Centennial Coal

Exploration Activities and Minor Surface Infrastructure Management Plan

Airly Mine

July 2018

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Table of Contents

List of Figures

List of Tables

Appendices

1 BACKGROUND

1.1 Introduction

Airly Mine (Airly/the Mine) is an underground mine located in the Western Coalfields, within the Sydney Basin, approximately 40 kilometers (km) north-northwest of Lithgow and approximately 171 km northwest of Sydney in New South Wales (NSW). The regional locality of Airly is shown on **Figure 1**.

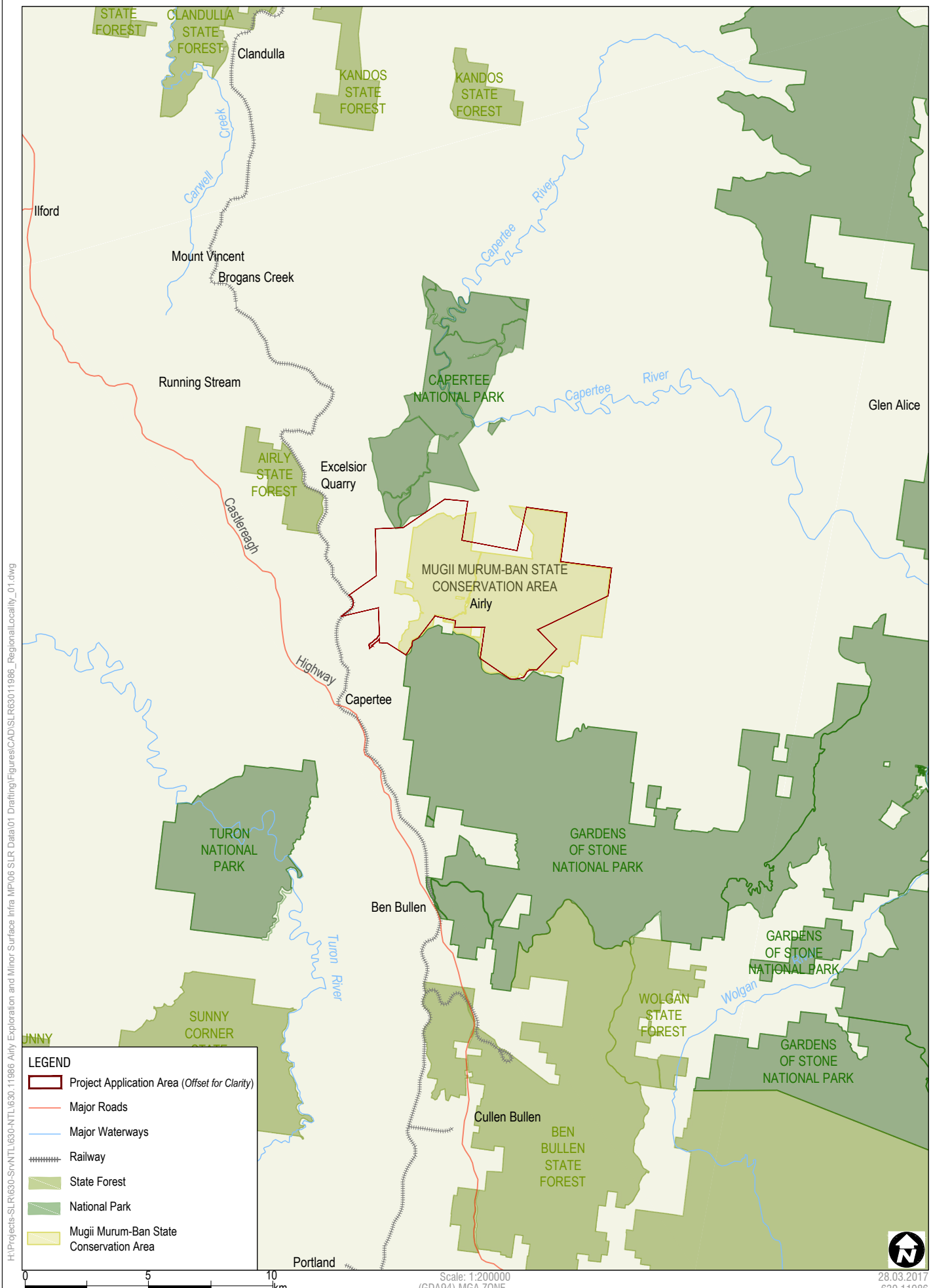
Centennial Airly Pty Limited (Centennial Airly) is the operator of Airly and is a wholly owned subsidiary of Centennial Coal Company Pty Limited (Centennial Coal). Centennial Coal was purchased by Banpu Public Company Limited (Banpu) in October 2010.

Airly 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). DA 162/91 and its subsequent modifications allowed for the extraction of 1.8 million tonnes per annum (Mtpa) of run of mine (ROM) coal within Mining Lease (ML) 1331. Mining in accordance with DA 162/91 was undertaken using low impact bord and pillar mining techniques to extract coal from the Lithgow Seam. Coal is supplied to both domestic and international markets by rail.

On 15 December 2016, Development Consent SSD-5581 for the Airly Mine Extension Project was approved by the Planning Assessment Commission (PAC) (under delegation from the Minister of Planning) pursuant to Part 4 of the EP&A Act. Airly Mine commenced operations under this consent on 31 January 2017. Development Consent SSD-5581 replaces Development Consent DA 162/91 which was surrendered by 31 January 2017 (in accordance with Schedule 2, Condition 10 of SSD-5581). Development Consent SSD-5581 allows for the continued underground mining operations at existing production rates until 15 December 2037. Approved underground mining methods include a combination of first workings and partial extraction methods.

Development Consent SSD-5581 also approves exploration drilling activities within the bounds of Authorisation (AUTH) 232. Exploration is undertaken to obtain specific geological information regarding coal seam quality and thickness, through logging and testing of cores and boreholes. Information is used for the ongoing refinement of Airly's existing geological model, allowing for detailed mine planning. Following the drilling of exploration bores, the bores may also be used to install piezometers in the aquifers of interest for ongoing groundwater monitoring, or for the installation of equipment for the purpose of strata and subsidence monitoring.

In accordance with the requirements of Schedule 4, Condition 28 of Development Consent SSD-5581 this Exploration Activities and Minor Surface Infrastructure Management Plan has been prepared to outline measures that will be implemented by Airly. These measures will be used to mitigate potential environmental impacts during the exploration activities and the construction and operation of minor surface infrastructure (including equipment for alluvial, groundwater, surface water and subsidence monitoring and associated access tracks).



REGIONAL LOCALITY

FIGURE 1

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1.2 Proposed Activities

1.2.1 Exploration

Surface exploration activities will continue to be undertaken to obtain specific geological information to assist with detailed mine planning. The boreholes drilled in the exploration programmes will also allow the installation of equipment for alluvial, groundwater, surface water and subsidence monitoring. Construction and exploration activities will include:

- Upgrading of existing access tracks (where necessary);
- Establishment of drilling sites;
- Construction and drilling of boreholes for geological and geotechnical investigation;
- Installation of piezometers and groundwater monitoring equipment;
- Installation of equipment for surface water monitoring;
- Installation of equipment for monitoring strata and subsidence; and
- Decommissioning and rehabilitation of the drill sites.

Exploration activities will be located within AUTH 232 and will generally focus on future mining areas (refer **Figure 2**).

All exploration activities will be carried out in accordance with the requirements of the *Mining Act 1992*, relevant mineral authorities and this Plan. Centennial Airly will continue to utilise area-based assessment procedures for the management of exploration activities to ensure that they are conducted in an environmentally responsible manner and with due consideration to the community. This will include a risk-based process for the selection, assessment and environmental management of proposed drill pad sites and access tracks, based on environmental, geological, logistical and other operational constraints.

Some minor surface clearing is likely to be required to establish drill sites and for the clearing/maintenance of access tracks required to reach drilling locations. Where possible and practicable, drill sites will be selected as close as possible to existing access tracks. This will reduce the requirement for new access tracks to be created and will minimise clearing requirements and surface disturbance for drill site establishment. The proposed drill site footprint will require a maximum disturbance area of approximately 35 metres (m) x 25 m. Where possible, drill sites may also be selected within existing cleared areas.

The drill site footprint will be required for the drill rig, two sumps (above-ground sumps or in-ground sumps, depending upon site suitability), a rod skid or truck, a core handling/storage area and space for parking of light and heavy vehicles.

Rehabilitation will be undertaken in accordance with the *Exploration Code of Practice: Rehabilitation* (Division of Resources and Geoscience (DRG), 2017a).

1.2.2 Subsidence Monitoring

Subsidence monitoring will continue to be undertaken by Centennial Airly to monitor the potential subsidence related impacts resulting from secondary extraction. In addition to potential installation of equipment for monitoring strata and subsidence in exploration bores, monitoring may include installation of GPS stations and survey marks.

Subsidence monitoring will continue to be located within AUTH 232, and will be carried out in accordance with the approved Extraction Plan, which has been developed in accordance with requirements of SSD 5581 and the *Mining Act 1992*. The Extraction Plan contains a Subsidence Monitoring Program, which includes further details of the monitoring techniques used.

Centennial Airly will continue to utilise area-based assessment procedures for the management of subsidence monitoring activities to ensure that they are conducted in an environmentally responsible manner and with due consideration to the community. This will include a risk-based process for the selection, assessment and environmental management of proposed monitoring sites and access tracks, based on environmental, geological, logistical and other operational constraints.

Some minor surface clearing is likely to be required to establish monitoring sites and for the clearing/maintenance of access tracks required to reach monitoring locations. Where possible and practicable, monitoring sites will be selected as close as possible to existing access tracks. This will reduce the requirement for new access tracks to be created and will minimise clearing requirements and surface disturbance for monitoring site establishment.

Upon completion of monitoring activities, disturbed areas will be rehabilitated in accordance with the *Exploration Code of Practice: Rehabilitation* (Division of Resources and Geoscience (DRG), 2017a).

1.2.3 Construction

This Plan has been prepared in accordance with the requirements of Schedule 4, Condition 28 of Development Consent SSD-5581 to manage the approved exploration and/or monitoring activities. This condition allows for the construction and operation of minor surface infrastructure. If such requirements are identified by Centennial Airly during the detailed design phase, this Plan allows adjustments to be made without the need for modifications to the Development Consent.

If the requirement for minor surface infrastructure is identified during the detailed design phase, this Plan will be revised to reflect the proposed management measures to be implemented during construction and operation. The revised Plan would be resubmitted to relevant stakeholders for consultation, prior to lodgement to the Department of Planning and Environment (DPE) for approval. All activities outlined within this Plan, will be undertaken within the limits of Development Consent SSD-5581.

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Surface Facilities

FIGURE 2

1.3 Objectives

The objectives of this Exploration Activities and Minor Surface Infrastructure Management Plan are to:

- Describe the measures that would be implemented to manage potential environmental impacts resulting from approved exploration activities and construction/operation of minor surface infrastructure;
- Satisfy the requirements of Development Consent SSD-5581; and
- Satisfy the requirements of AUTH 232 and ML 1331.

1.4 Regulatory Requirements

1.4.1 Development Consent SSD-5581

Development Consent SSD-5581 provides detail of the matters which should be included in this document. These matters are set out in **Table 1**, together with the notation of the section of this document in which each matter is addressed.

Table 1 – Relevant Development Consent Conditions

Condition	Condition Requirement	Section Addressed
Schedule 4, Condition 26	Prior to carrying out exploration activities on site under this consent that would cause surface disturbance or the construction and/or upgrade of minor surface infrastructure, the Applicant must prepare an Exploration Activities and Minor Surface Infrastructure Management Plan for the development to the satisfaction of the Secretary*. This Plan must:	This Document
	(a) Be prepared by suitable qualified and experienced person/s whose appointment has been endorsed by the Secretary;	Section 2.1
	(b) Be prepared in consultation with DRG and OEH;	Section 2.1
	(c) Include a description of the measures that would be implemented for:	-
	• managing exploration activities on site;	Section 2.4
	• managing construction and operation of minor surface infrastructure (including groundwater monitoring bores) and associated access tracks;	Section 2.4
	• consulting with and addressing concerns of affected landowners;	Section 2.1.2
	• avoiding threatened species, populations or their habitats and EECs;	Section 2.2.2
	• minimising clearance and disturbance of native vegetation;	Section 2.4.4
	• minimising erosion and sedimentation;	Section 2.4.1
	• achieving applicable standards and goals; and	Section 1.4.6
	• rehabilitating disturbed areas.	Section 2.5
	The Applicant must implement the approved Exploration Activities and Minor Surface Infrastructure Management Plan for the development.	Noted

**As noted in Schedule 4, Condition 26 of SSD-5581 this condition does not apply to the construction of approved surface infrastructure in the Airly pit top area.*

1.4.2 Mining and Exploration Authorities

Airly Mine currently undertakes mining in accordance with ML 1331. Exploration activities are undertaken in accordance with AUTH 232. These mining authorities are shown on **Figure 2** with details provided in **Table 2**.

A summary of relevant conditions, together with the notation of the section of this document in which each matter is addressed has been provided as **Appendix 1**.

Table 2 – Summary of Mining Authorities

Name	Summary	Grant Date	Expiry Date
Mining Lease 1331	Mining lease area of approximately 2,745 hectares	12/10/1993	20/10/2035
Authorisation 232	Exploration area of approximately 3,054 hectares	20/10/1980	20/10/2019

The Improved Management of Exploration Regulation (IMER) is a reform of NSW exploration regulation implemented from 1 July 2015. On renewal, the Airly Exploration Licence A232 will become a IMER title and will become subject to IMER licence conditions. Until renewed under the IMER, A232 will remain a non-IMER title and will continue with current licence conditions. Mining authorities are not covered by IMER and therefore are non-IMER titles.

Centennial Airly will submit a Mining Lease Application (MLA) prior to undertaking mining activities in the areas to the east of ML 1331.

1.4.3 Environment Protection Licence

Airly currently operates under Environmental Protection Licence (EPL) 12374, issued under the *Protection of the Environment Operations Act 1997* (POEO Act).

1.4.4 Water Licences

Centennial Airly currently holds four licences for groundwater monitoring bores issued under Section 115 of the *Water Act 1912* for the purposes of monitoring groundwater levels in the Airly Mine lease area. Airly also holds two groundwater extraction licences.

A summary of water licences relevant to Airly operation are outlined in **Table 3**.

Airly will continue to liaise with the Department of Primary Industries – Water (DPI Water) with regard to the site's future licensing requirements.

Table 3 – Water Licences

Licence	Purpose	Bore(s)	Date of Issue	Expiry
WAL 24386	Groundwater extraction	N/A	1/9/2014	Perpetuity
WAL 36565	Groundwater extraction	N/A	11/2014	Perpetuity
10BL604518	Monitoring	ARP01	14/2/2011	Perpetuity
10BL604520	Monitoring	ARP02a ARP03A	14/2/2011	Perpetuity
10BL604521	Monitoring	ARP04 ARP05	14/2/2011	Perpetuity
10BL605352	Monitoring	ARP06 ARP07 ARP08 ARP09	28/3/2013	Perpetuity
10BL605794	Monitoring	ARP11	19/08/2016	Perpetuity
10BL605793	Monitoring	ARP12, ARP13, ARP13SP, ARP14, ARP15 & ARP15SP	17/08/2016	Perpetuity

1.4.5 Access Arrangements

The Mugii Murum-ban State Conservation Area (SCA) is located above the majority of the Airly underground workings (refer **Figure 2**). The SCA is owned and managed by National Parks and Wildlife Service NSW (NPWS).

Under Clause 140 of the *Mining Act 1992*, the holder of a prospecting title must not carry out prospecting operations except in accordance with an access arrangement to be agreed in writing between the title holder and each landholder. Access arrangements agreed in writing will be obtained by Centennial Airly prior to the commencement of any exploration activities and/or monitoring activities.

1.4.6 Relevant Guidelines and Standards

This document has been prepared in accordance with the following guidelines and standards:

- *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* (DECCW, 2010);
- *Guideline for community consultation requirements for exploration* (DRG, 2012a);
- *Guideline for Community Consultation Reporting – Coal and Petroleum Exploration* (DRG 2012b);
- *EDG01: Borehole Sealing Requirements on Land: Coal Exploration* (DRG, 2012c);
- *Exploration Code of Practice: Rehabilitation* (DRG, 2017a);
- *Exploration Code of Practice: Environmental Management* (DRG, 2017b);
- *Exploration Code of Practice: Community Consultation* (DRG, 2016a);
- *Exploration Guideline: Annual Activity Reporting for Prospecting Titles* (DRG, 2016b);
- *Exploration Reporting: A Guide for Reporting on Exploration and Prospecting in New South Wales* (DRG, 2016c);
- *Managing Urban Stormwater; Soils and Construction* (The Blue Book) *Volume 1* (Landcom, 2004);
- *Managing Urban Stormwater; Soils and Construction Volume 2A, Installation of Services* (Department of Environment and Climate Change (DECC), 2008a);
- *Managing Urban Stormwater; Soils and Construction Volume 2C, Unsealed Roads* (DECC, 2008b);
- *Managing Urban Stormwater; Soils and Construction Volume 2E, Mines and Quarries* (DECC, 2008c);
- *Minimum Construction Requirements for Water Bores in Australia: Edition 2* (National Uniform Drillers Licensing Committee, 2012); and
- *Waste Classification Guidelines* (DECCW, 2009).

2 IMPLEMENTATION

2.1 Consultation

2.1.1 Government Consultation

This Exploration Activities and Minor Surface Infrastructure Management Plan has been prepared by SLR Consulting Pty Limited (SLR). In accordance with the requirements of Schedule 4, Condition 26(a) of Development Consent SSD-5581, SLR has been endorsed by the DPE as suitably qualified and suitable persons. A copy of this endorsement has been provided as **Appendix 2**.

To satisfy the requirements of Development Consent SSD-5581, Airly has consulted with relevant stakeholders during the preparation of this Plan. A copy of the Plan was provided to the Division of Resources and Geoscience (DRG) (formally known as DRE) and Office of Environment and Heritage (OEH) for review in July 2017. No feedback was received.

Centennial Airly received additional feedback on the EAMSIMP from DPE on 15 June 2018. Feedback and where it has been addressed in this plan is presented in **Table 4.**

Table 4 – DPE Comments on EAMSIMP

Section	DPE Comment	Response / Section Addressed
2.5	Consider increasing the frequency of rehabilitation monitoring in the first 12 months following sowing/planting to confirm landform establishment is progressing. Consider linking the Section 6 of the MOP	Monthly inspections of the rehabilitated sites will be undertaken for the first 12 months following seeding. Annual rehabilitation monitoring will be undertaken to assess progress against the completion criteria in Section 6 of the MOP. Monitoring will be undertaken in accordance with Section 8 of the MOP. **Section 2.5**
3.2.1	Define 'regular' inspections.	Regular inspections will be undertaken weekly for active sites and monthly for rehabilitated sites (for the first 12 months following seeding). **Section 3.2.1**
-	It is noted that supplementary approvals required under other legislation, such as the Mining Act may be required following approval of the EAMSIMP.	Noted.

During the preparation of the Airly Mine Extension Project Environmental Impact Statement (the EIS) (Golder Associates, 2014), consultation was also undertaken with Commonwealth, State and Local government agencies including:

- Department of the Environment and Energy;
- OEH;
- Environment Protection Authority (EPA);
- DRG;
- Department of Primary Industries;
- Roads and Maritime Services (RMS);
- NSW Health;
- Sydney Catchment Authority;
- Hawkesbury-Nepean Catchment Management Authority; and

- Lithgow City Council.

Airly will notify relevant stakeholders prior to the commencement of exploration drilling and/or monitoring activities as follows:

- At least 28 days prior to the commencement of an exploration drilling programme;
- Centennial Airly will provide copies of any due diligence assessments to DPE, DRG and NPWS (where applicable);
- Airly will obtain written agreement of access arrangements from NPWS prior to commencing activities within the Mugii Murum-ban SCA;
- Centennial Airly will provide a completed copy of *ESF04: Application to Conduct Exploration Activities* to DRG;
- Prior to commencing activities within the Mugii Murum-ban SCA, Centennial Airly will seek approval to undertake operations within an 'exempted area' from the Minister for Industry, Resources and Energy;
- Centennial Airly will provide notification to DRG and NPWS (where applicable) at least seven days prior to the proposed commencement of any exploration drilling and/or monitoring activities;
- Centennial Airly will undertake an assessment of the risk of blowouts prior to the commencement of any drilling. Details of this assessment will be provided to the DRG at least seven days prior to the proposed commencement of any exploration drilling and/or monitoring activities;
- If Centennial Airly propose to leave an exploration drill hole in an open condition for future monitoring purposes they will notify the DRG; and
- Centennial Airly will consult with DPI Water regarding licences for groundwater monitoring bores issued under Section 115 of the *Water Act 1912*, as required.

2.1.2 Community Consultation

A significant amount of consultation was undertaken during the preparation of the EIS (Golder Associates, 2014). This consultation was completed in accordance with the Airly Mine Stakeholder Engagement Plan. Further, in accordance with the requirements of SSD-5581, Airly operates a Community Consultative Committee (CCC) for the development in accordance with the *Guidelines for Establishing and Operating Community Consultative Committees for Mining Projects* (Department of Planning, 2007).

Airly will undertake specific consultation for exploration drilling and/or monitoring purposes in accordance with the *Guideline for Community Consultation Requirements for Exploration* (DRG, 2012b).

The majority of exploration and/or monitoring activities will be undertaken within the Mugii Murum-ban SCA (which is owned and managed by the NPWS). All drill site selection within the SCA and the preferred access routes will be undertaken in consultation with NPWS and subject to their written agreement as the landowner.

In the event that exploration and/or monitoring activities were to be undertaken on private land, an Access Agreement will be prepared with the landowners. The Access Agreement will include details regarding consultation and compensation.

An annual report outlining community consultation undertaken in accordance with the *Guideline for Community Consultation Requirements for Exploration* (DRG, 2012b) will be submitted annually to DRG in accordance the requirements of AUTH 232. This report will include evidence that consultation was undertaken in accordance with the guideline.

2.1.3 Cultural Heritage Consultation

Centennial Airly works closely with local Aboriginal people through professional engagement and consultation on cultural heritage management. Consultation between Centennial and the Aboriginal community is undertaken in accordance with the approved *Aboriginal Cultural Heritage Management Plan for Centennial's Western Holdings* (ACHMP) (RPS 2016).

The Registered Aboriginal Parties for the Airly Mine are:

- Bathurst Local Aboriginal Land Council;
- Gundungurra Aboriginal Heritage Association Inc.;
- Gundungurra Tribal Council Aboriginal Corporation;
- Mooka Traditional Owners;
- North-East Wiradjuri Company Ltd;
- Warrabinga Native Title Claimants Aboriginal Corporation;
- Wiradjuri Council of Elders;
- Wiray-dyuraa Ngambaay-dyil;
- Wiray-dyuraa Maying-gu;
- Warrabinga/Wiradjuri people; and
- Mingaan Aborigainal Corporation.

The ACHMP was developed in consultation with the Aboriginal Registered Stakeholders and includes pre-exploration planning and mitigation strategies to avoid harm to aboriginal sites (refer **Section 2.4.6**).

The ACHMP also provides the framework for ongoing consultation and engagement with the Aboriginal community, which will be continued by Centennial Airly throughout the life of the Mine.

2.2 Existing Environment

The Project Application Area covers 3,982 hectares (ha) of land within the Lithgow Local Government Area (LGA).

Approximately 3,090 ha or 78% of the Project Application Area is located within the Mugii Murum-ban SCA. The Mugii Murum-ban SCA covers an area of 3,650 ha. It has significant natural and cultural heritage values as well as significant mineral resources. As an SCA, Mugii Murum-ban is reserved to protect environmental and heritage values, whilst permitting mining and exploration activities.

2.2.1 Land Ownership

Land ownership within and surrounding the Project Application Area is shown on **Figure 3**. The Project Application Area comprises Crown Land, land owned by Centennial Coal, privately owned freehold and land owned and managed by NPWS.

Most of the land within the Project Application Area is owned by NPWS with the majority of the remainder owned by Centennial Airly. There are two freehold private properties within the Project Application Area.

Consultation undertaken with these landholders/stakeholders has been outlined in **Section 2.1**.

2.2.2 Ecology

RPS undertook a detailed assessment of ecological communities and threatened species as part of the EIS (Golder Associates, 2014). The findings are detailed in the *Airly Mine Extension Project Flora and Fauna Assessment* (RPS 2014a).

As shown on **Figure 4**, two Endangered Ecological Communities (EECs) listed under the *Threatened Species Conservation Act 1995* (TSC Act) were recorded within the Airly Project Application Area. These were:

- Genowlan Point *Allocasuarina nana* Heathland (TSC Act); and
- White Box – Yellow Box – Blakely's Red Gum Woodland (TSC Act) and White-Box – Yellow Box – Blakely's Red Gum Grassy Woodland and Derived Native Grassland (EPBC Act).

As shown on **Figure 4**, the following threatened plant species have also been identified within the Project Application Area:

- *Eucalyptus cannonii* (Capertee Stringybark);
- *Prostanthera stricta* (Mount Vincent Mint Bush); and
- *Pultenaea* sp. Genowlan (Genowlan Point Pultenaea).

2.2.3 Aboriginal and Historic Heritage

Aboriginal Cultural Heritage

A *Cultural Heritage Impact Assessment* was prepared by RPS (2014b) to support the EIS (Golder Associates, 2014). This identified 25 Aboriginal heritage sites within the Project Application Area. These included:

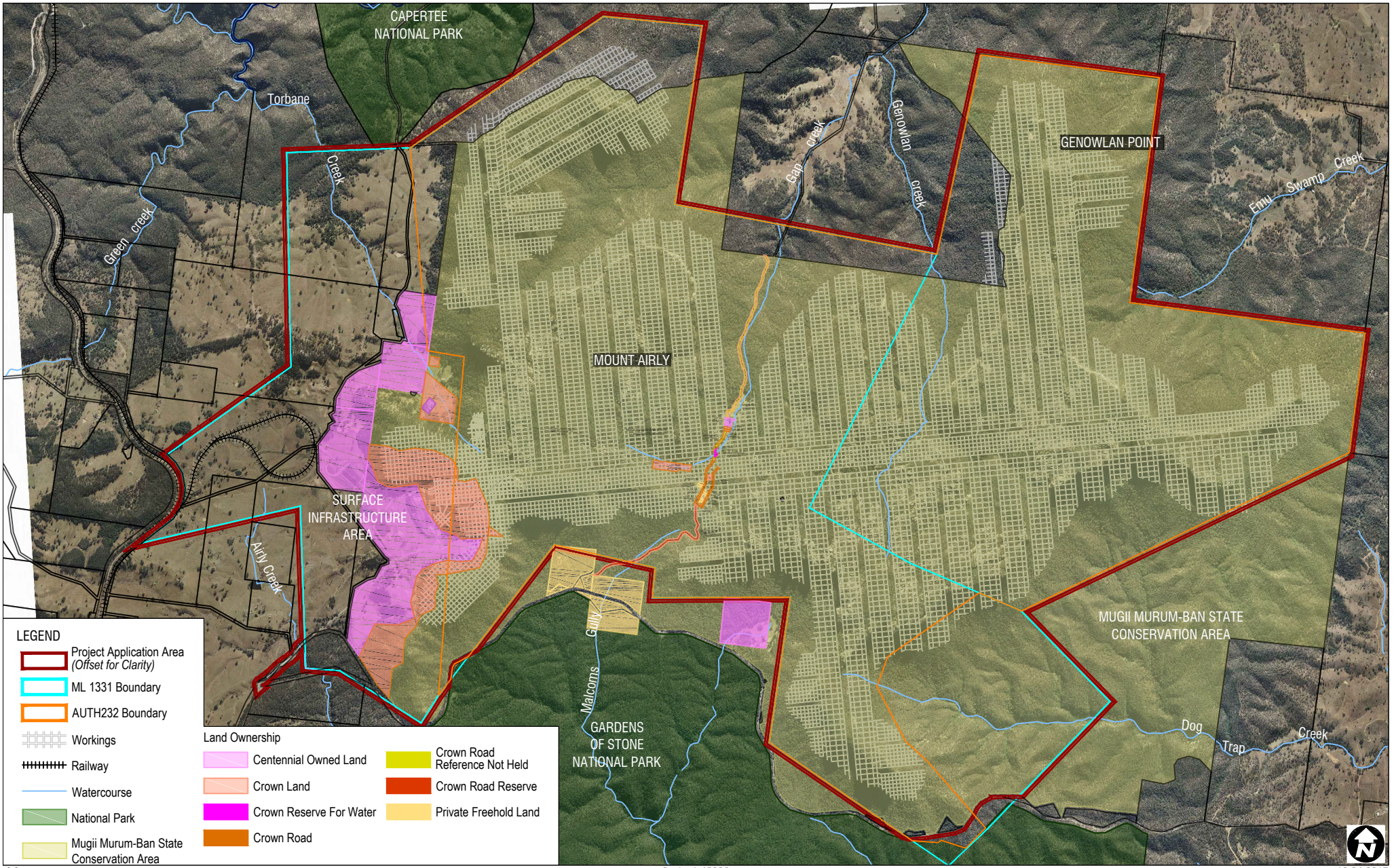
- Isolated finds;
- Artefact scatter;
- Scarred tree;
- Shelter with deposit;
- Shelter with artefact; and
- An art site.

The locations of identified Aboriginal heritage sites within the Project Application Area are shown on **Figure 5**.

Historic Heritage

As identified in the *Cultural Heritage Impact Assessment* RPS (2014b), there are a number of ruins within the Project Application Area associated with historic oil shale mining and processing sites. Ruins include the Airly Village and Torbane processing site which are collectively known as the Airly shale mining complex.

The locations of identified historic heritage sites within the Project Application Area are shown on **Figure 5**.



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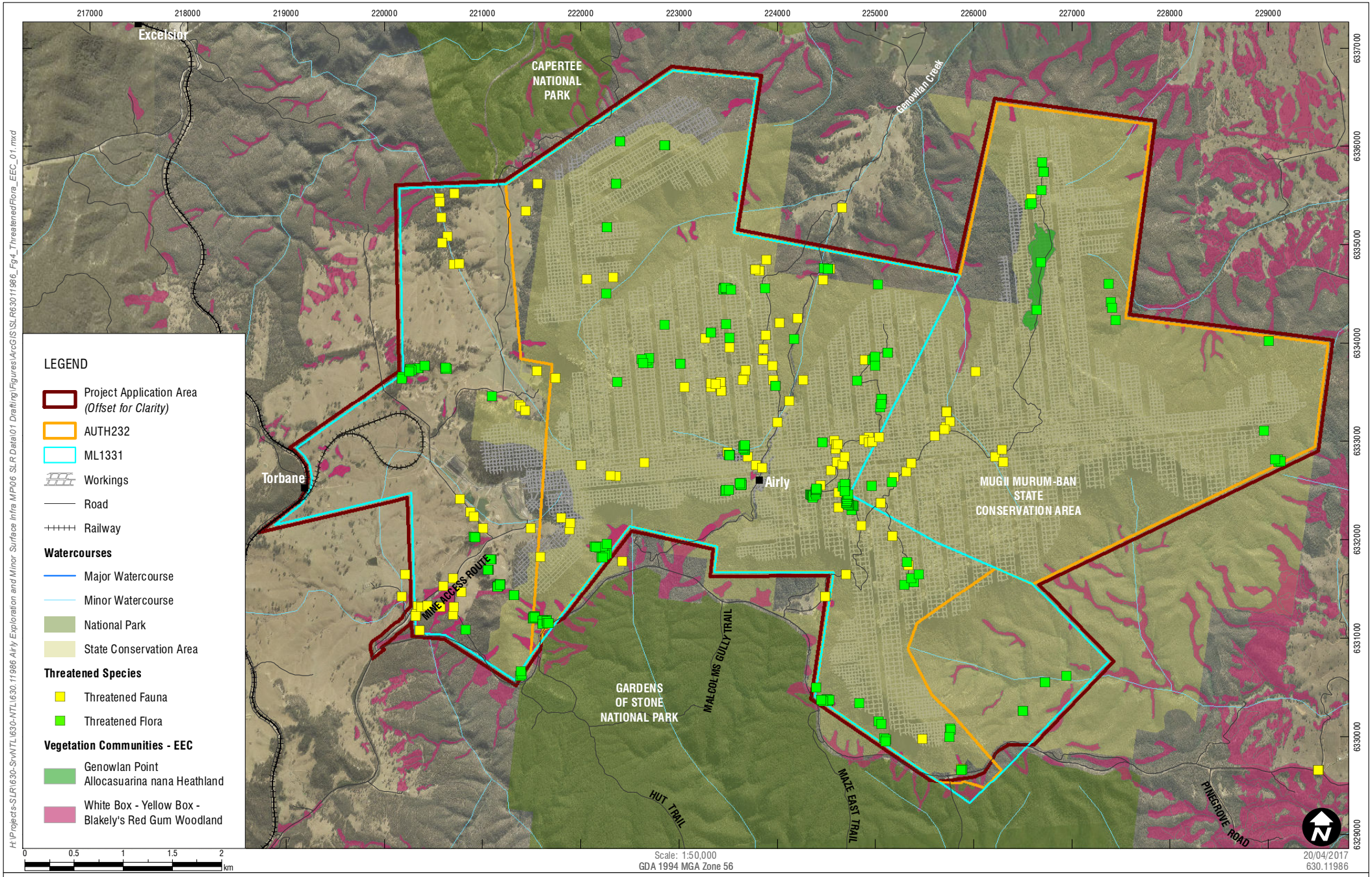
Land Ownership

FIGURE 3



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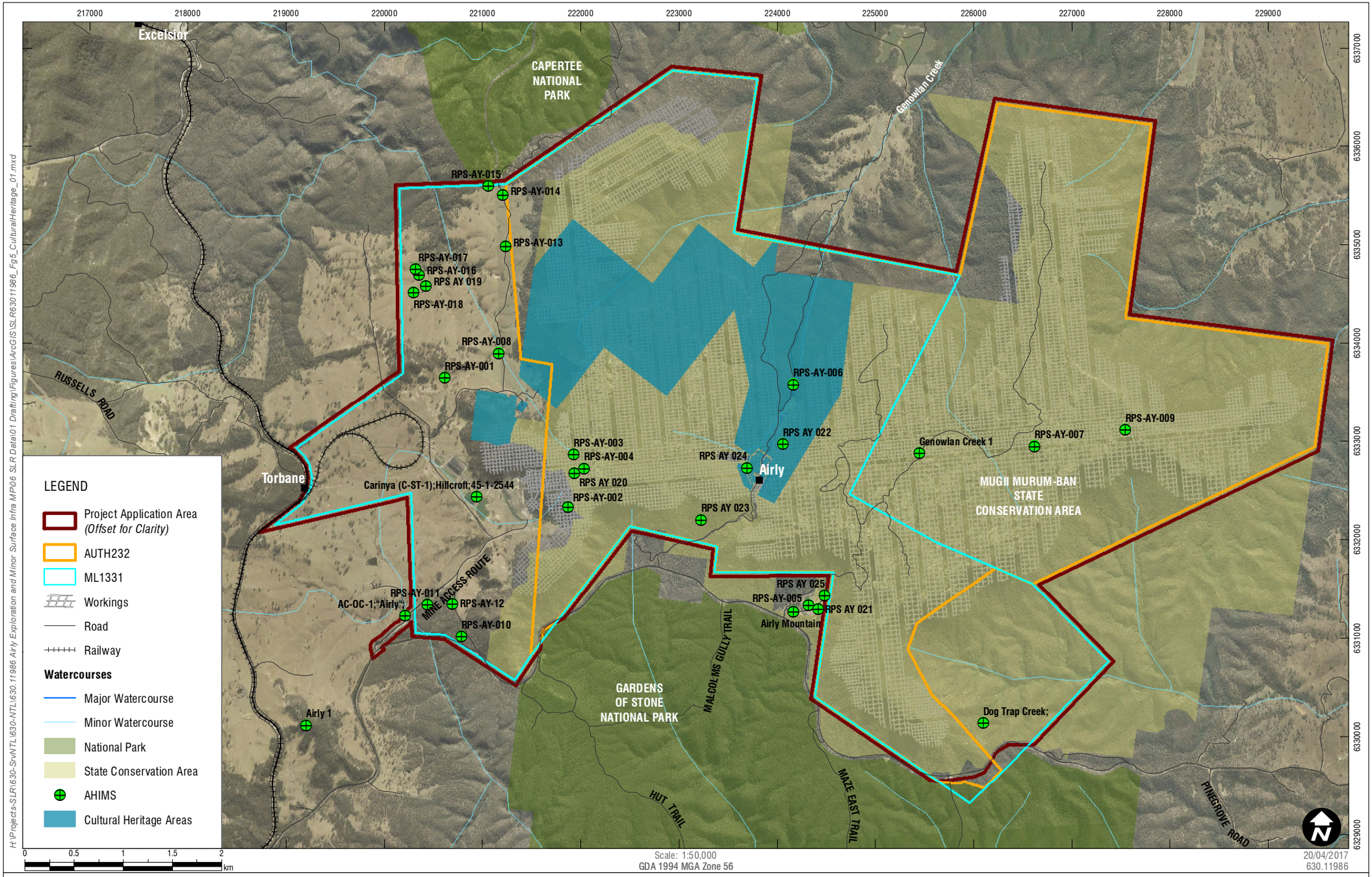
Threatened Flora and Endangered Ecological Communities

FIGURE 4



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Cultural Heritage

FIGURE 5

2.3 Methodology

As outlined in **Section 1.2**, all exploration and/or monitoring activities are undertaken within AUTH 232 in accordance with the requirements of the *Mining Act 1992* and this Exploration and Minor Surface Infrastructure Management Plan.

2.3.1 Exploration

Due-diligence field inspections and targeted surveys of the proposed drill sites and associated access tracks will be undertaken by appropriately qualified ecologist and heritage specialists prior to commencement of works. This is to ensure the potential for localised impacts and risks are minimised and, where necessary, appropriately managed. Noise assessments will be undertaken if proposed drill sites are in proximity to sensitive receptors. The combination of environmental sensitivity risk mapping and targeted due-diligence surveys of potential drill sites will provide greater flexibility in selecting the most suitable final drill site locations with minimal impact on the local environment.

Copies of any due diligence assessments will be provided to DPE, DRG and NPWS (where applicable).

At least seven days prior to the proposed commencement of any exploration drilling and/or monitoring activities, Airly will notify DRG and NPWS (where applicable). Prior to the commencement of exploration drilling and/or monitoring activities Centennial Airly will provide a completed copy of *ESF04: Application to Conduct Exploration Activities* to DRG (where applicable).

Before commencing any exploration and/or monitoring drilling, Airly will carry out an assessment of the risk of blowouts. Details of the assessment will be notified to the DRG at least seven days prior to the proposed commencement of drilling. If this assessment indicates that there is potential for a blowout to occur, blowout prevention equipment will be installed, in accordance with the *Schedule of Onshore Petroleum Exploration and Production Safety Requirements* (DMR 1992).

Following vegetation clearing at the drill site, appropriate erosion and sediment controls will be installed and maintained around disturbed areas in accordance with the Blue Book (Landcom, 2004). Felled trees and top soil are stockpiled for use in rehabilitation. The planning, design, construction and maintenance of all access tracks will be generally in accordance with *Managing Urban Stormwater: Soils and Construction, Volume 2C, Unsealed Roads* (DECC 2008b).

In accordance with the requirements of AUTH 232, Airly will use above-ground sumps. Above ground sumps are used to minimise the disturbance footprint resulting from the prospecting operations. Water required for drilling is sourced from the Airly water management dams or other water storages permitted by the land holder. Water is transported to the drill sites by either helicopter, pumps and poly lines or water trucks.

During drilling, fluid is continuously pumped to the drill head to facilitate the removal of cuttings, stabilise the borehole and cool the cutting head. The drilling fluid is generally sent into a reclaimer which removes the drill cuttings and maintains correct viscosity of the fluid. All drilling fluid recovered that cannot be recycled will be vacuum pumped and removed from site following OEH's *Waste Classification Guidelines* (DECCW, 2009) and the use of a licensed waste transporter to a receiving facility or other destination allowable under EPL 12374.

All boreholes will be surveyed and permanently marked in accordance with DRG guidelines so their location can be re-identified. Spoils or cuttings generated during drilling will generally be collected, and disposed of to a licenced landfill. Sealing of the drill holes will be undertaken in accordance with the *Exploration Code of Practice: Rehabilitation* (DRG, 2017a).

A flowchart summarising the process undertaken prior to, during and post exploration drilling and/or monitoring at Airly has been provided as **Figure 6**.

2.3.2 Subsidence Monitoring

Due-diligence field inspections and targeted surveys of the proposed monitoring sites and associated access tracks will be undertaken by appropriately qualified ecologist and heritage specialists prior to commencement of works. This is to ensure the potential for localised impacts and risks are minimised and, where necessary, appropriately managed. The combination of environmental sensitivity risk mapping and targeted due-diligence surveys of potential monitoring sites will provide greater flexibility in selecting the most suitable final site locations with minimal impact on the local environment.

Copies of any due diligence assessments will be provided to DPE, DRG and NPWS (where applicable).

Following vegetation clearing at the monitoring site, appropriate erosion and sediment controls will be installed and maintained around disturbed areas in accordance with the Blue Book (Landcom, 2004). Felled trees and top soil are stockpiled for use in rehabilitation. The planning, design, construction and maintenance of all access tracks will be generally in accordance with Managing Urban Stormwater: Soils and Construction, Volume 2C, Unsealed Roads (DECC 2008b).

Upon completion of monitoring activities, disturbed areas will be rehabilitated in accordance with the *Exploration Code of Practice: Rehabilitation* (Division of Resources and Energy (DRG), 2017a).

Exploration Process

Pre Site Occupation

Identify exploration and/or groundwater monitoring site

Is site suitable for exploration and/or groundwater monitoring?

YES → Apply for groundwater monitoring bore licence under Section 115 of Water Act 1912 from DPI Water

Due diligence field inspections of exploration and/or groundwater monitoring sites and access tracks
- Ecology
- Heritage
- Noise (where exploration sites are in proximity to sensitive receptors)

→ Provide Due Diligence Inspection Reports to:
- DP&E
- DRE
- NPWS (where applicable)

Prepare Groundwater Monitoring and Modelling Plan prior to the construction and use of boreholes

Initiate *ESF04: Application to Conduct Exploration Activities* (DRE, 2016) to the DRE (where applicable)

Consult with NPWS and obtain written agreement of access arrangements

Seek Exempted Area approval from Minister for Industry, Resources and Energy for exploration within State Conservation Area (where applicable)

Submit *ESF04: Application to Conduct Exploration Activities* (DRE, 2016) to the DRE

Notify DP&E Regional Hydrogeologist 28 days prior to drilling

Notify DRE and NPWS (where required) 7 days prior to drilling

Assessment of risk of blowouts
- Provide to DRE 7 days prior to commencement of drilling

RISK → Where required, advise drilling contractor that blowout prevention equipment is required

Site Preparation and Drilling

Implement appropriate public safety controls i.e. temporary fencing or security guards to prevent access

Site preparation
- Vegetation clearing and stockpiling
- Install appropriate erosion and sediment controls
- Stockpile topsoil material for rehabilitation
- Install above ground or in-ground sumps (as applicable)

Undertake drilling activities

Post-drilling

Survey horizontal and vertical position

Confirm the borehole is suitable for monitoring purposes?

NO → Seal exploration borehole in accordance with the *Exploration Code of Practice: Rehabilitation* (DRE, 2015)

Survey
- Confirm Horizontal and vertical position
- Install permanent steel identification plate or reference mark for re-identification purposes

Rehabilitation of disturbed areas (except where landholder instructs otherwise)
- Re-profile disturbed area to near original landform
- Re-spread stockpiled topsoil
- Re-spread stockpiled cleared vegetation
- Spread seed to promote revegetation (where required)

Obtain landowner sign-off on rehabilitation (form ESB-F06 Landowner/Occupier Rehabilitation Statement) or successor document

Prepare revised Rehabilitation Cost Estimate and apply for return of security deposit in accordance with *ESF2: Rehabilitation Completion and/or Review of Rehabilitation Cost Estimate* (DRE, 2017)

Provide required exploration data to the DRE as part of annual reporting

YES → Complete Form A Particulars of Completed Work and submit to DPI Water (for groundwater monitoring)

Seek Ministers approval that drill hole will be left in an open state

If groundwater monitoring bore, obtain groundwater monitoring bore licence under Section 115 of Water Act 1912

Install monitoring equipment and undertake monitoring → Record construction details in acQuire

Initial rehabilitation of disturbed areas (except where landholder instructs otherwise)
- Re-profile disturbed area to near original landform
- Re-spread stockpiled topsoil
- Re-spread stockpiled cleared vegetation
- Spread seed to promote revegetation (where required)

Decommission equipment and cancel monitoring bore licence (if necessary) when monitoring is no longer required

2.4 Environmental Management Activities and Controls

2.4.1 Erosion and Sediment Control

Management of erosion and sedimentation at Airly is achieved by implementing the following principles:

- Separating undisturbed, 'clean water' runoff from disturbed, 'dirty water' runoff to minimise and isolate the amount of dirty water to be treated and either reused or discharged off site;
- Directing sediment-laden runoff into designated sediment control retention ponds;
- Diverting 'clean water' runoff unaffected by the operations offsite; and
- Maintaining sediment control structures to ensure that the designed capacities are maintained for optimum settling of sediments.

Measures that will be implemented to manage erosion and sedimentation resulting from construction, approved exploration and/or monitoring activities and associated access roads include:

- Undertaking works in accordance with:
    - *Managing Urban Stormwater: Soils and Construction, Volume 1 (The Blue Book)* (Landcom, 2004);
    - *Managing Urban Stormwater: Soils and Construction Volume 2A, Installation of Services* (DECC, 2008a);
    - *Managing Urban Stormwater: Soils and Construction Volume 2C, Unsealed Roads* (DECC, 2008b); and
    - *Managing Urban Stormwater: Soils and Construction Volume 2E, Mines and Quarries* (DECC, 2008c).
- Prior to commencement of construction works, waterways and drainage lines in close proximity to the site will be identified;
- Stormwater will be diverted away from disturbed areas by directing clean water around the site. This may be achieved by installing a silt bag bund or a compacted earthen bund upslope of the work site;
- Sediment build up will be regularly cleaned from behind controls to ensure they work efficiently;
- In-ground sumps to be pumped down ahead of rain events to prevent overflow;
- All erosion and sediment controls will be checked regularly and before and after rainfall events, and maintained as required to ensure they are operating effectively; and
- Unless designed and constructed for wet weather use, Airly will restrict the use of unsealed roads and access tracks during wet weather to prevent damage to that track or road.

2.4.2 Topsoil Management

Stripping and stockpiling of topsoils followed by re-spreading for revegetation is regarded as best practice rehabilitation in the mining industry. The use of topsoil in this regard has three main advantages: as a source of seeds (seed bank), soil microbial organisms, and as a physical covering for dispersive subsoils. Biologically, the value of stockpiled topsoil is largely determined by the length of time that soil will be stockpiled and the physical shape of the stockpile.

Where soil stripping and transportation is required, the following management techniques will be adopted to prevent excessive soil deterioration:

- Where possible, topsoil will be maintained in a slightly moist condition during stripping, and material will not be stripped in either an excessively dry or wet condition;
- Stripping will be timed to take place in unison with any vegetation clearing activity. If planning to mix groundcover/grass with the soil (i.e. not removing groundcover prior to soil stripping), a weed assessment will be undertaken prior to stripping;

- Where possible, grading or pushing soil into windrows for later collection will be undertaken as a preferential less aggressive soil handling system;
- The surface of soil stockpiles will be left coarsely structured (as much as possible) in order to promote infiltration and minimise erosion until vegetation is established, and to prevent anaerobic zones forming;
- Topsoil stockpiles will be no higher than 3 m;
- If long-term stockpiling is planned (i.e. greater than three months), the stockpiles will be seeded and fertilised as soon as possible. An annual cover crop species that produces sterile florets or seeds will be sown. A rapid growing and healthy annual pasture sward will provide sufficient competition to minimise the emergence of undesirable weed species. The annual pasture species will not persist in the rehabilitation areas, however will provide sufficient competition for emerging weed species and enhance the desirable micro-organism activity in the soil;
- Prior to re-spreading stockpiled topsoil, an assessment of weed infestation on stockpiles will be undertaken to determine if individual stockpiles require herbicide application and / or 'scalping' of weed species prior to topsoil spreading; and
- An inventory of available soil will be maintained to keep track of topsoil materials available for planned rehabilitation activities.

Soil will be re-spread directly onto stripped areas where practical. Topsoil will be spread, treated with fertiliser and seeded in one consecutive operation, where possible, to reduce the potential for topsoil loss to wind and water erosion. Soil will be re-spread to the approximate depth from which it was stripped.

All topsoiled areas will be lightly contour ripped (after topsoil spreading) and, where possible, will be ripped when the soil is moist and immediately prior to sowing. If required, the re-spread topsoil surface will be scarified prior to, or during seeding, to reduce run-off and increase infiltration.

2.4.3 Water Management

Centennial Airly will undertake due diligence assessments to consider surface water and groundwater impacts. The general approach of the due diligence assessments will be to review baseline data and, if this review deems necessary, conduct site investigations to ensure that significant impacts are avoided.

In accordance with Condition 12 of AUTH 232, prior to the construction and use of boreholes, Airly will prepare a *Ground Water Monitoring and Modelling Plan* in consultation with the DPI Water. This Plan will:

- Describe methods for identifying aquifers, their depths, behaviour, containing layers and connectivity with surrounding aquifers or surface water systems;
- Describe methods for collection of data relevant to the type, quantity and quality of water contained within aquifer systems likely to be encountered during prospecting operations;
- Provide for the future development of a conceptual model of regional groundwater behaviour;
- Provide for the future development of a calibrated computer model of regional groundwater behaviour, to enable the impacts of any proposed mining operations to be assessed;
- Describe how records of all data collected will be maintained;
- Describe the staging process for implementation of the Plan; and
- Be prepared in accordance with any additional requirements prescribed by the Secretary of the DRG.

Measures that will be implemented to manage surface water quality during approved exploration and/or monitoring activities include:

- Installing the exploration and groundwater bores using blind boring and mud rotary drilling methods. On completion boreholes will be sealed appropriately to prevent cross contamination of aquifers;
- Machinery, plant, equipment, and chemical storage containers will be checked as part of the drilling contractor's regular mechanical and site inspections for leaks and defects. Equipment will not be used if there are signs of leaks and defects;
- All personnel will be trained in incident response and spill management;
- Safety Data Sheets (SDS) will be located on site and will be up to date (less than five years old);
- A Hazardous Substances Chemical Register will be available onsite where chemicals are stored or used, and will be kept up to date at all times;
- Only chemicals (including drilling additives) approved for use by the mine will be utilised on drilling programs;
- Personnel shall be advised of the location and contents of the emergency procedures;
- Chemicals including drilling additives, fuels and oils will not be stored in or on structures built over water, on bare ground or unsealed surfaces, in areas with no secondary containment (i.e. no bunding), or immediately adjacent to stormwater inlets, drains, and creeks;
- Chemicals, fuels and oils will be will be securely stored inside a bunded area or impermeable plastic container, on a flat and level surface and covered from rain;
- Areas for handling or storage of flammable and combustible liquids will be:
    - Maintained in a clean condition;
    - Free from potential ignition sources or heating;
    - Appropriately signed;
    - Have appropriate fire protection; and
    - Not stored with products that are incompatible e.g. fuel and pool chlorine.
- Bunded areas or containers will be sized to contain 110% of the largest chemical container stored within;
- When decanting from a smaller container, a temporary bund or collection tray will be used to control any accidental spills;
- Incident reports will be completed for any adverse impacts to water quality (e.g. chemical spill);
- Emergency procedures will be displayed in a prominent position within the site working area; and
- An equipped, labelled, and appropriately sized spill kit will be readily available onsite at all times.

2.4.4 Vegetation Clearing

In accordance with the requirements of Condition 17 of AUTH 232, vegetation clearing and vegetation disturbance will be limited to the minimum extent necessary to facilitate the conduct of drilling operations.

Due-diligence field inspections and targeted surveys of proposed drill sites and associated access tracks will be undertaken by appropriately qualified ecologists prior to commencement of works to ensure the potential for localised impacts and risks are minimised and, where necessary, appropriately managed. Airly will consult with the DPE and use all reasonable and feasible efforts to avoid impacting threatened species, populations or their habitats and EECs (including through the relocation of access tracks and exploration/ monitoring sites). The combination of environmental

sensitivity risk mapping and targeted due-diligence surveys of potential drill sites will provide greater flexibility in selecting the most suitable final drill site locations with minimal impact on the local environment.

Additionally, a range of management measures will be implemented to minimise impacts from vegetation clearing, including:

- Impacts on vegetation will be minimised as much as possible, and constrained to the approved disturbance footprint;
- Prior to clearing the approved disturbance footprint will be clearly demarcated;
- For those areas where hard surfaces are required, undertake stockpiling of soil to enable re-establishment of visible habitat following infrastructure decommissioning;
- During clearing, and where it would not interfere with operations, the removal of vegetation will be limited to above ground parts as much as possible. This will enable any vegetation that is able to re-sprout once works are completed to do so;
- Where possible, clearing activities will avoid hollow-bearing trees. Where this cannot be avoided clearing will be timed where possible to avoid removal of hollow-bearing trees during breeding season of threatened species;
- Employment of best practice methods for felling of hollow-bearing trees;
- Placement of hollow logs and felled hollow-bearing trees within adjacent uncleared vegetation to provide additional habitat resources for terrestrial fauna; and
- Any native animals found within the drilling footprint will be allowed to leave the area without undue harassment or duress. If relocation is required, appropriate expert assistance will be employed (e.g. Wildlife Information Rescue and Education Service, NPWS, specialist consultants, etc.).

2.4.5 Weed Management

Management of weeds associated with exploration include:

- Weed monitoring will be undertaken to identify potential weed infestations. If identified these will be appropriately managed to ensure surrounding communities are protected from invasive species, until the rehabilitation has been signed off by the landowner;
- Any listed noxious weeds infestations identified will be treated. This will include any that are deemed to be deleterious to the revegetation effort, or are likely to spread during the course of the rehabilitation work. Herbicides will be used with due consideration to environmental knock-on effects;
- Any weeds that germinate from the seed bank in the topsoil stockpile will also be treated to prevent outbreaks that pose an ongoing liability;
- Any noxious weeds removed from site will be transported in sealed bags and disposed of at an appropriate waste facility; and
- Any vehicles driven off-road through weed infested areas will be cleaned of weed and weed seeds using wash down facilities available at Airly Mine prior to moving into new areas.

2.4.6 Aboriginal and Non-Aboriginal Heritage

All exploration activities will continue to be undertaken in accordance with the requirements of the *Mining Act 1992* and this Plan. Management of Aboriginal heritage at Airly is undertaken in accordance with the ACHMP.

Prior to the commencement of any exploration and/or groundwater drilling activities, due-diligence surveys will be undertaken in accordance with the ACHMP. Due diligence surveys will be undertaken by appropriately qualified heritage specialists to ensure the potential for localised impacts and risks are minimised and, where necessary, appropriately managed. In the event that Aboriginal heritage

sites are identified, access tracks and exploration / monitoring sites will be relocated to avoid impacts. The combination of environmental sensitivity risk mapping and targeted due-diligence surveys of potential drill sites will provide greater flexibility in selecting the most suitable final drill site locations with minimal impact on the local environment.

If, during the course of exploration and/or monitoring drilling activities, cultural heritage sites not previously identified are uncovered, onsite works must stop immediately in the vicinity of the site and the area must be cordoned off as appropriate with high-visibility flagging tape. The onsite personnel must inform the nominated Centennial environmental manager/coordinator responsible about the whereabouts of the site, the condition of the site (i.e. any harm caused to the site as a result of exploration and/or monitoring drilling activities) in addition to any other relevant information. The Centennial environmental manager/coordinator must then contact the Heritage Branch of OEH about the incident and/or newly identified site in addition to any required monitoring or management strategies to be instigated.

If any skeletal remains are identified all work must halt in the immediate area to prevent any further harm to the remains. Centennial must contact the NSW Police Coroner immediately. No action is to be undertaken until police provide written notification to Centennial. If the skeletal remains are identified as Aboriginal, Centennial must contact OEH's Enviroline (131 555) and representatives of the local Aboriginal community. No works are to continue until OEH provides written notification to Centennial about the action plan for the management of the skeletal remains and formulated management plan, if required.

As outlined in **Section 2.2.3**, a number of historic heritage sites have been identified within the Project Application Area. Exploration/monitoring sites and access tracks will be located to avoid impacts on these sites.

If, during the course of development works, significant European cultural heritage material is uncovered, work will cease in that area immediately. The OEH Enviroline (131 555) will be contacted and works only recommence when an appropriate and approved management strategy has been instigated.

2.4.7 Noise

Schedule 4, Condition 1 of SSD-5581 states that construction, and exploration and monitoring borehole drilling must be restricted to:

- 7:00 am and 6:00 pm, Monday to Friday; and
- 8:00 am and 1:00 pm Saturdays.

In accordance with Schedule 4, Condition 2 of Development Consent SSD-5581, Airly will ensure the operational noise generated by exploration drilling and/or monitoring activities does not exceed the criteria in **Table 5**.

Table 5 – Operational Noise Criteria

Receiver	Noise Limit (dBA)			
	Day $L_{Aeq(15minute)}$	Evening $L_{Aeq(15minute)}$	Night $L_{Aeq(15minute)}$	Night $L_{A1(1minute)}$
Any residence on privately-owned land	35	35	35	52
	$L_{Aeq(period)}$			
R17 (camp ground)	50 (when in use)			N/A
R18 (Nissen Hut)	50 (when in use)			N/A

The noise limits outlined in **Table 4** do not apply if Centennial Airly has an agreement with the relevant landholder to exceed the criteria and the DPE has been advised in writing of the terms of this agreement.

It is noted that Condition 15 of AUTH 232 requires that exploration drilling and/or monitoring activities must be undertaken in accordance with the requirements of the *NSW Interim Construction Noise Guidelines* (DECC 2009) as follows:

- Noise levels during standard working hours (7:00 am and 6:00 pm, Monday to Friday) will not exceed Rating Background Level[1] (RBL) + 10 dB at any sensitive receiver; and
- Noise levels outside of standard working hours (on Saturday between 8:00 am and 1:00 pm) will not exceed RBL + 5 dB.

In this regard, the noise limits contained in **Table 4** provide a more stringent noise requirement and as such will be applicable to all exploration and/or monitoring activities. Noise assessments will be undertaken when proposed drill sites are in proximity to sensitive receivers.

SLR prepared the *Airly Mine Extension Project Noise Impact Assessment – Exploration Activities* (SLR 2015) in response to a submission received from the Environment Protection Authority (EPA) during the exhibition of the EIS (Golder Associates, 2014). The noise assessment calculated compliance distances for exploration activities under worst case meteorological conditions. Assuming a drill rig with a sound power level (SWL) of no greater than 104 dBA, the conditions outlined in **Table 4** are predicted to be met at distances greater than approximately 600 m.

Where drilling is to be undertaken in close proximity (i.e. within 600 m) to sensitive receptors, additional noise mitigation measures will be implemented as necessary and may include the following:

- If needed temporary noise barriers will be established and maintained;
- Drilling will be undertaken adopting rotary methods with water circulation (rather than compressed air);
- Where ever possible attenuated drill rigs will be used;
- Avoiding the unnecessary use of radios and stereos;
- Stakeholders will be notified of the work, in accordance with Centennial Coal procedures, prior to exploration drilling and/or monitoring activities;
- All contractors will be required to ensure that only vehicles and machinery in good working condition are used;
- Machinery and vehicles will be required to be maintained during works;
- Onsite noise mitigation measures and plant operating procedures will be refined where practical (e.g. orient machinery so that noise emitting sources are facing away from receptors);

[1] Rating Background Level – the overall single figure background noise level representing each assessment period (day, evening, night).

- Clear signage will be provided including relevant contact numbers for community enquiries; and
- Community complaints relating to noise will be addressed in accordance with the Centennial Airly complaints process.

2.4.8 Visual Amenity

The exploration drilling and/or monitoring activities are considered unlikely to have a significant restrictive impact on existing land uses within the area or on the surrounding community. A large portion of the Project Application Area is dominated by dense bushland, reducing the visual impact of the proposed activities on the community. Notwithstanding, the following mitigation measures will be implemented:

- Natural vegetation screening will be maintained where possible during drilling;
- Drilling will be undertaken during daylight hours only eliminating the need for artificial lighting at the site; and
- Exploration sites will be progressively decommissioned and rehabilitated commensurate with adjacent remnant vegetation in consultation with the landholder.

2.4.9 Air Quality

Air quality impacts associated with the exploration drilling and/or monitoring activities will be managed in accordance with the *Airly Air Quality and Greenhouse Gas Management Plan*, which includes the use of a number of emission controls to minimise the impact of the operations on nearby sensitive receivers.

The main dust impact from approved exploration and/or monitoring activities will be from traffic on unsealed roads. The following measures will be implemented by Centennial Airly to mitigate dust impacts from approved exploration activities and/or monitoring:

- Restricting the number of vehicles and vehicle movements to the sites to a minimum;
- Centennial Airly vehicles will adhere to a 40 km/hr speed limit on dirt tracks;
- Regular maintenance of plant and equipment to minimise fuel consumption and exhaust emissions;
- Plant will not be left running when not in use; and
- Minimise the generation of dust by stabilising ground progressively, implementing dust suppression as required and consider not working during windy conditions.

2.4.10 Public Safety

Public safety is a priority management aspect at Airly. The mine has an existing *Construction Environmental Safety Management Plan* that is used during exploration activities in the SCA. This plan includes the procedures to ensure the safety of members of the public, stock and wildlife in all areas where exploration work is conducted.

Public safety mitigation measures that will be undertaken for the approved exploration and/or monitoring activities are as follows:

- Signage will be installed to warn the public of the risks associated with unauthorised access and heavy vehicle traffic;
- Exploration bore sites will be manned during the hours of 7:00 am to 6:00 pm. To prevent public access to the sites during 6:00 pm to 7:00 am, Airly will utilise temporary security fencing or security guards;
- Existing relevant plans will be checked and 'Dial Before You Dig' searches will be undertaken to avoid interception with utilities, including underground pipelines and power cables;

- Following the completion of drilling and associated activities, all exploration drill holes that are not required for future monitoring activities will be sealed in accordance with relevant DRG guidelines; and
- All boreholes which are maintained in an open or partially grouted condition will be cased to prevent collapse and will be fitted with a locked cap to prevent public access.

2.4.11 Bushfire Management

The majority of the land within the Project Application Area is heavily forested with native vegetation and has been identified as bushfire prone land. Exploration activities are generally located less than 12 m from vegetation and as such are considered to be in the Flame Zone of a bushfire (RFS, 2006). This is the highest possible rating of fire risk.

Given the above, there is a high risk of impact to personnel during extreme fire danger periods. There is the potential for contractors to be exposed to bushfire in isolated or rough terrain, with limited access provisions and potentially hindering a safe evacuation.

Airly Mine has a Fire Management Plan developed to comply with the requirements of *Planning for Bushfire Protection* (RFS, 2006). Fire risk management measures include:

- Prohibiting entry to the Mugii Murum-ban SCA during periods of extreme fire weather;
- Managing potential sources of ignition via a hot works management system;
- Maintaining firebreaks surrounding Centennial Airly operations;
- Providing firefighting equipment at Centennial Airly operations;
- Maintaining a water supply for firefighting purposes;
- Trained and competent personnel on-site who can conduct fire-fighting if required; and
- Regular dialogue with the local Rural Fire Service (RFS) and NPWS in relation to Bushfire Management Practices.

Specific risk management actions which will be implemented for exploration drilling and/or monitoring activities include:

- No drilling will be conducted on total fire ban days;
- Firefighting equipment will be kept on all active sites at all times;
- Airly has a hot work management system that needs to be followed to prevent any fires resulting from hot works outside of designated areas.
- Fire trails and access tracks are maintained to a suitable standard to allow water tanker access;
- Operational procedures and evacuation planning will be prepared prior to the commencement of site preparation works to identify site specific emergency access/egress; and
- Evacuation plans and emergency contacts are provided on site and will be included in the staff inductions, as will the significance of working in bushfire prone land.

Furthermore, any specific or additional bushfire risk management requirements of the landholder (i.e. NPWS) will be complied with during project planning and prior to site establishment.

2.4.12 Waste and Hazardous Materials

Measures that will be implemented to manage waste from approved exploration and/or monitoring activities include the following:

- The sites will be maintained in a clean and tidy condition at all times;
- There will be appropriate bins on site for general waste;
- General waste will be disposed of in the general waste bins at the Airly Mine;

- Suitably sized sumps with appropriate erosion and sediment controls will be used/constructed to capture all drilling fluid from borehole drilling activities. The drilling fluid will be reused and on completion of drilling activities will be pumped out by a licensed contractor for disposal at an appropriate facility or other destination allowable under EPL 12374;
- All chemicals including oils and drilling muds will be on self bunded storage pallets. Disposal will follow the appropriate guidelines for the disposal of such wastes; and
- Spill kits will be provided at the drill site and staff will receive spill clean-up training.

In accordance with Condition 29 of AUTH 232, Airly will maintain records of all waste generated as a result of exploration activities and the means of disposal of that waste.

Where possible, all quantities of waste will be quantified and recorded for benchmarking and continuous improvement purposes as well as reporting in accordance with the National Greenhouse and Energy Reporting Scheme (NGERS).

2.5 Rehabilitation

Following the completion of drilling and associated activities, all exploration drill holes will be sealed in accordance with relevant DRG guidelines at the time. Records will be kept to demonstrate the method used to seal each drill hole, volume and types of materials used and information on the drill hole such as depth, diameter and casing string(s) left in the hole. Where non-grouted casing cannot be removed, grouting methods will be undertaken in accordance with DRG guidelines. All records relating to the sealing of drill holes will be provided to the DRG together with a declaration confirming that the work was carried out according to the guidelines.

Exploration drill holes that are consistent with the requirements of the Centennial Coal groundwater plan/model will be used for groundwater monitoring. These exploration boreholes will be approved to remain open or be partially grouted to allow access to install groundwater monitoring equipment to subsequently satisfy the commitments as outlined within the EIS (Golder Associates, 2014) and the Response to Submissions (Centennial Airly, 2015).

Following grouting or the installation of piezometers, all boreholes will be surveyed in accordance with DRG requirements to determine their horizontal and vertical positions and a permanent steel identification plate or reference mark will be placed at the location of each borehole for re-identification purposes.

Rehabilitation of the drill site will commence as soon as practical after completion of drilling activities and follows on from demobilisation of equipment and removal of waste materials. Following re-profiling to near the original landform within the disturbed areas, the stockpiled topsoil will be re-spread onto areas requiring rehabilitation. The disturbed areas will be seeded using species consistent with the surrounding vegetation.

Exploration bore sites which have monitoring equipment installed will have surrounding surface disturbance rehabilitated, where practical. The monitoring equipment may be in use for the remaining Life of Mine (LOM). When the monitoring equipment is no longer required, the infrastructure will be cut off below ground level, grouted and sealed in accordance with DRG requirements. The remaining area will be rehabilitated.

Annual rehabilitation monitoring will be undertaken in accordance with the rehabilitation monitoring methodology outlined in **Section 8** of the Airly Mine *Mining Operations Plan/Rehabilitation Management Plan* (MOP) (Centennial 2018). The monitoring will to assess progress against the completion criteria in Section 6 of the MOP. In addition, inspections will be undertaken monthly during the first 12 months following sowing/planting to confirm landform establishment is progressing (as outlined in **Section 3.2.1**).

Following the completion of rehabilitation and prior to lease relinquishment by DRG, Airly will seek confirmation that the landowner is satisfied with the standard of rehabilitation activities. To achieve this, Airly will provide the landowner with a copy of the DRG (2017) form titled *Landowner Rehabilitation Statement (ESF2)*. Completed forms will be forwarded to DRG as part of an Exploration Rehabilitation and Relinquishment Report.

3 MONITORING AND RESPONSE

3.1 Environmental Monitoring

This Plan will be implemented in conjunction with the Airly Environmental Management Strategy (EMS). The EMS provides an overall structure for environmental management at Airly including the strategic context, statutory requirements and roles and responsibilities of key personnel.

Annual inspections of rehabilitated drill sites are to be conducted until the site has been rehabilitated satisfactorily.

3.2 Environmental Inspections

3.2.1 Regular Inspections and Site Meetings

The Exploration Technical Manager (or their delegate) will undertake weekly inspections of the active drill/monitoring or construction sites and will also attend weekly project meetings where specific environmental issues will be raised and/or discussed. If required, actions will then be assigned to the most appropriate responsible person.

As outlined in **Section 2.5**, rehabilitated drill/monitoring sites will be inspected on a monthly basis following sowing/planting to confirm the landform establishment is progressing.

3.2.2 Non-Conformance and Corrective and Preventative Action

Airly will document in a report any case of non-conformance with this Plan. The Exploration Technical Manager (or their delegate) will investigate any such non-conformance by a contractor and/or subcontractor with the relevant contractor / subcontractor on a case by case basis.

3.3 Contacts, Complaints and Incidents

The contacts for environmental complaints and incidents are presented in **Table 6**.

Table 6 – Contact Details

Position	Contact Details
Mine Manager	Dennis Wallace T: (02) 6359 2101 E: dennis.wallace@centennialcoal.com.au
Exploration Technical Manager	Thomas Dubos T: (02) 6352 7791 E: thomas.dubos@centennialcoal.com.au
Environment and Community Coordinator	Sam Price T: (02) 6359 2108 E: sam.price@centennialcoal.com.au

3.3.1 Complaints Management

The Airly Community Complaints and Enquiries line (02 6359 2100) is made available on the Centennial Coal website. All complaints will be maintained in a register and reported internally to Centennial Airly and the Technical Manager for appropriate action. Any complaints will be reported externally in the monthly community complaints register and within the Annual Review.

3.3.2 Incident Reporting

The Environment Protection Authority (EPA) will be notified of environmental incidents in accordance with the requirements of EPL 12374. This requires Airly to contact the EPA's Pollution Line on 131 555 of any incidents causing or threatening material harm to the environment. The Airly EMS and Pollution Incident Response Management Plan (PIRMP) will be consulted for any additional notification requirements such as internal incident reporting procedures and minor environmental impacts that are not threatening to cause material harm to the environment.

In accordance with the requirements of Schedule 6, Condition 9 of Development Consent SSD-5581, Airly will immediately notify the DPE and any other relevant agencies once an incident has been identified.

3.3.3 Contingency Planning

Potential environmental impacts resulting from exploration activities will be assessed in accordance with the requirements of this Plan, including due diligence surveys involving specialist consultants. Given the location of the sites and potential external influences such as bushfire, climatic and emergency events, it is possible that unpredicted events may occur.

The Exploration Technical Manager, and Environment and Community Coordinator will be contacted in the event of unpredicted environmental impacts being identified to provide guidance on an appropriate course of action, including assessing whether the Airly incident procedure should be implemented.

Unpredicted impacts will be dealt with on a case by case basis. After appropriate action has been implemented, the need for review of this Plan, based on the unpredicted impact, will be assessed by the Exploration Technical Manager.

4 ENVIRONMENTAL MANAGEMENT

4.1 Roles and Responsibilities

Each employee and contractor is responsible for adhering to the Centennial Coal Environmental Policy. Whilst the obligation of complying with the Environmental Policy lies with the entire workforce, further environmental management responsibilities that are considered as a part of the normal functioning of some positions relevant to this Plan are described as follows:-

Exploration Technical Manager

The Exploration Technical Manager (or their delegate) is responsible for overseeing the implementation of this Plan, consulting with the relevant government and public stakeholders as required and providing the relevant information to stakeholders as necessary. During drilling or construction activities, the Exploration Technical Manager (or their delegate) will be responsible for:

- The overall implementation of this document;
- Maintaining accountability for the management of the drill/construction sites and all employees and contractors entering the sites for the purposes of construction;
- The conveyance of this Plan and it objectives to all contractors entering the construction sites;
- Maintaining accountability for the implementation, maintenance and monitoring of compliance with this Plan;
- Advising the Environment and Community Coordinator regarding potential environmental issues;
- Maintenance of the complaints register, investigating complaints, and taking appropriate action to alleviate the impact of any complaints;
- Ensuring the Mine Manager is informed of all incidents and non-compliance and the corrective actions taken to mitigate any such incidents; and
- Ensuring the correct signage is appropriately located around the Mugii Murum-ban SCA road network.

Mine Manager

- Authorisation of this Plan;
- Reporting of significant environmental incidents to external stakeholders as required;
- Delegation of resources to ensure environmental risk mitigation strategies are implemented;
- Delegation of duties during the absence of the Environment and Community Coordinator;
- Providing adequate resources to implement this Plan;
- The maintenance of resources to achieve the main objectives of the document; and
- The ultimate responsibility and accountability for the environmental performance of the works consistent with the existing policies on health, safety, environment and community.

Environment and Community Coordinator

- Compliance with the Centennial Environmental Policy;
- Reporting of environmental incidents as required to external stakeholders;
- Development and implementation of environmental strategies, plans, and procedures;
- Regulatory and community consultation;
- Registration of community complaints and regulatory liaison in the Environment and Community Database;
- Development and implementation of environmental work procedures;
- Development and implementation of environmental training and inductions;
- Auditing the effectiveness of the document;

- Compliance with all licences and approvals for environmental management of the site;
- Assisting the Exploration Technical Manager with the overall implementation of this Plan;
- Providing advice on environmental pollution issues;
- Investigating environmental incidents, exceedances, complaints and/or enquiries;
- Coordinating the required monitoring activities and undertaking additional monitoring as required;
- Coordinating training to employees and contractors regarding the requirements of this document;
- Assist the Exploration Technical Manager to undertake inspections on a regular basis to monitor the environmental performance of the construction phase; and
- Coordinating all reporting (both internally and externally) in relation to this document.

Employees and Contractors

- Compliance with the Centennial Environmental Policy, standards and procedures;
- Immediately reporting environmental incidents and community complaints or enquiries to the Environment and Community Coordinator;
- Conducting operations in compliance with the Centennial environmental management plans and procedures; and
- Identifying and implementing appropriate controls for environmental risks from any risk assessments and job safety analysis and communicating these with responsible staff.
- Undertake training in the content of this Plan during a site induction program; and
- During construction all contractors and employees will be responsible for carrying out actions as directed to ensure compliance with this document.

Delegation of roles or responsibilities may be determined by the Mine Manager at any time.

4.2 Reporting

4.2.1 Annual Review

A summary of construction activities, approved exploration and/or monitoring activities will be provided in the Annual Review for all years that relevant activities are undertaken by Airly. The Annual Review will include a summary of relevant environmental performance, rehabilitation and the results of environmental monitoring will be compared against the impact assessment criteria in the EIS (Golder Associates, 2014) and Development Consent SSD-5581.

The Annual Review will include information on the monitoring conducted during the reporting year, any non-conformances and complaints received. This report is made available on the Centennial Coal website.

4.2.2 Environmental Management Report

An Environmental Management Report will be prepared and provided to DRG to satisfy the requirements of AUTH 232. This Environmental Management Report will include details regarding disturbance, rehabilitation and environmental performance during approved exploration activities. An Environmental Management Report will be submitted in the following circumstances:

- Where the licence holder is seeking to renew AUTH 232, an Environmental Management Report must accompany an exploration licence renewal application;
- Where the licence holder is seeking to cancel or part-cancel the exploration licence, an Environmental Management Report must accompany an exploration licence cancellation application; and

- Where the licence holder is not seeking to renew or cancel the exploration licence, an Environmental Management Report must be submitted prior to the expiry of the licence.

Note: Where possible, Airly will address the requirements of an Environmental Management Report as a component of the Annual Review to avoid duplication of reporting.

4.2.3 Community Consultation Report

As outlined in **Section 2.1.2**, Airly will undertake consultation for exploration drilling and/or monitoring purposes in accordance with the *Guideline for Community Consultation Requirements for Exploration* (DRG, 2012b). An annual report will be prepared in accordance with *Guideline for Community Consultation Reporting – Coal and Petroleum Exploration* (DRG, 2012a). This report will provide a summary of the community consultation undertaken in accordance with the *Guideline for Community Consultation Requirements for Exploration* (DRG, 2012b) and be submitted annually to DRG within 28 days of 20 October (being the grant date of AUTH 232). This report will include evidence that consultation was undertaken in accordance with the DRG (2012b) guideline.

4.2.4 Exploration Licence Rehabilitation and Relinquishment Report

Following the completion of rehabilitation and prior to lease relinquishment, Airly will submit an Exploration Rehabilitation and Relinquishment Report to DRG. This report will include details to demonstrate that rehabilitation has been completed and complies with mining tenement requirements. These details are also included in the Annual Review.

4.2.5 Exploration Report

Exploration reports will be prepared in accordance with the requirements of ML 1331 and the DRG (2016) publication titled *Exploration Reporting: A guide for reporting on exploration and prospecting in New South Wales*. The report will include details of exploration and/or monitoring activities within ML 1331 including, but not limited to the following:

- A brief summary of prospecting operations carried out, including expenditure during the reporting period;
- The results and conclusions of all surveys and other operations; and
- The proposed exploration to be conducted during the next reporting period.

4.2.6 Website

Airly has formulated a community information and notification strategy that will assist with the conveyance of Project-related information, encourage discussions and dialogue with the community. This notification strategy will provide a clear complaints management procedure for the duration of the construction period. Information on the current construction activities will be made available on Centennial Coal's website. This website will contain project specific information including:

- Approval documents; and
- Information on how to make a complaint including telephone, email and postal addresses.

Additionally, a monitoring report is published on the website to satisfy the requirements under the *Protection of the Environment Legislation Amendment Act 2011* to publish or make pollution monitoring data available to members of the public.

4.2.7 Community Consultative Committee

The Airly CCC regularly. Some of the information reported at the CCC includes:

- Progress at the mine — operational issues;

- Monitoring and environmental performance; and
- Community complaints and the response to complaints.

A summary of environmental performance from all exploration drilling and/or monitoring activities will be presented at the CCC meetings. Minutes from the CCC meetings are available on the Centennial website.

4.3 Environmental Training

Airly will progress implementation of the EMS and the Environmental Policy by training employees and contractors in relevant areas on the EMS. Environmental and community training may include, but need not be limited to:

- Induction training;
- Environmental and community awareness training;
- Toolbox training; and
- Other specific training as required (for example environment spill control and management).

5 REVIEW

5.1 Document Review

In accordance with the requirements of Schedule 6, Condition 3 of Development Consent SSD-5581, Airly will review this Plan within three months of the following:

a) Submission of an incident report relating to this document;
b) Submission of an Annual Review;
c) Submission of an audit report;
d) Renewal of an exploration licence; or
e) Any modification to the conditions of SSD-5581.

If required, the proposed management strategies and control measures will be modified to address evolving site conditions, additional minor surface infrastructure and latent conditions. Any changes to the Plan will then be communicated to the relevant site personnel via daily “toolbox talk” training and weekly project meetings.

This management plan is a controlled document and will be reviewed on an as needs basis.

Prior to completing revisions, Centennial Airly will liaise with DPE to confirm the requirements for submission and consultation (in accordance with Schedule 6, Condition 4 of SSD-5581). Following amendments a copy of the revised Plan will be provided to the DPE for approval.

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RPS (2014c) *Airly Mine Extension Project Cultural Heritage Impact Assessment.*

SLR (2015) *Airly Mine Extension Project Noise Impact Assessment – Exploration Activities*.

APPENDICES

Relevant Mining Authority Conditions

Condition	Condition Requirement	Section Addressed
Community consultation		
AUTH 232 Condition 5	The licence holder must engage with the community in relation to the planning for and conduct of prospecting operations authorised under this exploration licence.	Section 2.1.2
AUTH 232 Condition 6	The consultation must be undertaken in accordance with the Guideline for community consultation requirements for the exploration of coal and petroleum, including coal seam gas (NSW Trade & Investment, 2012) as amended from time to time.	Section 2.1.2
AUTH 232 Condition 7	An annual report on Community Consultation must be submitted to the Department within 28 days of the anniversary of this licence being granted, together with evidence that the consultation has been undertaken in accordance with the Guideline. Note: Copies of the Guideline are available from www.resources.nsw.gov.au	Section 2.1.2 Section 4.2.3
Environmental harm		
AUTH 232 Condition 9	The licence holder must implement all reasonably practicable measures to prevent and/or minimise harm to the environment that may result from the conduct of any prospecting operations under this exploration licence.	This document
Erosion and sediment control		
AUTH 232 Condition 10	The licence holder must prevent erosion and pollution of watercourses resulting from the conduct of prospecting operations by implementing effective erosion and sediment control measures.	Section 2.4.1
AUTH 232 Condition 11	The planning, design and construction of erosion and sediment control measures must be conducted generally in accordance with Managing Urban Stormwater: Soils and Construction (DECC 2007), as amended or replaced from time to time.	Section 2.4.1
Groundwater Monitoring and Modelling Plan		
AUTH 232 Condition 12	Prior to conducting prospecting operations involving the construction and use of boreholes, the licence holder must: a) Prepare a Groundwater Monitoring and Modelling Plan in consultation with the NSW Office of Water; b) Ensure that the Groundwater Monitoring and Modelling Plan: i. describes methods for identifying aquifers, their depths, behaviour, containing layers and connectivity with surrounding aquifers or surface water systems; ii. describes methods for collection of data relevant to the type, quantity and quality of water contained within aquifer systems likely to be encountered during prospecting operations; iii. provides for the future development of a conceptual model of regional groundwater behaviour; iv. provides for the future development of a calibrated computer model of regional groundwater behaviour, to enable the impacts of any proposed mining operations to be assessed; v. describes how records of all data collected will be maintained; vi. describes the staging process for implementation of the plan; and vii. is prepared in accordance with any additional requirements prescribed by the Secretary. c) The Groundwater Monitoring and Modelling Plan must address the requirements identified in b)i) to b)vii) in a level of detail commensurate with the scale, timing and potential impact of proposed operations;	Section 2.4.3

Condition	Condition Requirement	Section Addressed
	d) Have the Groundwater Monitoring and Modelling Plan approved by the Minister; and e) Implement and comply with the approved Groundwater Monitoring and Modelling Plan. Note. The Groundwater Monitoring and Modelling Plan is required to ensure: a) there is sufficient groundwater data available to assess future operations against the Aquifer Interference Policy (NSW Office of Water, 2012), as amended or replaced from time to time; and b) 2 years of baseline data is available prior to submitting an application for any future production operations. An application may be made to the Department at any time to vary an approved Groundwater Monitoring and Modelling Plan.	
Use of Chemicals and Fuel		
AUTH 232 Condition 13	The licence holder must ensure that all chemicals, fuels and oils, excluding those contained within plant and equipment and those for personal use, are: a) stored and handled in accordance with the relevant Material Safety Data Sheet and Australian Standards for the material; b) stored in appropriate containers that are in good condition and labelled to clearly identify the stored product; and c) kept in a facility or area which is capable of containing at least 100% of the largest container capacity stored within that area; unless otherwise approved by the Minister.	Section 2.4.3
AUTH 232 Condition 14	The licence holder must ensure that adequate spill prevention and oil absorbent materials required to manage spills and leaks for all chemicals, fuels and oils on site are readily available at all times where prospecting operations are being carried out. Equipment and/or materials to capture drips and spills must be used during transfer of chemicals, fuels and oils, and when maintaining oil or fuel filled components.	Section 2.4.3
Noise		
AUTH 232 Condition 15	The licence holder must carry out operations in accordance with the requirements of the Interim Construction Noise Guidelines (DECC, 2009), as amended or replaced from time to time. Unless otherwise approved by the Minister, the licence holder must ensure that: a) noise levels during standard working hours do not exceed the Rating Background Level (RBL) +10dB at any residence or other sensitive receiver (as defined in the Interim Construction Noise Guidelines). b) noise levels outside of standard working hours do not exceed the RBL +5d8.	Section 2.4.7
AUTH 232 Condition 16	The noise limits identified in condition 15 will not apply where the licence holder has negotiated a written agreement with: a) the relevant landholder; or b) in the case of a prospecting operation that will result in an exceedance of the criteria at a dwelling or other sensitive receiver, the resident of that dwelling or occupier of the sensitive receiver; c) to allow different limits and the licence holder complies with those limits.	Section 2.4.7
Vegetation Clearing		
AUTH 232 Condition 17	Vegetation clearing and vegetation disturbance must be limited to the minimum extent necessary to facilitate the conduct of prospecting operations authorised by this exploration licence.	Section 2.4.4

Condition	Condition Requirement	Section Addressed
	Note: Any clearing of native vegetation which is not authorised under the Mining Act 1992 is subject to the Native Vegetation Act 2003. Additional approvals may also be required before using timber from Crown land	
Fire prevention		
AUTH 232 Condition 18	The licence holder must take all reasonably practicable precautions against causing an outbreak of fire.	Section 2.4.11
AUTH 232 Condition 19	The licence holder must not burn off any grass, foliage or herbage without the consent of the landholder and the local fire authority.	Section 2.4.11
Infrastructure		
Roads and Tracks		
AUTH 232 Condition 23	Except where otherwise approved under condition 2, the licence holder must ensure that: a) Existing roads and tracks are used in preference to constructing new roads and tracks; b) The planning, design, construction and maintenance of unsealed roads and tracks is constructed generally in accordance with Managing Urban Storm water Soils and Construction, Volume 2C, Unsealed Roads (DECC 2007) as amended or replaced from time to time; and c) All water land and wetland crossing works are constructed in accordance with the requirements of the Policy and Guidelines for Fish Friendly Waterway Crossings (NSW DPI 2003) and Why do Fish Need to Cross the Road? Fish Passage Requirements for Waterway Crossings (NSW Fisheries 2003) as amended or replaced from time to time.	Section 2.4.1 Section 2.4.3
AUTH 232 Condition 24	The licence holder must restrict the use of any unsealed road or track during wet weather to prevent damage to that road or track unless the road or track has been designed and constructed for use in wet weather.	Section 2.4.1
Topsoil management		
AUTH 232 Condition 25	The licence holder must ensure that all topsoil removed in the course of prospecting operations is stockpiled for later use in rehabilitating those operations.	Section 2.4.2
Drilling		
AUTH 232 Condition 26	The licence holder must: a) Construct, maintain and decommission all boreholes and petroleum wells in accordance with standards equivalent to or exceeding the Minimum Construction Requirements for Water Bores in Australia (NUDLC 2012), as amended or replaced from time to time. Where this condition is inconsistent with other conditions set out in this exploration licence, those conditions prevail to the extent of that inconsistency. b) Ensure that the construction, operation, maintenance and decommissioning of boreholes does not cause or enhance: i. hydraulic connection between aquifers ; ii. contamination or cross-contamination of aquifers ; iii. the escape of natural or noxious gases ; iv. the uncontrolled surface discharge of ground waters; v. collapse of the surrounding surface ; or vi. hazards to persons, stock and wildlife; c) Before commencing any drilling within the exploration licence area, carry out an assessment of the risk of blowouts. Details of the assessment must be notified to the Department at least 7 days prior to the proposed commencement of drilling. If this assessment indicates that there is potential for a blowout to occur, blowout prevention equipment must be installed, in accordance with the Schedule of Onshore Petroleum Exploration and Production Safety Requirements (DMR 1992), as amended or replaced from time to time;	Section 2.3, 2.4.3 and 2.5

Condition	Condition Requirement	Section Addressed
	d) Implement appropriate controls to manage any risks associated with natural or noxious gases , both during and after drilling ; e) Contain all drill cuttings, fluids and groundwater returned to the surface as part of the drilling process in above-ground tanks or in-ground sumps pending re circulation or disposal. In-ground sumps must be lined with an impermeable barrier where there is a potential risk of contamination from drill cuttings or fluids ; f) Survey boreholes to a minimum of 0.5 metre accuracy at collar, with the survey to be carried out by a surveyor registered with the Board of Surveying and Spatial Information under the Surveying and Spatial/Information Act 2002; g) Remove equipment and logging tools from the borehole prior to plugging and abandonment of the borehole , unless otherwise approved by the Minister; and; h) Once a borehole ceases to be used, the borehole must be completely filled with cement grout during drill rod withdrawal and plugged, unless otherwise approved by the Minister.	
AUTH 232 Condition 27	The licence holder must report any blowout associated with prospecting operations to the Department: a) immediately; and b) provide a written report within 24 hours. Note. The licence holder should have regard to any Secretary's guidelines related to the drilling, operation and abandonment of boreholes.	Section 2.1.1
Waste Management		
AUTH 232 Condition 28	The licence holder must ensure that: a) the sites of prospecting operations are maintained in a clean and tidy condition at all times; b) all waste, including contaminated residues, must be collected, segregated and securely deposited in properly constructed containers and disposed lawfully; c) drilling by-products contaminated by chemicals, oils or fuels must be collected and remediated or disposed lawfully; and d) all drill cuttings and drilling fluids not being reused in drilling operations are disposed lawfully. Note. Alternative reuse of drill cuttings and treated fluids may be approved by the Minister under condition 2 of this exploration licence.	Section 2.4.12
AUTH 232 Condition 29	The licence holder must maintain records of: a) all waste generated as a result of prospecting operations under this exploration licence; and b) the means of disposal of all waste. Note. Waste is regulated under the Protection of the Environment Operations Act 1997 and the NSW Waste Regulations. Contact the Local Council or the Environment Protection Authority for details of those requirements.	Section 2.4.12
Safety		
AUTH 232 Condition 30	The licence holder must notify the Department at least 7 days prior to the proposed commencement of any prospecting operation involving any drilling, blasting or other potentially hazardous operation. This notification must be made in the form approved by the Secretary.	Section 2.4.10
AUTH 232 Condition 31	The licence holder must carry out operations in a manner that ensures the safety of members of the public, stock and wildlife in the vicinity of the operations.	Section 2.4.10
AUTH 232 Condition 32	The licence holder must put in place measures to control safety hazards. These measures include, but are not limited to, the development of a Safety Management Plan prepared in accordance with relevant Departmental guidelines. Note. Mining activities in NSW, including exploration, are subject to the Work Health and Safety Act 2011 which is the main Act dealing with	Section 2.4.10

Condition	Condition Requirement	Section Addressed
	the health, safety and welfare of persons at work. The Work Health and Safety Act 2011 is to be read in conjunction with the Coal Mine Health and Safety Act 2002 which deals with health, safety and welfare of people at work at coal operations or related places and puts in place special provisions necessary for the control of particular risks arising from the exploration for coal.	
Rehabilitation		
AUTH 232 Condition 39	The licence holder must ensure that all water land and wetland crossings that are disturbed during prospecting operations are rehabilitated such that the natural flow of water is unimpeded and bank stability is maintained to prevent erosion.	Section 2.5
AUTH 232 Condition 40	The licence holder must comply with any relevant guidelines issued by the Secretary in the rehabilitation of disturbance resulting from prospecting operations under this exploration licence.	Section 2.5
AUTH 232 Condition 41	All rehabilitation of disturbance resulting from prospecting operations under this exploration licence must be completed before the expiry of this exploration licence or as soon as practicable following cancellation of this exploration licence, unless otherwise approved by the Minister.	Section 2.5
AUTH 232 Condition 42	Boreholes that have been abandoned as a result of previous mining or prospecting operations, and which have been opened up or used by the licence holder are subject to the conditions of this exploration licence as if the boreholes were constructed by the holder of this exploration licence.	Section 2.5
REPORTING		
Environmental Management Report		
AUTH 232 Condition 43	The licence holder must submit an Environmental Management Report to the Department in the following circumstances: a) where the licence holder is seeking to renew this exploration licence, an Environmental Management Report must accompany an exploration licence renewal application; or b) where the licence holder is seeking to cancel or part cancel this exploration licence, an Environmental Management Report must accompany an exploration licence cancellation application; c) where the licence holder is not seeking to renew or cancel this exploration licence, an Environmental Management Report must be submitted prior to the expiry of this exploration licence.	Section 4.2
AUTH 232 Condition 44	The report must be prepared in accordance with any Secretary's requirements for environmental and rehabilitation reporting on exploration licences and include information on all disturbance resulting from prospecting operations and rehabilitation carried out within the exploration licence area. The report must be prepared to the satisfaction of the Secretary.	Section 4.2
Mining Lease Requirements		
ML 1331 Note	**Note: Exploration Reports (Geological and Geophysical)** The lease holder must lodge reports to the satisfaction of the Minister in accordance with section 163C of the Mining Act 1992 and in accordance with clause 57 of the Mining Regulation 2010. Reports must be prepared in accordance with *Exploration Reporting: A guide for reporting on exploration and prospecting in New South Wales (Department of Trade and Investment; Regional Infrastructure and Services 2010).*	Section 4.2

Planning Services
Resource Assessments
Contact: Anthony Ko
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Mr James Wearne
Group Manager Approvals
Centennial Coal
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FASSIFERN NSW 2283

Dear Mr Wearne

Airly Mine Extension Project (SSD 5581)
Exploration Activities and Minor Surface Infrastructure Management Plan

I refer to your letter dated 8 March 2017, requesting endorsement of experts to prepare an Exploration Activities and Minor Surface Infrastructure Management Plan (EAMSIMP) for the Airly Mine Extension Project to satisfy condition 26 of Schedule 4 of Development Consent (SSD 5581).

The Department has reviewed the information you provided, and is satisfied that the nominated experts are suitably qualified to prepare the EAMSIMP.

Accordingly, the Secretary has endorsed Mr Adam Williams and Mr Nathan Archer of SLR Consulting Australia Pty Ltd to undertake the work.

If you have any further enquiries about this matter, please contact Anthony Ko on the above contact details.

Yours sincerely

9/3/17

Clay Preshaw
A/Director
Resource Assessments
as nominee of the Secretary