestry). However, no mining is proposed within Zone No. 1(f) Rural (Forestry).

Sub-clause 7(1)(a) of the Mining SEPP states that development for the purpose of underground mining may be carried out on any land with development consent. In relation to any inconsistency between the Mining SEPP and an LEP, sub-clause 5(3) provides that the Mining SEPP prevails to the extent of the inconsistency. On this basis, any provision in the Lithgow City LEP that would otherwise operate to prohibit the proposed Modification has no effect, and accordingly, the proposed Modification is permissible with development consent on the land in which the proposed Modification will be carried out that is within the Lithgow LGA.

#### **Draft Lithgow City Local Environmental Plan 2013**

Lithgow City Council has prepared a planning proposal for the *Draft Lithgow City Local Environmental Plan 2013* (Draft LEP 2013), which was lodged with NSW Planning and Infrastructure in April 2013. It is intended that the Draft LEP 2013 would implement the Standard Instrument LEP across the Lithgow LGA, and repeal the Lithgow City LEP.

The Draft LEP 2013 will seek to implement the key strategic directions of the *Lithgow Land Use Strategy 2010-2030*.

The planning proposal for the Draft LEP 2013 received its Gateway Determination from NSW Planning and Infrastructure in May 2013, after which the Draft LEP 2013 was prepared in compliance with the conditions of the Gateway Determination, and was publicly exhibited.



## **5.0 STAKEHOLDER ENGAGEMENT**

### **5.1 Introduction**

Airly Mine is undertaking significant consultation with government agencies, the community, Aboriginal groups and other stakeholders regarding the Mine Extension Project (SSD 12\_5581). This consultation incorporates the scope and potential impacts of this Modification. Consultation has also been undertaken with NSW P&I specifically in relation to this Modification. The sections below provide detail on the consultation conducted.

### **5.2 Engagement Strategy and Stakeholder Identification**

Stakeholder consultation has been ongoing since 2012 regarding the Airly MEP in accordance with Centennial Airly's *Stakeholder Engagement Plan* for the project. The Plan provides a framework to identify and appropriately consult with stakeholders that may be influenced by or have an interest in the Airly MEP.

The following stakeholders have been identified:

- Local community.
- Indigenous stakeholders.
- Government (Local, State and Commonwealth).
- Airly Mine staff and staff from other Centennial operations.
- Airly Mine Special Monitoring Committee.
- Other established forums in the area, including the Capertee and District Progress Association, Capertee Valley Alliance, Glen Davis Environmental Group, Glen Davis Community Group.

Consultation is being undertaken through:

- Airly Mine's Special Monitoring Committee Meetings
- Community Information Sessions
- Community Technical Information Sessions
- Social Impact Assessment Consultation for the Mine Extension Project
- Indigenous Stakeholder Consultation
- Government Agency Consultation

#### **5.2.1 Special Monitoring Committee Meetings**

The Special Monitoring Committee is a condition of the current development consent and provides an opportunity for members to discuss the results of ongoing environmental monitoring and specific issues related to the Airly Mine. The membership of this committee includes Lithgow City Council, Department of Trade & Investment, Regional Infrastructure and Services, Office of Environment and Heritage (National Parks and Wildlife Service), Capertee and District Progress Association, Colong Foundation for Wilderness and the Colo Committee. Other community organisations, including the Capertee Valley Alliance, Capertee Valley Environmental Group and the Blue Mountains Conservation Society, attend the meetings on a regular basis as non-voting participants.

## 5.2.2 Community Information Sessions

Community Information Sessions have been held on:

- 3 November 2012 at Capertee
- 10 November 2012 at Glen Alice
- 17 November 2012 at Wallerawang
- Celebrate Lithgow on 25 November 2012
- Rylstone Show on 23 February 2013
- Capertee Valley Catchment Group Meeting on 12 March 2013

## 5.2.3 Community Technical Information Sessions

Four technical information sessions were conducted for the Airly MEP for the purpose of providing the community with an opportunity to understand the environmental impact assessment process, key technical assessments undertaken, methodologies used in the technical assessments and the outcomes of these assessments. Information gathered during these sessions has been used to inform both this modification and the Airly MEP.

- Session 1: 13 October 2013
  - Mine design and subsidence criteria
  - Subsidence impacts on surface within the proposed mining area
  - Groundwater impacts including water inflow to the mine workings during and post mining and the impact on the surrounding catchment
  - Use of water on site and the impact on the surrounding catchment
- Session 2: 10 November 2013
  - Aquatic ecology and terrestrial ecology impact assessments
  - Cultural heritage impact assessment
- Session 3: 8 December 2013
  - Noise, air quality and visual impact assessment criteria
  - Potential noise, air and visual impacts of the Airly MEP
  - Decommissioning and rehabilitation strategy during operation and at the conclusion of mining
- Session 4: 16 February 2014
  - Overview of the Airly MEP, specialist assessments presented to date and how community feedback provided to date had been considered by Centennial Airly and incorporated into the project, as appropriate
  - Summary of the social and economic impact assessments undertaken for the Airly MEP.

The presentations, questions raised and Centennial Airly's response to these questions for each technical session are available to the community via Airly Mine's website ([www.centennialcoal.com.au](http://www.centennialcoal.com.au)).

#### **5.2.4 Social Impact Assessment Consultation**

To support Airly MEP, a social impact assessment was undertaken. Consultation within this assessment included direct engagement with residents/landholders to identify individual and collective values of the area, consultation with specialist consultants preparing technical assessments for the Airly MEP and numerous site visits.

Information gathered from both the technical information sessions and the social impact assessment consultation identified a number of key themes. These are:

- Surface and groundwater impacts are a key concern to residents in the Glen Davis, Glen Alice and Bogee areas.
- Impact of subsidence on surface features, particularly cliff lines and pagoda features
- Loss of rural amenity due to noise, dust, visual impacts, lights and traffic
- Potential for irreversible damage to the environment if the mine does not meet the mine design criteria
- The lack of benefit to the broader community as the Airly Mine will not employ local people and will therefore not generate local spending
- The risk to the environment due to a perceived lack of financial viability of Airly MEP (given its care and maintenance status at that time)
- The area has high conservation value, and the community with an interest in the operation is not limited to local landholders.

These issues have been considered against the findings of the technical assessments conducted as part of Airly MEP. That project, and this modification specifically, has adopted a mine design philosophy that will manage the potential impacts such that the impacts as a result of the mining methods employed under this modification will result in negligible impacts to both the environment and social amenity.

This modification proposes no additional infrastructure above that already approved and proposes a mine plan that limits mining to first workings only, thereby resulting in negligible subsidence impacts.

#### **5.2.5 Indigenous Stakeholder Consultation**

Consultation with relevant indigenous stakeholders is ongoing for Airly Mine. The consultation methodology for the Mine Extension Project has been undertaken in accordance with the *NSW Aboriginal Cultural Heritage Consultation Requirements for Proponents* (ACHCR) (DECCW 2010a).

A register of interested parties has been maintained and specific comments regarding the cultural significance of the survey results and report recommendations has been incorporated into the Environmental Impact Statement for the MEP.

There are two Aboriginal heritage sites within the proposed mining area for this Modification. Site 45-1-2747 is an artefact scatter in land previously cleared for pastoral activities. Site 45-1-2748 is an isolated find on a slope. Both are located in the region of Airly Gap. As only first workings are proposed in this area, no subsidence impact is expected on either of these sites.

No European heritage sites have been identified in the proposed mining area for this Modification.

## **5.2.6 Government (Local, State and Commonwealth)**

### **Local Government**

Consultation on the Airly MEP with Lithgow City Council is ongoing.

### **State Government Agencies**

Government consultation undertaken regarding the Airly MEP is documented fully in the Airly Mine Extension Project Environmental Impact Statement (Golder (2014a)). The Government Briefing Meeting was organised to discuss a number of projects from Centennial's Western Operations. The site visit on 18 October 2012 included a visit to the Airly Mine. The meeting and the site visits occurred following the submission of the Briefing Papers for Airly, Angus Place and Springvale Mine Extension Projects, Neubecks Coal Project and Western Coal Services Project to NSW P&I seeking DGRs for these projects.

The following government agencies attended the meeting on 17 October 2012:

- NSW Planning and Infrastructure.
- Office of Environment and Heritage.
- Environment Protection Agency.
- Division of Resources and Energy, Department of Trade & Investment, Regional Infrastructure and Services.
- Sydney Catchment Authority.
- Transport for NSW.
- NSW Health.
- Forestry Corporation of NSW.
- Lithgow City Council.

Consultation on the Airly MEP with these agencies is ongoing. Consultation includes overviews of the Project and specific consultation on the areas of interest of each government agency and the results of any impact assessments conducted to date. Opportunity was given for each agency to raise the issues that needed to be addressed in the *Environmental Impact Statement* (EIS) prepared in support of the Airly MEP. Subsequent consultation was provided to a number of agencies to provide feedback on the results of relevant impact assessments and to demonstrate how issues of concern had been dealt with in the EIS.

### **Commonwealth Government Agency**

An officer from the former Department of Sustainability, Environment, Water, Population and Community (SEWPAC), now the Department of the Environment attended the Government Briefing Meeting held on 17 October 2012 when the Airly MEP was discussed along with other projects from Centennial's Western Operations.

A meeting between Centennial's senior management and SEWPAC (now DoE) was held on 3 December 2012 for Centennial Coal to provide additional information on all Centennial projects that will be referred for declaration as controlled actions. The Airly MEP was discussed at this meeting.

Centennial Coal's senior management met with SEWPAC (now DoE) on 15 June 2013 to discuss the various upcoming Centennial Coal projects, including the Airly MEP. SEWPAC (now DoE) were informed that the Airly Mine Extension Project would be referred under the EPBC Act.

On 3 January 2014, Airly MEP was declared a controlled action, with the assessment to be undertaken using the Bilateral Agreement. A Client Service Charter has been developed between the Department of the Environment, NSW Planning and Environment and Centennial Airly, as per the terms of the Bilateral Agreement.

## 6.0 MANAGEMENT OF SUBSIDENCE

### 6.1 Introduction

As advised by the former NSW Planning and Infrastructure (refer Section 1.5) a subsidence assessment should be undertaken for the proposed mine design to demonstrate that there will be no increase in the approved levels of impact resulting from this modification.

The current approved mine plan for the Airly Mine is based on the initial plan and design described in the 1991 Environmental Impact Statement (Novacoal (1991)). In summary, the approved mine plan and design allowed for partial and full extraction in different zones within ML1331. The current approval permits:

- First workings within 50 metres of coal outcrop barrier and where the depth of cover is less than 50 metres
- First workings and partial secondary extraction within designated Environmental Protection Zones
- First workings and total extraction in remnant areas, generally within the centres of Mount Airly and Genowlan Mountain
- Subsidence predictions were that no measurable subsidence would occur in the first working and partial extraction areas and that up to 1.8 metres would occur in the total extraction areas

To date, mining has consisted of first workings in all areas mined with splitting and quartering practised in areas of less than 120 metres depth of cover. No secondary extraction has occurred within the Environmental Protection Zones defined in the current development consent; these zones were defined by a 25° angle of draw from both the crest and toe of the external cliffs greater than 20 metres.

Community, regulatory and industry expectations have changed since the development consent was granted in 1993. Airly Mine has developed a detailed mine design that provides outcomes which take into consideration the sensitive surface and sub-surface features within both ML1331 and A232. As a result, Airly Mine operates using low-impact underground mining methods that limit void widths and leave sufficiently large remaining pillars to support the overburden and prevent subsidence impacts.

Mining is proposed to be undertaken using bord and pillar mining methods resulting in first workings extraction only. Pillars will be quartered and/or spilt to maximise coal recovery under a first workings extraction scenario. Whilst first workings will not result in any discernible surface impacts, Airly Mine has established a mine design philosophy that limits subsidence to the following parameters:

- Vertical subsidence to be no greater than 125 mm
- A maximum tilt of 2.5 mm/m
- A maximum strain of 2.0 mm/m

### 6.2 Significant Surface Features and Mine Design

Key natural features with some degree of sensitivity to subsidence are cliffs, pagodas, watercourses, threatened species and vegetation communities. Built features of sensitivity in the area of the Modification are tracks. For the purposes of this modification, the following sensitive surface features are relevant (refer **Figure 6**):

- Mugii Murum-ban State Conservation Area
- Gap Creek

- Cliff lines and associated pagoda features

To achieve the subsidence outcomes detailed in Section 6.1, Airly Mine has undertaken an assessment of the minimum pillar size required to achieve a pillar system factor of safety equal to or greater than 2.0 and a width to height ratio of no less than 4. Pillars with these factors of safety and width to height ratios are considered to be long term stable. Golder (2014b) has undertaken a subsidence and pillar design assessment to support this modification application. This assessment is included in **Appendix 3**.

The proposed mine plan includes a mining exclusion zone under creeks where there is less than 40 metres depth of cover. The application of this exclusion is more conservative than the Environmental Protection Zones that were established under the original development consent.

### **6.3 Subsidence Predictions for the Proposed Modification**

The proposed mine plan has been designed to be long term stable and self-supporting and, therefore, is not expected to result in any measurable subsidence at the surface. The predicted tilts, curvatures and strains resulting from the extraction of the first workings are negligible and are so small as to be difficult to accurately measure at the surface using normal ground monitoring techniques. The subsidence effects as a result of the mine design are detailed in **Appendix 3**.

### **6.4 Predicted Impacts to Natural and Built Features**

Two natural features have been identified within or in the vicinity of the Project Application Area, those being the Gap Creek and cliff lines. In the context of this modification, the first workings are designed to be stable and self-supporting and, therefore, are not expected to result in any measurable subsidence at the surface. It is not expected, therefore, that there would be any adverse impacts on the natural features due to this modification.

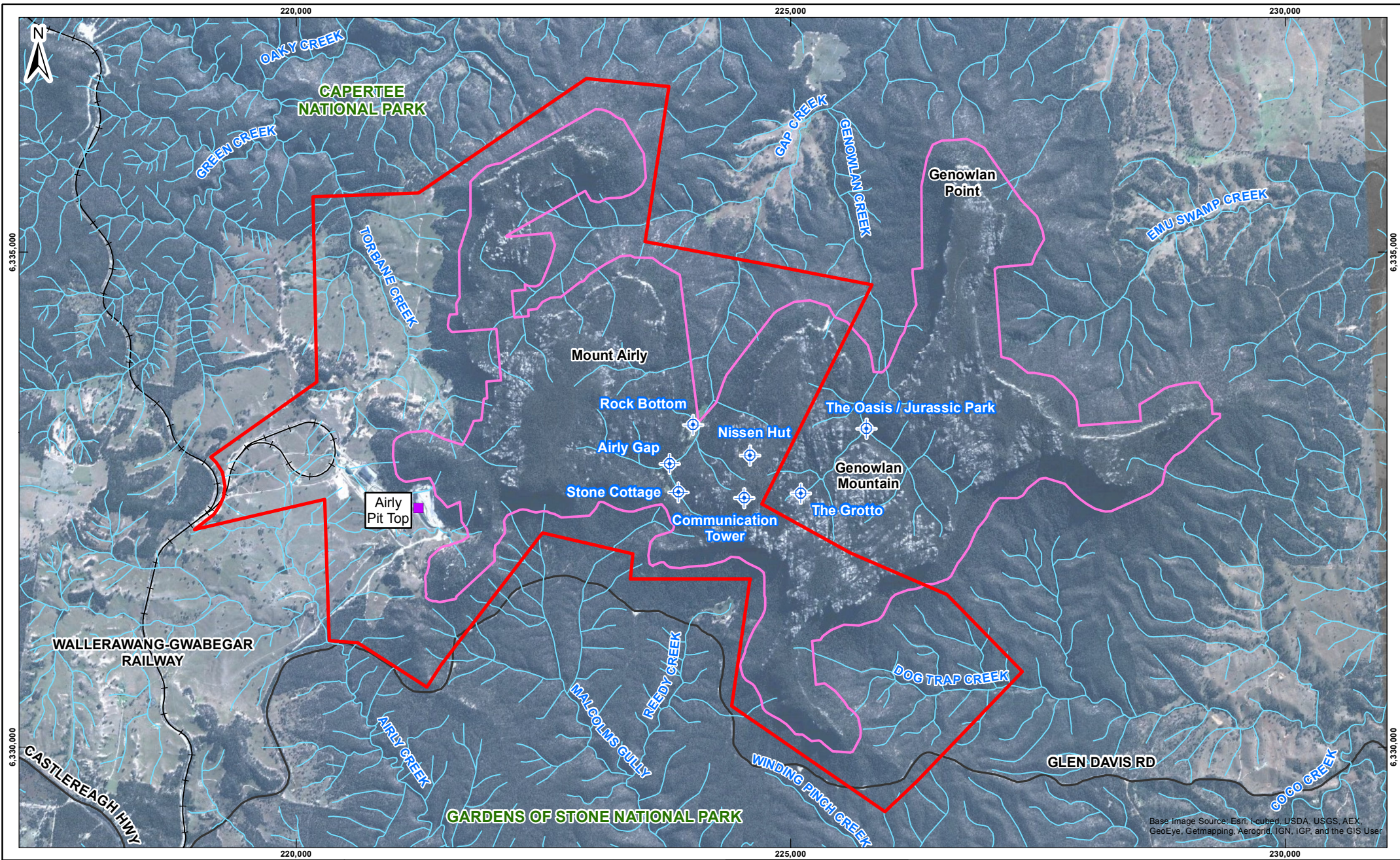
While five built features, namely, Airly Gap, Rock Bottom, Stone Cottage, Nissen Hut and a Communications Tower (refer **Figure 5**), are located within the Project Application Area. Only the Stone Cottage is within the proposed mining footprint. No splitting or quartering is proposed under this structure or within an area defined by half the depth of cover measured horizontally from the structure. No impacts are predicted in this structure.

### **6.5 Mitigation Measures and Conclusion**

The first workings have been designed to be stable and self-supporting in the long term and, therefore, are not expected to result in any measurable subsidence at the surface. It is not expected, therefore, that there would be any adverse impacts on the natural and built features due to the development of the first workings.

As such no subsidence related mitigation measures are proposed for this Modification project. The proposed first workings can be managed through existing management practices in place at Airly Mine.





#### LEGEND

- Project Application Area
- Watercourse
- Dam
- Rail
- Cliff Line
- Main Road
- Sensitive Feature

Coordinate System: GDA 1994 MGA Zone 56

CENTENNIAL AIRLY PTY. LTD.

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DATE 28/05/2014

SEAM LITHGOW

REFERENCE 137623024-R  
Rev 0

SCALE 1:50,000



**Figure 6:  
Surface  
Sensitive Features**

0 500 1,000 1,500 2,000 Metres

PLOTFILE No.



**Centennial Coal**  
Airly

DRG No. 6

**A4**



## 7.0 STATEMENT OF COMMITMENTS

The flowing Statement of Commitments is based upon the mitigation and management measures identified in the subsidence assessment and Section 6.0 of this EA. The existing Airly Mine Environmental Management System and supporting management plans is already in place to effectively monitor, mitigate and/or manage the potential environmental and socio-economic impacts of this Modification should it be approved.

### **Subsidence**

- Airly Mine will satisfy the Division of Resources and Energy that the proposed first workings are designed to remain stable and non-subsiding in the long term. The design of pillars will comply with the requirements of the *Coal Mines Health and Safety Act 2002* and *Coal Mines Health and Safety Regulation 2006*.
- Appropriate impact management and mitigation strategies will be developed for natural features within the Project Application Area as required.
- Existing management plans will be reviewed and updated if necessary to take into consideration potential impacts from the Modification.

## 8.0 JUSTIFICATION AND CONCLUSION

A description of the need and justification for the Modification project is provided in this section having regard to environmental, economic and social considerations. This includes consideration of the principles of Ecologically Sustainable Development (ESD) and the consistency of the Modification with the objectives of the EP&A Act.

### 8.1 Project Justification

DA162/91 allows for Airly Mine to extract up to 1.8 Mtpa. Airly Mine is seeking development consent modification under Section 75W of the EP&A Act to allow for the development of nominated roadways and headings within the identified mining panels (refer **Appendix 2**) for the Modification Project.

The development of the first workings will be achieved through existing mining practices and operation of existing equipment and have been designed to be long term stable. Negligible subsidence will result from this additional development drive.

Centennial Airly's approach to the Project has been to apply a best practice system of environmental management: that is a hierarchy of avoid, minimise, mitigate and finally, offset residual impacts. On this basis, the mine planning and design process had already eliminated and designed out many of the potential environmental consequences identified early in the risk management process.

The Modification will not include any new infrastructure or changes to the operations at Airly Mine, and as detailed in this EA, the Modification will have no environmental impacts beyond those originally approved in development consent DA162/91. Without approval of this modification, Airly Mine will not be able to maintain current operations, thereby placing longer term employment options for a recently employed workforce at risk.

### 8.2 Ecologically Sustainable Development

ESD is a primary objective of environmental protection in NSW. The objects of the EP&A Act adopt the principles of ESD and it is defined under section 6(2) of the *Protection of the Environment Administration Act 1991* as:

*6(2) For the purposes of subsection (1)(a), ecologically sustainable development requires the effective integration of economic and environmental considerations in decision-making processes. Ecologically sustainable development can be achieved through the implementation of the following principles and programs:*

- (a) **the precautionary principle** - namely, that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. In the application of the precautionary principle, public and private decisions should be guided by:*
  - (i) careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment, and*
  - (ii) an assessment of the risk-weighted consequences of various options,*
- (b) **inter-generational equity** - namely, that the present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations,*
- (c) **conservation of biological diversity and ecological integrity** - namely, that conservation of biological diversity and ecological integrity should be a fundamental consideration,*
- (d) **improved valuation, pricing and incentive mechanisms** - namely, that environmental factors should be included in the valuation of assets and services, such as:*

- (i) polluter pays - that is, those who generate pollution and waste should bear the cost of containment, avoidance or abatement,*
- (ii) the users of goods and services should pay prices based on the full life cycle of costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste,*
- (iii) environmental goals, having been established, should be pursued in the most cost effective way, by establishing incentive structures, including market mechanisms, that enable those best placed to maximise benefits or minimise costs to develop their own solutions and responses to environmental problems.*

The overall objectives of ESD are to use, conserve and enhance natural resources. This ensures that ecological processes are maintained facilitating improved quality of life, now and into the future.

Airly Mine is committed to the principles of ESD and understands that social, economic and environmental objectives are interdependent. Centennial Airly acknowledges that a well-designed and effectively managed operation will avoid significant and/or costly environmental impacts or degradation. Consideration has been given to appropriately identifying, avoiding, mitigating and managing environmental risk. This demonstrates environmental due diligence and will provide for on-going and adaptive monitoring and management of the operation in line with the ESD principles outlined in the below sub-sections.

### **8.2.1 The Precautionary Principle**

The precautionary principle, in summary, holds that where there are threats of serious or irreversible environmental damage, the lack of full scientific certainty should not be used as a reason for postponing measures to prevent the degradation.

The mine plan has been designed to ensure pillars are long term stable, resulting in negligible surface impacts. Existing management controls and mitigation strategies are in place for Airly Mine to effectively monitor, mitigate and/or manage the potential environmental and socio-economic impacts of the Modification should it be approved. The Modification will involve no additional impacts to the environment above those for the existing operations at Airly Mine.

### **8.2.2 Intergenerational Equity**

Intergenerational equity is centered on the concept that the present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations. There is a moral obligation to ensure that today's economic progress, which will benefit both current and future generations, is not offset by environmental deterioration.

Airly Mine undertakes on-going environmental monitoring with mitigation measures to provide effective environmental management across its operations. This management is provided through planning, communication, documentation, review and feedback. These environmental management measures ensure that the health, diversity and productivity of the environment is maintained or enhanced for future generations.

### **8.2.3 Conservation of Biological Diversity and Ecological Integrity**

The principle of "conservation of biological diversity and ecological integrity" holds that the conservation of biological diversity and ecological integrity should be a fundamental consideration for development proposals.

The potential for environmental impacts as a result of this modification is negligible and the Modification will involve no significant additional impacts to the environment above those for the existing operations at Airly Mine.

## 8.2.4 Improved Valuation, Pricing and Incentive Mechanisms

The principle of “improved valuation, pricing and incentive mechanisms” deems that environmental factors should be included in the valuation of assets and services. The cost associated with using or impacting upon an environmental resource is seen as a cost incurred to protect that resource.

Airly Mine will optimise the valuation and pricing of the coal resources by achieving continued driveage designed to maintain the site’s business plan and allow development of the Mine Extension Project on schedule.

## 8.3 Conclusion

The Modification has been assessed using a risk-based approach to appropriately identify and assess the design criteria required to achieve negligible surface impacts. The assessment involved consultation with NSW P&E in addition to other stakeholders. Emphasis has been placed on ensuring minimal changes to the existing operations at Airly Mine other than the extension of time to the existing consent to allow continuation of underground mining operations until such time as the Airly Mine Extension Project has completed its assessment process.

This Environmental Assessment includes the mine plan proposed to be undertaken with an extension of time to the Airly Mine development consent DA 162/91. No other changes are proposed as part of this modification.

A subsidence assessment demonstrating the mine design requirements to achieve the subsidence predictions is included in **Appendix 3**. This assessment concludes that the proposed pillar design for the mine plan will be long term stable in all of the proposed pillars. This in turn will result in negligible environmental consequences. Existing management controls and mitigation strategies are in place for Airly Mine to effectively monitor, mitigate and/or manage the potential impacts of the Modification should it be approved.

The Modification is considered to be consistent with relevant objectives of the EP&A Act, including the principles of ESD, and will not change the nature of the development originally approved. On considering the balance of environment and community impacts, it is considered reasonable to conclude that the benefits of the modification outweigh the impacts. Based on the findings of this EA, it is recommended that the Modification be approved subject to conditions.

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## 10.0 ABBREVIATIONS

CHPP	Coal Handling and Processing Plant
DGRs	Director-General's Requirements
DoE	Commonwealth Department of the Environment
DTIRIS	NSW Department of Trade and Investment, Regional Infrastructure and Services
EA	Environmental Assessment
EIS	Environmental Impact Statement
EL	Exploration Licence
EMS	Environmental Management System
EP&A Act	NSW <i>Environmental Planning and Assessment Act 1979</i>
EPBC Act	Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i>
EPA	Environment Protection Agency
EPL	Environment Protection Licence
ESD	Ecologically Sustainable Development
FCNSW	Forestry Corporation of New South Wales
ha	Hectares
km	Kilometres
LCC	Lithgow City Council
LEP	Local Environmental Plan
LGA	Local Government Area
NSW P&I	NSW Planning and Infrastructure
MEP	Mine Extension Project
ML	Mining Lease
MNES	Matter of National Environmental Significance
MOP	Mining Operations Plan
Mtpa	Million tonnes per annum
NSW	New South Wales
OEH	NSW Office of Environment and Heritage
POEO Act	NSW <i>Protection of the Environment Operations Act 1999</i>
REA	Reject Emplacement Area
ROM	Run of Mine
SEPP	State Environmental Planning Policy
SEWPaC	Former Commonwealth Department of Sustainability, Environment, Water, Population and Community
SSD	State Significant Development
TSC Act	NSW <i>Threatened Species Conservation Act 1995</i>
WM Act	<i>Water Management Act 2000</i>
WSP	Water Sharing Plan

# **Appendix 1**

## **Development Consent DA 162/91**

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# **ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979**

## **DETERMINATION OF DEVELOPMENT APPLICATION PURSUANT TO SECTION 101**

I, the Minister for Planning, pursuant to Section 101 of the Environmental Planning and Assessment Act 1979 ("the Act"), determine the development application ("the application") referred to in Schedule 1 by granting consent to the application subject to the conditions set out in Schedule 2.

The reasons for the imposition of the conditions are:

- (i) to minimise the adverse impact the development may cause through noise, visual amenity, air and water pollution;
- (ii) to provide for environmental monitoring and reporting;
- (iii) to set requirements for infrastructure provision.

Robert Webster  
Minister for Planning

Signed by the Minister for Planning and dated 14 April 1993.

### **Schedule 1**

**Application number:** DA 162/91

**Made by:** Novacoal Australia Pty Limited ("the Applicant")

**To:** Lithgow City Council ("the Council")

**In respect of:** Land described in Attachment "A"

**For the following:**

- (1) Construction and operation of an underground coal mine.
- (2) Construction and operation of pit top and rail facilities.
- (3) Modification to facilities at Wallerawang Colliery Siding.

**NOTE:**

- (1) To ascertain the date upon which the consent becomes effective, refer to section 101 (9) of the Act.
- (2) To ascertain the date upon which the consent is liable to lapse, refer to section 99 of the Act.

**Blue type represents 7 December 1999 Modification (DA 162/91 MOD 1)**

**Red type represents 21 August 2009 Modification (DA 162/91 MOD 2)**

### **SCHEDULE 2**

S91/2836/002

#### **GENERAL**

1. The Applicant shall carry out the development generally in accordance with the:
  - (i) Development application and accompanying Environmental Impact Statement, dated 18 October 1991 and prepared by Novacoal Australia Pty Limited;
  - (ii) EIS Addendum dated 5 October 1992;
  - (iii) Submissions by Novacoal to the Commission of Inquiry on the Underground Coal Mine proposed by Novacoal Australia Pty Ltd, Mounts Airly and Genowlan Area, Capertee Valley, City of Greater Lithgow;

- (iv) Modification application and accompanying Statement of Environmental Effects titled *Airly Coal Mine Proposed Modifications to Development Consent*, dated April 1999;
- (vi) Modification application and accompanying Environmental Assessment titled *Proposed Modification of DA 162/91 for the Construction of a 66kV Powerline and Associated Infrastructure – Airly Coal Mine*, dated July 2009;
- (vii) Revised Statement of Commitments dated 6 August 2009 (see Appendix 1); and
- (viii) Conditions of this consent.

If there is any inconsistency between the above documents, the most recent document shall prevail to the extent of the inconsistency. However, conditions of this consent shall prevail to the extent of any inconsistency.

#### **DURATION**

- 2. The duration of this consent is limited to twenty-one (21) years from the granting of the Mining Lease taking account of Authorisation No 232; Exploration Licence Application No 770; Exploration Licence Application No 888; Exploration Licence No 887; Mining Lease No 3; Mining Purposes Lease No 135; Parish of Airly, County of Roxburgh.

#### **STATUTORY REQUIREMENTS**

- 3. The Applicant shall ensure that all statutory requirements including but not restricted to those set down by the *Local Government Act 1993*, *Protection of the Environment Operations Act 1997*, *Protection of the Environment Administration Act 1991* and all other relevant legislation, regulations, Australian Standards, codes, guidelines and notices are fully met to the requirements and satisfaction of the Department of Environment, Climate Change and Water (DECCW), Department of Industry and Investment (DII), Department of Transport and Infrastructure (DTI) and Sydney Catchment Authority.
- 3A. The Applicant shall prepare revisions of any strategies, plans or programs required under this consent if directed to do so by the Director-General. Such revisions shall be prepared to the satisfaction of, and within a timeframe approved by, the Director-General.

#### **REJECT EMPLACEMENT**

- 4.
  - (a) The Applicant shall investigate the possibility of combining all reject in one emplacement area and report to the DII.
  - (b) The Applicant shall provide a report of geotechnical investigations and engineering specifications for each emplacement area to the DII, the Director-General of Planning (the Director-General) and the DECCW.
  - (c) The Applicant shall implement the emplacement area scheme after approval by the DII.

#### **DEPARTMENT OF ENVIRONMENT, CLIMATE CHANGE AND WATER**

- 5.
  - (a) In the event of emissions exceeding the approved levels, or in the event that there are adverse effects on the environment beyond those anticipated at the date of this consent and which can be reasonably attributed to emissions from the proposal, the Applicant shall comply with the conditions, directions or notices issued under the foregoing Acts aimed at achieving the approved levels of emissions or at mitigating or eliminating the adverse effects. The Applicant shall comply with any stop work notices issued by the DECCW to temporarily cease the construction work.
  - (b) The Applicant shall inform the DII, the Council and the Special Monitoring Committee recommended in Condition No 31 of this consent of all instances where the DECCW advise emissions exceed approved levels.

#### **COAL TRANSPORTATION AND ROAD WORKS**

- 6.
  - (a) The Applicant shall transport all coal from the full production mine by rail.
  - (b) In the event of no rail services due to an industrial dispute, there shall be no emergency haulage of coal from the mine without prior consent of Council and the Director-General.
  - (c) The Applicant shall be permitted to road haul a maximum of 500,000 tonnes of coal per annum from the trial mine for a maximum period of 2 years, commencing from the date of any resumption of road haulage of coal from the mine prior to July 2000 or from July 1, 2000, whichever is the sooner, in compliance with the reasonable requirements of the Council and the DTI, and as agreed by the Director-General. The

Applicant shall notify the Director-General and the Council of the commencement of road haulage at least 1 week prior to the commencement of haulage.

- (d) The Applicant shall prepare and implement a Road Haulage Management Plan in consultation with the Council, and the Special Monitoring Committee (refer condition 31). The Plan shall be submitted for the approval of the Director-General (or delegate) 28 days prior to any road haulage of coal authorised by condition 6(c), (or such other time as agreed in writing by the Director-General or delegate). The Plan shall address the following matters:
- procedures for the ongoing assessment of noise impacts on dwellings, as a result of the Applicant's operations;
  - procedures for the ongoing identification and implementation of reasonable noise mitigation works on dwellings adversely impacted by road haulage noise directly attributable to the applicant's operations and subject to the agreement of the Director-General;
  - reasonable contributions towards road improvements works required by the Director-General, as the direct result of the Applicant's road haulage of coal;
  - an agreed maximum aggregate cost to implement the reasonable requirements of the Road Haulage Management Plan. Such costs are to be solely attributable to the applicant's operations.
- (e) The Applicant shall prepare a truck management plan in consultation with the Council and the Special Monitoring Committee, for submission and approval by the Director-General, 28 days prior to any road haulage of coal authorised by condition 6 (c) (or such other time as agreed in writing by the Director-General or delegate). The truck management plan shall include specific enforcement procedures. The applicant is to ensure strict compliance with the approved truck management plan, in accordance with the reasonable requirements of the Director-General.
- (f) The Applicant shall establish and publicise a 24 hour contact telephone number for complaints associated with the development.
- (g) The Applicant is to adhere to any reasonable requirements of the DTI in regard to haulage along the Castlereagh Highway.
- (h) The Applicant shall ensure that:
- haulage vehicles strictly conform with any 40km/h school zone speed limit on the haul route;
  - road haulage is programmed to minimise truck movements during the active times of the 40km/h school zone.
- (i) The maximum annual rate shall be calculated from the date of the commencement of road haulage. The Applicant shall submit statements every three (3) months regarding quantities and destination of product hauled by public road in that period to the Director-General, commencing from the date of road haulage.
- (j) Within three (3) months of commencement of road haulage, and at three (3) monthly intervals thereafter, the Applicant shall provide a written report to the Director-General detailing measures undertaken during that period to pursue coal haulage options other than by road. The Applicant shall provide any reasonable additional information relevant to these reports and any other reasonable requirements for the reports, if requested to do so by the Director-General (or delegate).
- (k) Within three (3) months of the commencement of road haulage, and on an annual basis thereafter (or as agreed or requested by the Director-General), the Applicant shall submit an independent audit of road haulage operations to the Director-General. The audit shall be conducted pursuant to ISO 14010 – Guidelines and General Principles for Environmental Auditing and ISO 14011 – Procedures for Environmental Auditing and any specifications of the Director-General. The audit shall;
- assess compliance with the conditions of road haulage;
  - review the effectiveness of noise mitigation works;
  - review the application of the truck management plan;
  - be carried out at the Applicant's expense;
  - be conducted by a duly qualified person or team acceptable to the Director-General.

## **GLEN DAVIS ROAD, CAPERTEE**

7. (a) (i) The Applicant shall place with the Council a bank guarantee to the sum of \$200,000 at the commencement of the trial mine, to allow for the reconstruction of the Glen Davis Road, Capertee, from the intersection of the **Castlereagh Highway** to the mine entry to a standard capable of sustaining proposed traffic volumes following the completion of the trial mine. The Applicant shall engage at its own cost an independent Engineer to assess the condition of the road both prior to the lodgment of the bank guarantee and prior to any application for its release. The bank guarantee shall only be released if the Engineer's report establishes the road is in at least the same condition prior to road haulage.
- (ii) The Applicant shall pay to Council within 14 days of receipt Council invoices for road repairs or reconstruction as accompanied by an independent Engineer's report for the necessary work done.
- (iii) The fees for the mutually agreed independent Engineer's report shall be met by the Applicant.
- (b) The Applicant shall pay the Council a contribution of 5 cents per tonne per kilometre of product hauled by road under Council's Section 94 Contributions Plan for rural roads. The contribution shall relate to the section of Glen Davis Road from the colliery access to the intersection with the **Castlereagh Highway**. The amount shall be paid within one month of the end of each calendar year and be accompanied by appropriate documentation for verification. The Applicant shall apply to Council for approval to construct any weighbridge.
- (c) The Council, prior to undertaking reconstruction work, shall consult with the independent Engineer on the scope, timing and cost of reconstruction work to be done on the Glen Davis Road, Capertee from the intersection with the **Castlereagh Highway** to the mine entry.
- (d) The Applicant shall signpost the section of Glen Davis Road between SH 18 at Capertee and the entrance to the Airly Coal Project with 60 kmph speed limit sign for the period of the trial mine.
- (e) The Applicant shall linemark the section of road outlined in (d) above in accordance with the appropriate Australian Standard.
- (f) The Applicant shall provide all appropriate road signs and furnishings including guide posts and truck warning signs at the entrance of the Mine Access Road in accordance with the appropriate Australian Standard.
- (g) The Applicant following any approval of an access road and facilities at the eastern portal shall, as a minimum, upgrade the unsealed section of Glen Davis Road, Capertee, to the second mine entry to a standard such that:
- (i) Pavement shall be widened to 7.4 metres;
  - (ii) Road shoulder and table drains shall be upgraded;
  - (iii) A minimum of 100mm of compacted road base shall be placed;
  - (iv) The Applicant shall replace the existing timber bridge over Airly Creek with a structure capable of accommodating two lanes of traffic (not less than 8 metres wide) according to Council's requirements;
  - (v) The Applicant shall submit to Council copies of engineering plans and specifications for replacement of the structure referred to in (iv) above, for approval.
- (h) The Applicant shall comply with condition 7(g) prior to the use of the eastern portal entry.
- (i) The Applicant shall implement all required road improvements prior to road transport of coal.
- (j) The Applicant shall provide all appropriate road side signs and furnishings including guide posts to the appropriate **Austroads** Guide and truck warning signs at the entrance of Torbane Road.

- (k) The Applicant following any approval of an access road and facilities at the eastern portal shall as a minimum, upgrade the unsealed section of Glen Davis Road, Capertee to the second mine entry to a standard such that:
  - (i) Pavement shall be widened to 7.4 metres;
  - (ii) Road shoulder and table drains shall be upgraded;
  - (iii) A minimum of 100mm of compacted road base shall be placed.
- (l) The Applicant shall comply with condition 7(j) prior to the use of the eastern portal entry.
- (m) The Applicant shall implement all required road improvements for the Glen Davis Road, Capertee prior to road transport of coal.

#### **TORBANE ROAD**

- 8. (a) Torbane Road from Glen Davis Road to the junction with the mine access road shall be upgraded as necessary by the Applicant prior to trial mine operations to a two-lane standard capable of sustaining:
  - (i) traffic associated with the trial mine; and
  - (ii) thereafter maintained to handle traffic associated with the full production mine. Such standard to be to the satisfaction of Council. This standard shall be maintained throughout the life of the mine.
- (b) Full design plans and specifications of such road reconstruction shall be submitted to and approved by Council prior to the commencement of work.

#### **STATE HIGHWAY NO 18 (Castlereagh Highway)**

- 9. (a) Left turn merge lane from Glen Davis Road to the Castlereagh Highway SH 18 shall be modified by the Applicant to accommodate the large vehicles associated with the development. The Applicant shall resurface, linemark and provide appropriate signage on the eastern shoulder of SH 18 between Glen Davis Road and the school crossing to remove any ambiguities between through traffic, decelerating traffic and parking. Appropriate signage shall also be located on the Glen Davis Road in the vicinity of the intersection.
- (b) Improved street lighting shall be provided by the Applicant at the intersection of Glen Davis Road/Castlereagh Highway intersection by replacing the existing low pressure tubular fluorescent lighting with high pressure mercury or sodium vapour lamps.
- 10. (a) All works associated with Conditions 7 and 8 to be at full cost to the Applicant and to the satisfaction of the Council.
- (b) All works associated with Condition 9 to be at full cost to the Applicant and to be agreed with the Council, DTI and Capertee Progress Association.

#### **INFRASTRUCTURE PROVISION**

- 11. (a) The Applicant shall negotiate with and submit to Council a contribution pursuant to Section 94 of the Environmental Planning and Assessment Act, 1979, in accordance with Council's Infrastructure Plan for Coal Related Developments as made necessary by the impact of the development. The time of which contributions are made and the use of the payments are to be negotiated and agreed with Council.
- (b) The Applicant shall take such steps as Council may reasonably require to ensure that the construction of the mine does not adversely impact on the availability of rental housing in the district.
- (c) The Applicant shall undertake further discussions with Council regarding the possibility of establishing joint user facilities for coal transportation to Mt Piper Power Station.

#### **ENVIRONMENTAL PROTECTION ZONES**

- 12. (a) The Applicant shall ensure that all external high cliffs and rock formations known as 'pagodas' and 'beehives' located in Environmental Protection Zones as designated in Plan No ACP1 (such plan being part of this consent) are adequately protected so as to avoid adverse structural or visual impact caused by mining.

High is defined as 20m or more change in elevation in any section with a slope greater than 75 degrees.

- (b) The Applicant shall adopt such practices and techniques as will minimise disturbance occurring to the 'internal' high cliffs and 'pagodas' and 'beehives' within the mining area not included in the protection zones referred to in (a) above.

#### **SUBSIDENCE DAMAGE**

- 13. The Applicant shall restrict usage of areas subject to subsidence damage according to the requirements of the **DII**.

#### **HYDROLOGY**

- 14. The Applicant shall arrange to restore or provide an alternative water supply should the water supply to residential properties be disturbed by mining induced subsidence.

#### **TRIAL MINE**

- 15. (a) The Applicant shall prior to construction prepare and submit to Council for its approval, a detailed site management plan for the proposed trial mine (the "Trial Mine Phase") operation, such plan to include the following:
  - (i) a contour plan showing the location of site facilities including administration office ablution facilities, staff car parking areas and access road;
  - (ii) details of effluent disposal and water supply;
  - (iii) a plan showing location of coal stockpile areas.
- (b) Details of proposed pollution control measures including dust suppression and water quality controls.
- (c) Design and capacity of sediment control dams.
- (d) The time schedule for site preparation and for construction of the trial mine.
- (e) A rehabilitation plan for the pit top site following completion of the twelve (12) month trial mine period.
- (f) The Trial Mine Phase shall end upon the happening of the following trigger events:
  - (i) at the end of the two (2) year period (refer Condition 6(c)), or
  - (ii) availability of rail unloading facilities at the power stations, whichever is the sooner.

#### **WALLERAWANG SIDING INFRASTRUCTURE**

- 16. The Applicant shall submit for Council approval the following information in relation to the upgrading and continued operation of Wallerawang Siding:
  - (a) (i) A detailed contour plan to a suitable scale indicating location of existing and proposed coal stockpiles, loading facilities and other site management controls.
  - (ii) Details of the location of the proposed balloon loop, associated coal handling facilities, and proposed landscaping of the site.
  - (iii) A detailed landscaping plan, prepared by a landscape architect, incorporating the landscape details set out in the EIS.
- (b) Details of proposed soil management, erosion and sediment control, depth of cuts and angle of batter slopes and proposed stabilization measures.
- (c) Schedule of manning levels and required amenities at this Wallerawang Siding.
- (d) Details of all noise control measures which involve construction of structures, earth mounding or other site treatment.

#### **CONVEYOR**

- 17. (a) The Applicant shall prior to construction submit for Council approval:
  - (i) A detailed contour plan showing the route of the proposed conveyor at Wallerawang Colliery Siding.
  - (ii) Full engineering, design and specifications for the construction of the conveyor prior to construction of works. Such details shall include the type of structure to be provided over the existing formation of the **Castlereagh Highway**, changes in levels deemed necessary by these works, any drainage works required and details of provision for traffic during construction and future access to the conveyors.
  - (iii) Details of proposed colour treatment for conveyor structure to minimize the degree of contrast with the existing visual environment.

- (iv) Details of proposed landscaping treatment for the conveyor route.
- (b) The Applicant shall carry out all work in a manner to minimise the impact on the wetland communities of Neubecks Creek.
- (c) The Applicant shall carry out all measures proposed in the EIS to minimise soil erosion and sedimentation effects and as otherwise required by and to the satisfaction of the **DECCW**.

#### **EASTERN PORTAL AREA**

- 18. (a) The Applicant shall prior to construction prepare and submit to Council for its approval a site management plan for the proposed eastern portal area. Such plan to include the following:
  - (i) A contour plan detailing location of site facilities including administration office, ablution facilities and staff car parking areas and access roads.
  - (ii) Details of proposed effluent disposal and water supply.
  - (iii) Details of proposed pollution control measures including dust suppression and water quality controls.
  - (iv) Design and capacity of sediment control dams.
  - (v) A time schedule for site preparation and construction.
  - (vi) Details of all road construction work relevant to providing an access road from the Glen Davis Road to the eastern portal. Such detail shall include measures proposed to minimise any adverse drainage and erosion effects and methods proposed for protection of flora and fauna. The latter mentioned to be prepared in consultation with the **DECCW**.
- (b) Approval shall be obtained from the **DECCW** for the removal or destruction of any trees to accommodate the proposed works.

#### **ARCHAEOLOGY**

- 19. (a) The Applicant shall meet the reasonable requirements of the **DECCW** in relation to the assessment of Aboriginal archaeological heritage. The Applicant shall not remove or destroy any item of aboriginal heritage without first obtaining the consent of the **DECCW**.
- (b) The Applicant shall employ the services of a qualified archaeologist to make an assessment of the oil shale mining relics at Airly to clarify the likely impact on their historical values and their conservation significance, to the satisfaction of the Council. Upon receipt of the assessment the Applicant shall negotiate with the Council on necessary protection measures.

#### **WATER MANAGEMENT**

- 20. (a) The Applicant prior to construction and in consultation with the **DECCW** shall produce a detailed water management plan for each component of the development detailing all proposed drainage diversion channels, collection pits and sedimentation dams to be constructed on site. Such plan shall incorporate the principles of Total Catchment Management.
- (b) The Applicant shall maintain a water supply to all identified users of the water resource, emanating from the mining lease application area, should such supply be interrupted or lost due to mining activity.
- (c) The Applicant shall obtain all licences from the **DECCW** necessary for the establishment of necessary bore fields for the supply of water to the development.

#### **NOISE**

- 21. The Applicant shall implement, all noise attenuation measures outlined in the EIS to the satisfaction of the **DECCW**.

#### **FIRE PROTECTION**

- 22. The Applicant shall provide details to the Council of all proposed fire fighting facilities and measures to be installed on the site including water storage capacity, location of hydrants, etc.

#### **EFFLUENT DISPOSAL AND WATER TREATMENT**

- 23. (a) The Applicant shall provide details to the **DECCW** of the design and capacity of the proposed effluent treatment and disposal. Approval of **DECCW** and the satisfaction of the NSW Department of Health shall be obtained for the disposal method selected.



- (b) A septic tank application for the eastern portal site, complete with details of the pump out facilities and final disposal of effluent shall be submitted for approval by the Council and the information of the NSW Department of Health and **DECCW**.
- (c) Details of proposed method of water treatment shall be provided to the **DECCW** and the Council.

#### **INTERNAL ROADS BUILDINGS**

- 23. The Applicant shall, prior to the commencement of construction of the proposed development, prepare, submit and obtain the approval of the Council for plans and specifications for all roads, car parking facilities and occupied buildings upon the site. All structural work shall be accompanied by structural engineering details certified by a practicing structural engineer.

#### **INITIAL CONSTRUCTION WORKS**

- 25. The Applicant shall within three months of site works commencement and prior to commencement of mining carry out all necessary site drainage and stability works. Further, the Applicant shall carry out site stabilization and temporary rehabilitation works at the pit top, upon direction by the **DII** and in consultation with the **DECCW**.

#### **LANDSCAPING**

- 26. The Applicant shall prepare and submit to the Council for its approval, within three months prior to commencement of construction:
  - (a) detailed landscaping proposals covering all components of the mining area development. The Applicant shall employ a qualified landscape architect to assist in the landscape design;
  - (b) proposals to satisfy visual considerations of the structural components of the development incorporating paint colour and specification. Buildings and structures are to be designed so as to present a neat orderly appearance and to blend as far as possible with the surrounding landscape;
  - (c) a comprehensive Plan of Management which shall consist of detailed plans, specifications and staged work programs shall be undertaken whilst the colliery is in operation. Such plan shall include surveys of existing vegetation and site features, replacement and maintenance of all landscape and rehabilitation works, and replacement and maintenance of building materials and cladding.

#### **SOIL MANAGEMENT, EROSION CONTROL AND SITE REHABILITATION**

- 27. (a) The Applicant shall prior to construction of works other than those for the trial mine prepare and implement a soil management plan to the satisfaction of the **DECCW**.
- (b) The Applicant shall prior to construction of works other than those for the trial mine prepare and implement to the satisfaction of the **DECCW** a management plan directed to the control of erosion, sediment control, site revegetation and rehabilitation.
- (c) The Applicant shall consult with the **DII** and the **DECCW** concerning appropriate vegetative species selection, seedling establishment techniques, soil testing and fertilizer selection and application for all rehabilitation works.

#### **APPROVALS TO COUNCIL**

- 28. The Applicant shall furnish to the Council and the Special Monitoring Committee referred to in Condition No 31 copies of all environmental planning approvals from Government Departments and other Statutory authorities.

#### **ENVIRONMENTAL MONITORING**

- 29. The Applicant shall carry out all operating and monitoring as described and specified in the EIS and supplementary report thereto and/or as specified below:
  - (a) The Applicant shall institute and implement a comprehensive monitoring program for air, water, and noise emissions to the respective requirements of the **DECCW** and the **DII**.
  - (b) The Applicant shall within twelve months of the date of this consent and to the satisfaction of the **DECCW** undertake flora monitoring at selected locations within Mount Airly and Genowlan Mountain directed to ensuring long term protection of **rare** and endangered species.

- (c) The Applicant shall twelve months prior to mining under any area, in consultation with the **DECCW**, undertake a fauna survey to update the fauna survey and study presented by the Applicant to the Commission of Inquiry. Such updating shall include long term fauna monitoring and reporting to the satisfaction of the **DECCW** and shall be reviewed at regular intervals.
- (d) The Applicant shall monitor the impact of noise and dust emissions from the development on the property of Ms C Parr (Portion 9) in accordance with **DECCW** requirements.
- (e) The Applicant shall, six months prior to commencement of coal mining operations prepare and submit to the Council and the **DII** a hydrological impact assessment of the area likely to be mined in the first twelve months (including site facilities areas). This assessment is to be updated each twelve months to include areas likely to be mined in subsequent twelve month periods. Such assessments shall identify and quantify existing rainfall run-off and hydrogeological circumstances and changes likely to be occasioned by subsidence impact and location of site facilities. The assessments shall be particularly concerned to examine the likely impacts of any change on existing streams, springs, wet areas and the Grotto precinct.
- (f) Two years prior to conducting second workings in any area, the Applicant shall establish a groundwater monitoring station in that area with the purpose of distinguishing existing flows and the variations in water flow caused by mine operations and subsidence and to allow assessment of the likely impact on flora and on areas such as the Grotto precinct.
- (g) Data emerging from such monitoring and an assessment set out in (e) and (f) above shall be included in the annual environmental management plan report referred to in Condition No 30 of this Consent.

#### **ENVIRONMENTAL REPORTING**

30. (a) The Applicant shall prepare and submit to the **DII** for approval an annual Environmental Management Plan Report. The Report shall include:
- (i) Short, medium and long term mine plans.
  - (ii) Procedures for handling and emplacement of coal washery rejects.
  - (iii) Progressive rehabilitation of the site including coal washery reject emplacement areas.
  - (iv) A review of performance in terms of **DECCW** licenses and approvals applicable to the site activities.
  - (v) Status of achieving the water management plan of the development including all drainage diversion channels, collection pits and sedimentation dams to be constructed on site.
  - (vi) A review of environmental monitoring data and assessment of the effectiveness of the site's environmental management.
  - (vii) A review of performance in terms of the conditions of development consent including all monitoring and reporting requirements.
  - (viii) Workforce characteristics of the development.
  - (ix) Socio-economic impact of the development in respect of the Capertee area other than covered in (viii) above.
  - (x) Results of subsidence monitoring and subsidence impacts upon the natural environment, and measures implemented to rectify any damage caused.
- (b) The Applicant shall consult with the **Director-General**, during report preparation concerning any additional requirements.
- (c) Copies of the annual Environmental Management Plan Report shall be submitted to the **Director-General**, **DECCW**, the **Council** and the Special Monitoring Committee mentioned in Condition No 31 of this Consent.
- (d) The first report shall be completed and submitted within twelve months of this Development Consent, at a date to be determined in consultation with the **DII**, and thereafter annually on the anniversary of that date.

#### **SPECIAL MONITORING COMMITTEE**

31. (a) The Applicant shall establish the Committee to be known as the Special Monitoring Committee, comprising representatives nominated by the Council, **DII**, **DECCW**, Capertee Progress Association and two members selected from the Colong

Foundation for Wilderness Limited the Colo Committee and the Capertee Valley Committee, and, **Airly Coal Mine's** Environmental Officer.

- (b) The Chairperson of this Committee shall be the representative of the Council.
- (c) The Committee shall meet at least once per year or at such other additional times as may be directed by the Chairperson.
- (d) The Committee shall have the power to co-opt representatives from other relevant bodies, authorities or persons where necessary.
- (e) The duties of the Committee shall be to consider and assess all environmental reports and management plans as emerging from conditions of development consent, any required remedial action (if necessary) arising therefrom and make such representations as may be appropriate to **the Applicant**, Government agencies or other relevant authority.
- (f) The Applicant shall be responsible for the administration and operation of such Committee including:
  - (i) All arrangements for notification and conduct of Committee meetings.
  - (ii) Preparation of Committee agendas and circulation to Committee members. Such agenda or business papers shall include all environmental monitoring reports from conditions of development consent and the Applicant's or Government agencies response thereto as relevant to the date of each meeting.
  - (iii) Keeping of all minutes of Committee meetings and as necessary and in accordance with the resolutions of such Committee advising relevant organisations and the public of Committee decisions.
- (g) The Applicant shall make available to the Committee all data and information held by it as relevant and necessary for the Committee to assess the affect of the development on both the short and long term natural environment of the Mount Airly-Mount Genowlan area.
- (h) The Applicant shall be responsible to meet all attendance expenses of Committee members to the limit of \$100 per person per day.

#### **ENVIRONMENTAL OFFICER**

- 32. The Applicant shall employ or contract the services of an Environmental Officer whose qualifications are acceptable to the **DII** for the proposed development to be responsible for ensuring that nominated environmental safeguards proposed for the development and as required by this Consent and other statutory approvals are enforced and monitored from the commencement of construction.

#### **MINE CLOSURE**

- 33. The Applicant shall, one month prior to a planned mine closure, notify the employees, the Council, the **Director- General** and the relevant authorities of any proposed mine closure and undertake all consultations and negotiations as are necessary in the circumstances.

#### **DISPUTE RESOLUTION**

- 34. Any dispute arising between any of the parties in respect of the above conditions shall be referred to the Minister for Planning for resolution.

#### **ALTERNATIVE ACCESS**

- 35. The Applicant shall provide alternative access to that presently available along Crown roads in the vicinity of the pit top works and balloon rail loop when and if required to the satisfaction of the **Land and Property Management Authority** and if necessary to public roads to the satisfaction of the Council.

## **ATTACHMENT “A” Airly Coal Project**

The development application relates to the land as follows:

### **Airly**

Portion 35; Parish of Morundurey, County of Roxburgh.

Portion (P) 59, P83, P87; P93, P146, Title Reference (TR) 158/722293; TR 159/722293; Parish of Airly, County of Roxburgh.

P46, P47, P55, P127, Camping and Water Reserve No 25523; Parish of Bandamora. County of Roxburgh.

Village of Airly: Section 1 Lot (L) 1, L2, L3, L4, L5; Section 2, Lot 4, Parish of Airly, County of Roxburgh.

Public Roads to Torbane. Crown subdivision roads excluded from portions 59, 86, 146 & 159, Parish of Airly and Portion 35, Parish of Morundurey.

Mining Titles: Authorisation No 232; Exploration Licence Application No 770; Exploration Licence Application No 888; Exploration Licence No 887; Mining Lease No 3; Mining Purposes Lease No 135; Parish of Airly, County of Roxburgh.

The attached map shows properties and the Crown land within the proposed coal lease boundary.

### **Airly Powerline**

Portions 22, 44, 45 and 55 DP 755758. Crown Road Enclosure Permit 50283.

### **Wallerawang**

Portions, 3, 10, 13, 14, 17, 18, 19, 20, 23, 29, 35, 58, 59, 65, 80, 290, 291, 316, 317. Crown subdivision roads separating Portions 18 and 19; 19 from 17, 10, 23, 13, 65, and 14; 17, 10 from 58, 316 and 317; 14 from 65; 14 from 3; 29 from 290, 291; Reserved Roads under **Land and Property Management Authority** control excluded from Portion 80, Enclosed road within Portion 59. Parish of Cox, County of Cook.

Part of Ben Bullen State Forest No. 434 (No.1 Extension). Crown land bounded by Portions 80, 18 and 59 (part lots 363, 364 and 365). Portions 290 and 291 embracing part of Ben Bullen State Forest No. 434 (No.1 Extension). Public road Capertee to Wallerawang (The **Castlereagh Highway**). Part Portion ML3.

## APPENDIX 1

### REVISED STATEMENT OF COMMITMENTS

**6 AUGUST 2009**

The following statement of commitments has been prepared, in accordance with the DGR's. This statement of commitments provides a summary of the proposed environmental management and mitigation measures for the proposed modification.

Aspect	Commitments/Mitigation measures
General	<ul style="list-style-type: none"> <li>Construction of the 66kV powerline and associated infrastructure will be undertaken in accordance with the description provided in the Environmental Assessment dated June 2009.</li> </ul>
Flora and Fauna	<ul style="list-style-type: none"> <li>During the removal of any mature tree, all works will be undertaken under the supervision of an appropriately qualified person to manage the recovery of any native fauna that may be displaced as a result. A plan of management for the handling and care of any displaced fauna will be prepared prior to the commencement of clearing activities.</li> <li>The proponent will continue to engage with the Hawkesbury Nepean Catchment Management Authority in regard to the revegetation works to be carried out within Airly Creek in the vicinity of the creek crossing including the removal of weed species such as willows.</li> <li>Appropriate measures will be employed to ensure that machinery working within the site does not bring materials (soils etc.) onto the sites that may infect onsite vegetation with <i>Phytophthora cinnamomi</i>.</li> <li>Ongoing weed management will be instituted and potential weed infestations will be appropriately treated to ensure surrounding communities are protected from invasive species.</li> <li>At the completion of the powerline construction, all non-operational areas will be suitably rehabilitated.</li> </ul>
Archaeology and Cultural Heritage	<ul style="list-style-type: none"> <li>The proponent and its employees, earthmoving contractors, subcontractors, machine operators and their representatives, working in the proposed modification area (162/91 MOD 2), will be instructed that in the event of any bone or stone artefacts, or discrete distributions of shell, or any objects of cultural association, being unearthed during earthmoving, work will cease immediately in the area of the find, and the DECC will be notified.</li> <li>The newly recorded artefact scatter, located outside the powerline easement, will be placed on the AHIMS and a site card lodged with the DECC.</li> </ul>
Soil and Water	<ul style="list-style-type: none"> <li>During construction temporary erosion control measures will be implemented and maintained in accordance with the Blue Book (Volumes 1 and 2).</li> <li>Revegetation works of all disturbed areas will be established as soon as possible following completion of construction works.</li> <li>Steep batters will be stabilised as soon as practical following removal of the trees and rehabilitated.</li> <li>No construction activities, including pole installation will be undertaken within 40m of the top bank of Airly Creek.</li> </ul>
Visual Amenity	<ul style="list-style-type: none"> <li>Clearing of vegetation will be contained to only that required for the works, with trees to be removed to be clearly marked.</li> </ul>

Aspect	Commitments/Mitigation measures
Air Quality	<ul style="list-style-type: none"> <li>Vehicle speeds will be limited along unsealed sections of construction and maintenance tracks to 40km/hr.</li> </ul>
Noise	<ul style="list-style-type: none"> <li>Construction activities will be limited to daytime work hours (7am to 5pm) Monday to Friday. No construction activities will take place on weekends.</li> </ul>
Waste Management	<ul style="list-style-type: none"> <li>Suitably qualified and licensed waste contractors will be used for appropriate waste disposal.</li> <li>Effluent waste will be managed and collected from portable toilet facilities.</li> </ul>
Disused Landing Ground	<ul style="list-style-type: none"> <li>Crosses will be placed every 200m along the landing ground.</li> <li>The Department of Lands (Bathurst) will be contacted to request the landing ground be removed from future 1:25,000 topographic maps. Air Services Australia (Aeronautical Information Services) will also be contacted to request they remove the Aerodrome symbol from the World Aeronautical Chart at that location.</li> </ul>

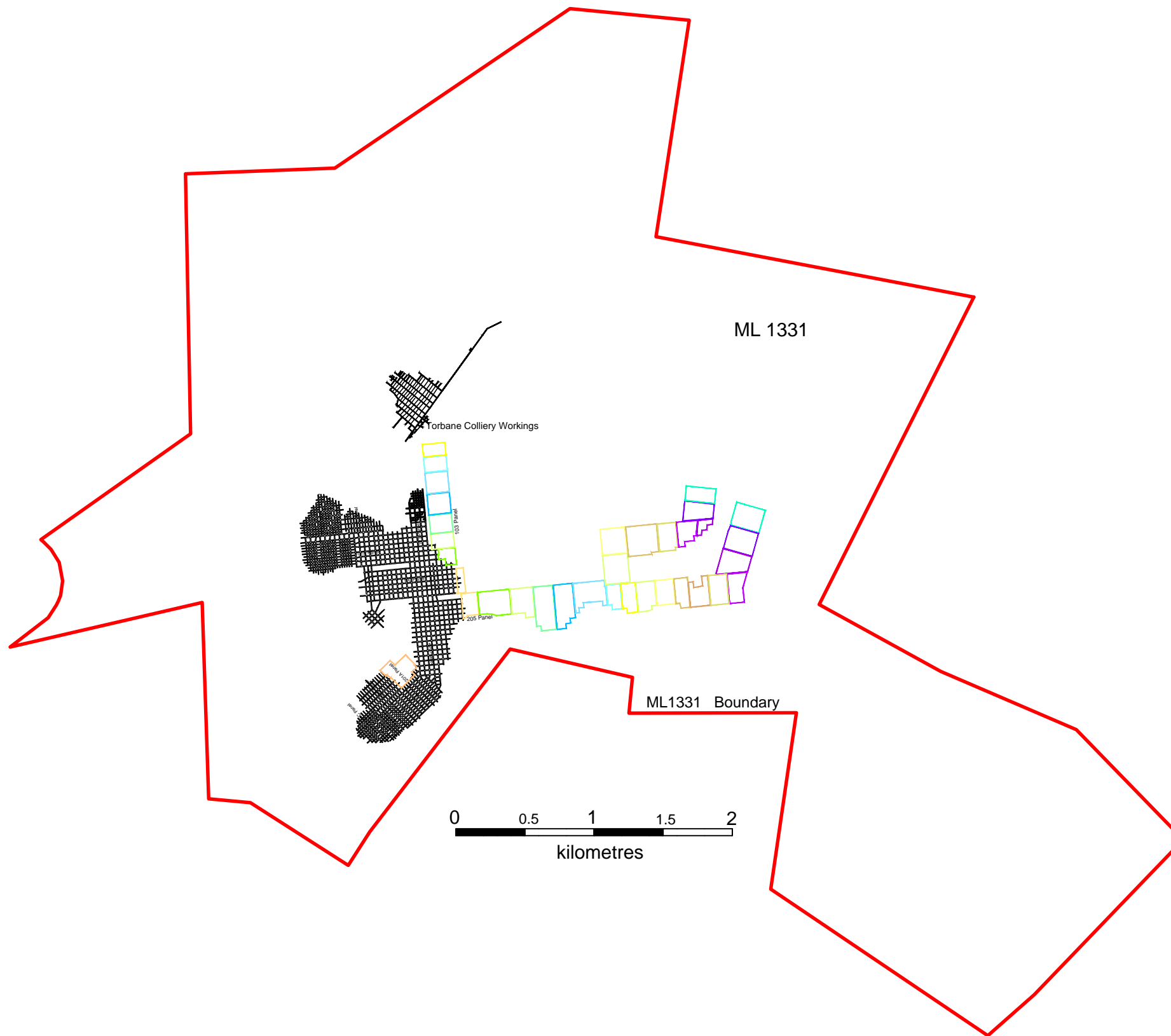
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# **Appendix 2**

## **Proposed Mining Schedule**

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LEGEND

Development

- |                |                |
|----------------|----------------|
| May 2014       | March 2015     |
| June 2014      | April 2015     |
| July 2014      | May 2015       |
| August 2014    | June 2015      |
| September 2014 | July 2015      |
| October 2014   | August 2015    |
| November 2014  | September 2015 |
| December 2014  | October 2015   |
| January 2015   |                |
| February 2015  |                |

- Existing Workings
- ML1331 Boundary

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OR TRANSMITTED WITHOUT PRIOR WRITTEN PERMISSION.

LOCATION	Airly
SEAM	Lithgow
DRAWN	J Stevens
CHECKED	D King
APPROVED	R Miller
SCALE	Refer to scalebar

Airly Mine  
Proposed Mining Schedule  
May 2014 to October 2015



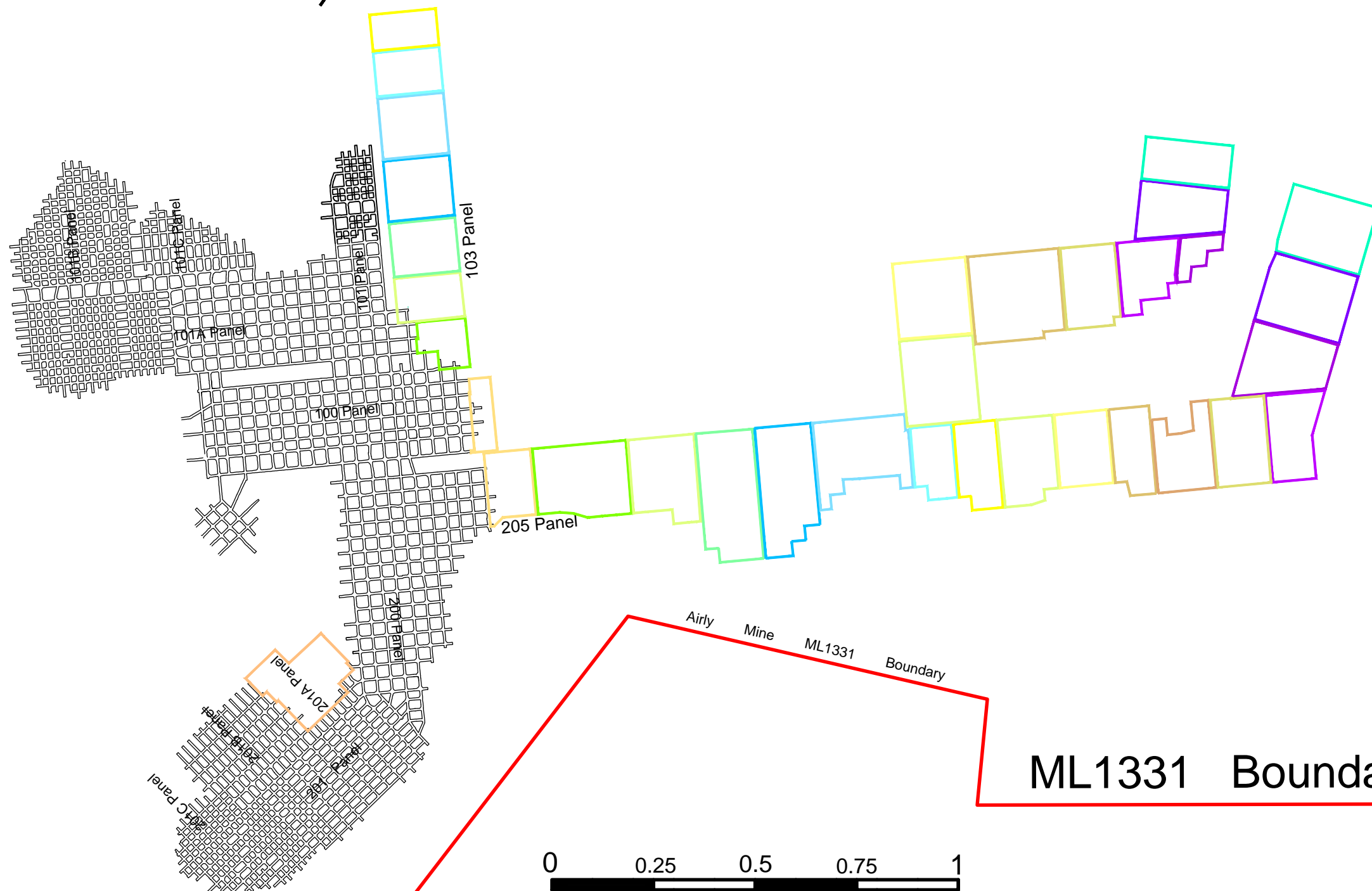
Centennial  
Airly

DATE 13-06-2014

AM00138c



Torbane Colliery Workings



ML1331 Boundary

0 0.25 0.5 0.75 1  
kilometres

LEGEND

Development

- |                |                |
|----------------|----------------|
| May 2014       | March 2015     |
| June 2014      | April 2015     |
| July 2014      | May 2015       |
| August 2014    | June 2015      |
| September 2014 | July 2015      |
| October 2014   | August 2015    |
| November 2014  | September 2015 |
| December 2014  | October 2015   |
| January 2015   |                |
| February 2015  |                |

Existing Workings

ML1331 Boundary

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LOCATION	Airly
SEAM	Lithgow
DRAWN	J Stevens
CHECKED	D King
APPROVED	R Miller
SCALE	Refer to scalebar

Airly Mine  
Proposed Mining Schedule  
May 2014 to October 2015



Centennial  
Airly

DATE 13-06-2014

AM00138b

# **Appendix 3**

## **Pillar Stability and Subsidence Assessment**

### **Golder Associates Pty Limited, June 2014**

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# Centennial Coal

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