



Environmental Management Strategy

August 2018

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Table of Contents

1	INTRODUCTION	1
2	PURPOSE OF THE EMS.....	2
3	ENVIRONMENTAL MANAGEMENT STRATEGY OUTLINE	3
4	ENVIRONMENTAL POLICY	5
5	PROJECT DESCRIPTION	6
	OVERVIEW.....	6
5.2	THE APPROVED DEVELOPMENT	7
5.2.1	Donaldson Open Cut Mine.....	8
5.2.2	Abel Underground Mine	8
6	STATUTORY OBLIGATIONS	9
6.1	KEY LEGISLATION	9
6.2	CONSENTS, LEASES AND LICENCES	9
6.2.1	Donaldson	10
6.2.2	Abel Underground Mine	11
6.3	DEVELOPMENT CONSENT – EMS REQUIREMENTS	12
6.3.1	Donaldson	12
6.3.2	Abel Underground Mine	13
7	IMPLEMENTATION AND OPERATION.....	14
7.1	ROLES AND RESPONSIBILITIES	14
7.1.1	Operations Manager	14
7.1.2	Environment & Community Relations Superintendent	14
7.1.3	Staff and Employees.....	14
7.1.4	Contractors	14
7.2	ENVIRONMENTAL AWARENESS TRAINING	14
8	IDENTIFICATION AND MANAGEMENT OF ENVIRONMENTAL ASPECTS	15
8.2	Donaldson.....	15
8.3	Abel.....	15
9	CUMULATIVE IMPACTS	19
10	INTERESTED STAKEHOLDERS	20
10	COMMUNITY ISSUES	21
10.1	COMMUNITY INVOLVEMENT.....	21
10.2	COMPLAINT PROTOCOL.....	22
11	INCIDENT RESPONSE	23

11.1	INCIDENTS.....	23
11.1.1	Notification to Surrounding Property Owners	23
11.1.2	Donaldson Incident Report	23
12	MONITORING, REVIEW AND IMPROVEMENT.....	24
12.1	MONITORING.....	24
12.2	ANALYSIS AND REPORTING PROCEDURES	24
12.3	PROCEDURE FOR EXCEEDANCE OF CRITERIA OR THRESHOLD.....	25
12.4	IMPLEMENTING CORRECTIVE ACTIONS.....	25
13	DOCUMENT CONTROL.....	26
14	REVIEW AND CONTINUAL IMPROVEMENT.....	27
Appendix A	29
Appendix B	32
Appendix C	25
Appendix D	28

1 INTRODUCTION

The Abel underground coal mine and Donaldson open cut coal mines are located in close proximity to each other and are currently managed as an amalgamated mining complex. Donaldson is in a mine closure phase whilst Abel is in 'care and maintenance' with restricted activities occurring across the mining complex. Activities that currently occur include water management, maintenance of rehabilitation, land management, maintenance of mining infrastructure and environmental monitoring activities.

This Environmental Management Strategy (EMS) takes into consideration the commitments stated in the Environmental Assessment, Environmental Impact Statement, Statement of Environmental Effects, various development consent conditions and license conditions of both Donaldson Open Cut Mine (**Donaldson**) and the Abel Underground Mine (**Abel**).

This Operating Manual provides the strategic context for environmental management at Donaldson and Abel and associated infrastructure located within the lower Hunter Valley of NSW.

2 PURPOSE OF THE EMS

The EMS establishes an environmental management framework for all mining and surface activities. It includes the development and management of environmental management plans, procedures and reporting requirements.

The objectives of the EMS are to:

- satisfy the relevant conditions under NSW Development Consent DA98/01173 (Maitland City Council, MCC) and Development Consent DA18/698/22 (Cessnock City Council, CCC) (as modified) and NSW Project Approval (05_0136) (as modified);
- provide an overall framework for environmental management;
- identify key environmental aspects requiring management and supporting plans and procedures;
- establish procedures for reviewing management performance and implementing corrective actions; and
- provide a framework for review and continual improvement.

3 ENVIRONMENTAL MANAGEMENT STRATEGY OUTLINE

This document outlines the EMS for Donaldson and Abel including organizational responsibilities, planning activities, procedures, processes, implementation and review. It is an integral component of the overall environmental management framework for the Donaldson and Abel Operations.

The subordinate plans and policies have been developed in consultation with relevant government agencies and departments. Where relevant, some plans may address the requirements of both Development Consent DA98/01173 (MCC) and Development Consent DA18/698/22 (CCC) and NSW Project Approval (05_0136), and the approval of the Secretary of Department Planning & Environment (DPE) is sought under both Development Consent DA98/01173 (MCC) and Development Consent DA18/698/22 (CCC) (as modified) and NSW Project Approval (05_0136) for those plans. A diagrammatic representation of the Donaldson Integrated EMS is illustrated in Figure 1 while the general relationship of the EMS with other plans is shown in Figure 2.

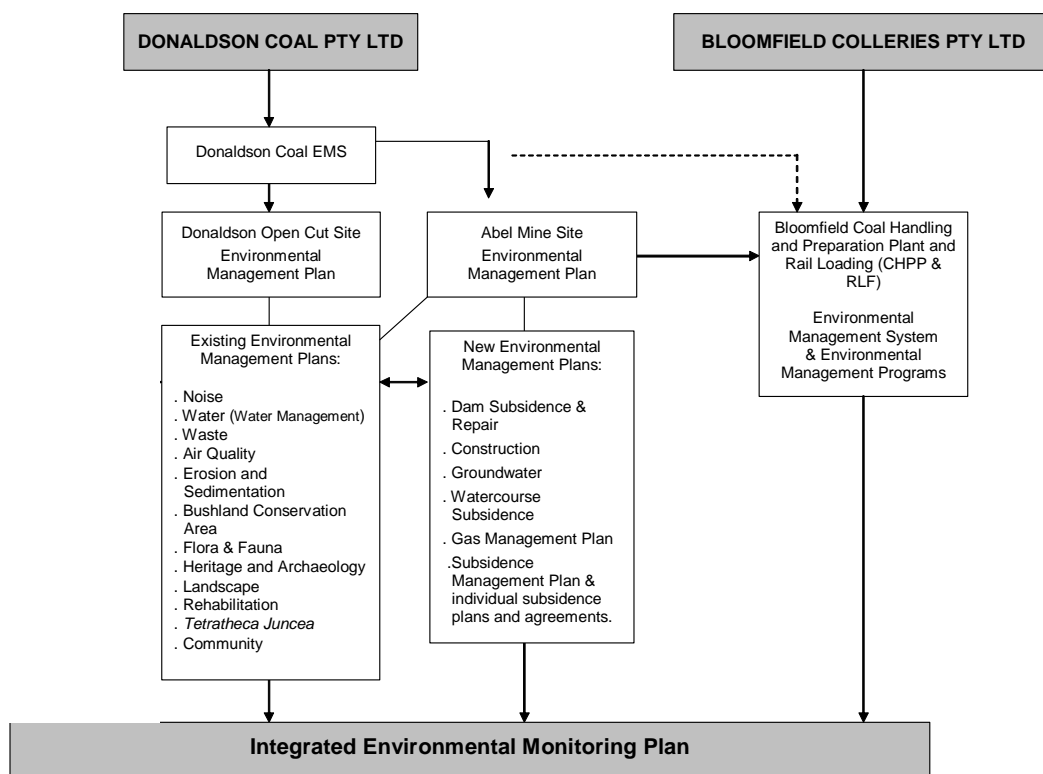


Figure 1 Donaldson Integrated EMS

The key environmental issues and requirements resulting from the EIS process are normally summarised in the Department of Planning & Environment or (equivalent department) Director-General’s Consent Conditions for the particular project or operation. A series of operational Environmental Management Plans (EMP) (or environmental management programs) are then developed to detail the measures required to ensure that each operation (e.g. coal mine, coal handling and preparation plant, rail load out facility or associated activity) minimises its impact on the surrounding environment.

Consultants with specific environmental expertise are engaged by Donaldson to assist in the preparation of operational EMPs. In addition, all operational plans are developed in consultation with the relevant state and local government authorities and copies are made available to the relevant Community Consultative Committees (CCCs) as required.

The following list of EMPs are subsidiary components/plans under the EMS, and detail specific operating

requirements needed to minimise potential environmental impacts.

The various strategies, plans and programs required under the conditions of Development Consent DA98/01173 (MCC) and Development Consent DA18/698/22 (CCC) (as modified) and NSW Project Approval (05_0136) are as follows (and can be found on the Donaldson Website www.doncoal.com.au):

Donaldson Management Plan	DA18/698/22 DA98/01173 Condition Number
Noise Monitoring Program	10
Blast Management Plan	26
Air Quality Management Plan	38
Water Management Plan	60
Erosion and Sediment Control Plan	66
Tetrathec juncea Management Plan	69
Bushland Conservation Area Management Plan	74
Flora and Fauna Management Plan including Rehabilitation Management Plan	76
Aboriginal Sites Management Plan	84
Waste Management Plan	87
Landscaping Plan	91

Abel Management Plan	PA05_0136 Condition Number
	Schedule 3
Gas Drainage Management Plan	9
Service Boreholes Management Plan	11
PED Communications Management Plan	12
	Schedule 4
Noise Management Plan	6
Air Quality and Greenhouse Gas Management Plan	11
Water Management Plan	17
Biodiversity Offset Strategy	18
Biodiversity Management Plan	20
Aboriginal Cultural Heritage Management Plan	22
Rehabilitation Management Plan	29

The following Extraction Plans are also part of the EMS structure and available on the Donaldson Website:

- The Abel Mine SMP Area 1
- The Abel Mine SMP Area 2
- The Abel Mine SMP Area 3

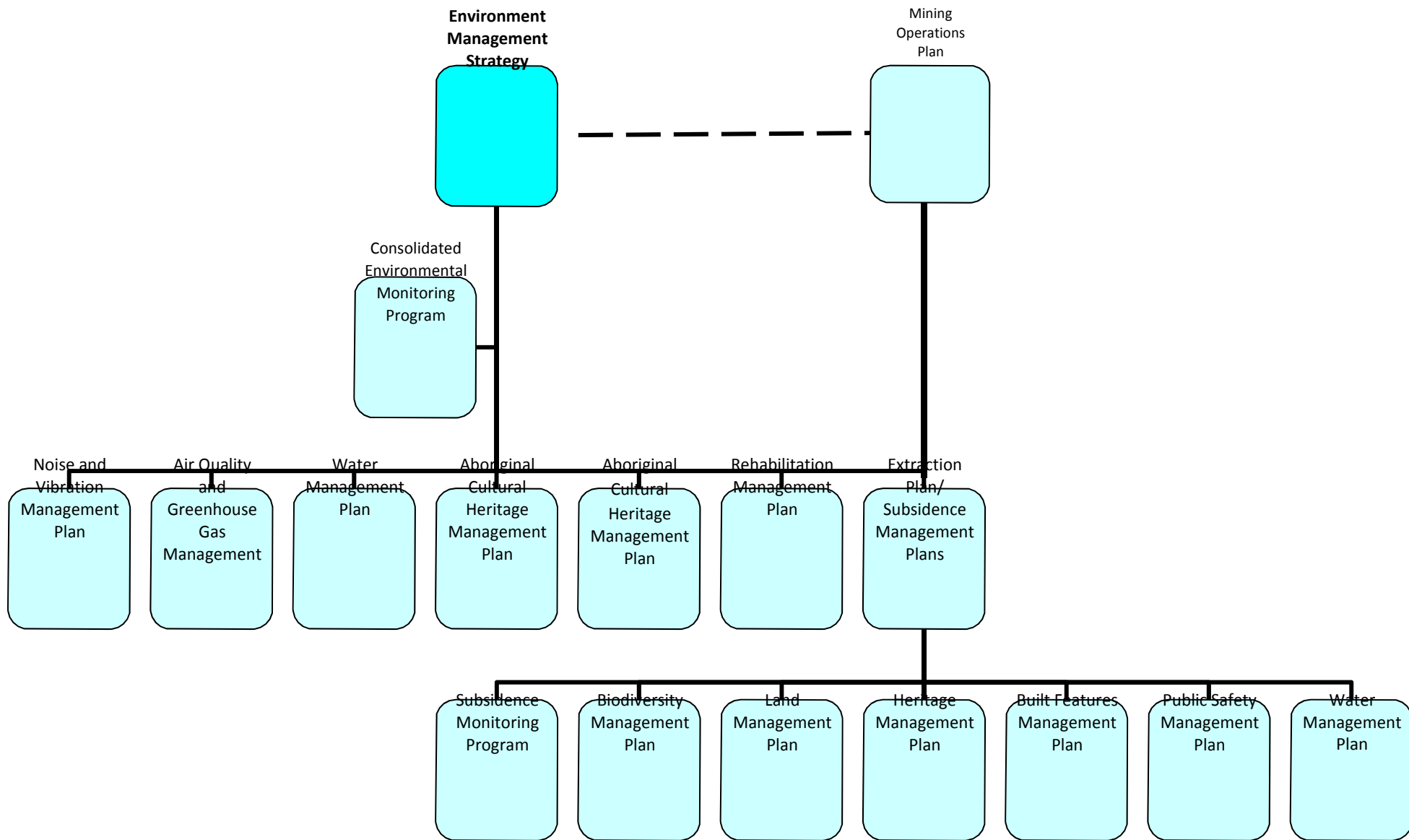


Figure 2 Environmental Management Strategy and Relationship with Other Plans

4 ENVIRONMENTAL POLICY

The Environmental Policy for Yancoal represents a statement of its intentions and principles in relation to its overall environmental performance. The Policy has been designed to fulfill the expectations of all stakeholders in the project. A copy of the Policy is contained in Appendix 1.

The Policy aims to:

- Provide a framework for action;
- Provide a setting for Yancoal's environmental objectives and targets;
- Promote continual improvement;
- Be the foundation of the EMS;
- Give an overall sense of direction; and
- Be a reference/baseline for company strategies, plans and actions.

Personnel on every Yancoal site have access to copies of the Environmental Policy which are generally located in office areas, crib rooms and training rooms. In addition, copies can be made available to any employee by contacting the Donaldson Environment & Community Superintendent.

Communication of the Environmental Policy forms part of the Donaldson training and awareness program. All new starter employees undergo a site specific induction that includes specific reference to the Yancoal Environmental Policy. In addition, the Environmental Policy will be routinely addressed in workforce training and awareness forums.

The Environmental Policy will be reviewed for its continuing appropriateness and applicability during the annual management review of the EMS. The Policy will be available to the public via reports to the relevant local council, the various government consent and approval departments and the respective CCCs. It has also been posted on the Donaldson website site at www.doncoal.com.au.

All major contractors operating at Donaldson and Abel sites are expected to maintain their own Environmental Policy in line with the requirements of this section. Copies of these policies are to be made available in office areas, crib rooms and training rooms.

5 PROJECT DESCRIPTION

OVERVIEW

Yancoal Pty Ltd (Yancoal) and its fully owned subsidiary companies, including Newcastle Coal Pty Ltd, is both an owner / operator and developer of open cut and underground coal operations in the lower Hunter Valley.

Operations included the Donaldson Open Cut Mine (Donaldson) (now closed and rehabilitated) located within Mining Lease 1461 near Beresfield, and the Abel Underground Mine (Abel) within Mining Lease 1618.

All coal from the Donaldson Mines is washed under contract at the Bloomfield Coal Handling and Preparation Plant (CHPP) owned and operated by Bloomfield Collieries Pty Ltd. All washed product coal is transported by rail to the Port of Newcastle using the existing Rail Loading Facility (RLF) and infrastructure associated with Bloomfield's operation. Bloomfield are responsible for the management of tailings and reject emplacement areas within their mining operations.

The following table provides Company contact details for current Donaldson projects.

Operation	Donaldson	Abel	Bloomfield Operations
Colliery Holder:	Donaldson Coal Pty Ltd	Donaldson Coal Pty Ltd	Bloomfield Collieries Pty Ltd
Project Name:	Donaldson Open Cut Coal Mine	Abel Coal Project	Bloomfield CHPP
Project Approval:	DA98/01173 (MCC) and DA18/698/22 (CCC)	Project Approval (05_0136)	
Address:	1132 John Renshaw Drive, BLACKHILL 2322	1132 John Renshaw Drive, BLACKHILL 2322	Four Mile Creek Road, ASHTONFIELD 2323
Postal Address:	PO Box 2275, GREENHILLS 2323	PO Box 2275, GREENHILLS 2323	PO Box 4, EAST MAITLAND 2323
Telephone Number:	02 4015 1140	02 4015 1140	(02) 4930 2600
Principal Mine Operator:	Donaldson Coal Pty Ltd	Donaldson Coal Pty Ltd	Bloomfield Collieries Pty Ltd
Project Name	Donaldson Open Cut Coal Mine	Abel Underground Mine	Bloomfield CHPP
Address	1132 John Renshaw Drive, BLACKHILL 2322	1132 John Renshaw Drive, BLACKHILL 2322	Four Mile Creek Road, ASHTONFIELD 2323
Postal Address:	PO Box 2137, GREENHILLS 2323	PO Box 2275, GREENHILLS 2323	PO Box 4, EAST MAITLAND 2323
Telephone Number	02 4015 1140	02 4015 1140	(02) 4930 2600
Operations Manager	William Farnworth	William Farnworth	
Environment & Community Relations Superintendent	Phillip Brown	Phillip Brown	Greg Lamb



Figure 3 presents the location of the underground mining areas and surface infrastructure areas of Donaldson Coal and Abel Mine.

5.2 THE APPROVED DEVELOPMENT

5.2.1 Donaldson Open Cut Mine

Donaldson was an open cut coal mining operation located ~23km from the Port of Newcastle, north of John Renshaw Drive and west of Weakleys Drive. The mining lease is contained within the Cessnock and Maitland Local Government Areas.

The mine commenced operation on 25th January 2001, following approval by the then Minister of Urban Affairs and Planning (now known as the Department of Planning and Environment) in 1999.

The first load of coal was railed from the mine on the 26th March 2001. Up to the 31st October 2013, approximately 13,002,548 tonnes of coal had been railed to both Hunter Valley power stations and international customers, through the Port of Newcastle.

Mining operations were completed in April 2013. Progressive rehabilitation activities have been undertaken throughout the operation of the mine and a final rehabilitation project commenced in May 2013. This involved removal of roads, excavation of contaminated material, decommissioning of the fuel storage area, buildings and other surface infrastructure, reshaping surfaces to the final landform, topsoil spreading, drainage line construction and seeding with local tree and shrub species. The rehabilitation works at the mine were completed in March 2014.

5.2.2 Abel Underground Mine

The Abel Underground Coal Mine (Abel) is located approximately 23km northwest of Newcastle, New South Wales (see Figure 2.1). Following the grant of Project Approval 05_0136 in June 2007, the Company undertook construction and mining activities until the mine was placed in care and maintenance from 28 April 2016.

Relevant environmental impacts from the Able and Donaldson operations are managed in accordance with their respective approval. Copies of the Abel and Donaldson approvals are provided in Appendix B and C.

6 STATUTORY OBLIGATIONS

6.1 KEY LEGISLATION

There are a range of legislative requirements and approvals needed in addition to those required to comply with approvals granted under the Environmental Planning and Assessment Act 1979. These include requirements of Mining Leases, and of the Environment Protection Licence (EPL) that must be satisfied.

The NSW Acts that may be applicable to Donaldson operations include, but are not limited to, the:

- *Crown Lands Act 1989;*
- *Fisheries Management Act 1994;*
- *Heritage Act 1977;*
- *Mine Subsidence Compensation Act 1961;*
- *Mining Act 1992;*
- *National Parks and Wildlife Act 1974;*
- *Native Vegetation Act 2003;*
- *Protection of the Environment Operations Act 1997;*
- *Roads Act 1993;*
- *Threatened Species Conservation Act 1995;*
- *Water Act 1912;*
- *Water Management Act 2000;*
- *Work Health and Safety Act 2011; and*
- *Work Health and Safety (Mines) Act 2013.*

Environmental Management Plans reference the relevant legislation and approvals where appropriate.

6.2 CONSENTS, LEASES AND LICENCES

Operations at Donaldson and Abel are regulated through various leases, licences, permits and approvals as set out below.

6.2.1 Donaldson

The following approvals apply to Donaldson:

Approval/Lease/Licence	Issue / Approval Date	Expiry Date	Details / Comments
Mining Lease (No. 1461)	22/12/1999	22/12/2020	A copy of the mining lease is available for review at the Donaldson Coal office.
Mining Operations Plan	16/05/2014	16/05/2021	Amended MOP as approved by the DTI DRE.
Development Consent (combined DA 98/01173 and 118/698/22)	14/10/1999 26/08/2005 24/06/2011	March 2011 31/12/13	<ul style="list-style-type: none"> Certain conditions of the consent will continue to operate after the consent for mining operations has lapsed. Variation to Development consent for modification to mining area. Variation to Development Consent for extension of time for mining to be completed.
Environment Protection Licence (No. 11080).	13/09/2000	Not Applicable	Anniversary date 13 September Current licence version dated 2 December 2011.
Bore Licence (No. 20BL168123)	18/04/14	17/04/19	Issued to cover groundwater extraction as a result of the active mining area. The Water Sharing Plan for the North Coast Fractured and Porous Rock Groundwater Sources 2016 commenced in 2016. However the bore licence has not yet been converted by Water NSW to a Water Access Licence and Water Supply Works Approval. Advice from Water NSW indicates that the existing licence should continue to be implemented in its current form until the new licence is issued.
Water Supply Works Approval (20WA211590)	01/08/09	31/07/22	Issued for the works associated with the open cut mining pits as located within the <i>Water Sharing Plan for the Hunter Unregulated and Alluvial Water Sources 2009</i> .

6.2.2 Abel Underground Mine

The following approvals apply to Abel:

Consent/Lease/Licence	Issue Date	Expiry Date	Details / Comments
Project Approval 05_0136	7 June 2007	31 December 2030	Granted by the (then) Minister for Planning and last modified on 04 December 2013.
Mining Lease ML 1618	15 May 2008	15 May 2029	Granted by the Minister for Primary Industries. Incorporates 2755ha of surface area.
Mining Lease ML 1653	21 January 2011	21 January 2032	Granted by the Minister for Primary Industries. Incorporates 0.25ha of surface area. Issued construction of ventilation shaft.
Environment Protection Licence No. 12856	9 July 2008 (licence version date 21 December 2011)	Not applicable	Issued by the (then) Department of Environment and Climate Change (EPA).
Water Licence 20BL171935	5 August 2013	4 August 2018	Bore licence to intercept groundwater issued by the (then) NSW Office of Water.

6.3 DEVELOPMENT CONSENT – EMS REQUIREMENTS

Relevant conditions from the Development Consent DA98/01173 (MCC) and Development Consent DA18/698/22 (CCC) (as modified) and NSW Project Approval (05_0136) that relate directly to the preparation and implementation of the EMS for the site are produced in the following tables:

6.3.1 Donaldson

Donaldson is subject to conditions issued by the Minister for Urban Affairs and Planning, dated 14 October 1999. In particular Schedule 2, Conditions 10, 11 and 12 relate to the preparation of an Environmental Management Strategy (EMS) for the mine as follows:

<i>Donaldson Environmental Management Strategy – DA98/01173 & DA118/698/22 – condition 11, Schedule 2</i>	Relevant Section (s)
(i) statutory and other obligations which the Applicant is required to fulfil during construction and mining, including all approvals and consultations and agreements required from authorities and other stakeholders, and key legislation and policies;	
(ii) definition of the role, responsibility, authority, accountability and reporting of personnel relevant to environmental management, including the Environmental Officer;	Section 7
(iii) overall environmental management objectives and performance outcomes, during construction, mining and decommissioning of the mine, for each of the key environmental elements for which management plans are required under this Consent;	Section 6
(iv) overall ecological and community objectives and a strategy for restoration and management, including habitat areas, creeklines and drainage channels, within the context of those objectives;	Section 6
(v) identification of cumulative environmental impacts and procedures for dealing with these at each stage of the development;	Section 9
(vi) overall objectives and strategies for minimising the impacts of the development on economic productivity;	
(vii) steps to be taken to ensure that all approvals, plans, and procedures are being complied with;	Section 12
(viii) processes for conflict resolution in relation to the environmental management of the project; and	Section 10
(ix) documentation of the results of consultations undertaken in the development of the Strategy.	Section 10

A full copy of DA 98/01173 (MCC) and DA 118/698/22 (CCC) (Donaldson Coal Open Cut Consent) is provided in Appendix B.

6.3.2 Abel Underground Mine

Abel is subject to conditions issued by the Minister for Planning and Infrastructure, dated the 4 December 2014 as part of Modification 3. In particular Schedule 6, Condition 1 relates to the preparation and implementation of an Environmental Management Strategy (EMS) for the mine as follows:

<i>Abel Environmental Management Strategy – 05_0136 – Condition 1, Schedule 6</i>	Relevant Section (s)
(a) be submitted to the Director-General for approval within 6 months of the date of approval of MOD 3;	
(b) provide the strategic framework for environmental management of the project;	Section 3
(c) identify the statutory approvals that apply to the project;	Section 6
(d) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the project;	Section 7
(e) describe the procedures that would be implemented to: <ul style="list-style-type: none"> (i) keep the local community and relevant agencies informed about the operation and environmental performance of the project; (ii) receive, handle, respond to, and record complaints; (iii) resolve any disputes that may arise during the course of the project; (iv) respond to any non-compliance; (v) respond to emergencies; and 	Section 10 Section 11 Section 12
(f) include: <ul style="list-style-type: none"> (i) copies of any strategies, plans and programs approved under the conditions of this approval; and (ii) a clear plan depicting all the monitoring required to be carried out under the conditions of this approval. 	Section 3 Section 12 Appendix D

A full copy of PA 05_0136 (Abel Underground Consent) is provided in Appendix C.

7 IMPLEMENTATION AND OPERATION

7.1 ROLES AND RESPONSIBILITIES

7.1.1 Operations Manager

The Donaldson and Abel Operations Manager is responsible for the overall environmental performance of the Donaldson Operations. The Operations Manager will ensure that adequate resources are available to implement the EMS at Donaldson and Abel. The current operations Manager is William Farnworth and can be contacted on 4015 1140.

7.1.2 Environment & Community Relations Superintendent

The Donaldson Environment & Community Relations Superintendent is responsible for overseeing the environmental performance of the operation and compliance with the conditions of consent. This includes managing (including under delegation) aspects of the EMS including environmental monitoring, complaints handling, environmental training, environmental incident management and reporting, and regulatory reporting. The Environment & Community Relations Superintendent reports directly to the site Operations Manager. The current Environment & Community Relations Superintendent is Phillip Brown and can be contacted on 4015 1140.

7.1.3 Staff and Employees

All employees have a responsibility to manage operations in an environmentally responsible manner report incidents and take action to minimise the impacts from site operations. All employees are provided with environmental awareness training through a site induction process.

7.1.4 Contractors

All contractors have a responsibility to manage operations in an environmentally responsible manner and report any incidents or take action to minimise the impacts from site operations. All contractors are provided with environmental awareness training through a site induction process.

7.2 ENVIRONMENTAL AWARENESS TRAINING

The EMS requires all employees, regardless of role or organization level, receive an appropriate level of environmental awareness training. Training covers environmental legislation, due diligence, performance criteria, reporting requirements and emergency response procedures. All employees are made aware of the Yancoal Environmental Policy and the need to meet its obligations.

8 IDENTIFICATION AND MANAGEMENT OF ENVIRONMENTAL ASPECTS

This section identifies and discusses potential environmental impacts associated with key surface facilities and infrastructure.

8.2 Donaldson

There are two distinct Community Asset areas on the Donaldson Coal Mining Lease:

Donaldson Office and Car park

The Donaldson Coal office is a demountable building with metal walls and roof. The Office was constructed in 2000. A car park which services the office is located to the north of the building. The building was used for administrative purposes and can have extended periods of vacancy.



Donaldson Maintenance Facility

The Open Cut maintenance facility is a shed building with metal walls and roof. The building was constructed in 2000. An open area around the building acts as a lay down area for equipment. During care and maintenance activities of the Abel site, this facility is used to store mobile equipment.



8.3 Abel

There are six distinct Community Asset areas on the Abel Coal Mining Lease:

Abel Office and Car park

The Abel Offices are demountable buildings with metal walls and roof. A car park which services the office is located to the east of the building.



Abel and Bathhouse

The Abel office is a demountable building with metal walls and roof. The bathhouse is joined to the Office Block. This building is the primary administration building for Donaldson Coal and is used by administration and operational personnel. This building will be the site operations control in the event of an emergency.



Abel Workshop and Store buildings

The workshop is a metal fabricated building enclosed on three sides. Attached to the Workshop (on the western side) is the oil storage building. The store buildings are also metal fabricated buildings.



Abel Portal area

The Abel portal area has the three entries to the underground operations. The belt road, the transport road and the auxiliary vent area.



Abel Substation

The Abel substation area converts the 130 kv to 11 kv for use in the underground operations.



Abel Upcast Shaft area

The Abel Upcast shaft area includes the main fans for the underground operations. The buildings consist of two large cowl fans and associated motors. There is also an electrical switch room within the compound.



9 CUMULATIVE IMPACTS

The Pit Top facilities and remote infrastructure sites are relatively remote from other industrial activities. The potential for cumulative impacts in regards to noise, air quality, visual amenity and traffic movements from other industries is, therefore, minor.

Land use surrounding the Pit Top and remote infrastructure sites include bushland, grazing, residential and rural residential landholdings. None of these land uses are considered to contribute significantly to cumulative impacts. There is an approved small quarry located immediately to the south of the Site, which could contribute to the noise and air quality environment.

The area above the current Abel Underground Coal Mine working areas are mainly small rural holdings, and therefore, have low potential to contribute to cumulative impacts that would be cumulative.

Cumulative impacts are assessed as part of each management plan with mitigation measures implemented where required.

10 INTERESTED STAKEHOLDERS

A graphical representation of stakeholders is shown in **Figure 4**. The EMS seeks to accommodate the views of all stakeholders including those expressed through the EIS process and related documents and approvals for each project.

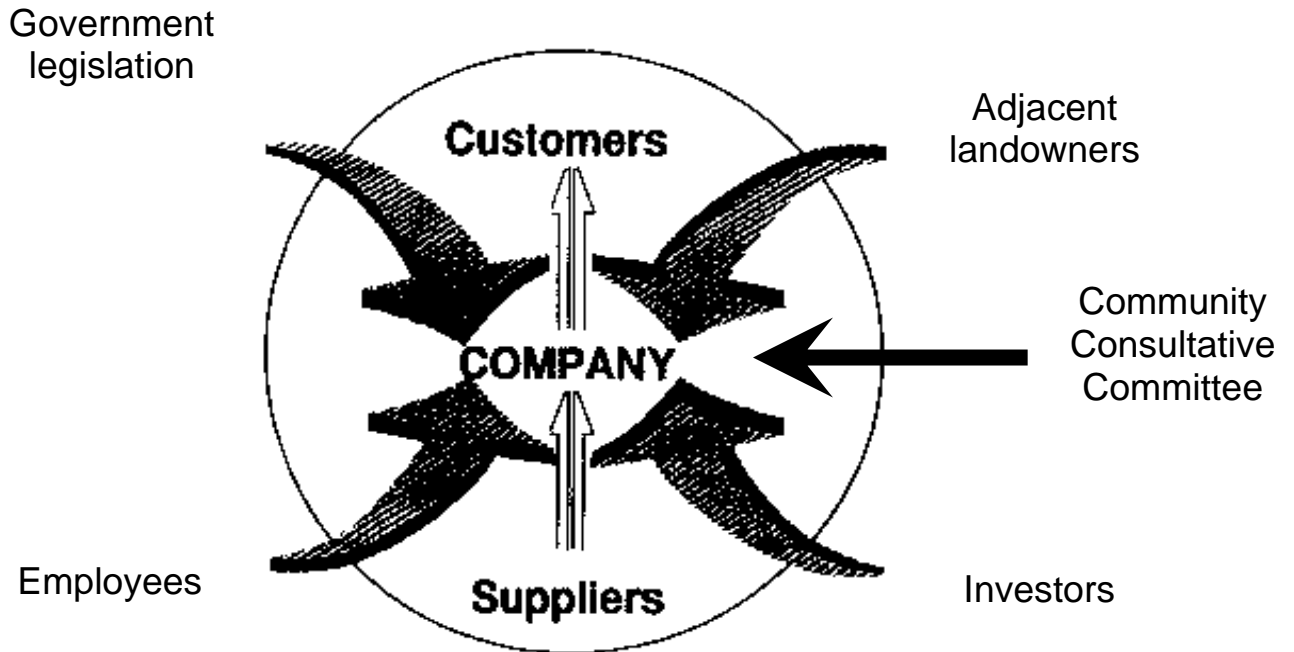


Figure 4 Graphical Representation of interested Stakeholders

10 COMMUNITY ISSUES

10.1 COMMUNITY INVOLVEMENT

Donaldson is aware of its community obligations and the need to engage with various stakeholders. Donaldson endeavours to keep the local community informed of its operations, plans and environmental performance.

This will be achieved by one or more of the following activities:

- distribution of newsletters and updates;
- 24 hour telephone complaints line (1800 111 271);
- informal discussions with local residents as required;
- provision of relevant plans, reports and monitoring results on the Donaldson Coal Mine website; and
- effective operation of CCCs.

Donaldson Coal Website

In accordance with Condition 112 of DA 98/01173 and DA 118/698/22 and Condition 11 of Schedule 6 of Project Approval 05_0136 respectively, the Donaldson Website will be maintained as a tool for the provision of information to stakeholders and interested parties about the operation and environmental performance of Donaldson Operations. The following information will be available on the Donaldson website:

- Environmental Assessments
- Current statutory approvals for the projects
- Approved strategies, plans or programs required under the conditions of the approvals
- Comprehensive summary of the monitoring results of the project, which have been reported in accordance with the various plans and programs approved under the conditions of the project approvals
- A complaints register, which is updated on a monthly basis
- Minutes of CCC meetings
- Annual reviews
- Any independent environmental audits
- Any other matter required by the secretary of the DP&E

Information available on the Donaldson Coal Website will be updated as required by the various approvals.

10.2 COMPLAINT PROTOCOL

Donaldson maintains a community response line (1800 111 271) that is dedicated to the receipt of community complaints. The community response line is publicly advertised and operates 24 hours per day, seven days per week to receive any complaints from neighboring residents or other stakeholders. The community response number is available on the Donaldson Coal website and in the community newsletters. Donaldson records all complaints made by the community in a complaints register. The Environment & Community Relations Superintendent (or delegate) is responsible for handling, recording and investigating complaints, and initiating remedial actions as required. The flowchart below details the procedure for complaints handling.

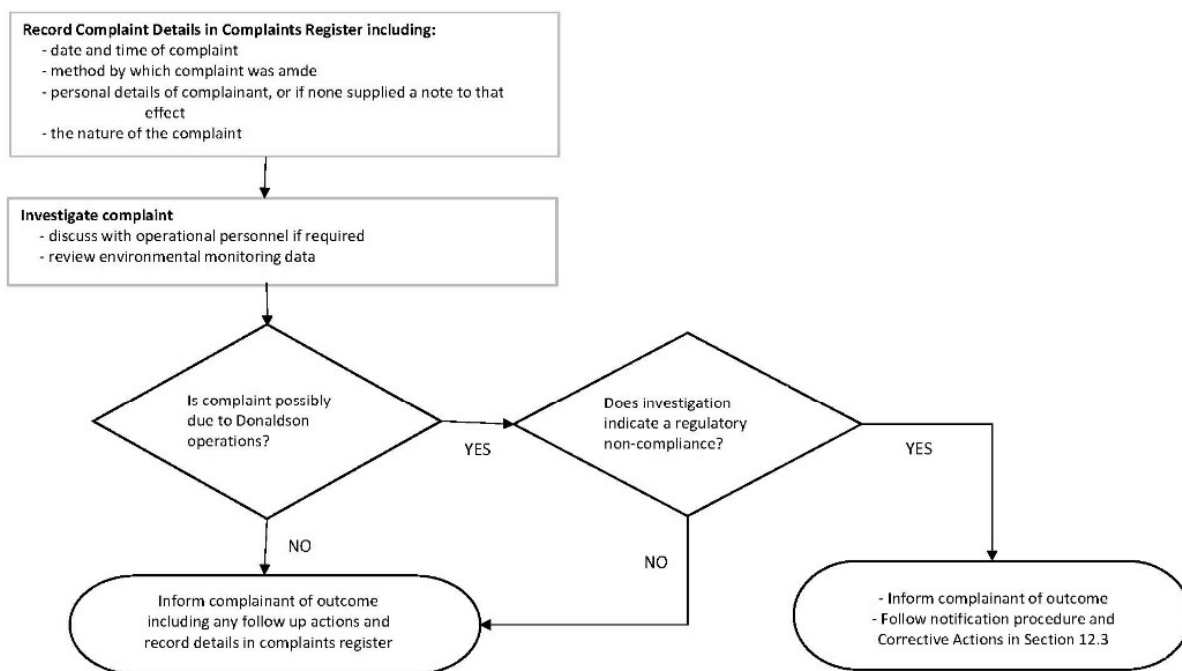


Figure 5 - Complaints Handling Flowchart

Complaint records are kept for at least four years after the complaint was made and will be available to any authorised officer of the Environment Protection Authority (EPA) who may require details. Complaint records are also provided in the relevant Annual Review Report and are available on the Donaldson website.

11 INCIDENT RESPONSE

11.1 INCIDENTS

An incident is defined as a set of circumstances that causes or threatens to cause material harm to the environment, and/or breaches or exceeds the limits or performance measures/criteria in Donaldson's approvals.

In the event that an incident which causes or threatens to cause material harm to the environment occurs, the incident will be managed in accordance with the Pollution Incident Response Management Plan (PIRMP) and in accordance with the protocol for industry notification of pollution incidents under Part 5.7 of the *Protection of the Environment Operations Act 1997*. A copy of the PIRMP is available on the Donaldson website.

The reporting of incidents and/or breaches and/or exceedances of limits or performance measures/criteria will be conducted in accordance with Condition 120 of the Donaldson Consent and Schedule 6 Condition 7 of the Abel Underground Consent. Donaldson will notify the Secretary of the DP&E and any other relevant agencies of any incident associated with the mine complex as soon as practicable after becoming aware of the incident.

Within seven days of the date of the incident, Donaldson Coal will provide the Secretary of the DP&E and any relevant agencies with a detailed report on the incident. The report will:

- describe the date, time, and nature of the exceedance/incident;
- identify the cause (or likely cause) of the exceedance/incident;
- describe what action has been taken to date; and
- describes the proposed measures to address the exceedance/incident.

11.1.1 Notification to Surrounding Property Owners

In the event that there is an incident which poses a potential threat to surrounding property owners and occupiers, Donaldson will notify those likely to be affected as soon as practicable. Depending on the nature of the incident, this may be in conjunction with or undertaken by emergency services.

Where the property owner notification procedure is initiated by Donaldson, the Environment & Community Relations Superintendent (or the person designated as fulfilling the responsibilities of the Environment & Community Relations Superintendent) will endeavor to maintain a record of all property owners and occupiers contacted.

11.1.2 Donaldson Incident Report

The Donaldson Incident Reporting procedure will be undertaken for all environmental incidents.

12 MONITORING, REVIEW AND IMPROVEMENT

12.1 MONITORING

Environmental monitoring is used to check the performance of the operation against regulatory standards and planning initiatives. Records of all environmental monitoring and results are kept on site and made readily available.

In accordance with Section 66(6) of the POEO Act, Condition 112 of Donaldson Open Cut Development Consent and Schedule 6 Condition 11 of Abel Underground Consent, the results from Donaldson's various monitoring programs are published on the Donaldson website: www.doncoal.com.au.

The type, location and frequency of monitoring take two separate forms. The first is statutory monitoring as required by EPA licences and approvals and the second is additional monitoring undertaken as part of specific projects or as part of compliance auditing.

Regular environmental monitoring is integral to the successful implementation of the EMS. The measurement and evaluation of criteria allows for the assessment of performance against quantitative and qualitative standards and assists in the identification of any non-conformances or areas that may require additional attention.

The Environmental Monitoring Program (**Appendix D**) has been prepared to provide a clear plan depicting the monitoring to be carried out in relation to the mine complex. This Program consolidates the monitoring requirements of the Environmental Management Plans in a central location.

12.2 ANALYSIS AND REPORTING PROCEDURES

The Environment & Community Relations Superintendent (or delegate) will review all environmental monitoring results on a regular basis to ensure compliance with all statutory, legislative and approval requirements (project approval, development consents, EPL, mining approvals), and to identify where results or trends indicate a risk of future non-compliance to the development consent criteria or other approval conditions.

The results of environmental monitoring compared to approval requirements will be included in the Annual Review Report.

The Annual Review Report will also identify any trends and/or any non-conformances over the year as well as describing any actions currently implemented or planned to ensure compliance with the appropriate criteria. The Annual Review Report will be provided to the relevant authorities including the DPE, RR, EPA and CCCs. It will also be placed on the Donaldson website along with a summary of environmental monitoring results.

The Annual Review Reports are prepared in accordance with Condition 114 of the Donaldson Open Cut Development Consent and Schedule 6 Condition 4 of the Abel Underground Consent.

The EPA will be provided with annual licence returns including statement of compliance, monitoring and summary of complaints. Copies are available on the EPA website.

Donaldson's compliance with development consents and licence conditions are assessed during the three yearly independent environmental audit, as required by both the Donaldson Open Cut Consent and the Abel Underground Consent. The final audit of the Donaldson Open Cut Consent was undertaken at the completion of mining. The most recent audit of the Abel Consent was completed in March 2015 and involved a review of all plans, including the EMS.

12.3 PROCEDURE FOR EXCEEDANCE OF CRITERIA OR THRESHOLD

Should environmental monitoring show that the relevant criteria or threshold has been exceeded, the company will conduct an investigation into the potential sources and/or causes. The investigation will consider any plant operation or other factors that may have resulted in the exceedance. If the company is responsible for the exceedance further actions will be taken to address the matter.

Reporting on any exceedance of criteria or threshold is to be undertaken in accordance with **Section 11.1.**

12.4 IMPLEMENTING CORRECTIVE ACTIONS

Corrective and preventative actions will be implemented through the development of an action plan. The plan will provide details on the action required, time frame and responsibilities for completing the action. The implementation of the corrective and preventative actions will be reviewed internally and specific procedures developed for addressing non-conformances with the EMS or subordinate plans and strategies.

13 DOCUMENT CONTROL

Donaldson will ensure that EMS documentation is maintained, up to date and readily available to all authorised personnel. The following procedures ensure document control:

- Copies of the EMS document will be kept on-site with Donaldson's electronic Document Control System. Once printed, the document will be considered "uncontrolled";
- The document will be reviewed, and if necessary revised, when major changes occur or at milestones established in Donaldson Coal Development Consent or Abel Underground Consent to ensure that it remains accurate and in accordance with all relevant standards;
- Donaldson personnel will be notified of the revision to the EMS; and
- The EMS will be clearly dated.

14 REVIEW AND CONTINUAL IMPROVEMENT

Operational activities will be subject to regular review to ensure conformance with commitments made in the EMS and subordinate plans and strategies.

In accordance with Schedule 6, Condition 4 of Abel Underground Consent, this Environmental Management Strategy will be reviewed, and if necessary revised, within 3 months of:

- (a) the submission of an Annual Review Report under Abel Underground Consent;
- (b) the submission of an incident report under Condition 120 of Donaldson Consent or Condition 7 of schedule 6 of Abel Consent ;
- (c) the submission of an audit report under condition 117 of Donaldson Open Cut consent or Condition 9 of schedule 6 of the Abel Consent; or
- (d) any modification to the conditions of the Donaldson Open Cut Development Consent or the Abel Underground Consent, (unless the conditions require otherwise).

New activities or changes to the operation that may result in environmental issues will be assessed to determine if changes are required to manage the impacts, and so if any revision to a particular subordinate plan is required.

The review process will include formalised procedures including independent audits, or consultation with relevant specialists where required.

Donaldson's compliance with the project approval, development consents and licence conditions are assessed by a 3-yearly independent environmental audit, as required by both the Donaldson consent and the Abel project approval.

Any revision of the EMS will be undertaken to the satisfaction of the Secretary of NSW Department of Planning and Environment.

15 MANAGEMENT REVIEW PROCESS

Donaldson management will review the EMS at least once every twelve (12) months.

The purpose of the review is to assess the effectiveness of the system and to determine whether any changes in policy, objectives, methods or philosophy are considered necessary to meet the current or future needs of Donaldson's projects or operations.

The major components of the Management Review include:

- checking continuing suitability, adequacy and effectiveness of the EMS;
- assessing the relevance of environmental commitments;
- documentation of findings; and
- attention for change in environmental policy objectives and targets in the light of changing circumstances and in view of continual improvement.

Appendix A

Donaldson Coal Mine Environment & Community Relations Policy



YANCOAL POLICY – Environment and Community Relations

Objective

Yancoal is committed to operating as an environmentally and socially responsible corporate entity. We will strive to be a valued and respected member of the communities in which we operate.

Scope

This policy applies to all Yancoal business units and operations.

Statement

Yancoal accepts its responsibility to conduct its operation in a lawful and environmentally sound manner and to work in consultation with the community and other stakeholders.

We will:

- Identify, assess and manage potential environmental impacts and community risks.
- Implement and validate an effective documented environment and community relations management system.
- Strive for continual improvement in environmental performance.
- Provide the resources and training to our employees necessary to achieve our objectives.
- Deliver outcomes that meet or exceed our licences and approvals.
- Comply with applicable legislation and regulations.
- Foster positive relationships with regulatory agencies and community representatives.
- Be accountable for our actions.
- We will strive for excellence in environmental management and in the establishment of effective and sustainable community relationships.

Signed: _____

Reinhold Schmidt
Yancoal Chief Executive Officer

Date: 5/6/2017



Appendix B

Donaldson Coal Open Cut Consent

File No. N97/0014

DA 98/01173 (MCC)

DA 118/698/22 (CCC)

DETERMINATION OF A DEVELOPMENT APPLICATION PURSUANT TO SECTION 101(8) OF THE UNAMENDED ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

I, the Minister for Urban Affairs and Planning, pursuant to Section 101(8) of the unamended *Environmental Planning and Assessment Act, 1979* ("the Act") determine the Development Application ("the application") referred to in Schedule 1 by granting consent to the application subject to the Conditions set out in Schedule 2.

The reasons for the imposition of the Conditions are:

1. to minimise the adverse environmental impacts the development may cause; and
2. to provide for environmental monitoring and reporting.

Because of the recognised significance of the locality as an area containing valuable flora and fauna, and because the established vegetation cover provides an extensive and complex fauna habitat, the Approval is specifically conditioned to conserve the ecological features of the area for the long term future.

The Conditions require the Applicant to understand the nature of the existing flora and fauna that prevailed before mining occurred; to pursue a progressive rehabilitation program that attempts to replicate the ecology of the area mined; and to continue to implement a comprehensive rehabilitation strategy for a suitable period after the mine has finished.

Andrew Refshauge

Minister for Urban Affairs and Planning

SIGNED BY MINISTER REFSHAUGE 14 OCTOBER 1999

Sydney,

1999

File No. N97/00147

SCHEDULE 1

Application made by: Donaldson Pty Ltd ("the Applicant").

To: The Minister for Urban Affairs and Planning ("the Minister").

In respect of: Land as shown on the map and table in Schedule 3.

For the following: Construction and operation of an open cut coal mine, including a Coal Preparation Plant, known as Donaldson Coal Mine ("the Development").

Development Application: DA 98/01173 dated 13/2/98 lodged with Maitland Council and DA 118/698/22 dated 19/2/98 lodged with Cessnock Council.

NOTES:

1. To ascertain the date upon which the Consent becomes effective, refer to section 101(9) of the unamended Act. To ascertain the date upon which the Consent is liable to lapse, refer to section 99 of the unamended Act.
2. Reference to the unamended EP&A Act 1979 means the Act in force immediately prior to 1 July 1998.

SCHEDULE 2 - CONDITIONS

Modification of 28 August 2005 in red type

ABBREVIATIONS AND DEFINITIONS

AEMR	Annual Environmental Management Report (Conditions 114-116)
construction	Includes any earthworks or roadworks
Councils	Cessnock, Maitland and Newcastle City Councils (as applicable)
DA area	Area to which the DA applies, as described in the table and map in Schedule 3
Director-General	Director-General of the Department of Urban Affairs and Planning or her nominee
DLWC	Department of Land and Water Conservation
DMR	Department of Mineral Resources
DUAP	Department of Urban Affairs and Planning
EIS	Environmental Impact Statement
EPA	Environment Protection Authority
Lower Hunter Region	Local government areas of Newcastle, Greater Cessnock, Maitland, Lake Macquarie and Port Stephens
NPWS	National Parks and Wildlife Service

OPERATION OF DEVELOPMENT

1. (1) The Applicant shall carry out the development generally in accordance with the:
 - development application DA 98/01173, dated 13 February 1998, lodged with Maitland City Council and DA 118/698/22, dated 19 February 1998, lodged with Cessnock City Council and the accompanying Environmental Impact Statement (EIS) dated 10 February 1998, and prepared by PPK Environment and Infrastructure, as modified by the reports in Schedule 4;
 - submissions to the Commission of Inquiry by the Applicant;
 - *Statement of Environmental Effects titled, Modification to the approved mining area at the Donaldson Open Cut Coal Mine, Beresfield, dated 10 November 2004, and prepared by GSS Environmental; and*
 - conditions of this consent.

- (2) *If there is any inconsistency between the above, either the conditions of this consent, or the most recent document shall prevail to the extent of any inconsistency.*

- (3) Unless otherwise specifically stated, the conditions of this consent do not apply to lot 131 DP 234203 (owned by Steggles Limited at the date of this consent), provided the Deed of Agreement between Steggles Limited and the Applicant (dated 24 February 1999) is in effect.

2. Except as expressly provided by the *Statement of Environmental Effects, dated 10 November 2004*, the development shall be restricted as follows:
 - (i) the mine plan in the EIS shall be reduced such that no mining shall be undertaken in any area identified in accordance with these Conditions as a Conservation Area. This includes the *Tetratheca juncea* Conservation Area (Condition 68); and
 - (ii) the Applicant shall not clear any land or erect any structures within any Conservation Area without approval from the Director-General.

3. (1) Subject to (2) the approved hours of operation are as follows:

Works	Period	Hours
Construction, including construction of any bunds	Monday to Friday	7am to 6pm
	Saturday	8 am to 1pm
Mining operations, including mining, haulage of waste to dumps and coal processing	Monday to Friday	24 hours per day
	Saturday, Sunday	7am to 6pm
Road transportation and stockpiling of coal	7 days per week	24 hours per day
Rail loading of coal	7 days per week	7am to 10pm
Maintenance of mobile and fixed plant	7 days per week	24 hours per day
Blasting, not involving closure of John Renshaw Drive	Monday to Saturday	7am to 5pm
Blasting, involving closure of John Renshaw Drive	Monday to Saturday	10am to 2pm

Table 1: Approved Hours of Operation

Notes: Restrictions on Public Holidays are the same as Sundays.

(2) The Applicant shall submit a report to the Director-General's satisfaction demonstrating that the noise limits in Condition 15 can be met while rail loading of coal is occurring during the period from 6pm to 10pm. If that report does not demonstrate that the noise limits can be met to the Director-General's satisfaction, then the hours of operation for rail loading of coal shall be restricted to 7am to 6pm.

4. The Applicant shall comply with any order of the Director-General to cease activities causing serious or irreversible environmental concerns, until those concerns have been addressed to the satisfaction of the Director-General.

COMMENCEMENT AND DURATION

5. (1) To ensure the employment benefits of this development are realised without delay, the Applicant shall commence mining within two years of the date of this Consent. This does not remove the obligation of the Applicant to comply with any other requirement listed in the Conditions of this Consent.

(2) To minimise potential delays to development on adjoining lands, consent for mining shall lapse 11 years from commencement of mining.

Note: Certain Conditions of this Consent will continue to operate after the Consent for mining operations has lapsed.

6. The Applicant shall notify the Director-General and the Councils in writing of the dates of commencement of:
- (i) construction works,
 - (ii) mining, and
 - (iii) coal processing operations,
- 14 days prior to the commencement of such works.
7. No construction or mining shall commence until:
- (i) the relevant compliance reports in Condition 121 have been completed to the satisfaction of the Director-General; and
 - (ii) the Applicant provides evidence to the Director-General of an agreement with the adjoining Bloomfield mine for the use of rail loading infrastructure.

ENVIRONMENTAL OFFICER

8. The Applicant shall employ an Environmental Officer, whose qualifications are suitable to the Director-General, throughout the life of the mine. The Environmental Officer shall:
- (i) be responsible for the preparation of the Environmental Management Strategy (Conditions 10-13) and environmental management plans;
 - (ii) be responsible for considering and advising on matters specified in the Conditions of this Consent and compliance with such matters;
 - (iii) be responsible for receiving and responding to complaints in accordance with Condition 113;
 - (iv) facilitate an induction and training program for all persons involved with construction activities, mining and environmental management activities; and
 - (v) have the authority and independence to require reasonable steps to be taken to avoid or minimise unintended or adverse environmental impacts and failing the effectiveness of such steps, to stop work immediately if an adverse impact on the environment is likely to occur.
9. The Applicant shall notify the Director-General, EPA, DLWC, DMR, NPWS, Councils and the Community Consultative Committee (Conditions 107-110) of the name and contact details of the Environmental Officer upon appointment and upon any changes to that appointment.

ENVIRONMENTAL MANAGEMENT STRATEGY

10. The Applicant shall prepare an Environmental Management Strategy (the Strategy) for the development, providing a strategic context for environmental management. All environmental management plans required by the Conditions of this Consent shall be consistent with the Strategy. The Strategy shall be prepared in consultation with the relevant authorities and the Community Consultative Committee and to the satisfaction of the Director-General, prior to commencement of construction.
11. The Strategy shall cover the area of mining, the haul road and rail loading facility, and the Conservation Areas. The Strategy shall include:
- (i) statutory and other obligations which the Applicant is required to fulfill during construction and mining, including all approvals and consultations and agreements required from authorities and other stakeholders, and key legislation and policies;
 - (ii) definition of the role, responsibility, authority, accountability and reporting of personnel relevant to environmental management, including the Environmental Officer;
 - (iii) overall environmental management objectives and performance outcomes, during construction, mining and decommissioning of the mine, for each of the key environmental elements for which management plans are required under this Consent;
 - (iv) overall ecological and community objectives and a strategy for restoration and management, including habitat areas, creeklines and drainage channels, within the context of those objectives;
 - (v) identification of cumulative environmental impacts and procedures for dealing with these at each stage of the development;
 - (vi) overall objectives and strategies for minimising the impacts of the development on economic productivity;
 - (vii) steps to be taken to ensure that all approvals, plans, and procedures are being complied with;
 - (viii) processes for conflict resolution in relation to the environmental management of the project; and
 - (ix) documentation of the results of consultations undertaken in the development of the Strategy.

12. The Applicant shall make copies of the Environmental Management Strategy available to Councils, EPA, DLWC, NPWS, DMR and the Community Consultative Committee within 14 days of approval by the Director-General.

ENVIRONMENTAL MONITORING AND REPORTING

13. (1) Except as provided in (2), the Applicant shall provide six-monthly monitoring reports on all environmental monitoring required under this Consent for the first three years of the project and for any further period as may be determined necessary by the Director-General. The reports shall contain interpretations of the monitoring data, and summarise exceedances and action taken. The Applicant shall make copies of the monitoring reports available to the Director-General, DLWC, EPA, DMR, Councils and the Community Consultative Committee, and to NPWS where relevant.
- (2) Noise monitoring reports shall be provided six-monthly for the life of the mine, unless the Director-General, on the advice of the independent noise expert (Condition 48) requires more frequent reports.
14. All sampling strategies and protocols undertaken as part of any monitoring program shall include a quality assurance/quality control plan and shall require approval from the relevant regulatory agencies to ensure the effectiveness and quality of the monitoring program. Only accredited laboratories shall be used for laboratory analysis.

NOISE AND VIBRATION

Noise Limits:

15. Except as may be expressly provided by a DEC licence under the *Protection of the Environment Operations Act 1997*, or unless subject to a negotiated agreement in accordance with Condition 23, the Applicant shall ensure that the noise emission from construction or mining operations, when measured or computed at the boundary of any dwelling not owned by the Applicant (or within 30 metres of the dwelling, if the boundary is more than 30 metres from the dwelling), shall not exceed the following noise limits:

Location	L _{A10} (15 minute) noise limits (dB(A))	
	Daytime	Night-time
Beresfield area (residential)	45	35
Steggles Poultry Farm	50	40
Ebenezer Park Area	46	41
Black Hill Area	40	38
Buchanan and Louth Park Area	38	36
Ashtonfield Area	41	35
Thornton Area	48	40

Table 2: Noise Limits

Note: Daytime is 7am to 10pm Monday – Saturday, and 8am to 10pm Sundays and Public Holidays. Night-time is 10pm to 7am Monday – Saturday, and 10pm to 8am Sundays and Public Holidays.

The noise limits apply for prevailing meteorological conditions (winds up to 3 m/s), except under conditions of temperature inversions.

Noise Management:

Monitoring

16. Prior to 31 October 2005, the Applicant shall prepare a Noise Monitoring Program for the development in consultation with the DEC, and to the satisfaction of the Director-General, which includes a noise monitoring protocol for evaluating compliance with the criteria in condition 15.
17. Deleted.
18. Deleted.
19. Deleted.
20. In the event that a landowner or occupier considers that noise or vibration from the project at their property is in excess of the relevant criteria set out in this Consent, the Applicant shall, upon receipt of a written request and at its own expense immediately undertake direct discussion with the landowners or occupiers affected to determine their concerns. Independent investigations of the noise complaints shall be carried out if the matter is not resolved within six weeks, in accordance with Conditions 48-53.

Noise Acquisition:

21. If noise monitoring or independent noise investigations indicate that noise from construction or operation of the mine at the boundary of a dwelling, or within 30 metres of the dwelling where the boundary is more than 30 metres from the dwelling, is in excess of the noise limits set out in this Consent under adverse weather conditions and if appropriate noise control measures cannot be achieved on the mine site, the landowner may request the Applicant in writing to acquire the whole of the property or such part of the property requested by the landowner where subdivision is approved.

Note: Adverse weather conditions means the presence of winds up to 3 metres per second, and/or temperature inversions of up to 4 degrees Celsius per 100 metres.

22. Any such request shall be referred to the Director-General for determination in consultation with the independent expert. If the Director-General determines acquisition is necessary, the Applicant shall acquire the property in accordance with Conditions 54-55.

Negotiated agreements:

23. If monitoring or independent investigations indicate that noise or dust from the mine is in excess of the criteria set out in this Consent and the affected landowner does not wish to be acquired, the Applicant shall, if requested by the affected landowner, enter into a negotiated agreement. Where a negotiated agreement is required, the Applicant shall, within the time period specified by the Director-General:
 - (i) appoint an independent facilitator, approved by the Director-General;
 - (ii) negotiate a package of benefits for the landowner, which may include undertaking noise reduction measures on the property or at the dwelling(s) or compensation;
 - (iii) pay all reasonable costs of the process; and
 - (iv) report to the Director-General and the EPA on the agreement reached.

BLASTING

Blasting Criteria:

24. The Applicant shall ensure that the airblast overpressure level from blasting at the development does not exceed the criteria in Table 3, and the ground vibration level does not exceed the criteria in Table 4, at any residence on privately-owned land or noise sensitive location as defined in the EPA's Industrial Noise Policy.

Airblast overpressure level (dB(Lin Peak))	Allowable exceedance
115	5% of total number of blasts in a 12 month period
120	0%

Table 3: Airblast Overpressure Impact Assessment Criteria

Peak particle velocity (mm/s)	Allowable exceedance
5	5% of the total number of blasts in a 12 month period
10	0%

Table 4: Ground Vibration Impact Assessment Criteria

Blasting Design and Management:

25. (1) The Applicant shall not blast within 500 metres of an occupied residence.
- (2) The Applicant shall not blast within 500 metres of private lands unless there is a written agreement between the Applicant and the landowner/occupier(s) to the satisfaction of the Director-General which guarantees the safety of persons who might use those lands.
- (3) The Applicant shall not blast within 500 metres of public lands unless public access to those areas is prevented at times of blasting.
- (4) The Applicant shall not blast within 500 metres of a public road unless the road is closed with the prior written agreement of the Regional Traffic Committee (or in the absence of the Regional Traffic Committee, the Director-General). A copy of any such agreement shall be supplied to the Director-General within 14 days of the agreement.

If determined necessary by the Regional Traffic Committee the Applicant shall prepare a Traffic Study to identify upgrading of the surrounding road system commensurate with the additional traffic volumes. The Study shall be prepared in consultation with Councils and the RTA, and to the satisfaction of the Regional Traffic Committee. All recommended traffic management measures and road infrastructure upgrading are to be undertaken at the Applicant's expense prior to any closure of John Renshaw Drive. If the study identifies the need for acquisition to enable the works to be undertaken, acquisition shall occur in accordance with the acquisition procedures established under this Consent.

- (5) The 500 metre distance may be reduced by the Director-General if a risk analysis provides an appropriate level of safety.

26. The Applicant shall prepare and implement a Blast Management Plan in consultation with DMR and Councils, prior to the commencement of blasting (including trial blasting). The Applicant shall make copies of the Blast Management Plan available to the independent noise expert (Condition 48), EPA, DMR, Councils and the Community Consultative Committee within 14 days of approval by the Director-General.
27. The Blast Management Plan shall:
- (i) provide details of any proposed trial blasting;
 - (ii) identify a monitoring program, including locations and justification for selection of locations such as the Steggles Black Hill poultry operations and areas of old underground mine workings;
 - (iii) detail measures to ensure that air blast overpressure and vibration monitoring and control is generally carried out in accordance with the recommendations of Australian Standard AS-2187-1993 (or its latest version) and in terms of ANZECC Guidelines;
 - (iv) detail methods to measure weather data as soon as practicable prior to blasting and from that data predict whether noise levels are likely to be increased above the levels expected under prevailing meteorological conditions;
 - (v) detail measures to be taken to minimise disruptions from blasting, including any road closures agreed in accordance with Condition 25, and management of impacts on local traffic and pedestrian movements;
 - (vi) specify procedures for ensuring that the occurrence of concurrent blasts with the adjoining coal mine operators is avoided; and
 - (vii) identify procedures for notifying landowners/occupiers within 2 km of the site of the general blasting program and for notifying landowners or occupiers within 500m of blasting events (or any reduced area approved by the Director-General under Condition 25(5)) prior to blasting occurring.
28. The Applicant shall not blast if weather conditions indicate that air blast overpressure levels are likely to be exceeded at residences not owned by the Applicant.
29. The Applicant shall report on blasting practices (including any trial blasting), weather data and the results of blast emissions monitoring in the six-monthly environmental monitoring reports and in the AEMR.
30. The Applicant shall revise the Blast Management Plan as necessary and provide an updated Plan five years after commencement of mining to the Director-General, the independent noise expert, EPA, DMR, Councils and the Community Consultative Committee.

Blasting Impacts:

31. Prior to the commencement of blasting, the Applicant shall undertake baseline structural surveys of all buildings and structures within 1.5 kilometres of blasting locations, unless it can be demonstrated to the satisfaction of the Director-General in consultation with DMR that surveys of certain properties are unnecessary because blasting damage is unlikely to occur to those properties. In conducting these structural surveys, the Applicant shall ensure that:
- (i) the surveys are carried out by a technically qualified person, as agreed in consultation with the Director-General and relevant landowners; and
 - (ii) a copy of any inspection report (including video or photographs, if requested), certified by the person who undertook the inspection, is supplied to the relevant property owner within 14 days of receipt of same.
32. In the event that a landowner or occupier considers that blast emissions from the development may have affected the material condition of their property, the landowner may make a written request to the Director-General for an independent dilapidation assessment. If the Director-General, in

consultation with the DMR, is satisfied that an independent investigation is required, the Applicant shall ensure:

- (i) the survey is carried out by a technically qualified person, as agreed in consultation with the Director-General and the relevant landowners or occupiers; and
 - (ii) a copy of any inspection report (including video or photographs, if requested), certified by the person who undertook the inspection, is supplied to the relevant property owner within 14 days of receipt of same.
33. Where a dilapidation assessment concludes that structural damage has occurred as a result of blast emissions, the Applicant shall undertake immediate preventative and/or remedial measures at its expense.

Newcastle Herald's Printing Facilities at Holmwood Business Park:

34. Prior to commencement of mining, the Applicant shall:
- (i) conduct ambient vibration monitoring adjacent to (on the floor) and if required, on the most vibration-sensitive component of the printing facilities in order to establish both the levels of ambient vibration generated by the operation of the Printing Facility itself and that of any other nearby vibration sources;
 - (ii) provide a detailed report on the monitoring procedures and the monitoring results and findings to the Newcastle Herald upon completion of the survey;
 - (iii) meet with Herald representatives to discuss the results of the survey and determine whether the initially agreed limit of 0.3 mm/s is appropriate; and
 - (iv) design initial blasting for compliance with a peak particle velocity vibration criterion of 0.3 mm/s adjacent to or on the Printing Facility, unless a more appropriate limit is mutually agreed.
35. The Applicant shall monitor the impacts of blasting on the Printing Facility throughout the life of the mine, at a mutually agreed location in or adjacent to the Printing Facility during every blast. The Applicant shall provide results of the monitoring to the Newcastle Herald and provide a summary in the AEMR.

Hunter Water Corporation Pipelines:

36. *The Applicant shall ensure that blasting is undertaken in a manner that protects the Hunter Water Corporation's pipeline to the satisfaction of the Hunter Water Corporation.*

AIR QUALITY

Air Quality Criteria:

37. The Applicant shall take all practical steps to manage the mine's operations so that the ambient air quality goals for total suspended particles (TSP) of 90ug/m³ (annual average) and the dust deposition goal of 4gm/m² (annual average) are not exceeded as a result of the development when monitored at any monitoring location specified in the Air Quality Management Plan.

Air Quality Management:

38. The Applicant shall prepare and implement an Air Quality Management Plan, containing strategies to manage the mine's contribution to dust deposition, TSP, PM₁₀ and PM_{2.5} to the satisfaction of the Director-General, prior to the commencement of construction. The Applicant shall make copies of the Air Quality Management Plan available to the independent expert (Condition 48), EPA, Councils and the Community Consultative Committee within 14 days of approval by the Director-General.

39. The Air Quality Management Plan shall:
- (i) identify potential sources of dust deposition, TSP and fine particulates (PM₁₀ and PM_{2.5}) and specify appropriate monitoring intervals and locations. The purpose of the monitoring is to evaluate, assess and report on these emissions and the ambient impacts with the objective of understanding the mine's contribution to levels of dust deposition, TSP and fine particulates in ambient air around the mine site;
 - (ii) provide the mine's monitoring plan having regard to local meteorology and the relevant Australian Standards, identifying the methodologies to be used, including justification for monitoring intervals, weather conditions, seasonal variations, selecting locations, periods and times of measurements;
 - (iii) provide the design of any modelling or other studies, including the means for determining the contribution to dust deposition, TSP and fine particulates from the development;
 - (iv) provide details of dust suppression measures for all sources of dust from the development (including the haul road and the rail loading site);
 - (v) provide details of actions to ameliorate impacts if they exceed the relevant criteria; and
 - (vi) provide the design of the reactive management system intended to reduce the day-to-day impacts of dust and fine particulates due to the mine's operation.
40. The Applicant shall ensure the prompt and effective rehabilitation of all disturbed areas as soon as practicable to minimise the generation of dust.
41. The Applicant shall cease offending work at such times when the hourly average wind speed exceeds 5 metres per second and the operations are resulting in visible dust emissions blowing in a direction so as to cross onto public roads or lands not owned by the Applicant.
42. The Applicant shall revise the Air Quality Management Plan as necessary and provide an updated Plan five years after commencement of mining and to the Director-General, independent air quality expert (Condition 48), EPA, Councils and the Community Consultative Committee.

Air Quality Monitoring:

43. The Applicant shall install, maintain and continuously operate a meteorological station in accordance with the relevant Australian Standards and to the satisfaction of the EPA. The meteorological station shall be installed within six weeks of the date of this consent and remain for the life of the mine. The Applicant shall analyse and report the meteorological data on a monthly basis to adequately characterise the site, and shall use the data collected by the wind monitoring and recording station to determine when and how the mine operation is to be modified in accordance with the Air Quality Management Plan and the Conditions of this Consent.
44. The Applicant shall install, maintain and operate dust deposition gauges in accordance with the relevant Australian Standards and to the satisfaction of the EPA. The dust deposition gauges shall be installed and operational within six weeks of the date of this consent and the Applicant shall determine the dust deposition rate in grams/m²/month in each calendar month so that any increases in dust deposition rates can be presented in the AEMR.
45. (1) The Applicant shall install, maintain and operate an air quality monitoring network in accordance with the relevant Australian Standards and to the satisfaction of the EPA. The network shall be installed and operational within six weeks of the date of this consent and in each calendar year the Applicant shall determine the concentrations of TSP in :g/m³ (annual average) and fine particulates (PM₁₀ and PM_{2.5}) in :g/m³ (24 hour average and annual average) so that the contribution of the mine to regional ambient air quality can be presented in the AEMR.

- (2) The Applicant shall also participate in (and if appropriate contribute reasonable funds to) regional air quality studies conducted by or on behalf of the EPA or the Director-General.

Air Quality Acquisition:

46. If dust monitoring or independent dust investigations indicate that dust from operation of the mine at a dwelling is in excess of the criteria set out in this Consent and if appropriate dust control measures cannot be achieved on the mine site, the landowner may request the Applicant in writing to acquire the whole of the property or such part of the property requested by the landowner where subdivision is approved.
47. Any such request shall be referred to the Director-General for determination. If the Director-General determines acquisition is necessary, the Applicant shall acquire the property in accordance with Conditions 54-55.

INDEPENDENT MONITORING OF NOISE, VIBRATION OR DUST

48. The Applicant shall bear the reasonable costs of the appointment by the Director-General of an independent noise and air quality expert(s) and/or mediator to assist in the implementation of the Conditions of this Consent. The independent expert(s) shall:
- (i) receive and advise the Director-General on the Noise, Blast and Air Quality Management Plans;
 - (ii) receive and advise the Director-General on noise and dust monitoring results;
 - (iii) be responsible for, or supervise, the independent investigation of complaints; and
 - (iv) advise the Director-General on the need for acquisition due to noise, vibration or dust.
- The independent expert(s) shall report directly to the Director-General and provide such advice as agreed by the Director-General to the Applicant and the landowner or occupier.
49. In the event that a landowner or occupier considers that noise, vibration and/or dust from the project at their property is in excess of the relevant criteria set out in this Consent the landowner may make a written request to the Applicant for an investigation. If the Director-General, on the advice of the independent expert, is satisfied that an investigation is required, the independent expert shall ensure that:
- (i) direct discussions are undertaken with the landowners or occupiers affected to determine their concerns and to plan and implement an investigation to quantify the impact and determine the sources of the effect;
 - (ii) independent investigations are conducted to quantify the impact and determine the source of the effect; and
 - (iii) a report is submitted to the Director-General, the Applicant and the landowner or occupier.
50. If exceedances are identified, within six weeks or as otherwise directed by the Director-General, the Applicant shall modify the mining activity which may be causing the impacts and/or enter into a negotiated agreement (Condition 23) with the affected landowner.
51. The Applicant shall bear the cost of the independent investigations and make available plans, programs and other information necessary for the independent expert(s) to form an appreciation of the past, present and future works and their effects on noise, vibration and/or dust emissions.
52. Investigations shall be carried out in accordance with a documented Plan. The Plan shall be designed and implemented to measure and/or compute (with appropriate calibration by measurement) the relevant noise, vibration and/or dust levels at the complainant's residence/property boundary emitted by the development.

53. Further independent investigations shall cease if the Director-General, in consultation with the independent expert, is satisfied that the relevant approval levels are not being exceeded and are unlikely to be exceeded in the future.

ACQUISITION PROCEDURE

54. Upon determination of the Director-General in relation to the purchase of a property in accordance with any Conditions of this Consent, the Applicant shall negotiate and purchase the whole of the property (unless the request specifically requests acquisition of only part of the property and subdivision has already been approved) within six months of receipt of notification from the Director-General. The Applicant shall pay the landowners an acquisition price resulting from proper consideration of:
- (i) a sum not less than the current market value of the owner's interest in the land, whosoever is the occupier, having regard to:
 - (a) the existing use and permissible use of the land in accordance with the applicable planning instruments at the date of the written request;
 - (b) the presence of improvements on the land and/or any Council approved building or structure which although substantially commenced at the date of the request is completed subsequent to that date; and
 - (c) as if the land was unaffected by the development proposal.
 - (ii) the owner's reasonable compensation for disturbance allowance and relocation within the Lower Hunter Region;
 - (iii) the owner's reasonable costs for obtaining legal advice and expert witnesses for the purposes of determining the acquisition price for the land and the terms upon which it is to be acquired; and
 - (iv) the purchase price determined by reference to points (i), (ii) and (iii) shall be reduced by the amount of any compensation awarded to a landowner pursuant to the *Mining Act, 1992* or other legislation providing for compensation in relation to coal mining but limited to compensation for dwellings, structures and other fixed improvements on the land, unless otherwise determined by the Director-General in consultation with the DMR.
55. Notwithstanding any other Condition of this Consent, the Applicant may, upon request of the landowner, acquire any property affected by the project during the course of this Consent on terms agreed to between the Applicant and the landowner.

INDEPENDENT VALUATION

56. In the event that the Applicant and the landowner cannot agree within three months upon the acquisition price of the land and/or the terms upon which it is to be acquired under the terms of this Consent, then either party may refer the matter to the Director-General who shall request an independent valuation to determine the acquisition price. The independent valuer shall consider any submissions from the landowner and the Applicant in determining the acquisition price.
57. If the independent valuer requires guidance on any contentious legal, planning or other issues, the independent valuer shall refer the matter to the Director-General, who, if satisfied that there is a need for a qualified panel, shall arrange for the constitution of the panel. The panel shall consist of:
- (i) the appointed independent valuer;
 - (ii) the Director-General; and/or
 - (iii) the President of the Law Society of NSW or nominee.
- The qualified panel shall, on the advice of the valuer, determine the issue referred to it and advise the valuer.

58. The Applicant shall bear the costs of any independent valuation or survey assessment requested by the Director-General.
59. The Applicant shall, within 14 days of receipt of a valuation by the independent valuer, offer in writing to acquire the relevant land at a price not less than the said valuation.

WATER

Water Management:

60. The Applicant shall prepare and implement a Water Management Plan in consultation with DLWC, Councils, EPA and the Hunter Catchment Management Trust, and to the satisfaction of the Director-General, prior to the commencement of construction. The Applicant shall make copies of the Water Management Plan available to the EPA, DLWC, DMR, Councils, the Hunter Catchment Management Trust and the Community Consultative Committee within 14 days of approval by the Director-General.
61. The Water Management Plan shall include but not be limited to:
 - (i) management of the impacts of the development on the quality and quantity of surface and groundwater, including water in dirty water dams and clean water diversion dams;
 - (ii) stormwater and general surface runoff diversion to ensure separate effective management of clean and dirty water;
 - (iii) stormwater management facilities designed to at least a 1:10 year storm design criteria;
 - (iv) identification of any possible adverse effects on water supply sources (both surface and groundwater) of landowners or occupiers from the development, and implementation of mitigation measures as necessary;
 - (v) identification of the fresh quality groundwater zones within the DA area and appropriate protection strategies;
 - (vi) management of the impacts of the development on the quality and quantity of groundwater within 2 kilometres of the boundary of the DA area, with particular attention to mobilisation of salts and contingency plans for managing any adverse impacts;
 - (vii) management of the impacts of the development on the quality and quantity of surface water discharged, including scheduling of mining operations to minimise the area excised from the catchment draining to Woodberry Swamp at any one time;
 - (viii) identification of a defined buffer zone between the mine pit and Four Mile Creek and measures to minimise the risk of blast-induced fractures in the buffer zone to prevent saline seepage from the rehabilitated landform toward Four Mile Creek in the post-mining period;
 - (ix) procedures for the maintenance of drainage systems and water management structures; and
 - (x) development of a strategy for the decommissioning of water management structures, including dirty water dams and clean water diversion dams, and long term management of the final void.
62. The Applicant shall revise the Water Management Plan as necessary and provide an updated Plan five years after commencement of mining to the Director-General, EPA, DLWC, DMR, Councils, the Hunter Catchment Management Trust and the Community Consultative Committee.

Water monitoring:

63. The Applicant shall prepare and implement a detailed monitoring program for groundwater and surface water in consultation with the Department, DEC, DPI and the Hunter-Central Rivers Catchment Management Authority throughout the life of the mine and for a period of at least five

years after the completion of mining, or other such period as determined by the Director-General. The results of the monitoring information shall be included in the AEMR (Conditions 114-116).

The monitoring program shall contain:

- (xi) details of proposed monitoring sites, frequency and parameters to be tested;
 - (xii) pre-mining baseline data;
 - (xiii) monitoring of surface water quality to detect any changes in ambient water quality between the mine site and the wetlands;
 - (xiv) monitoring of macroinvertebrates and vegetation in accordance with protocols developed for the Hunter SIGNAL biological assessment criteria, with an assessment of inflows to the wetlands;
 - (xv) monitoring of stream stability, stream bank and bed stability;
 - (xvi) monitoring of the volume and quality of water transfer between the Donaldson and Bloomfield operations; and
 - (xvii) a program for replacement of any monitoring bores destroyed by the development.
64. Prior to 31 October 2005, the Applicant shall revise, and then implement any necessary changes in the monitoring program for groundwater and surface water to the satisfaction of the Director-General.

Water Supply:

65. On request of a landowner whose water supply from licensed bore holes or springs has been determined by DLWC at any time to have been affected by the project, the Applicant shall replace lost water supply with water of an equivalent quality and quantity to meet the landowner's requirements, to the satisfaction of DLWC.

EROSION AND SEDIMENT CONTROL

66. The Applicant shall prepare and implement an Erosion and Sediment Control Plan(s) for the development (including the haul road and the relocation of utilities and services) to the satisfaction of DLWC and submit these Plans to the EPA as part of applications for a licence under the *Protection of the Environment Operations Act*. The Plan(s) shall be prepared prior to the commencement of work in the relevant areas. The Applicant shall make copies of all Erosion and Sediment Control Plan(s) available to the Director-General, Councils and the Community Consultative Committee within 14 days of approval.
67. The Erosion and Sediment Control Plan(s) shall include consideration and management of erosion and sedimentation of watercourses and waterbodies, including Woodberry Swamp.

FLORA AND FAUNA

***Tetratheca juncea* Conservation Area:**

68. Prior to the commencement of construction, the Applicant shall:
- (i) undertake a survey of potential *Tetratheca juncea* habitat in the southwest portion of the site. The survey shall:
 - (a) be undertaken by a suitably qualified botanist, with the assistance of a suitably qualified surveyor, both approved by the Director-General;
 - (b) re-examine the outcomes of previous surveys;
 - (c) be undertaken between the months of August and December (inclusive);

- (d) record the location of *Tetratheca juncea* clumps on the ground using suitable tags and by using either theodolite and electronic measuring equipment or differential GPS;
 - (e) investigate the occurrence of any native sonicating bee habitat within 500 metres of the *Tetratheca juncea* population; and
 - (ii) establish a Conservation Area for the *Tetratheca juncea* based on the findings of the survey. The Conservation Area shall include a 50 metre buffer. The boundaries of the Conservation Area shall be surveyed and marked by a suitably qualified surveyor, with the assistance of a botanist, using either a theodolite and electronic measuring equipment or differential GPS. No clearing, construction or mining shall commence until the boundary of the Conservation Area has been approved by the Director-General.
69. The Applicant shall prepare a Management Plan for the *Tetratheca juncea* Conservation Area in consultation with NPWS and to the satisfaction of the Director-General, prior to commencement of construction. The Plan shall be consistent with the Flora and Fauna Management Plan (Conditions 76-79); and include measures for fire management. The Applicant shall clearly mark the boundary of the Conservation Area and make provision for signage which specify that no dumping, clearing or other works are permitted in the Conservation Area. Such signage shall be replaced as required. The Applicant shall make copies of the *Tetratheca juncea* Management Plan available to NPWS, Councils and the Community Consultative Committee within 14 days of approval by the Director-General.

BUSHLAND AREA

70. Within six months of this Consent, or as otherwise agreed by the Director-General, the Applicant shall identify a bushland area(s) in the region that will adequately compensate for the impact of the mine on biodiversity, provide compensatory habitat and be managed for the primary purposes of conservation. The area shall be identified in consultation with NPWS and Councils and be to the satisfaction of the Director-General. Identification of the bushland area(s) shall include:
- (i) a detailed assessment of the current characteristics and ecological values of existing ecosystems affected by the mine, including the habitat of threatened species identified in the EIS as possibly occurring in the area and the Spotted Gum Ironbark community;
 - (ii) identification of conservation objectives to be achieved by the establishment of the bushland area(s), with reference to the Regional Biodiversity Strategy and the principles of Ecologically Sustainable Development;
 - (iii) consideration of alternative locations within the region, including, but not limited to, the land proposed as compensatory area in the EIS (ie land adjoining the mine site);
 - (iv) a detailed assessment of appropriate boundaries, size and shape of the bushland area(s), in relation to the characteristics, values and objectives;
 - (v) consideration of appropriate management options necessary to protect the conservation values; and
 - (vi) consideration of opportunities to incorporate cultural heritage conservation into the bushland area(s).
71. In identifying the bushland area(s), the following broad criteria shall be applied:
- (i) a ratio of 2:1 in terms of compensatory area to the area to be directly impacted by mining and associated infrastructure;
 - (ii) the vegetation communities and habitat values of the bushland area(s) are to be broadly representative of the area which will be subject to mining and contain a similar suite of fauna species;
 - (iii) the location of the bushland area(s) will aim to consolidate existing reserves in the lower Hunter Area; and

- (iv) reserve design criteria, including edge-to-area ratio, size and connectivity shall be taken into account.
72. Upon approval of the identified bushland area(s) by the Director-General, the Applicant shall:
- (i) secure care, control and management of the bushland area(s) prior to the commencement of mining;
 - (ii) retain management and ownership of the land for a minimum of 36 years from the commencement of construction, unless other arrangements are agreed in accordance with Condition 73; and
 - (iii) prepare and implement a Management Plan for that area in consultation with NPWS and to the satisfaction of the Director-General, during the period in which the Applicant is responsible for management. The Management Plan shall be consistent with the Flora and Fauna Management Plan (Conditions 76-79) and consider the integration of cultural conservation objectives and management. The Applicant shall make copies of the Management Plan available to NPWS and the Community Consultative Committee within 14 days of approval by the Director-General.

For the purposes of the Conditions of this Consent, the bushland area(s) approved by the Director-General shall be known as the Bushland Conservation Area until the completion of the period referred to in Condition 72(ii) and any Conditions relating to Conservation Areas shall apply to that area during that period. The Management Plan referred to in Condition 72(iii) shall be referred to as the Bushland Conservation Area Management Plan.

73. The Applicant shall undertake negotiations with the NPWS and Councils to reach agreement on the long term tenure and management status of the Bushland Conservation Area. These negotiations must commence within six months of commencement of construction.
74. *Prior to 31 October 2005, the Applicant shall revise the Bushland Conservation Area Management Plan to compensate for the extension of the disturbance area in the vicinity of Weakley's Flat Creek, to the satisfaction of the Director-General, and provide an updated Plan to the DEC, Councils and the Community Consultative Committee.*

Flora and Fauna Management:

75. The Applicant shall bear the reasonable costs of the appointment by the Director-General of an independent flora and fauna expert(s) to assist in the implementation of the Conditions of this Consent. The independent expert(s) shall:
- (i) be selected in consultation with the applicant;
 - (ii) assess and advise the Director-General on the Applicant's proposed Conservation Areas and Management Plans for those areas;
 - (iii) assess and advise the Director-General on the Applicant's proposed bushland area(s);
 - (iv) assess and advise the Director-General on the Applicant's proposed Flora and Fauna Management Plan and the Rehabilitation Plan; and
 - (v) assess and advise the Director-General on the Applicant's monitoring of flora and fauna management and rehabilitation.
76. The Applicant shall prepare and implement a Flora and Fauna Management Plan for the mine site (in addition to the management plans for specific Conservation Areas), in consultation with DLWC, NPWS and Councils, and to the satisfaction of the Director-General, prior to the commencement of construction. The Applicant shall make copies of the Flora and Fauna Management Plan available to DLWC, NPWS, Councils and the Community Consultative Committee within 14 days of approval by the Director-General.

77. The Flora and Fauna Management Plan shall include but not be limited to:
- (i) additional surveys to more precisely identify the distribution of known and potential nest and roost trees for owl species. The surveys shall:
 - (a) be undertaken by a person experienced in the identification of owl nest and roost trees, approved by the Director-General; and
 - (b) record the location of known and potential nest and roost trees on the ground by marking the tree and by using either theodolite and electronic measuring equipment or differential GPS;
 - (c) a vegetation map delineating major vegetation communities, topographic features and the location of threatened species habitats, including potential and known owl nest and roost trees;
 - (ii) details of measures to manage the impacts of the development, including:
 - (a) restoration of degraded areas;
 - (b) management of invasive weed species and feral animals;
 - (c) establishment of an appropriate hazard reduction regime which is in keeping with the ecological values of the area;
 - (d) revegetation and the provision of compensatory areas of equivalent ecological and habitat value where necessary; and
 - (e) strategies to provide increased security for existing habitats and communities;
 - (iii) details of measures to manage the impacts of environmental management on flora and fauna, including the impact of erosion and sediment control measures and hazard reduction burning;
 - (v) priorities for action and a timetable for all works outlined in the Plan; and
 - (vi) a program to monitor flora and fauna impacts on undisturbed portions of the mining lease area and downstream environments (such as the Woodberry Swamp). The program shall extend for the life of the mine and for a period thereafter as approved by the Director-General, and include:
 - (a) justification for monitoring intervals and locations;
 - (b) monitoring of the presence and persistence of native flora and fauna species over time, particularly threatened species; and
 - (c) monitoring the effectiveness of management measures.
78. The Flora and Fauna Management Plan shall also include a Rehabilitation Plan that details the measures to be undertaken to progressively rehabilitate disturbed areas of the mine to replicate the original vegetation cover that existed before mining occurred. The Applicant shall be responsible for the management and monitoring of the rehabilitated mine site until such time as the Director-General agrees that restoration has been successful.
79. The Applicant shall revise the Flora and Fauna Management Plan as necessary and provide an updated Plan five years after commencement of mining to the Director-General, NPWS, Councils and the Community Consultative Committee.
80. The Applicant shall participate in (and if appropriate, contribute such reasonable funds as determined by the Director-General in consultation with NPWS) research into the Powerful Owl and Masked Owl habitat requirements in the region, and the habitat requirements and lifecycle of *Tetratheca juncea*.

HERITAGE

Heritage Statutory Requirements:

81. Prior to commencement of construction, the Applicant shall:

- (i) comply with the statutory requirements of NPWS in relation to works affecting Aboriginal sites; and
 - (ii) undertake a targeted archaeological survey of the slopes component within the mining impact area in cooperation with the Aboriginal community. Any Aboriginal sites located will be recorded, the significance of the sites assessed, and management strategies for the sites identified.
82. If, during the course of construction, the Applicant becomes aware of any heritage or archaeological material, all work likely to affect the material shall cease immediately and the relevant authorities consulted about an appropriate course of action prior to recommencement of work. The relevant authorities may include NPWS, the Heritage Office, and the Local Aboriginal Land Councils. Any necessary permits or consents shall be obtained and complied with prior to recommencement of work.

Aboriginal Heritage Management:

83. Prior to commencement of construction, the Applicant shall establish an Aboriginal Conservation Area along Four Mile Creek and tributaries in accordance with a plan approved by the Director-General. The plan shall include:
- (i) identification of an appropriate boundary and the basis on which the boundary has been selected;
 - (ii) a map at a scale of 1:1000 or larger which clearly delineates the Conservation Area boundary and specific features; and
 - (iii) documentation of consultations with NPWS and Aboriginal community groups in relation to the definition of the Conservation Area.
84. The Applicant shall prepare and implement an Aboriginal Sites Management Plan in consultation with the Aboriginal community, Councils and NPWS, and to the satisfaction of the Director-General, prior to the commencement of construction. The Applicant shall make copies of the Aboriginal Sites Management Plan available to the Director-General, Aboriginal community, Councils and the Community Consultative Committee within 14 days of approval by NPWS.
85. The Management Plan shall include, but not be limited to:
- (i) documentation of consultation with the relevant Aboriginal community groups to identify any outstanding concerns they may have with the project and a clear statement about how these concerns will be addressed, including any action to be taken;
 - (ii) identification of conservation objectives for the site as a whole and for the Conservation Area specifically;
 - (iii) a program to monitor the impacts of the development on the Conservation Area, including justification for monitoring locations and intervals;
 - (iv) strategies to achieve conservation objectives, including an access policy;
 - (v) the provision of fencing to permit faunal movement and the removal of fencing within six months of completion of mining;
 - (vi) further investigations; and
 - (vii) long term management requirements upon completion of mining.
86. The Applicant shall revise the Aboriginal Sites Management Plan as necessary and provide an updated Plan five years after commencement of mining to the Director-General, NPWS, Councils and the Community Consultative Committee.

WASTE

87. The Applicant shall prepare and implement a Waste Management Plan in consultation with EPA, DMR and the Hunter Waste Planning and Management Board, and to the satisfaction of the Director-General, prior to commencement of construction. The Applicant shall make copies of the Waste Management Plan available to Councils and the Community Consultative Committee within 14 days of approval by the Director-General.
88. The Waste Management Plan shall include, but not be limited to the management of the mine site to prevent dumping of waste; and the management and treatment of Potentially Acid Forming waste.
89. The Applicant shall meet the requirements of Councils, EPA and Hunter Water Corporation with respect to water and sewer.

VISUAL AMENITY

Landscaping:

90. The Applicant shall provide a minimum of 50 metres of landscaping between the outer edge of the bund wall and the edge of John Renshaw Drive. The 50 metres may include landscaping within the road verge if agreed by Cessnock Council.
91. The Applicant shall, within three months of the date of this Consent, or within such further period as Councils may require, submit for the Councils' approval a detailed Landscaping Plan covering all land within the proposed mining area (including the haul road and transmission line easements) and road reserve along the frontage to John Renshaw Drive. The Applicant shall engage a suitably qualified person to assist in the landscaping plan.
92. The Landscaping Plan shall be consistent with the Environmental Management Strategy and include:
 - (i) provision for the establishment of trees and shrubs and the construction of mounding or bunding along the planned highwall and any other areas identified as necessary by the Councils for the maintenance of satisfactory visual amenity and the re-establishment of flora and fauna habitats and corridors;
 - (ii) appropriate erosion control and sediment control practices for earthworks associated with the landscaping;
 - (iii) details of the visual appearance of all buildings, structures, facilities or works (including paint colours and specifications). Buildings and structures shall be designed and constructed so as to present a neat and orderly appearance and to blend as far as possible with the surrounding landscape; and
 - (iv) details, specifications and staged work programs to be undertaken, including a maintenance program of all landscape works, building materials and cladding.
93. The Applicant shall implement the approved Plan in accordance with Councils' requirements and make copies available to the Community Consultative Committee within 14 days of approval by Councils.
94. The Applicant shall plant screening vegetation on properties at higher elevation and with views across the mine site in the Black Hill area if requested in writing by the landowner, within three months of that request. The species, density and location of the plantings shall be determined in consultation with the landowner.
95. The Applicant shall lodge a landscaping bond with Cessnock Council, to a maximum of \$10,000 at any one time, for landscaping during the life of mine. This bond does not affect rehabilitation works covered by the *Mining Act*.

Lighting:

96. The Applicant shall screen or direct all onsite lighting and vehicle lights away from residences and roadways to the satisfaction of Councils. All screening to be completed prior to commissioning of the coal preparation plant and associated facilities.

HAZARDS, RISKS AND SAFETY

97. The Applicant shall:
- (i) provide adequate fire protection works on site. This shall include one fully equipped fire fighting unit on standby and hazard reduction works at a time determined by the relevant Council, with particular attention to boundaries of adjoining land holdings;
 - (ii) submit an annual report on fire management activities to the local Bush Fire Management Committee; and
 - (iii) ensure that all dangerous goods and materials stored on site are stored in accordance with the relevant Australian standards.

UTILITIES AND SERVICES

98. The Applicant shall consult with affected service authorities and make arrangements satisfactory to those authorities for the protection or relocation of utilities and services (such as transmission lines and pipelines) at the Applicant's expense, prior to any existing utilities or services being affected by mining activity. Relocation of utilities and services shall be conducted in accordance with the relevant Management Plans and the Erosion and Sediment Control Plan(s).

TRANSPORT AND ACCESS

99. Prior to commencement of construction, or as otherwise agreed by the Councils, the Applicant shall design, construct and seal the private haul road and access road to the satisfaction of the Councils, and with consideration of the impact on the fragmentation of fauna habitat and fauna movement.
100. No coal shall be hauled on public roads.
101. The Applicant shall carry out intersection improvements as determined necessary by the Regional Traffic Committee as a result of the development and by such times as directed by the Regional Traffic Committee.
102. If closure of John Renshaw Drive is agreed by the Regional Traffic Committee under Condition 25(4), the Applicant shall:
- (i) pay \$20,000 to Cessnock City Council to upgrade the alignment and surface of the unsealed western end of Black Hill Road;
 - (ii) provide a water cart and apply water to the unsealed western end of Black Hill Road to the requirements of Cessnock City Council prior to each closure of John Renshaw Drive for blasting; and
 - (iii) prepare a Traffic Management Plan for the approval of the RTA in relating to the closure of John Renshaw Drive during blasting.
103. The Applicant shall provide for signalling of the Bloomfield rail loop to the satisfaction of Freight Corp prior to the commencement of mining.

INITIAL COAL WASHING

104. Upon commencement of coal extraction, the Applicant shall initially make use of the coal preparation plant (CPP) at the adjoining Bloomfield coal mine for up to two years from commencement of mining or such other period as approved by the Director-General. This will allow the Applicant to:
- (i) trial the washing of Donaldson coal to assist in the determination of its washing characteristics; and
 - (ii) commence the earliest possible coal extraction at Donaldson, and hence hasten project completion.
105. The haulage route for raw coal from the Donaldson pit to the Bloomfield CPP shall be the same as that proposed for haulage of product coal from the proposed Donaldson CPP to the existing Bloomfield rail loading facility up to the point of intersection with the Bloomfield Mine access road, and thence westward along the Bloomfield Mine access road to the CPP, unless otherwise agreed to with the owners of Bloomfield. However, any variation to the route shall be considered to determine whether a modification to this Consent is required to enable the variation.
106. The Applicant shall notify the Director-General within eighteen months of the commencement of mining as to the results of the Bloomfield washery trials.

COMMUNITY INVOLVEMENT

Community Consultative Committee:

107. The Applicant shall establish a Community Consultative Committee which shall be chaired by an independent chairperson approved by the Director-General. Selection of representatives shall be agreed by the Director-General and include (unless otherwise agreed by the Director-General) two representatives from the Applicant (including the Environmental Officer), four community representatives (including a representative of the local Aboriginal Community) and representatives of the local Councils. Representatives from relevant government agencies (including DUAP) may be invited to attend meetings of the Committee as required.
108. The Committee may make comments and recommendations about the implementation of the development. The Applicant shall ensure that the Committee has access to the necessary plans and/or studies for such purposes. The Applicant shall consider the recommendations and comments of the Committee and provide a response to the Committee and the Director-General.
109. The Applicant shall, at its own expense:
- (i) provide appropriate facilities for meetings of the Committee;
 - (ii) nominate a representative to attend all meetings of the Committee;
 - (iii) ensure that the first meeting is held prior to commencement of construction, that meetings are held at least every six months for the first 24 months from the date of the mining lease and at least annually thereafter;
 - (iv) provide to the Committee regular information on the progress of the work and monitoring results;
 - (v) promptly provide to the Committee such other information as the Chairperson of the Committee may reasonably request concerning the environmental performance of the development; and
 - (vi) provide reasonable access for site inspections by the Committee.
110. The Applicant shall establish a trust fund to be managed by the Chairperson of the Committee to facilitate functioning of the Committee, and pay \$2000 per annum to the fund for the duration of

mining operations. The payment shall be indexed according to the Consumer Price Index (CPI) at the time of payment. The first payment shall be made by the date of the first Committee meeting.

Community Information:

111. The Applicant shall, in consultation with Councils, ensure that the local community is kept informed (by way of local newsletters, leaflets, newspaper advertisements and community notice boards as appropriate) of the progress of the project, including prior notice of:
- (i) the nature of works proposed for the forthcoming period;
 - (ii) hours of construction;
 - (iii) a 24 hour contact telephone number;
 - (iv) any traffic disruptions and controls;
 - (v) proposed blasting program, and any changes to the program;
 - (vi) work required outside the normal working hours; and
 - (vii) individuals' rights under the Conditions of this Consent (such as the rights for acquisition or independent monitoring) and mechanisms proposed to be used to safeguard the community and individual properties against adverse impacts from the development.
112. The Applicant shall ensure that the AEMR, minutes from Community Consultative Committee meetings and results and interpretation of monitoring required by this Consent are placed on the Internet for public information within 14 days after they are available. The Internet address is to be made publicly available.

Complaints:

113. (1) The Applicant shall record details of all complaints received in an up to date log book, and ensure that a response is provided to the complainant within 24 hours.
- (2) If the Applicant's response does not address the complaint to the satisfaction of the complainant within six weeks, the Applicant shall refer the matter to an independent mediator (approved by the Director-General) and bear the costs of such mediation. The Applicant shall immediately carry out such works as agreed through the mediation process.
- (3) The Applicant shall make available a report on complaints received every three months to the Community Consultative Committee and to relevant government agencies and the Councils upon request; and include a summary in the AEMRs. The report shall include the number of complaints that have been resolved with or without mediation.

ANNUAL ENVIRONMENTAL MANAGEMENT REPORT

114. The Applicant shall prepare and submit an Annual Environmental Management Report (AEMR) throughout the life of the mine to the satisfaction of the Director-General. The AEMR shall review the performance of the mine against the Environmental Management Strategy and the Conditions of this Consent, and other licences and approvals relating to the mine. To enable ready comparison with the EIS's predictions, diagrams and tables, the report shall include, but not be limited to, the following matters:
- (i) an annual compliance audit of the performance of the project against Conditions of this Consent and statutory approvals;
 - (ii) a review of the effectiveness of the environmental management of the mine in terms of EPA, DLWC, DMR, and the Councils' requirements and provide an explanation of any variance;
 - (iii) results of all environmental monitoring required under this Consent or other approvals, including interpretations and discussion by a suitably qualified person;

- (iv) identification of trends in monitoring results over the life of the mine;
 - (v) a comparison of the actual impacts with predictions made in the EIS and supporting documents;
 - (vi) a review of the social impact of the mine, including mitigation works and acquisition;
 - (vii) a listing of any variations obtained to approvals applicable to the subject area during the previous year;
 - (viii) the outcome of the water budget for the year, the quantity of water used from water storages and details of discharge of any water from the site;
 - (ix) rehabilitation report; and
 - (x) environmental management targets and strategies for the next year, taking into account identified trends in monitoring results.
115. In preparing the AEMR, the Applicant shall:
- (i) Consult with the Director-General during preparation of each report for any additional requirements;
 - (ii) comply with any requirements of the Director-General or other relevant government agency and with any guidelines current at the time of reporting; and
 - (iii) ensure that the first report is completed and submitted within 12 months of this Consent, or at a date determined by the Director-General in consultation with the DMR and the EPA.
116. The Applicant shall ensure that copies of each AEMR are submitted at the same time to DUAP, EPA, DLWC, NPWS, Councils and the Community Consultative Committee, and made available for public information at Councils within 14 days of submission to these authorities.

Note: The AEMR should be the same document submitted to the DMR as part of its mining lease requirements, and as such should also be prepared in accordance with DMR guidelines.

INDEPENDENT ENVIRONMENTAL AUDIT

117. At 3 yearly intervals after the commencement of mining and at the completion of mining, unless the Director-General directs otherwise, the Applicant shall commission and pay the full cost of an Independent Environmental Audit of the development. This audit must:
- (i) be conducted by a suitably qualified, experienced, and independent person whose appointment has been endorsed by the Director-General;
 - (ii) be consistent with *ISO 19011:2002 – Guidelines for Quality and/or Environmental Systems Auditing*, or equivalent updated versions of these guidelines;
 - (iii) assess the environmental performance of the development, and its effects on the surrounding environment;
 - (iv) assess whether the development is complying with the relevant standards, performance measures, and statutory requirements;
 - (v) review the adequacy of the Applicant's Environmental Management Strategy and Environmental Monitoring Program; and
 - (vi) if necessary, recommend measures or actions to improve the environmental performance of the development, and/or the environmental management and monitoring systems.
118. The audit shall:
- a. assess compliance with the requirements of this Consent, licences and approvals;
 - b. review the effectiveness of the environmental management of the mine, including any mitigation works;
 - c. be carried out at the Applicant's expense; and
 - d. be conducted by a duly qualified independent person or team approved by the Director-General in consultation with the Councils.

119. The Director-General may, after assessing compliance in accordance with this Consent and after considering any submission made by the EPA, DLWC, DMR, the Councils or the Community Consultative Committee on the report, notify the Applicant of any reasonable requirements for compliance with this Consent. The Applicant shall comply with those requirements within such time as the Director-General may require.

COMPLIANCE

120. The Applicant shall comply or ensure compliance with all requirements of the Director-General in respect of the implementation of any measures arising from the Conditions of this Consent. The Applicant shall bring to the attention of the Director-General any matter that may require further investigation and the issuing of instructions from the Director-General. The Applicant shall ensure that these instructions are implemented to the satisfaction of the Director-General within such time that the Director-General may specify. If necessary, the Director-General may order the Applicant to cease work until non-compliance has been addressed to her satisfaction.
121. The Applicant shall submit for the approval of the Director-General compliance reports concerning the implementation of Conditions of this Consent as applicable:
- (i) before the commencement of construction works; and
 - (ii) before the commencement of mining.

Y2K COMPLIANCE

122. One month prior to the commencement of operation of any automated system, included embedded systems, used for operation, pollution control, monitoring and safety (including fire safety), the Applicant shall provide the Director-General with a report confirming that the system(s) has been tested in accordance with the most recent edition of BSI/DISC PD2000-1 to confirm continuous time and date functionality of that system.

DISPUTE RESOLUTION

123. In the event that the Applicant and an individual, the Councils or a Government agency, other than DUAP, cannot agree on the specification or requirements applicable under this Consent, the matter shall be referred by either party to the Director-General or if not resolved within six months, to the Minister for Urban Affairs and Planning, whose determination of the disagreement shall be final and binding on the parties.

OTHER ISSUES

124. The Applicant shall participate in (including a financial contribution if appropriate, to a maximum of \$10,000) the preparation of a revised Planning Strategy for the Thornton-Beresfield area. Any such financial contribution shall be paid as directed by the Director-General and any amounts not expended in the review upon completion of mining shall be refunded to the Applicant.
125. The Applicant shall provide reasonable funding to Councils for independent counselling services for any landowner within 1.5 kilometres of the mining lease area who may request support on stress-related matters resulting from the development.

126. Within six months of the date of this Consent and in each AEMR thereafter, the Applicant shall report to the Director-General on the number of personnel employed by the mine in construction, mining and environmental management during that reporting period. The report shall compare the employment figures with those predicted in the EIS.

Supplementary Note:

Nothing in these Conditions removes or lessens any obligations by the Applicant under the mining lease or mining legislation in relation to matters covered by these Conditions.

SCHEDULE 4:

Supplementary reports to the EIS:

Title	Author	Date
Amended Mine Plan	Donaldson Projects	August 1998
Air Quality Assessment	Holmes Air Scientists	August 1998
Supplementary Assessment of Flora and Fauna	Gunninah Environmental Consultants	August 1998
Threatened Species Issues - Supplementary Information and Section 5A assessments of significance	Gunninah Environmental Consultants	May 1998
Erosion and Sediment Control Plan	Global Soil Systems	August 1998
Soil and Land Capability Survey Report	Global Soil Systems	August 1998
Supplementary Report on Temporary Closure of John Renshaw Drive During Blasting Operations	Project Planning Associates	August 1998
Supplementary Report on Visual Impacts and Landuse Planning Issues	Mike George Planning	August 1998
Supplementary Noise and Blasting Impact Assessment	Richard Heggie Associates	August 1998
Additional Water Management Studies	Mackie Environmental Research	August 1998

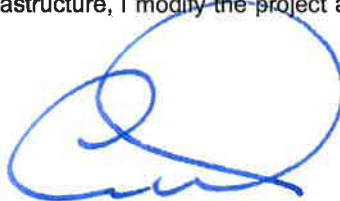
Appendix C

Abel Coal Mine Consolidated Consent PA 05_0136

Notice of Modification

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

As delegate for the Minister for Planning and Infrastructure, I modify the project approval referred to in Schedule 1, subject to the conditions in Schedule 2.



Chris Wilson
Executive Director
Development Assessment Systems and Approvals

Sydney

4 December

2013

SCHEDULE 1

The Project Approval (05_0136) for the Abel Coal Project, granted by the Minister for Planning, on 7 June 2007.

SCHEDULE 2

Delete all words after "Abel Coal Project", where first occurring, and replace with the following:

TABLE OF CONTENTS

DEFINITIONS	3
ADMINISTRATIVE CONDITIONS	5
Obligation to Minimise Harm to the Environment	5
Terms of Approval	5
Limits on Approval	5
Structural Adequacy	6
Demolition	6
Operation of Plant and Equipment	6
Staged Submission of Strategies, Plans and Programs	6
SPECIFIC ENVIRONMENTAL CONDITIONS – UNDERGROUND MINING	7
Subsidence	7
Surface Infrastructure Management	10
SPECIFIC ENVIRONMENTAL CONDITIONS – GENERAL	12
Noise	12
Air Quality & Greenhouse Gas	13
Meteorological Monitoring	15
Soil & Water	15
Biodiversity	16
Heritage	17
Transport	17
Visual	17
Waste	17
Bushfire	17
Rehabilitation	17
ADDITIONAL PROCEDURES	19
Notification of Landowners	19
Independent Review	19
ENVIRONMENTAL MANAGEMENT, REPORTING & AUDITING	20
Environmental Management	20
Reporting	21
Independent Environmental Audit	22
Access to Information	22
APPENDIX 1: SCHEDULE OF LAND	23
APPENDIX 2: PROJECT LAYOUT	26
APPENDIX 3: RECEIVERS AND MONITORING LOCATIONS	29
APPENDIX 4: NOISE COMPLIANCE ASSESSMENT	30
APPENDIX 5: STATEMENT OF COMMITMENTS	31

DEFINITIONS

Adaptive management	Adaptive management includes monitoring subsidence effects and impacts and, based on the results, modifying the mining plan as mining proceeds to ensure that the effects, impacts and/or associated environmental consequences remain within predicted and/or designated ranges and in compliance with the conditions of this approval
Annual Review	The review required by condition 3 of Schedule 6
Approved mine plan	The mine plans depicted in the figures in Appendix 2
ARTC	Australian Rail Track Corporation
BCA	Building Code of Australia
Bloomfield site	The Bloomfield Coal Handling and Preparation Plant, the Bloomfield Rail Loading Facility, Rail Loop and Rail Spur, and the Bloomfield Colliery open-cut pits which are used to emplace coal reject and tailings from the project
Built features	Includes any building or work erected or constructed on land, and includes dwellings and infrastructure such as any formed road, street, path, walk, or driveway; any pipeline, water, sewer, telephone, gas or other service main
CCC	Community Consultative Committee
Cliff	A continuous rock face, including overhangs, having a minimum length of 20 metres, a minimum height of 10 metres and a minimum slope of 2 in 1 (>63.4°)
Conditions of this approval	Conditions contained in Schedules 2 to 6 inclusive
Construction	The demolition of buildings or works, carrying out of works and erection of buildings covered by this approval
Day	The period from 7am to 6pm on Monday to Saturday, and 8am to 6pm on Sundays and Public Holidays
Department	Department of Planning and Infrastructure
Director-General	Director-General of the Department, or delegate
DRE	Division of Resources and Energy, within the Department of Trade & Investment, Regional Infrastructure & Services
EA	Environmental assessment titled <i>Abel Underground Mine Part 3A Environmental Assessment Application No. 05_0136 – Volumes 1 to 5</i> , dated June 2005, including the associated response to submissions (dated January 2007)
EA (MOD 1)	Modification application 05_0136 MOD 1 and accompanying Environmental Assessment titled <i>Abel Underground Mine May 2010 Modification (Downcast Ventilation Shaft) Environmental Assessment</i> , prepared by Donaldson Coal Pty Limited and dated May 2010
EA (MOD 2)	Modification application 05_0136 MOD 2 and accompanying Environmental Assessment titled <i>Abel Underground Mine March 2011 Modification (Upcast Ventilation Shaft) Environmental Assessment</i> , prepared by Donaldson Coal Pty Limited and dated March 2011
EA (MOD 3)	Modification application 05_0136 MOD 3 and accompanying Environmental Assessment titled <i>Abel Upgrade Modification Environmental Assessment, Volumes 1 and 2</i> prepared by Resource Strategies Pty Limited and dated December 2012, including the Response to Submissions document titled <i>Abel Upgrade Modification Environmental Assessment Response to Submissions</i> dated July 2013
Environmental consequences	The environmental consequences of subsidence impacts, including: damage to built features; loss of surface flows to the subsurface; loss of standing pools; adverse water quality impacts; cliff falls; rock falls; damage to Aboriginal heritage sites; impacts on aquatic ecology; and ponding
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EP&A Regulation	<i>Environmental Planning and Assessment Regulation 2000</i>
EPL	Environment Protection Licence issued under the POEO Act
Executive Director Mineral Resources	Executive Director Mineral Resources within DRE, or the equivalent role
Evening	The period from 6pm to 10pm
Feasible	Feasible relates to engineering considerations and what is practical to build or to implement
First workings	Development of main headings, longwall gate roads, related cut throughs and the like
GDE	Groundwater Dependent Ecosystem
Ha	Hectare
Incident	A set of circumstances that: <ul style="list-style-type: none"> • causes or threatens to cause material harm to the environment; and/or • breaches or exceeds the limits or performance measures/criteria in this approval

Land	As defined in the EP&A Act, except for where the term is used in the noise and air quality conditions in Schedules 3 and 4 of this approval where it is defined to mean the whole of a lot, or contiguous lots owned by the same landowner, in a current plan registered at the Land Titles Office at the date of this approval
Material harm to the environment	Actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial
Mining area	The area identified on the 2nd figure in Appendix 2
Mining operations	Includes all extraction, processing, handling, storage and transportation of coal carried out on the site
Minister	Minister for Planning and Infrastructure, or delegate
Minor	Not very large, important or serious
Minor cliff	A continuous rock face, including overhangs, having a minimum height of 5 metres and a minimum slope of 2 in 1 (>63.4°)
Mitigation	Activities associated with reducing the impacts of the project prior to or during those impacts occurring
MSB	Mine Subsidence Board
Negligible	Small and unimportant, such as to be not worth considering
Night	The period from 10pm to 7am on Monday to Saturday, and 10pm to 8am on Sundays and Public Holidays
NOW	NSW Office of Water
OEH	Office of Environment and Heritage
POEO Act	<i>Protection of the Environment Operations Act 1997</i>
Privately-owned land	Land that is not owned by a public agency, or a mining company (or its subsidiary)
Project	The project described in the EA, EA (MOD 1), EA (MOD 2) and EA (MOD 3)
Proponent	Donaldson Coal Pty Ltd, or its successors in title
Reasonable	Reasonable relates to the application of judgement in arriving at a decision, taking into account: mitigation benefits, cost of mitigation versus benefits provided, community views and the nature and extent of potential improvements
Reasonable costs	The costs agreed between the Department and the Proponent for obtaining independent experts to review the adequacy of any aspects of the Extraction Plan, or where such costs cannot be agreed, the costs determined by a dispute resolution process
Rehabilitation	The treatment or management of land disturbed by the project for the purpose of establishing a safe, stable and non-polluting environment
Remediation	Activities associated with partially or fully repairing or rehabilitating the impacts of the project or controlling the environmental consequences of this impact
RMS	Roads and Maritime Services
Rock face feature	A rock face having a minimum length of 20 metres, heights between 3 metres and 5 metres and a minimum slope of 2 in 1 (>63.4°)
ROM coal	Run-of-mine coal
Safe, serviceable & repairable	Safe means no danger to users who are present, serviceable means available for its intended use, and repairable means damaged components can be repaired economically
Second workings	Extraction of coal from longwall panels, shortwall panels or pillar extraction
Site	The land referred to in Schedule 1, and listed in Appendix 1
Statement of commitments	The Proponent's commitments in Appendix 3
Steep slope	An area of land having a gradient between 1 in 3 (33% or 18.3°) and 2 in 1 (200% or 63.4°)
Subsidence	The totality of subsidence effects, subsidence impacts and environmental consequences of subsidence impacts
Subsidence effects	Deformation of the ground mass due to mining, including all mining-induced ground movements, such as vertical and horizontal displacement, tilt, strain and curvature
Subsidence impacts	Physical changes to the ground and its surface caused by subsidence effects, including tensile and shear cracking of the rock mass, localised buckling of strata caused by valley closure and upsidence and surface depressions or troughs
Surface facilities sites	The Abel pit top area; all associated ventilation shaft sites; sites for other mining purposes infrastructure; and any other site subject to existing or proposed surface disturbance (excluding subsidence impacts) by the project

SCHEDULE 2 ADMINISTRATIVE CONDITIONS

OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT

1. In addition to meeting the specific performance criteria established under this approval, the Proponent shall implement all reasonable and feasible measures to prevent and/or minimise any harm to the environment that may result from the construction, operation, or rehabilitation of the project.

TERMS OF APPROVAL

2. The Proponent shall carry out the project generally in accordance with the:
 - (a) EA;
 - (b) EA (MOD 1);
 - (c) EA (MOD 2);
 - (d) EA (MOD 3);
 - (e) statement of commitments; and
 - (f) conditions of this approval.

Notes:

- *The general layout of the project is shown on the figures in Appendix 2.*
- *The statement of commitments is reproduced in Appendix 4.*

3. If there is any inconsistency between the above documents, the more recent document shall prevail to the extent of the inconsistency. However, the conditions of this approval shall prevail to the extent of any inconsistency.
4. The Proponent shall comply with any reasonable requirement/s of the Director-General arising from the Department's assessment of:
 - (a) any strategies, plans, programs, reviews, audits, reports or correspondence that are submitted in accordance with this approval; and
 - (b) the implementation of any actions or measures contained in these documents.

LIMITS ON APPROVAL

Mining Operations

5. The Proponent may carry out mining operations on site until the end of December 2030.

Note: Under this approval, the Proponent is required to rehabilitate the site and perform additional undertakings to the satisfaction of either the Director-General or the Executive Director, Mineral Resources. Consequently this approval will continue to apply in all other respects other than the right to conduct mining operations until the rehabilitation of the site and these additional undertakings have been carried out satisfactorily.

Coal Extraction

6. The Proponent shall not extract more than 6.1 million tonnes of ROM coal from the site per calendar year.

Coal Processing

7. The Proponent shall not process more than 8.5 million tonnes of ROM coal at the Bloomfield site per calendar year.

Coal Transport

8. The Proponent shall transport all ROM coal from the Abel pit-top area to the Bloomfield site via the private haul road, or by coal conveyor, or by a combination of both methods.
9. The Proponent shall transport all product coal produced on the Bloomfield site via the Bloomfield Rail Loop, and Rail Spur and the Main Northern Railway, except in an emergency. In an emergency, product coal may be transported from the Bloomfield site by road, with the prior written approval of the Director-General, and subject to any restrictions that the Director-General may impose.

Note: The alignment of the approved coal conveyor is shown in Figure 3 of Appendix 2.

Hours of Operation

10. The Proponent shall comply with the operating hours in Table 1.

Table 1: Operating hours

Activity	Operating Hours
Mining Operations	24 hours a day, 7 days per week
Construction activities	7.00 am to 6.00 pm, Monday to Friday; and 8.00 am to 1.00 pm, Saturdays, unless noise from these activities does not exceed 35dB(A) _{LAeq(15 min)} at any privately-owned residence
Maintenance activities	24 hours a day, 7 days per week, providing maintenance activities are inaudible at any privately-owned residence

STRUCTURAL ADEQUACY

11. The Proponent shall ensure that all new buildings and structures, and any alterations or additions to existing buildings and structures that are part of the project are constructed in accordance with:
- the relevant requirements of the BCA; and
 - any additional requirements of the MSB where the building or structure is located on land within declared Mine Subsidence Districts.

Notes:

- Under Part 4A of the EP&A Act, the Proponent is required to obtain construction and occupation certificates for the proposed building works.
- Part 8 of the EP&A Regulation sets out the requirements for the certification of the project.
- Under Section 15 of the Mine Subsidence Compensation Act 1961, the Proponent is required to obtain the MSB's approval before constructing any improvements within a Mine Subsidence District.

DEMOLITION

12. The Proponent shall ensure that all demolition work is carried out in accordance with *Australian Standard AS 2601-2001: The Demolition of Structures*, or its latest version.

OPERATION OF PLANT AND EQUIPMENT

13. The Proponent shall ensure that all plant and equipment used at the site is:
- maintained in a proper and efficient condition; and
 - operated in a proper and efficient manner.

STAGED SUBMISSION OF STRATEGIES, PLANS OR PROGRAMS

14. With the approval of the Director-General, the Proponent may submit any strategies, plans or programs required by this approval on a progressive basis. Strategies, plans or programs approved before 31 October 2013 continue to apply to the project, until revised strategies, plans or programs required under the terms of this modified approval are approved by the Director-General.

Notes:

- While any strategy, plan or program may be submitted on a progressive basis, the Proponent will need to ensure that the existing operations on site are covered by suitable strategies, plans or programs at all times.
- If the submission of any strategy, plan or program is to be staged, then the relevant strategy, plan or program must clearly describe the specific stage to which the strategy, plan or program applies, the relationship of this stage to any future stages, and the trigger for updating the strategy, plan or program.

**SCHEDULE 3
SPECIFIC ENVIRONMENTAL CONDITIONS – UNDERGROUND MINING**

SUBSIDENCE

Performance Measures – Natural and Heritage Features, etc

- The Proponent shall ensure that the project does not cause any exceedances of the performance measures in Table 2, to the satisfaction of the Director-General.

Table 2: Subsidence Impact Performance Measures

Water Resources	
<ul style="list-style-type: none"> Hexham Swamp; Blue Gum Creek and Alluvium; and Long Gully. 	<ul style="list-style-type: none"> Negligible environmental consequences, including: <ul style="list-style-type: none"> <i>negligible</i> reduction in the quantity of water entering the swamp or the creeks (ie baseflow or environmental flows); <i>negligible</i> reduction in the quality of water entering the swamp or the creeks; and <i>negligible</i> reduction in creek bed or bank stability. No connective cracking between the surface and the mine.
<ul style="list-style-type: none"> All other watercourses in the mining area. 	<ul style="list-style-type: none"> No greater environmental consequences than predicted in the EA and EA (MOD 3).
Land	
<ul style="list-style-type: none"> Cliffs. 	<ul style="list-style-type: none"> Minor environmental consequences (that is, occasional rockfalls, displacement or dislodgement of boulders or slabs, or fracturing, that in total do not impact more than 3% of the total face area of cliffs within the mining area).
<ul style="list-style-type: none"> Minor cliffs Rock face features; and Steep slopes. 	<ul style="list-style-type: none"> Minor environmental consequences (that is, occasional rockfalls, displacement or dislodgement of boulders or slabs, or fracturing, that in total do not impact more than 5% of the total face area of each such type of feature within the mining area).
<ul style="list-style-type: none"> Pambalong Nature Reserve. 	<ul style="list-style-type: none"> Negligible environmental consequences.
Biodiversity	
<ul style="list-style-type: none"> Threatened species; and Endangered ecological communities (including unspecified Lowland Rainforest EEC). 	<ul style="list-style-type: none"> Negligible environmental consequences.
Heritage Sites	
<ul style="list-style-type: none"> Aboriginal heritage sites. 	<ul style="list-style-type: none"> No greater subsidence impacts or environmental consequences than predicted in the EA and EA (MOD 3).
<ul style="list-style-type: none"> Historic heritage. 	<ul style="list-style-type: none"> No greater subsidence impacts or environmental consequences than predicted in the EA and EA (MOD 3).
Mine workings	
<ul style="list-style-type: none"> First workings under an approved Extraction Plan beneath any feature where performance measures in this table require negligible subsidence impacts, negligible environmental consequences. 	<ul style="list-style-type: none"> To remain long-term stable and non-subsiding.
<ul style="list-style-type: none"> Second workings. 	<ul style="list-style-type: none"> To be carried out only in accordance with an approved Extraction Plan.

Notes:

- The Proponent will be required to define more detailed performance indicators (including impact assessment criteria) for each of these performance measures in the various management plans that are required under this approval.*
- Measurement and/or monitoring of compliance with performance measures and performance indicators is to be undertaken using generally accepted methods that are appropriate to the environment and circumstances in which the feature or characteristic is located. These methods are to be fully described in the relevant management plans. In the event of a dispute over the appropriateness of proposed methods, the Director-General will be the final arbiter.*

- *The requirements of this condition only apply to the impacts and consequences of mining operations, construction or demolition undertaken following the date of approval of MOD 3.*

Offsets

2. If the Proponent exceeds the performance measures in Table 2 and the Director-General determines that:
 - (a) it is not reasonable or feasible to remediate the impact or environmental consequence; or
 - (b) remediation measures implemented by the Proponent have failed to satisfactorily remediate the impact or environmental consequence;
 the Proponent shall provide a suitable offset to compensate for the impact or environmental consequence, to the satisfaction of the Director-General.

Note: Any offset required under this condition must be proportionate with the significance of the impact or environmental consequence.

Performance Measures – Built Features

3. The Proponent shall ensure that the project does not cause any exceedances of the performance measures in Table 3, to the satisfaction of the Director-General. Any dispute between the Proponent and the owner of any built feature over the interpretation, application or implementation of the performance measures in Table 3 is to be settled by the Director-General, following consultation with the MSB and the Executive Director Mineral Resources. Any decision by the Director-General shall be final and not subject to further dispute resolution under this approval.

Table 3: Subsidence Impact Performance Measures

Built Features	
Key Public Infrastructure: <ul style="list-style-type: none"> • F3 Freeway; • Hunter Expressway; • 330kV transmission line and transmission towers; and • 132kV and 66kV powerlines. 	<ul style="list-style-type: none"> • Always safe and serviceable. • Damage that does not affect safety or serviceability must be fully repairable, and must be fully repaired.
Other Public Infrastructure: <ul style="list-style-type: none"> • Timber power poles; • Roads; • Fibre-optic cables; and • Telecommunication cables. 	<ul style="list-style-type: none"> • Always safe and serviceable. • No greater subsidence impact or environmental consequences than predicted in the EA and EA (MOD 3). • Damage that does not affect safety or serviceability must be fully repairable, and must be fully repaired.
Key Privately-Owned Built Features <ul style="list-style-type: none"> • Principal residences; • All buildings and structures on, or built in the future on: <ul style="list-style-type: none"> – the Black Hill Public School; – Catholic High School site (Lot 131 DP1057179); – Black Hill Church and Cemetery; – Coal & Allied Operations Pty Limited site (Lot 30 DP870411); and • The 4 largest dams at the commercial orchard on Lots 11 and 12 DP877937 and Lots 610 and 611 DP1035588, while this land is used for this purpose. 	<ul style="list-style-type: none"> • First workings only within a 26.5° angle of draw of the structure, except with the prior written agreement of the relevant landowner. • Always safe. • Serviceability should be maintained wherever practicable. • Damage must be fully repairable, and must be fully repaired, or else replaced or fully compensated.
Other Privately-Owned Built Features <ul style="list-style-type: none"> • Rural buildings; • Farm dams; • Tracks and fences; • Black Hill Quarry; and • Stockrington Quarry. 	<ul style="list-style-type: none"> • Always safe. • Serviceability should be maintained wherever practicable. Loss of serviceability must be fully compensated. • Damage must be fully repairable, and must be fully repaired or else replaced or fully compensated.
Public Safety	
<ul style="list-style-type: none"> • Public safety. 	<ul style="list-style-type: none"> • Negligible additional risk.

Notes:

- *The Proponent will be required to define more detailed performance indicators for each of these performance measures in Built Features Management Plans or a Public Safety Management Plan (see condition 4 below).*
- *Measurement and/or monitoring of compliance with performance measures and performance indicators is to be undertaken using generally accepted methods that are appropriate to the environment and circumstances in*

which the feature or characteristic is located. These methods are to be fully described in the relevant management plans. In the event of a dispute over the appropriateness of proposed methods, the Director-General will be the final arbiter.

- *The requirements of this condition only apply to the impacts and consequences of mining operations undertaken following the date of this approval.*
- *Requirements under this condition may be met by measures undertaken in accordance with the Mine Subsidence Compensation Act 1961.*
- *Requirements regarding safety or serviceability do not prevent preventative or mitigatory actions being taken prior to or during mining in order to achieve or maintain these outcomes.*

Extraction Plan

4. The Proponent shall prepare and implement an Extraction Plan for all second workings on site to the satisfaction of the Director-General. Each extraction plan must:
- (a) be prepared by suitably qualified and experienced persons whose appointment has been endorsed by the Director-General;
 - (b) be approved by the Director-General before the Proponent carries out any of the second workings covered by the plan;
 - (c) include detailed plans of existing and proposed first and second workings and any associated surface development;
 - (d) include detailed performance indicators for each of the performance measures in Tables 2 and 3;
 - (e) give particular consideration to any proposed multi-seam mining;
 - (f) include a detailed investigation of any overlying or adjacent West Borehole Seam workings, in consultation with DRE, which:
 - assesses the stability of remnant coal pillars in the former West Borehole Seam workings;
 - includes revised multi-seam subsidence predictions for the second workings areas;
 - gives particular consideration to the risks of irregular subsidence and for pillar run leading to subsidence outside of the predicted angle of draw; and
 - recommends final design of the second workings panels and any necessary adaptive management measures;
 - (g) provide revised predictions of the potential subsidence effects, subsidence impacts and environmental consequences of the proposed second workings, incorporating any relevant information obtained since this approval;
 - (h) describe the measures that would be implemented to ensure compliance with the performance measures in Tables 2 and 3, and manage or remediate any impacts and/or environmental consequences;
 - (i) include a Built Features Management Plan, which has been prepared in consultation with DRE and the owners of affected built features, to manage the potential subsidence impacts and/or environmental consequences of the proposed second workings, and which:
 - addresses in appropriate detail all items of key public infrastructure (with particular consideration of angle towers on transmission lines and powerlines), other public infrastructure and all other built features;
 - has been prepared following appropriate consultation with the owner/s of potentially affected feature/s;
 - recommends appropriate remedial measures and includes commitments to mitigate, repair, replace or compensate all predicted impacts on potentially affected built features in a timely manner; and
 - in the case of all key public infrastructure, and other public infrastructure except roads, trails and associated structures, reports external auditing for compliance with ISO 31000 (or alternative standard agreed with the infrastructure owner), and provides for annual auditing of compliance and effectiveness during extraction which may impact the infrastructure;
 - (j) include a Water Management Plan, which has been prepared in consultation with EPA and NOW, which provides for the management of the potential impacts and/or environmental consequences of the proposed second workings on watercourses and aquifers, including:
 - surface and groundwater impact assessment criteria, including trigger levels for investigating any potentially adverse impacts on water resources or water quality;
 - a program to monitor and report stream flows, assess any changes resulting from subsidence impacts and remediate and improve stream stability;
 - a program to monitor and report groundwater inflows to underground workings;
 - a program to predict, manage and monitor impacts to groundwater bores on privately-owned land; and
 - (k) include a Biodiversity Management Plan, which has been prepared in consultation with OEH, which provides for the management of the potential impacts and/or environmental consequences of the proposed second workings on aquatic and terrestrial flora and fauna, with a specific focus on threatened species, populations and their habitats; endangered ecological communities; and water dependent ecosystems;
 - (l) include a Land Management Plan, which has been prepared in consultation with any affected public authorities, to manage the potential impacts and/or environmental consequences of the proposed

- second workings on land in general, with a specific focus on cliffs, rock face features and steep slopes;
- (m) include a Heritage Management Plan, which has been prepared in consultation with OEH and relevant stakeholders for both Aboriginal and historic heritage, to manage the potential environmental consequences of the proposed second workings on both Aboriginal and non-Aboriginal heritage items, and reflects the requirements of condition 21 of schedule 4;
 - (n) include a Public Safety Management Plan, which has been prepared in consultation with DRE, to ensure public safety in the mining area;
 - (o) include a Subsidence Monitoring Program, which has been prepared in consultation with DRE; to:
 - provide data to assist with the management of the risks associated with subsidence;
 - validate the subsidence predictions;
 - analyse the relationship between the predicted and resulting subsidence effects and predicted and resulting impacts under the plan and any ensuing environmental consequences; and
 - inform the contingency plan and adaptive management process;
 - (p) include a contingency plan that expressly provides for adaptive management where monitoring indicates that there has been an exceedance of any performance measure in Tables 1 and 2, or where any such exceedance appears likely;
 - (q) proposes appropriate revisions to the Rehabilitation Management Plan required under condition 28 of Schedule 4; and
 - (r) include a program to collect sufficient baseline data for future Extraction Plans.

Notes:

- *To identify the second workings mining domains referred to in this condition, see Appendix 2.*
 - *In accordance with Condition 14 of Schedule 2, the preparation and implementation of Extraction Plans may be staged, with each plan covering a defined area of underground workings. In addition, these plans are only required to contain management plans that are relevant to the specific underground workings that are being carried out.*
 - *An SMP that is substantially consistent with this condition and which is approved by DRE prior to 31 October 2013 is taken to satisfy the requirements of this condition.*
5. The Proponent shall ensure that the management plans required under conditions 4(h)-(m) above include:
- (a) an assessment of the potential environmental consequences of the Extraction Plan, incorporating any relevant information that has been obtained since this approval; and
 - (b) a detailed description of the measures that would be implemented to remediate predicted impacts.

First Workings

6. The Proponent may carry out first workings on site, other than in accordance with an approved Extraction Plan, provided that DRE is satisfied that the first workings are designed to remain long-term stable and non-subsiding, except insofar as they may be impacted by approved second workings.

Note: The intent of this condition is not to require an additional approval for first workings, but to ensure that first workings are built to geotechnical and engineering standards sufficient to ensure long term stability, with zero resulting subsidence impacts.

Alternative Mining Methods

7. The Proponent may carry out bord and pillar mining and pillar extraction in the longwall mining and shortwall mining areas shown in Figure 2 of Appendix 2, subject to any necessary Extraction Plan.

Payment of Reasonable Costs

8. The Proponent shall pay all reasonable costs incurred by the Department to engage suitably qualified, experienced and independent experts to review the adequacy of any aspect of an Extraction Plan.

SURFACE INFRASTRUCTURE MANAGEMENT

Gas Drainage

9. The Proponent shall ensure that all gas drainage pipelines (other than connection points, monitoring points, dewatering facilities, regulation or isolation points) between gas drainage plants are buried, unless otherwise agreed with the relevant landowner or unless burial is inappropriate for safety or other reasons, to the satisfaction of the Director-General.
10. The Proponent shall prepare and implement a Gas Drainage Management Plan in respect of construction and use of future gas drainage infrastructure (ie for any gas drainage not subject to approval at the date of approval of MOD 3), to the satisfaction of the Director-General. This plan must be submitted to the

Director-General for approval prior to the construction of any future gas drainage infrastructure and must include details of the Proponent's commitments regarding:

- (a) community consultation;
- (b) landholder agreements;
- (c) assessment of noise, air quality, traffic, biodiversity, heritage, public safety and other impacts in accordance with approved methods;
- (d) avoidance of significant impacts and minimisation of impacts generally;
- (e) beneficial re-use or flaring of drained hydrocarbon gases, wherever practicable;
- (f) achievement of applicable standards and goals;
- (g) mitigation and/or compensation for significant noise, air quality and visual impacts; and
- (h) rehabilitation of disturbed sites.

Service Boreholes

11. The Proponent shall prepare and implement a Service Boreholes Management Plan in respect of construction and use of future service boreholes (ie any service boreholes not subject to approval at the date of approval of MOD 3) to the satisfaction of the Director-General. This plan must be submitted to the Director-General for approval prior to the construction of any future service borehole and must include details of the Proponent's commitments regarding:

- (a) community consultation;
- (b) landholder agreements;
- (c) assessment of noise, air quality, traffic, biodiversity, heritage, public safety and other impacts in accordance with approved methods;
- (d) avoidance of significant impacts and minimisation of impacts generally;
- (e) achievement of applicable standards and goals;
- (f) mitigation and/or compensation for significant noise, air quality and visual impacts; and
- (g) rehabilitation of disturbed sites.

Personal Emergency Device (PED) Communications

12. The Proponent shall prepare and implement a PED Communications Management Plan in respect of construction and use of future PED communications infrastructure (ie for any PED communications infrastructure not subject to approval at the date of approval of MOD 3) to the satisfaction of the Director-General. This plan must be submitted to the Director-General for approval prior to the construction of any future PED communications infrastructure and must include details of the Proponent's commitments regarding:

- (a) community consultation;
 - (b) landholder agreements;
 - (c) assessment of noise, air quality, traffic, biodiversity, heritage, public safety and other impacts in accordance with approved methods;
 - (d) avoidance of significant impacts and minimisation of impacts generally;
 - (e) achievement of applicable standards and goals;
 - (f) mitigation and/or compensation for significant noise, air quality and visual impacts; and
 - (g) rehabilitation of disturbed sites.
-

SCHEDULE 4 SPECIFIC ENVIRONMENTAL CONDITIONS – GENERAL

NOISE

Operational Noise Criteria

- The Proponent shall ensure that the noise generated by the project does not exceed the criteria in Table 4 at any residence on privately-owned land.

Table 4: Operational noise criteria dB(A)

Location	Receiver Area	Day	Evening	Night	
		$L_{Aeq} (15 \text{ min})$	$L_{Aeq} (15 \text{ min})$	$L_{Aeq} (15 \text{ min})$	$L_{A1} (1 \text{ min})$
Location I	Lord Howe Drive, Ashtonfield	36	36	36	45
Location K	Catholic Diocese Land	37	37	37	45
Location L	Kilshanny Avenue, Ashtonfield	40	40	40	47
All other locations	All other privately-owned residences	35	35	35	45

Notes:

- To interpret the locations referred to Table 4, see the plan in Appendix 3.
- Noise generated by the project is to be measured in accordance with the relevant requirements, and exemptions (including certain meteorological conditions), of the NSW Industrial Noise Policy. Appendix 4 sets out the meteorological conditions under which these criteria apply, and the requirements for evaluating compliance with these criteria.

However, these noise criteria do not apply if the Proponent has an agreement with the relevant landowner to generate higher noise levels, and the Proponent has advised the Department in writing of the terms of this agreement.

Construction Noise Criteria

- The Proponent shall ensure that the noise generated during the construction of the downcast ventilation shaft as described in EA (MOD 3) does not exceed the criteria in Table 5.

Table 5: Construction noise criteria dB(A)

Location	Receiver	Day
		$L_{Aeq} (15 \text{ min})$
Location R	281 Lings Road, Buttai	50
Location S	189 Lings Road Buttai	43

Notes:

- The criteria in Table 5 apply only whilst the downcast ventilation shaft is being constructed, and for a maximum of 12 weeks from the commencement of construction.
- To interpret the locations referred to Table 5, see the plan in Appendix 3.
- Noise generated by the project is to be measured in accordance with the relevant requirements, and exemptions (including certain meteorological conditions), of the NSW Industrial Noise Policy.

However, these noise criteria do not apply if the Proponent has an agreement with the relevant landowner to generate higher construction noise levels, and the Proponent has advised the Department in writing of the terms of this agreement.

Rail Noise Criteria

- The Proponent shall ensure that the noise from rail movements on the Bloomfield Rail Spur does not exceed the limits in Table 6 at any residence on privately-owned land.

Table 6: Rail Spur noise criteria dB(A)

Location	Day	Evening	Night
	L _{Aeq} (period)		
All privately-owned land	55	45	40

Cumulative Noise Criteria

4. The Proponent shall implement all reasonable and feasible measures to ensure that the noise generated by the project combined with the noise generated by other mines in the area does not exceed the criteria in Table 7 at any residence on privately-owned land.

Table 7: Cumulative noise criteria dB(A)

Location	Day	Evening	Night
	L _{Aeq} (period)		
All privately-owned land	55	45	40

Note: Cumulative noise is to be measured in accordance with the relevant requirements, and exemptions (including certain meteorological conditions), of the NSW Industrial Noise Policy. Appendix 4 sets out the meteorological conditions under which these criteria apply, and the requirements for evaluating compliance with these criteria.

Operating Conditions

5. The Proponent shall:
- implement best management practice to minimise the construction, operational, road and rail noise of the project;
 - operate an on-site noise management system to ensure compliance with the relevant conditions of this approval;
 - minimise the noise impacts of the project during meteorological conditions under which the noise limits in this consent do not apply (see Appendix 4);
 - only receive and/or dispatch locomotives and rolling stock either on or from the site that are approved to operate on the NSW rail network in accordance with the noise limits in ARTC's EPL (No. 3142);
 - carry out regular monitoring to determine whether the project is complying with the noise criteria and other relevant conditions of approval,

to the satisfaction of the Director-General.

Noise Management Plan

6. The Proponent shall prepare and implement a Noise Management Plan for the project to the satisfaction of the Director-General. This plan must:
- be prepared in consultation with EPA, and submitted to the Director-General for approval within 6 months of the date of approval of MOD 3;
 - describe the measures that would be implemented to ensure compliance with the noise criteria and operating conditions in this approval;
 - describe the proposed noise management system in detail; and
 - include a monitoring program that:
 - uses attended monitoring to evaluate the compliance of the project against the noise criteria in this approval;
 - evaluates and reports on:
 - the effectiveness of the on-site noise management system; and
 - compliance against the noise operating conditions; and
 - defines what constitutes a noise incident, and includes a protocol for identifying and notifying the Department and relevant stakeholders of any noise incidents.

AIR QUALITY & GREENHOUSE GAS

Odour

7. The Proponent shall ensure that no offensive odours are emitted from the site, as defined under the POEO Act.

Greenhouse Gas Emissions

8. The Proponent shall implement all reasonable and feasible measures to minimise the release of greenhouse gas emissions from the site to the satisfaction of the Director-General.

Air Quality Criteria

9. The Proponent shall implement all reasonable and feasible mitigation measures to ensure that the particulate emissions generated by the project do not exceed the criteria listed in Tables 8, 9 and 10 at any residence on privately-owned land.

Table 8: Long-term criteria for particulate matter

Pollutant	Averaging period	^d Criterion
Total suspended particulate (TSP) matter	Annual	^a 90 µg/m ³
Particulate matter < 10 µm (PM ₁₀)	Annual	^a 30 µg/m ³

Table 9: Short-term criterion for particulate matter

Pollutant	Averaging period	^d Criterion
Particulate matter < 10 µm (PM ₁₀)	24 hour	^a 50 µg/m ³

Table 10: Long-term criteria for deposited dust

Pollutant	Averaging period	Maximum increase in deposited dust level	Maximum total deposited dust level
^c Deposited dust	Annual	^b 2 g/m ² /month	^a 4 g/m ² /month

Notes to Tables 8-10:

- ^a Total impact (ie incremental increase in concentrations due to the project plus background concentrations due to other sources);
- ^b Incremental impact (ie incremental increase in concentrations due to the project on its own);
- ^c Deposited dust is to be assessed as insoluble solids as defined by Standards Australia, AS/NZS 3580.10.1:2003: Methods for Sampling and Analysis of Ambient Air - Determination of Particulate Matter - Deposited Matter - Gravimetric Method; and
- ^d Excludes extraordinary events such as bushfires, prescribed burning, dust storms, sea fog, fire incidents, illegal activities or any other activity agreed to by the Director-General.

Operating Conditions

10. The Proponent shall:
- implement best practice air quality management at the site, including all reasonable and feasible measures to minimise off-site odour and dust emissions generated by the project, including from any spontaneous combustion on site;
 - operate an air quality management system on site to ensure compliance with the relevant conditions of this approval;
 - minimise the air quality impacts of the project during adverse meteorological conditions and extraordinary events (see note d to Tables 8-10 above); and
 - co-ordinate the air quality management on site with the air quality management of the Bloomfield Colliery, to minimise cumulative air quality impacts,

to the satisfaction of the Director-General.

Air Quality & Greenhouse Gas Management Plan

11. The Proponent shall prepare and implement a detailed Air Quality & Greenhouse Gas Management Plan for the project to the satisfaction of the Director-General. This plan must:
- be prepared in consultation with EPA, and submitted to the Director-General for approval within 6 months of the date of approval of MOD 3;
 - describe the measures that would be implemented to ensure compliance with the relevant air quality criteria and operating conditions of this approval;
 - describe the measures that would be implemented to minimise the greenhouse gas emissions from the site;
 - describe the proposed on-site air quality management system; and
 - include an air quality monitoring program that:
 - is capable of evaluating the operating conditions of this approval;
 - evaluates and reports on:
 - the effectiveness of the air quality management system; and
 - compliance against the air quality operating conditions; and

- defines what constitutes an air quality incident, and includes a protocol for identifying and notifying the Department and relevant stakeholders of any air quality incidents.

METEOROLOGICAL MONITORING

12. During the life of the project, the Proponent shall ensure that there is a suitable meteorological station operating in the vicinity of the site that:
- (a) complies with the requirements in the *Approved Methods for Sampling of Air Pollutants in New South Wales* guideline; and
 - (b) is capable of continuous real-time measurement of temperature lapse rate in accordance with the *NSW Industrial Noise Policy*, unless a suitable alternative is approved by the Director-General following consultation with the EPA.

SOIL & WATER

Note: Under the Water Act 1912 and/or the Water Management Act 2000, the Proponent is required to obtain the necessary water licences for the project.

Water Supply

13. The Proponent shall ensure that it has sufficient water for all stages of the development, and if necessary, adjust the scale of mining operations to match its available water supply, to the satisfaction of the Director-General.

Compensatory Water Supply

14. The Proponent shall provide a compensatory water supply to any landowner of privately-owned land whose water entitlements are adversely impacted (other than an impact that is negligible) as a result of the project, in consultation with NOW, and to the satisfaction of the Director-General.

The compensatory water supply measures must provide an alternative long-term supply of water that is equivalent to the loss attributed to the project. Equivalent water supply must be provided (at least on an interim basis) within 24 hours of the loss being identified.

If the Proponent and the landowner cannot agree on the measures to be implemented, or there is a dispute about the implementation of these measures, then either party may refer the matter to the Director-General for resolution.

If the Proponent is unable to provide an alternative long-term supply of water, then the Proponent shall provide alternative compensation to the satisfaction of the Director-General.

Surface Water Discharges

15. The Proponent shall not discharge any water from the site or cause any pollution of waters except as expressly provided for in an EPL.

Surface Water Transfer

16. The Proponent may transfer water between the site, the Donaldson Open-Cut Coal Mine and the Bloomfield Colliery, in accordance with the Water Management Plans for these operations.

Water Management Plan

17. The Proponent shall prepare and implement a Water Management Plan for the project, for all areas that are not, or will not, be subject to condition 4 of schedule 3, to the satisfaction of the Director-General. This plan must be prepared in consultation with NOW and EPA, by suitably qualified and experienced persons whose appointment has been endorsed by the Director-General, and submitted to the Director-General for approval within 6 months of the date of approval of MOD 3. This plan must include:
- (a) a comprehensive water balance for the project that includes details of:
 - sources and security of water supply;
 - water make in the underground workings;
 - water use; and
 - any water discharges; and
 - (b) management plans for the Surface facilities sites, that include:
 - a detailed description of water management systems for each site, including:
 - clean water diversion systems;
 - erosion and sediment controls; and
 - any water storages;

- measures to minimise potable water use and to reuse and recycle water; and
- monitoring and reporting procedures.

Note: This plan can be integrated with the Water Management Plans prepared for the Donaldson Open-Cut Mine and the Bloomfield Colliery.

BIODIVERSITY

Biodiversity Offset Strategy

18. The Proponent shall develop and implement a Biodiversity Offset Strategy as summarised in Table 11, prior to the commencement of construction of the coal conveyor or the vegetation clearing described in the EA, whichever is sooner, in consultation with OEH, and to the satisfaction of the Director-General.

Table 11: Biodiversity Offset Strategy

Area	Offset Type	Minimum Size/Amount
Biodiversity Offset Area	Lower Hunter Spotted Gum-Ironbark Forest EEC	10 ha
	Remnant native woodland vegetation	10 ha

Long Term Security of Offset

19. Within 12 months of the commencement of construction of the coal conveyor, or the vegetation clearing described in the EA, whichever is sooner, unless the Director-General agrees otherwise, the Proponent shall make suitable arrangements to provide appropriate long term security for the biodiversity offset area identified in Table 11, to the satisfaction of the Director-General.

Note: In order of preference, mechanisms to provide appropriate long term security to the land within the Biodiversity Offset Strategy include incorporation into the nearby State Conservation Areas, Biobanking Agreement, Voluntary Conservation Agreement, or restrictive covenant on land titles.

Biodiversity Management Plan

20. The Proponent shall prepare and implement a Biodiversity Management Plan for the project, for all areas that are not, or will not, be subject to condition 4 of schedule 3, to the satisfaction of the Director-General. This plan must:
- be prepared in consultation with OEH, and be approved by the Director-General prior to the commencement of construction of the coal conveyor;
 - establish baseline data for the existing habitat in the biodiversity offset area and on the site;
 - describe the short, medium, and long term measures that would be implemented to:
 - manage vegetation clearing;
 - manage the remnant vegetation and habitat in the biodiversity offset area and on the site;
 - and
 - implement the biodiversity offset strategy, including detailed performance and completion criteria;
 - include a program to monitor and report on the effectiveness of these measures, and progress against detailed performance and completion criteria;
 - identify the potential risks to the successful implementation of the Biodiversity Offset Strategy, and the contingency measures that would be implemented to mitigate these risks; and
 - include details of who would be responsible for monitoring, reviewing, and implementing the plan.

Conservation Bond

21. Within 6 months of the commencement of construction of the coal conveyor, or the vegetation clearing described in the EA, whichever is sooner, the Proponent shall lodge a conservation bond with the Department to ensure that the Biodiversity Offset Strategy is implemented in accordance with the performance and completion criteria described in the Biodiversity Management Plan. The sum of the bond shall be determined by:
- calculating the full cost of implementing the offset strategy (other than land acquisition costs); and
 - employing a suitably qualified quantity surveyor to verify the calculated costs.

If the offset strategy is completed generally in accordance with the completion criteria in the Biodiversity Management Plan to the satisfaction of the Director-General, the Director-General will release the bond.

If the offset strategy is not completed generally in accordance with the completion criteria in the Biodiversity Management Plan, the Director-General will call in all or part of the conservation bond, and arrange for the satisfactory completion of the relevant works.

HERITAGE

Aboriginal Cultural Heritage Management Plan

22. The Proponent shall prepare and implement an Aboriginal Cultural Heritage Management Plan for the project, for all areas that are not, or will not, be subject to condition 4 of Schedule 3, to the satisfaction of the Director-General. This plan must:
- (a) be prepared in consultation with OEH and the Aboriginal community;
 - (b) be submitted to the Director-General for approval within 6 months of the date of approval of MOD 3;
 - (c) identify any actions required to ensure that the performance measures in Table 1 are met;
 - (d) include the following program/procedures for Aboriginal cultural heritage management:
 - managing Aboriginal cultural heritage sites, and the discovery of any new Aboriginal cultural heritage sites, objects or skeletal remains;
 - maintaining consultation with, and the involvement of, the Aboriginal community in the conservation and management of Aboriginal heritage sites, and managing access for the Aboriginal community to Aboriginal heritage sites and culturally significant areas; and
 - a trigger action response plan to manage unexpected subsidence impacts.

TRANSPORT

Monitoring of Coal Transport

23. The Proponent shall:
- (a) keep accurate records of the amount of coal transported from the site (on a monthly basis); and
 - (b) make these records publicly available on its website at the end of each calendar year.

VISUAL

Visual Amenity and Lighting

24. The Proponent shall:
- (a) implement all reasonable and feasible measures to minimise the visual and off-site lighting impacts of the project;
 - (b) ensure no unshielded outdoor lights shine above the horizontal; and
 - (c) ensure that all external lighting associated with the project complies with *Australian Standard AS4282 (INT) 1995 – Control of Obtrusive Effects of Outdoor Lighting* or its latest version, to the satisfaction of the Director-General.

WASTE

25. The Proponent shall:
- (a) minimise and monitor the waste generated by the project;
 - (b) ensure that the waste generated by the project is appropriately stored, handled and disposed of;
 - (c) manage on-site sewage treatment and disposal in accordance with the requirements of Council; and
 - (d) report on waste management and minimisation in the Annual Review, to the satisfaction of the Director-General.

BUSHFIRE

26. The Proponent shall:
- (a) ensure that the project is suitably equipped to respond to fires on site; and
 - (b) assist the Rural Fire Service and emergency services as much as possible if there is a fire in the vicinity of the site.

REHABILITATION

Rehabilitation Objectives

27. The Proponent shall rehabilitate the site to the satisfaction of the Executive Director Mineral Resources. This rehabilitation must be generally consistent with the proposed rehabilitation strategy described in the EA, and comply with the objectives in Table 12.

Table 12: Rehabilitation Objectives

Feature	Objective
<ul style="list-style-type: none"> Mine site (as a whole). 	<ul style="list-style-type: none"> Safe, stable & non-polluting; and Final land use compatible with surrounding land uses.
<ul style="list-style-type: none"> Surface infrastructure. 	<ul style="list-style-type: none"> To be decommissioned and removed, unless the Executive Director Mineral Resources agrees otherwise.
<ul style="list-style-type: none"> Portals and ventilation shafts. 	<ul style="list-style-type: none"> To be decommissioned and made safe and stable; and Retain habitat for threatened species (eg bats), where practicable.
<ul style="list-style-type: none"> Watercourses within project area. 	<ul style="list-style-type: none"> Hydraulically and geomorphologically stable.
<ul style="list-style-type: none"> Cliffs. 	<ul style="list-style-type: none"> No additional risk to public safety compared to prior to mining.
<ul style="list-style-type: none"> Other land affected by the project. 	<ul style="list-style-type: none"> Restore ecosystem function, including maintaining or establishing self-sustaining ecosystems comprised of: <ul style="list-style-type: none"> local native plant species (unless the Executive Director Mineral Resources agrees otherwise); and a landform consistent with the surrounding environment .
<ul style="list-style-type: none"> Built features damaged by mining operations. 	<ul style="list-style-type: none"> Repair to pre-mining condition or equivalent unless: <ul style="list-style-type: none"> the owner agrees otherwise; or the damage is fully restored, repaired or compensated under the <i>Mine Subsidence Compensation Act 1961</i>
<ul style="list-style-type: none"> Community. 	<ul style="list-style-type: none"> Ensure public safety; and Minimise the adverse socio-economic effects associated with mine closure

Notes:

- These rehabilitation objectives apply to all subsidence impacts and environmental consequences caused by mining taking place after the date of this approval; and to all surface infrastructure sites and other disturbance which forms part of the project, whether constructed prior to or following the date of this approval.
- Rehabilitation of subsidence impacts and environmental consequences caused by mining which took place prior to the date of this approval may be subject to the requirements of other approvals (eg under a mining lease or a Subsidence Management Plan approval).

Progressive Rehabilitation

28. The Proponent shall carry out the rehabilitation of the site progressively, that is, as soon as reasonably practicable following disturbance.

Rehabilitation Management Plan

29. The Proponent shall prepare and implement a Rehabilitation Management Plan for the project, in consultation with OEH, NOW, Cessnock City Council, Maitland City Council and Newcastle City Council, and the CCC, and to the satisfaction of the Director-General and the Executive Director Mineral Resources. This plan must:
- be submitted to the Director-General and the Executive Director Mineral Resources for approval within 9 months of the date of approval of MOD 3;
 - be prepared in accordance with any relevant DRE guideline and be consistent with the rehabilitation objectives in the EA, EA (MOD 3) and in Table 11;
 - describe how the performance of the rehabilitation would be monitored and assessed against the objectives in Table 11;
 - describe the process whereby additional measures would be identified and implemented to ensure the rehabilitation objectives are achieved;
 - provide for detailed mine closure planning, including measures to minimise socio-economic effects due to mine closure, to be conducted prior to the site being placed on care and maintenance; and
 - be integrated with the other management plans required under this approval.

Note: The Rehabilitation Management Plan should address all land impacted by the project, and should be suitably integrated with the approved Rehabilitation Management Plans for the Donaldson Open-Cut Mine and the Bloomfield Colliery.

SCHEDULE 5 ADDITIONAL PROCEDURES

NOTIFICATION OF LANDOWNERS

1. As soon as practicable after obtaining monitoring results which show:
 - (a) an exceedance of any relevant criteria in Schedule 4, the Proponent shall notify affected landowners in writing of the exceedance, and provide regular monitoring results to each affected landowner until the Proponent is again complying with the relevant criteria; and
 - (b) an exceedance of any relevant air quality criteria in Schedule 4, the Proponent shall send a copy of the NSW Health fact sheet entitled "Mine Dust and You" (as may be updated from time to time) to the affected landowners and/or existing tenants of the land (including the tenants of any mine-owned land).

INDEPENDENT REVIEW

2. If an owner of privately-owned land considers that the Proponent is exceeding the relevant criteria in Schedule 4, then he/she may ask the Director-General in writing for an independent review of the impacts of the project on his/her land.

If the Director-General is satisfied that an independent review is warranted, then within 2 months of the Director-General's decision the Proponent shall:

- (a) commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Director-General, to:
 - (i) consult with the landowner to determine his/her concerns;
 - (ii) conduct monitoring to determine whether the Proponent is complying with the relevant criteria in Schedule 4; and
 - (iii) if the Proponent is not complying with these criteria then identify the measures that could be implemented to ensure compliance with the relevant criteria; and
 - (b) give the Director-General and landowner a copy of the independent review.
-

SCHEDULE 6 ENVIRONMENTAL MANAGEMENT, REPORTING & AUDITING

ENVIRONMENTAL MANAGEMENT

Environmental Management Strategy

1. The Proponent shall prepare and implement an Environmental Management Strategy for the project to the satisfaction of the Director-General. This strategy must:
 - (a) be submitted to the Director-General for approval within 6 months of the date of approval of MOD 3;
 - (b) provide the strategic framework for environmental management of the project;
 - (c) identify the statutory approvals that apply to the project;
 - (d) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the project;
 - (e) describe the procedures that would be implemented to:
 - (i) keep the local community and relevant agencies informed about the operation and environmental performance of the project;
 - (ii) receive, handle, respond to, and record complaints;
 - (iii) resolve any disputes that may arise during the course of the project;
 - (iv) respond to any non-compliance;
 - (v) respond to emergencies; and
 - (f) include:
 - (i) copies of any strategies, plans and programs approved under the conditions of this approval; and
 - (ii) a clear plan depicting all the monitoring required to be carried out under the conditions of this approval.

Management Plan Requirements

2. The Proponent shall ensure that the management plans required under this approval are prepared in accordance with any relevant guidelines, and include:
 - (a) detailed baseline data;
 - (b) a description of:
 - (i) the relevant statutory requirements (including any relevant approval, licence or lease conditions);
 - (ii) any relevant limits or performance measures/criteria;
 - (iii) the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the project or any management measures;
 - (c) a description of the measures that would be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria;
 - (d) a program to monitor and report on the:
 - (i) impacts and environmental performance of the project;
 - (ii) effectiveness of any management measures (see c above);
 - (e) a contingency plan to manage any unpredicted impacts and their consequences and to ensure that ongoing impacts reduce to levels below relevant impact assessment criteria as quickly as possible;
 - (f) a program to investigate and implement ways to improve the environmental performance of the project over time;
 - (g) a protocol for managing and reporting any:
 - (i) incidents;
 - (ii) complaints;
 - (iii) non-compliances with statutory requirements; and
 - (iv) exceedances of the impact assessment criteria and/or performance criteria; and
 - (h) a protocol for periodic review of the plan.

Note: The Director-General may waive some of these requirements if they are unnecessary or unwarranted for particular management plans.

Adaptive Management

3. The Proponent must assess and manage project-related risks to ensure that there are no exceedances of the criteria and/or performance measures in Schedules 3 and 4. Any exceedance of these criteria and/or performance measures constitutes a breach of this approval and may be subject to penalty or offence provisions under the EP&A Act or EP&A Regulation.

Where any exceedance of these criteria and/or performance measures has occurred, the Proponent must, at the earliest opportunity:

- (a) take all reasonable and feasible steps to ensure that the exceedance ceases and does not recur;

- (b) consider all reasonable and feasible options for remediation (where relevant) and submit a report to the Department describing those options and any preferred remediation measures or other course of action; and
- (c) implement remediation measures as directed by the Director-General, to the satisfaction of the Director-General.

Annual Review

4. By the end of March each year, or other timing as may be agreed by the Director-General, the Proponent shall review the environmental performance of the project to the satisfaction of the Director-General. This review must:
 - (a) describe the development (including any rehabilitation) that was carried out in the past calendar year, and the development that is proposed to be carried out over the current calendar year;
 - (b) include a comprehensive review of the monitoring results and complaints records of the project over the past calendar year, which includes a comparison of these results against the:
 - (i) relevant statutory requirements, limits or performance measures/criteria;
 - (ii) requirements of any plan or program required under this approval;
 - (iii) monitoring results of previous years; and
 - (iv) relevant predictions in the EA and EA (MOD 3);
 - (c) identify any non-compliance over the past calendar year, and describe what actions were (or are being) taken to ensure compliance;
 - (d) identify any trends in the monitoring data over the life of the project;
 - (e) identify any discrepancies between the predicted and actual impacts of the project, and analyse the potential cause of any significant discrepancies; and
 - (f) describe what measures will be implemented over the current calendar year to improve the environmental performance of the project.

Revision of Strategies, Plans and Programs

5. Within 3 months of:
 - (a) the submission of an annual review under Condition 4 above;
 - (b) the submission of an incident report under Condition 7 below;
 - (c) the submission of an audit report under Condition 9 below; or
 - (d) any modification to the conditions of this approval, (unless the conditions require otherwise),
 the Proponent shall review the strategies, plans, and programs required under this approval, to the satisfaction of the Director-General. Where this review leads to revisions in any such document, then within 4 weeks of the review the revised document must be submitted for the approval of the Director-General.

Note: The purpose of this condition is to ensure that strategies, plans and programs are regularly updated to incorporate any measures recommended to improve environmental performance of the project.

Community Consultative Committee

6. The Proponent shall continue to operate a Community Consultative Committee (CCC) for the project to the satisfaction of the Director-General. This CCC must be operated in general accordance with the *Guidelines for Establishing and Operating Community Consultative Committees for Mining Projects* (Department of Planning, 2007, or its latest version).

Notes:

- *The CCC is an advisory committee. The Department and other relevant agencies are responsible for ensuring that the Proponent complies with this approval.*
- *In accordance with the guideline, the Committee should be comprised of an independent chair and appropriate representation from the Proponent, Council/s, recognised environmental groups and the local community.*
- *In operating the CCC, the Department will accept the continued representation from existing CCC members.*

REPORTING

Incident Reporting

7. The Proponent shall notify, at the earliest opportunity, the Director-General and any other relevant agencies of any incident that has caused, or threatens to cause, material harm to the environment. For any other incident associated with the project, the Proponent shall notify the Director-General and any other relevant agencies as soon as practicable after the Proponent becomes aware of the incident. Within 7 days of the date of the incident, the Proponent shall provide the Director-General and any relevant agencies with a detailed report on the incident, and such further reports as may be requested.

Regular Reporting

8. The Proponent shall provide regular reporting on the environmental performance of the project on its website, in accordance with the reporting arrangements in any plans or programs approved under the conditions of this approval.

INDEPENDENT ENVIRONMENTAL AUDIT

9. By the end of March 2015 (or other such timing as agreed by the Director-General), and every 3 years thereafter, unless the Director-General directs otherwise, the Proponent shall commission and pay the full cost of an Independent Environmental Audit of the project. This audit must:
 - (a) be conducted by a suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Director-General;
 - (b) include consultation with the relevant agencies;
 - (c) assess the environmental performance of the project and assess whether it is complying with the requirements in this approval and any relevant EPL or Mining Lease (including any assessment, plan or program required under these approvals);
 - (d) review the adequacy of strategies, plans or programs required under the abovementioned approvals; and
 - (e) recommend appropriate measures or actions to improve the environmental performance of the project, and/or any assessment, plan or program required under the abovementioned approvals.

Note: This audit team must be led by a suitably qualified auditor and include experts in any field specified by the Director-General.

10. Within 6 weeks of the completion of this audit, or as otherwise agreed by the Director-General, the Proponent shall submit a copy of the audit report to the Director-General, together with its response to any recommendations contained in the audit report.

ACCESS TO INFORMATION

11. From the end of December 2013, the Proponent shall:
 - (a) make copies of the following publicly available on its website:
 - the EA, EA (MOD 1), EA (MOD 2) and EA (MOD 3);
 - all current relevant statutory approvals for the project;
 - approved strategies, plans and programs required under the conditions of this approval;
 - a comprehensive summary of the monitoring results of the project, which have been reported in accordance with the various plans and programs approved under the conditions of this approval;
 - a complaints register (updated monthly);
 - minutes of CCC meetings;
 - the Annual Reviews of the project;
 - any Independent Environmental Audit, and the Proponent's response to the recommendations in any audit;
 - any other matter required by the Director-General; and
 - (b) keep this information up-to-date, to the satisfaction of the Director-General.
-

**APPENDIX 1
SCHEDULE OF LAND**

1. ABEL SITE

Abel Underground Mining Area – South of John Renshaw Drive

Lot	DP	Lot	DP	Lot	DP
94	755260	120	755260	1	228477
942	817442	101	755260	1	986196
1	858353	100	755260	2	602610
94	755260	11	11875	91	828299
11	804925	13	11875	92	828299
12	804925	122	567150	951	600488
1	583620	21	1019282	202	626192
8	1048112	22	1019282	2011	812939
7	1048112	1	120851	2012	812939
3	237431	A	418390	952	600488
210	833717	11	877937	A	155698
211	833717	12	877937	101	837562
5	237431	610	1035588	100	837562
1	1003988	611	1035588	1	602610
932	816814	2	219167	1	179002
1	189884	A	181350	2	228477
83	629112	1	536570	3	228477
3	1003988	1	957782	12	528093
2	1003988	8110	867955	21	1043285
223	841899	8111	867955	22	1043285
224	841899	810	730001	111	1035921
84	629112	1	951843	1	174428
116	755260	2	951843	10	837813
121	755260	1	119630	1	910932
122	755260	1	123945	1	359638
113	755260	1	505578	680	545657
112	755260	72	755260	683	619758
110	755260	79	755260	686	619758
111	755260	82	755260	685	619758
2	449834	83	755260	3	214493
21	773883	84	755260	2	214493
22	1080823	89	755260	1	214493
23	1080823	96	755260	4	214493
24	1080823	125	755260	684	619758
220	836874	1	877416	1	123949
2	531623	2	877416	2	123949
219	836874	3	877416	70	755260
218	836874	4	877416	82	627799
107	755260	101	881099	1131	1057179
1061	855759	13	1072499	1	811514
1062	855759	2	503566	10	829154
105	755260	1	433355	11	829154
118	755260	21	801283	11	746684
11	873821	22	801283	41	811191
8	873821	2	285375	8	755232
9	873821	100	881099	7	850020
5	873821	1	285375	8	850020
7	873821	3	285375	4	1049753
6	873821	4	285375	43	811191
104	755260	5	285375	6	850020
103	755260	6	285375	101	860867
102	755260	3	602610	13	1072499
14	1059212	1	34665		

Abel Surface Facilities Site – North of John Renshaw Drive

Landowner	Lot	Deposited Plan
Donaldson Coal Pty Limited	PT92	755260
Donaldson Coal Pty Limited	PT13	11875
Donaldson Coal Pty Limited	121	567150
Donaldson Coal Pty Limited	PT11	11875
Donaldson Coal Pty Limited	21	1019282
Donaldson Coal Pty Limited	22	1019282
Donaldson Coal Pty Limited	81	627799
Donaldson Coal Pty Limited	1	838310
Donaldson Coal Pty Limited	PT13	755260
Hunter Water		2487-3070

2. BLOOMFIELD SITE

Bloomfield Lease Area

Landowner	Lot	Deposited Plan
Ashtonfield Holdings	1	1045723
Ashtonfield Holdings	9	755237
Ashtonfields Pty Limited	223	755237
Ashtonfields Pty Limited	1	456999
Ashtonfields Pty Limited	15	241097
Ashtonfields Pty Limited	14	241097
Ashtonfields Pty Limited	1	982215
Hunter Water	1	724270
Ashtonfields Pty Limited	1	1045720
Ashtonfields Pty Limited	2	1045720
Ashtonfields Pty Limited	1	1045722
Hunter Water		2487-3070
Ashtonfields Pty Limited	2	1045722
Ashtonfields Pty Limited	13	241097
Ashtonfields Pty Limited	10	755237
Ashtonfields Pty Limited	11	755237
Ashtonfields Pty Limited	18	755237
Ashtonfields Pty Limited	20	755237
Ashtonfields Pty Limited	19	755237
Ashtonfields Pty Limited	30	755260
Ashtonfields Pty Limited	29	755260
Ashtonfields Pty Limited	28	755260
Ashtonfields Pty Limited	27	755260
Ashtonfields Pty Limited	26	755260
Ashtonfields Pty Limited	PT34	755260
Ashtonfields Pty Limited	1	722210
Ashtonfields Pty Limited	PT48	755260
Ashtonfields Pty Limited	PT35	755260
Ashtonfields Pty Limited	PT36	755260
Ashtonfields Pty Limited	1	42349
Ashtonfields Pty Limited	1	69246
Ashtonfields Pty Limited	3	1045720
Ashtonfields Pty Limited	4	1045720
Ashtonfields Pty Limited	1	58967
Ashtonfields Pty Limited	1	136865
Hunter Water	1	617909
Ashtonfields Pty Limited	2	136865
Ashtonfields Pty Limited	PT31	755237
Four Mile	35	755237
Four Mile	36	755237
Ashtonfields Pty Limited	23	755237
Ashtonfields Pty Limited	29	755237
Ashtonfields Pty Limited	1	1045719
Ashtonfields Pty Limited	PT37	755237
Ashtonfields Pty Limited	PT38	755237
Ashtonfields Pty Limited	PT39	755237

Ashtonfields Pty Limited	25	755260
Ashtonfields Pty Limited	24	755260
Ashtonfields Pty Limited	23	755260
Ashtonfields Pty Limited	22	755260
Ashtonfields Pty Limited	12	241097
Ashtonfields Pty Limited	43	755260
Ashtonfields Pty Limited	44	755260
Ashtonfields Pty Limited	45	755260
Ashtonfields Pty Limited	46	755260
Ashtonfields Pty Limited	2	456999
Hunter Water pipeline	1	241097
Hunter Water pipeline	2	241097
Hunter Water pipeline	3	241097
Hunter Water pipeline	4	241097
Hunter Water pipeline	5	241097
Hunter Water pipeline	6	241097
Hunter Water pipeline	7	241097
Hunter Water pipeline	8	241097
Hunter Water pipeline	9	241097
Hunter Water pipeline	10	241097
Hunter Water pipeline	2	42349
Hunter Water pipeline	3	42349
Hunter Water pipeline	1	814843

3. OUT OF LEASE AREAS

Landowner	Lot	Deposited Plan
Donaldson Coal	PT92	755260
Big Ben Holdings	4	11988
Big Ben Holdings	849	852072
Cant Family Partnership	30	577638
Cant Family Partnership	101	616161
Four Mile	5	866929
Donaldson Coal	12	1007491
Ashtonfield Holdings	43	755237
Ashtonfield Holdings	44	755237
Ashtonfield Holdings	50	755237
Ashtonfield Holdings	51	755237
Big Ben Holdings	42	755237
Ashtonfield Holdings	45	755237
Ashtonfield Holdings	49	755237
Big Ben Holdings	41	755237
Hunter Water		2487-3070
Hunter Water pipeline	11	241097

APPENDIX 2 PROJECT LAYOUT

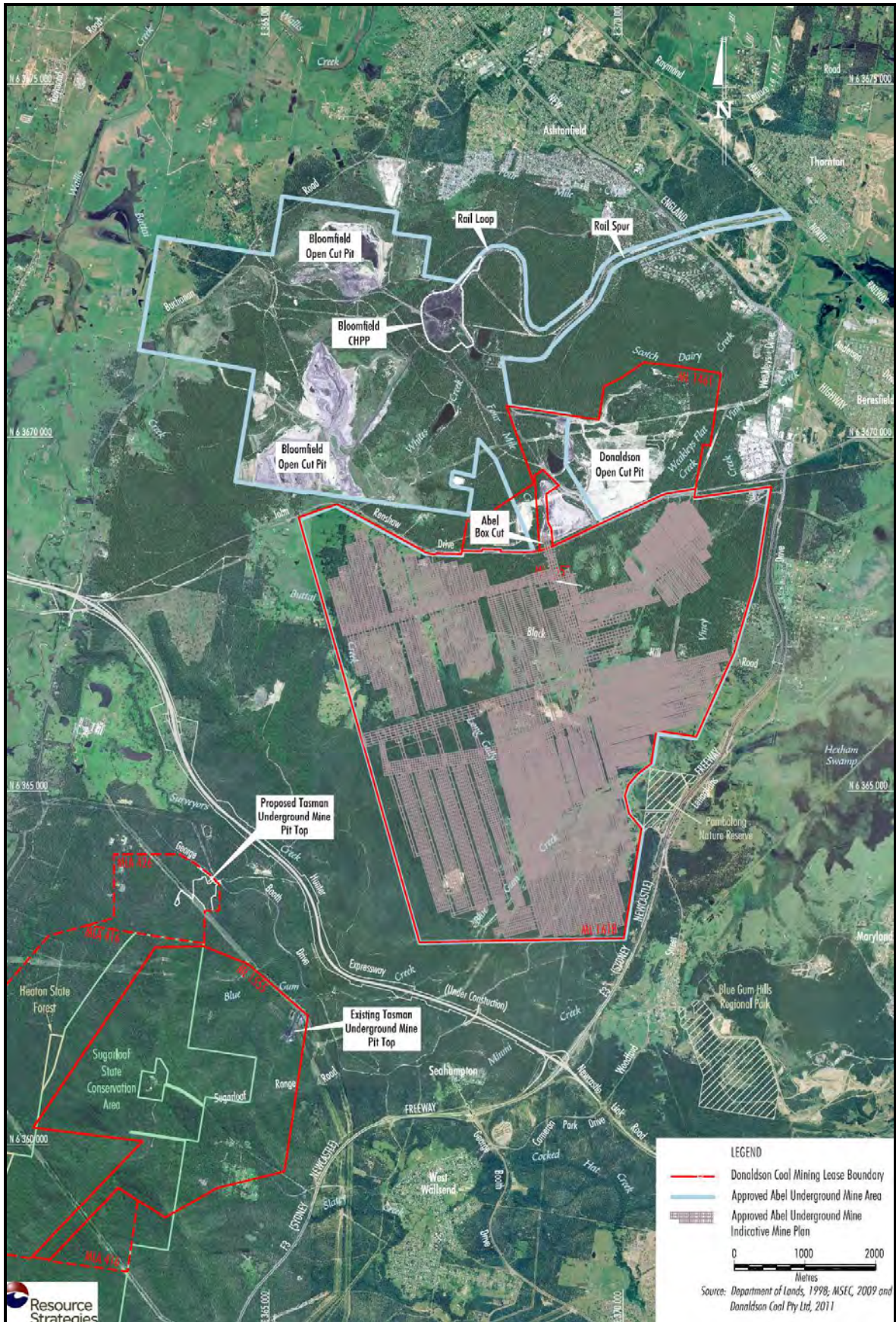


Figure 1: Project area

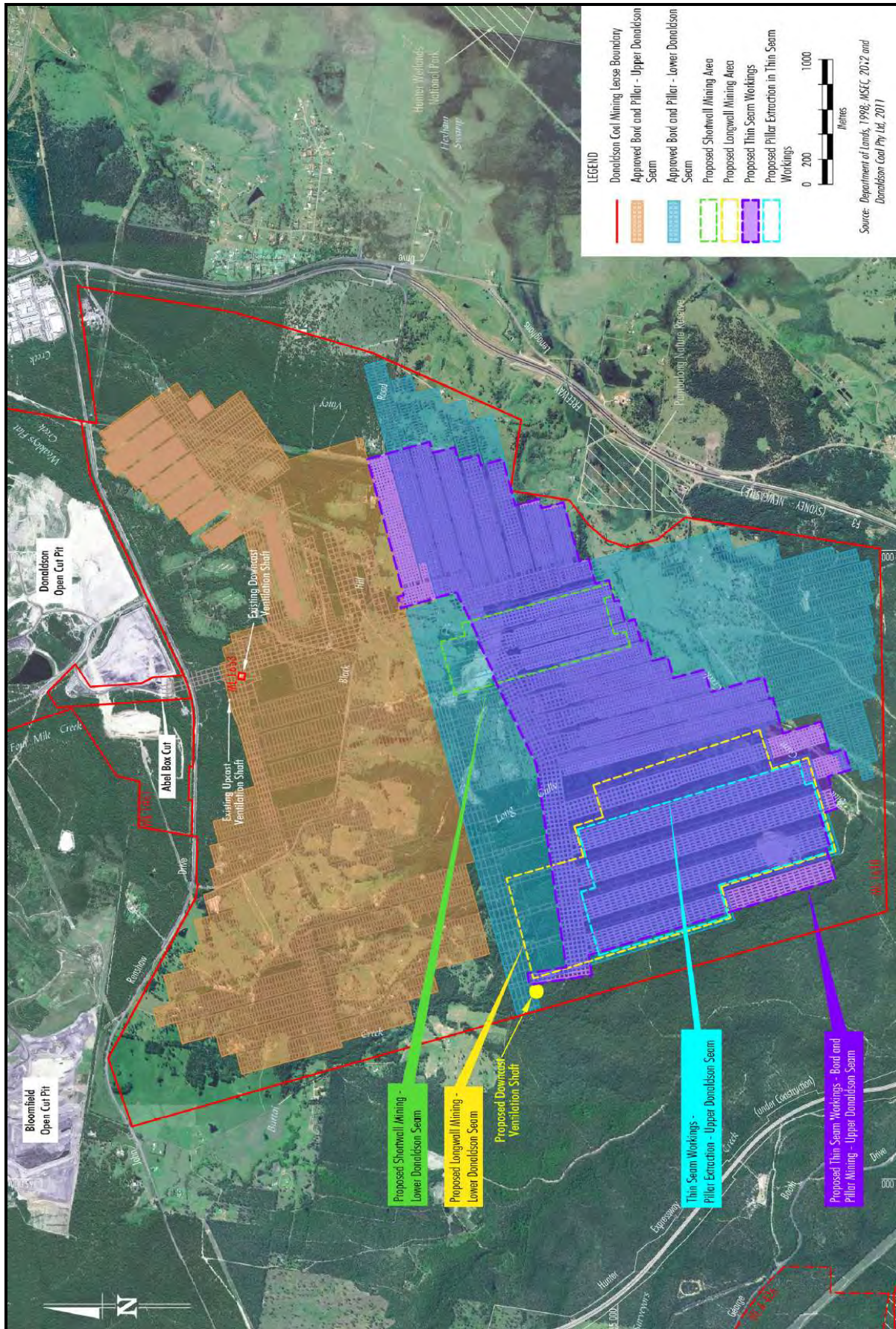


Figure 2: Approved mine plan

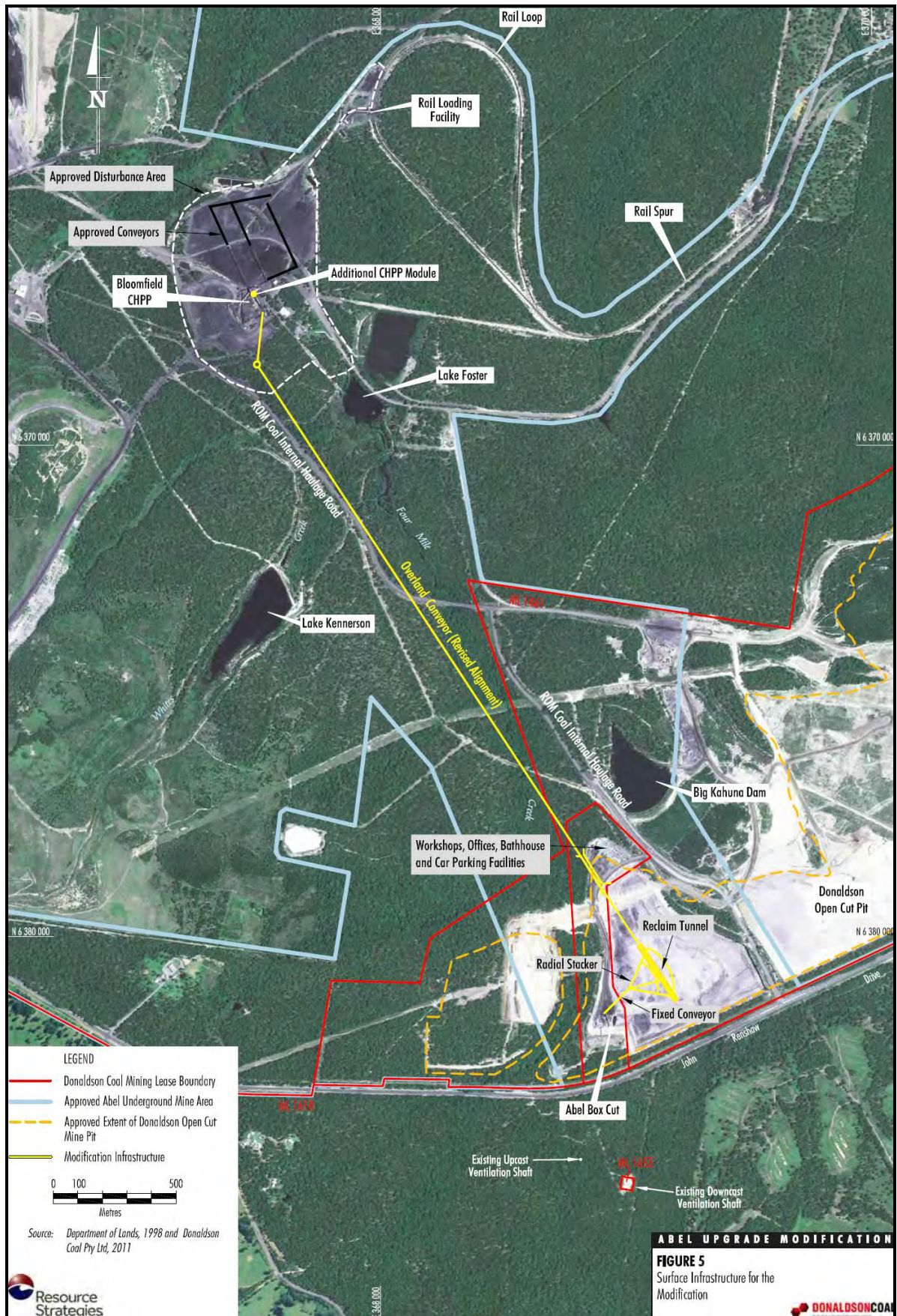


Figure 3: Surface facilities

APPENDIX 3 RECEIVERS AND MONITORING LOCATIONS

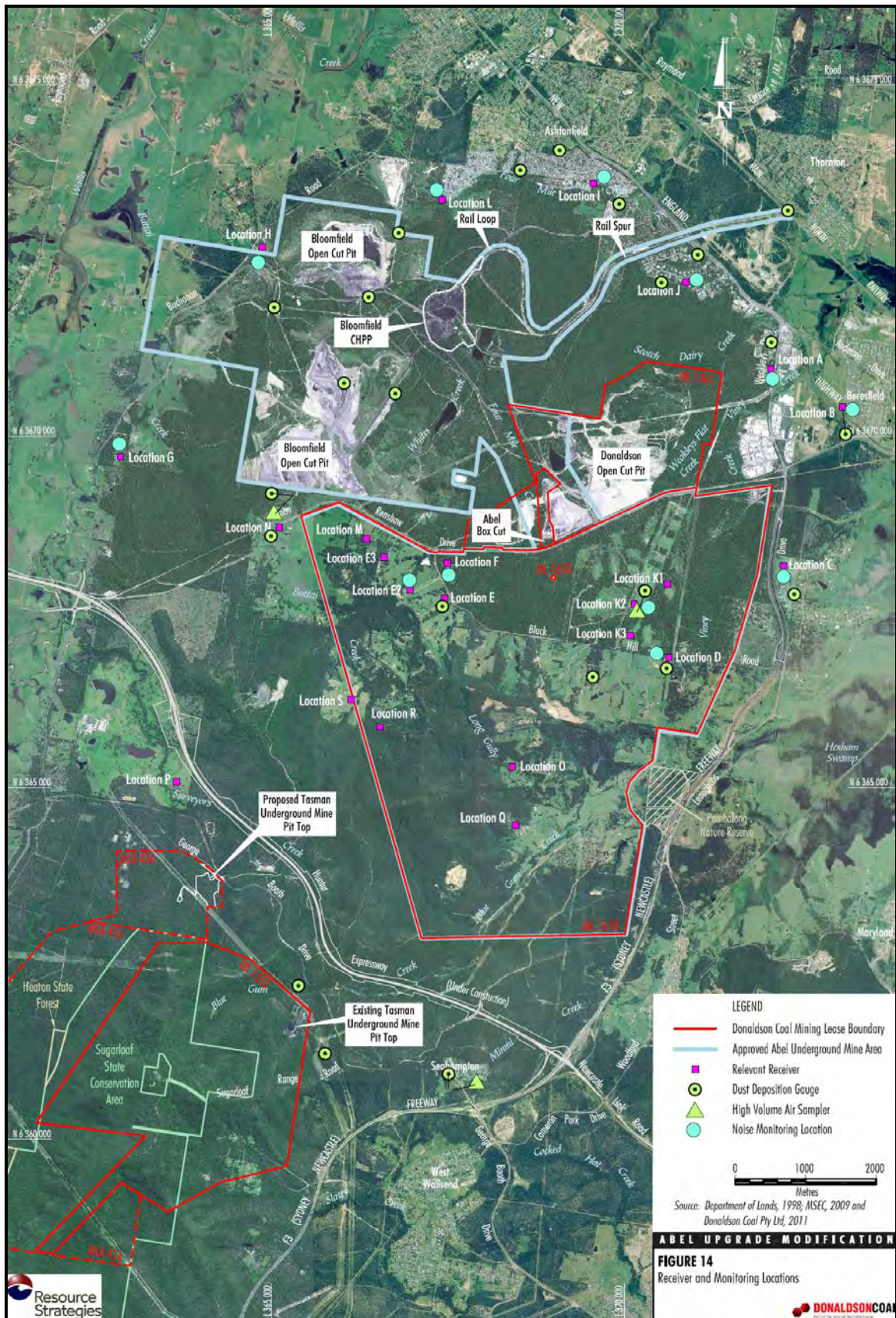


Figure 1: Monitoring locations

APPENDIX 4 NOISE COMPLIANCE ASSESSMENT

Applicable Meteorological Conditions

1. The noise criteria in Tables 4 and 7 are to apply under all meteorological conditions except the following:
 - (a) during periods of rain or hail;
 - (b) average wind speed at microphone height exceeds 5 m/s;
 - (c) wind speeds greater than 3 m/s measured at 10 m above ground level; or
 - (d) temperature inversion conditions greater than 3°C/100 m.

Determination of Meteorological Conditions

2. Except for wind speed at microphone height, the data to be used for determining meteorological conditions shall be that recorded by the meteorological station located on the site.

Compliance Monitoring

3. Attended monitoring is to be used to evaluate compliance with the relevant conditions of this approval.
4. Unless otherwise agreed with the Director-General, this monitoring is to be carried out in accordance with the relevant requirements for reviewing performance set out in the *NSW Industrial Noise Policy* (as amended from time to time), in particular the requirements relating to:
 - (a) monitoring locations for the collection of representative noise data;
 - (b) meteorological conditions during which collection of noise data is not appropriate;
 - (c) equipment used to collect noise data, and conformity with Australian Standards relevant to such equipment; and
 - (d) modifications to noise data collected, including for the exclusion of extraneous noise and/or penalties for modifying factors apart from adjustments for duration.

**APPENDIX 5
STATEMENT OF COMMITMENTS**

Donaldson Coal Pty Ltd (**the Company**) will commit to the following controls for construction and operation of the Abel Underground Mine.

0. General	<p>The Company shall carry out the development generally in accordance with the:</p> <ul style="list-style-type: none"> (a) Abel Underground Mine Part 3A Environmental Assessment. (b) modification application 05_0136 – MOD 1 and the accompanying Environmental Assessment prepared by the Company and dated May 2010; (c) modification application 05_0136 – MOD 2 and the accompanying Environmental Assessment prepared by the Company and dated March 2011; (d) modification application 05_0136 – MOD 3 and the accompanying Environmental Assessment prepared by the Company and dated February 2013 and Response to Submissions dated July 2013. <p>If there is any inconsistency between the conditions of this Statement of Commitments and a document listed above the conditions of this Statement of Commitments shall prevail to the extent of the inconsistency.</p>
1. Production	<ul style="list-style-type: none"> 1.1 No more than 6.1 million tonnes of ROM coal a year will be mined from the Abel Underground Mine. 1.2 No more than 8.5 million tonnes of ROM coal a year will be processed at the Bloomfield CHPP. 1.3 No more than 6.5 million tonnes per annum of product coal will be transported on the Bloomfield Rail Loop.
2. Hours of Operation	<ul style="list-style-type: none"> 2.1 The Abel Underground Mine will operate 24 hours per day, seven days per week. 2.2 The Bloomfield CHPP will operate 24 hours per day, seven days per week. 2.3 The Bloomfield Rail Loop will operate 24 hours per day, seven days per week.
3. Noise	<p>3.1 Construction Activities</p> <p>The following noise control measures will be implemented prior to commencement of construction of the Abel Underground Mine or the upgrade of the Bloomfield CHPP:</p> <ul style="list-style-type: none"> (a) Maintain all machinery and equipment in working order; (b) No construction activities at the Abel pit top will take place on Sundays or Public Holidays; (c) Where possible locate noisy site equipment behind structures that act as barriers or at the greatest distance from noise sensitive areas; and (d) Orientate equipment so that noise emissions are directed away from noise sensitive areas. <p>3.2 Noise Control Measures</p> <ul style="list-style-type: none"> (a) The following noise control measures will be implemented prior to the mining of coal from the Abel Underground Mine: <ul style="list-style-type: none"> • Orientation of the ventilation fans away from residential receivers and angle the output parallel to the ground. • The sound power level of the front end loader to be used near the portal should not exceed 113 dBA and will be fitted with a noise sensitive reversing alarm. (b) The following noise control measures will be implemented prior to the Bloomfield CHPP receiving any ROM coal from the Abel Underground Mine: <ul style="list-style-type: none"> • Noise mitigation works including partial enclosure and noise screening of drives and conveyors of the Bloomfield CHPP to screen residences to the north of the site.

	<p>3.3 Monitoring</p> <p>The Company will implement a Noise Monitoring Program for the Abel Underground Mine and the Bloomfield CHPP, to the satisfaction of the Director-General. The Noise Monitoring Program shall include a combination of real-time and supplementary attended monitoring measures, and a noise monitoring protocol for evaluating compliance with the noise environmental assessment. This plan will be integrated with the monitoring plans for the Tasman, Donaldson and Bloomfield Mines to provide a single integrated Noise Monitoring Program for all 4 mines.</p> <p>3.4 Continuous Improvement</p> <p>The Company shall:</p> <p>(a) report on these investigations and the implementation of any new noise mitigation measures on site in the AEMR, to the satisfaction of the Director-General.</p> <p>The operator of the Bloomfield CHPP shall:</p> <p>(b) investigate ways to reduce the noise generated by the Bloomfield CHPP, including maximum noise levels which may result in sleep disturbance;</p> <p>(c) implement all reasonable and feasible best practice noise mitigation measures on the site; and</p> <p>(d) report on these investigations and the implementation of any new noise mitigation measures on site in the AEMR, to the satisfaction of the Director-General.</p>
<p>4. Air Quality</p>	<p>4.1 Construction</p> <p>The following actions shall be adopted in relation to dust control on the site during construction of the proposed Abel Underground Mine and the modifications to the Bloomfield CHPP:</p> <ul style="list-style-type: none"> • Minimise the area to be disturbed; • Progressively rehabilitate disturbed areas as soon as practicable; • Restrict vehicle movements to specified routes; • Provide speed limited signage around the mine site; • Dust suppression using water sprays; • Commence landscaping as soon as practicable; • Install dust gauges to monitor dust deposition levels at sensitive receptors. A minimum of 11 locations are proposed. <p>4.2 Air Quality Control Measures</p> <p>(a) The following actions would be adopted in relation to dust control on the site during operation of the proposed Abel Underground Mine and the operation of the Bloomfield CHPP:</p> <ul style="list-style-type: none"> • All mobile equipment will be maintained in good working order to limit exhaust fumes. • Regular watering of all roads. • Use water sprays periodically on open stockpile areas and regular visual inspection will be undertaken and water sprays activated as required. <p>(b) Dust emissions generated by the Abel Underground Mine and the Bloomfield CHPP will not exceed any statutory limits.</p> <p>(c) Dust control on site is to be aimed at prevention of air pollution and prevention of the degradation of local amenity.</p> <p>(d) Dust controls on the site will comply with all relevant NSW EPA guidelines and any applicable Environment Protection Licence issued under the POEO Act 1997.</p> <p>(e) Regular inspections for excessive visible dust generation will be undertaken and appropriate controls will be implemented when such events occur. This will include ceasing operations during high wind conditions if necessary to ensure effective dust control.</p>

	<p>4.4 Monitoring</p> <p>(a) The Company will implement a Air Quality Monitoring Program for the Abel Underground Mine and the Bloomfield CHPP, to the satisfaction of the Director-General. The Air Quality Monitoring Program shall include a combination of real-time and supplementary attended monitoring measures (including real-time air quality monitoring for 24-hour average PM10 and the recording of required meteorological monitoring data) and an air quality monitoring protocol for evaluating compliance with the air quality environmental assessment. This plan will be integrated with the existing monitoring plans for the Tasman, Donaldson and Bloomfield Mines to provide a single integrated Air Monitoring Program for all 4 mines.</p> <p>(b) The Company shall ensure that there is a suitable meteorological station operating in the vicinity of the development in accordance with the requirements in Approved Methods for Sampling of Air Pollutants in New South Wales.</p>
<p>5. Surface Water Management – Abel Underground Mine</p>	<p>5.1 Schedule 1 Streams</p> <p>(a) Schedule 1 streams (as defined in the DIPNR 2005 guideline, "Management of stream/aquifer systems in coal mining developments") will be managed via the implementation of mitigation and remediation works where needed to ensure that:</p> <ul style="list-style-type: none"> • stream stability is maintained where subsidence occurs; • stream fractures are minimised; • stream channels are maintained with minimal incision from bed grade change; and • stream bed grade change is minimised to provide stable stream length. <p>(b) Where any stream stability controls are required they will be designed in accordance with the Rehabilitation Manual for Australian Streams (Land and Water Resources Research and Development Corporation, 2000) and will be provided primarily by vegetation.</p> <p>5.2 Schedule 2 Streams</p> <p>(a) Schedule 2 streams (as defined by DIPNR, 2005) will be managed so as to ensure that:</p> <ul style="list-style-type: none"> • they maintain pre-mining course, and maintain bed channel gradients which do not initiate erosion; • they maintain pool riffle sequences where they pre-existed, or have pool riffle sequences installed where appropriate; • they maintain connectivity to underground workings, and flow loss to fracture zones in similar levels to pre-mining; • they maintain geomorphic integrity of the stream; • the ecosystem habitat values of the stream are protected; • no significant alteration of the water quality occurs in the stream. <p>(b) The above commitments for Schedule 2 streams will be achieved by:</p> <ul style="list-style-type: none"> • the provision of a minimum barrier of 40m between the 20 millimetre line of subsidence and the bank of any Schedule 2 streams; or • the carrying out of further detailed studies and the development of a Surface Water Management Plan for the Abel Underground Mine which clearly demonstrates that the above commitments can be met prior to any mining occurring which will impact on any Schedule 2 streams. <p>5.3 Pambalong Alluvium</p> <p>For the lower reach of Blue Gum Creek (from the confluence of Long Gully and Blue Gum Creek downstream), a buffer will be provided which provides for no more than 20mm of subsidence at 40m from the edge of the alluvium will be adopted, and within the buffer zone no significant subsidence will occur.</p>

5.4 Rainforest Communities

Subsidence in the rain forest protection zones identified on Figure 2.2 of the EA will be limited to 20mm of subsidence at the edge of the zone identified unless further studies can demonstrate that there will be no significant impact on the rainforest communities within the buffer zone with greater subsidence impacts.

5.5 Surface Water Management Plan

Prior to mining occurring that will impact on any Schedule 1 streams the Surface Water Management Plan for the Abel Underground Mine will be developed so as to address the following in relation to schedule 1 streams:

- detailed identification of risk factors on a case-by-case basis;
- setting up of permanent monitoring locations along watercourses as well as regular inspection regimes;
- continuation of baseline data collection on water flow conditions and health indicators (such as macro- invertebrates);
- establishment of trigger levels that will be used to assess whether any changes observed through monitoring warrant responsive action; and
- details of responsive and remedial action to be undertaken if required.
- require the identification of any existing degradation in the streams prior to mining to allow differentiation of that degradation induced by the mining.
- provide for a post-mining assessment of any streams within the area of mine subsidence within six (6) months of the initial subsidence.
- provide for a subsequent assessment within eighteen (18) months of the initial subsidence to confirm that post-mining degradation resulting from the mining is successfully remediated.
- require any remediation works to be implemented to a standard approved by NOW, where the assessment has indicated degradation of the streams in the area of mining induced subsidence, and thereafter on an annual basis until any mining induced stream instability is addressed to the standard approved.
- require a photographic record of stream stability for areas where either fracturing is detected (at maximum strain points), or at maximum tilts within the subsidence envelope.

Where it is proposed not to leave a barrier around a Schedule 2 stream a detailed assessment will be undertaken for the stream and provided to NOW addressing the proposed impacts on it. The detailed assessment will include as a minimum:

- assessment of the geomorphic and vegetation condition and aquatic habitat for the stream;
- selective measurements of channel boundary sediment size;
- predications of subsidence and cracks/fractures throughout the stream;
- a detailed photographic record of the existing stream condition;
- a map of the spatial distribution of alluvium and colluvial aprons throughout the stream;
- collection of background data for the main areas of alluvium for the shallow alluvial aquifer by the installation and regular monitoring of a network of piezometers and/or wells in the main areas of alluvium for the shallow alluvial aquifer;
- assessment of the location and activity of springs, pipes/tunnels and/or salt seepages/efflorescences;
- measurement of current bed slope and any pool-riffle sequences on each channel and periodic assessments of changes over time;
- an assessment of likely erosion points, fracturing or seepage zones from the mining area to the stream, along the stream channel occurring as a result of mining activities.

	<ul style="list-style-type: none"> • an assessment of any required remedial works on the affected stream, including: <ul style="list-style-type: none"> - options considered for the remediation program - anticipated lifetime of the remedial works - details of the engineering design or process for engineering - design of the remediation works - long term remediation requirements, including revegetation. • details of the proposed monitoring regime. It will provide for: <ul style="list-style-type: none"> - post-mining assessment, to a standard approved by NOW, within six (6) months of the initial subsidence. - provide for a subsequent assessment within eighteen (18) months of the initial subsidence to confirm that post-mining degradation resulting from the mining is successfully remediated. <p>Following consultation with NOW on the above assessment for each schedule 2 stream the Surface Water Management Plan for the Abel Underground Mine will be developed to implement the findings of the above assessment.</p>
<p>6. Surface Water Management – Bloomfield CHPP and the Abel Underground Pit Top Facilities</p>	<p>6.1 Separate surface water management systems will be designed for the Bloomfield CHPP and the Abel Underground Pit Top Facilities which provide for:</p> <ul style="list-style-type: none"> • Separation of clean and dirty water; • Management and control of stormwater flows; • Minimisation of sediment generation, soil erosion and transport off site; • Recycling of water where to minimise demand for potable water; and • Provision of water for fire fighting. • Maintain water supply for the coal handling and preparation plant and for dust suppression at all times; • Minimise discharge to the environment from Big Kahuna; • Minimise discharge from the Stockpile Dam; • Minimise discharge from Lake Foster and Lake Kennerson; and • Where controlled discharge is necessary, preference is given to Lake Kennerson. <p>6.2 The surface water management systems shall be based on the following principles:</p> <ul style="list-style-type: none"> • Minimise demand for fresh water supply by recycling water collected on the site; • Store recycled water on site to reduce water consumption during operation of the proposed development; • Design drainage and sediment control for the operation in accordance with the Landcom (2004) guidelines; • Provide a water supply for fire fighting and provision for containment of firewater; • Use of a first flush system to ensure “dirty” water is captured in accordance with EPA guidelines. <p>6.3 The surface water management systems will include an Erosion and Sediment Control Plan (ESCP). The ESCP will outline the measures that will be implemented to ensure that no undue pollution of receiving waters occurs during any earthworks construction or during the operation of the facilities.</p>

	<p>6.4 The following erosion and sediment control works will be implemented as part of the project:</p> <ul style="list-style-type: none"> • All works for the Abel box cut and subsequent construction of surface facilities will be undertaken within the boundaries of the existing Donaldson Mine lease area. These activities will be undertaken in accordance with the approved procedures for erosion protection and sediment control for the Donaldson Mine. • The majority of works in the vicinity of the stockpile area for the Bloomfield CHPP will be undertaken within an area that reports to the existing Stockpile Dam and Dam F. These facilities provide adequate erosion and sediment control for those areas. For minor bunding works to be undertaken on the southern boundary of the enlarged stockpile area, standard erosion control practices such as silt fences will be used. • For any earthworks associated with increasing the capacity of the bypass channel around Lake Foster, standard erosion control practices such as silt fences will be used. • If a conveyor is eventually constructed between the Abel box cut and the Bloomfield CHPP, a separate Erosion and Sediment Control Plan will be prepared that takes account of the details of the conveyor, particularly the crossing of Four Mile Creek.
<p>7. Surface Water Monitoring Program</p>	<p>7.1 An integrated surface monitoring program will be undertaken for the Abel Mine, Donaldson Mine and the Bloomfield CHPP covering all potentially affected catchments including Four Mile Creek, Blue Gum Creek and other creeks on the land overlying the Abel underground lease area.</p> <p>7.2 Monitoring of surface water in the creeks that overlie the Abel Underground Mine will commence just prior to mining and continue until one year after mining has passed the contributing catchment and will be undertaken at the following locations:</p> <ul style="list-style-type: none"> • Four Mile Creek at John Renshaw Drive (same as existing Donaldson site); • Weakleys Flat Ck at John Renshaw Drive (same as existing Donaldson site); • Buttai Creek at Lings Road; • Blue Gum Creek at Stockrington Road; and • Long Gully (downstream). <p>7.3. The following monitoring regime is proposed:</p> <ul style="list-style-type: none"> • Routine monthly baseline sampling; • Daily water samples collected from the discharge point on any occasion when there is controlled discharge from Lake Kennerson. Water samples will also be collected at the flow gauging station behind the Four Mile Workshops. These samples will be analysed for: total suspended solids, conductivity, pH and filterable Iron; • Daily water samples will be collected from any overflow from the Stockpile Dam. Water samples will also be collected at the flow gauging station behind the Four Mile Workshops. These samples will be analysed for: total suspended solids, conductivity, pH and filterable Iron. • Collection of extensive baseline data prior to mining, including the ability to collect at least 15 years of baseline data for Blue Gum Creek and Pambalong Nature Reserve; • Monthly monitoring during any substantial subsidence period for each monitoring site, and annual monitoring for all sites; • Water quality sampling from each of the sampling locations shown in Figure 8.2 in the EA with analytes measured including pH, Electrical Conductivity, Total Dissolved Solids, Total Suspended Solids, Chloride, Sulfates, Alkalinity (Bicarbonate), Alkalinity (Carbonate), Calcium,

	<p>Magnesium, Sodium and Potassium;</p> <ul style="list-style-type: none"> Flow gauging stations established on Blue Gum Creek to monitor water flow and level; and Macro-invertebrate monitoring within Blue Gum Creek and Pambalong Nature Reserve, including the use of AUSRIVAS (Australian River Assessment System) to assess biological health.
<p>8. Groundwater Monitoring Program</p>	<p>8.1 The Company will implement a Groundwater Monitoring Program. The Program will comply with all relevant guidelines and will address:</p> <ul style="list-style-type: none"> Groundwater management within the Abel Underground Mine area, including protection, management, mitigation and remediation of groundwaters as required; Groundwater management within the area of proposed tailings disposal within Bloomfield Colliery; Proposed groundwater monitoring program; Proposed groundwater reporting schedule; and Feedback mechanisms to alter mining methods if documented groundwater monitoring values are triggered. <p>8.2 The following response plan will be implemented in the event of significant unforeseen variances from the predicted inflow rates and/or groundwater level impacts:</p> <ul style="list-style-type: none"> Additional sampling and/or water level measurements to confirm the variance from expected behaviour. Immediate referral to a competent hydrogeologist for assessment of the significance of the variance from expected behaviour. The review hydrogeologist would be requested to recommend an appropriate remedial action plan or amendment to the mining or water management approach. If appropriate, this recommended action plan would be discussed with NOW and other agencies for endorsement. <p>8.3 The groundwater monitoring program will be an integrated monitoring program for the Abel Mine, Tasman Mine, Donaldson Mine and the Bloomfield CHPP (including the tailings disposal area) and will include:</p> <ul style="list-style-type: none"> Monthly measurement of water levels in a representative network of piezometers. Initially, all piezometers currently available would be monitored, however it is recommended that the representativeness of the piezometers be reviewed after the first two years of the project, and an appropriate suite of piezometers be selected on the basis of this review for ongoing monitoring. All piezometers located around Pambalong Nature Reserve would continue to be monitored through the life of the project. Quarterly sampling of all standpipe piezometers, for laboratory analysis of electrical conductivity (EC), total dissolved solids (TDS) and pH. Annual collection of water samples from all standpipe piezometers for laboratory analysis of a broader suite of parameters <ul style="list-style-type: none"> Physical properties (EC, TDS and pH) Major cations and anions Nutrients Dissolved metals Additional sampling and/or water level measurements to confirm any variance from expected behaviour. Additional regional monitoring piezometers will be installed in the following areas: <ul style="list-style-type: none"> Multi-level piezometers to the north and west of Pambalong Nature Reserve, to provide additional data on groundwater pressures in the intervening strata between the Donaldson seams and the alluvium (supplementing the existing data from piezometers C081A and B and

	C082).
	<ul style="list-style-type: none"> - Multi-level piezometers along the eastern side of the Abel Underground Mine area, located at nominally 3 sites between the F3 Freeway and the lease boundary, to resolve the apparent anomalous water levels below sea level at C063A and B, and to provide additional data on groundwater pressures in the intervening strata between the Donaldson seams and the Hexham Swamp alluvium. - Multi-level piezometers near the western and southern boundaries of the Abel project area to provide information on groundwater pressures at various depths, as this area currently lacks monitoring points. These piezometers would also aim to provide information on the current status of groundwater in the West Borehole seam near the former workings, prior to mining of the Donaldson seams approaching that area. <ul style="list-style-type: none"> • The additional Pambalong and Hexham Swamp monitoring bores will be installed prior to commencement of coal extraction. The western piezometers will be installed at least five years prior to mining reaching that part of the lease. • The subsidence/fracturing monitoring piezometer network should comprise the following: <ul style="list-style-type: none"> - Multi-level piezometers situated centrally within the extraction panels (at least 2 locations per panel) with vibrating wire piezometers set at nominally 30m intervals from the surface down to 30m above the Upper Donaldson roof level. - Shallow standpipe piezometers adjacent to each of the above multi-level piezometers, set to the base of the colluvium/weathered bedrock zone, to monitor any impact on the surficial unconfined aquifer. Standpipe piezometers will allow repeat hydraulic testing and water quality sampling, as well as water level monitoring. • The above monitoring network will be implemented prior to commencement of each extraction panel, and would be monitored closely before, during and after extraction. Based on the monitoring results during extraction of the first 4 or 5 panels, an appropriate ongoing monitoring program would be developed for the subsequent deeper panels as the mining progresses downdip. <p>8.4 At the end of the second year of underground mining, a comprehensive review will be undertaken of the performance of the groundwater system. This would include re-running the groundwater model in transient calibration mode, to verify that the actual inflow rates and groundwater level impacts are in accordance with the model predictions described in this report. If necessary, further adjustment would be made to the model at that time, and new forward predictions of mine inflows and water level impacts be undertaken.</p> <p>8.5 The current groundwater model will be expanded to include deeper layers and a larger area that will incorporate the Bloomfield operations and areas of possible groundwater impact around Bloomfield. It is proposed to calibrate this expanded model with ongoing monitoring data from Bloomfield, and more detailed simulation of the Donaldson mining and backfilling. Details of this model and scheduling for completion will be included in the Groundwater Monitoring Program.</p>
9. Visual Amenity	<p>Visual impacts of the Abel Underground Mine portal and the Bloomfield CHPP will be ameliorated by the following strategies:</p> <ul style="list-style-type: none"> (a) The access portals for the Abel underground Mine will be located in the high wall of the existing Donaldson Open Cut Pit. (b) If the overland conveyor to the Bloomfield CHPP to the Abel Underground Mine portal is constructed its maximum height will not exceed 15 metres so to ensure that it is concealed from view by the surrounding tree cover. Where possible the route will follow the existing haul roads and tree clearing will be minimised where possible to reduce the visual impact of the conveyor. (c) New buildings and structures, as well as existing buildings and structures at the Bloomfield CHPP, visible from the surrounding areas will be painted a dark charcoal colour.

	<p>(d) All reasonable measures will be taken to design the stockpiles at the Bloomfield CHPP so as to minimise their visual impact on the surrounding East Maitland and Ashtonfield Areas.</p> <p>(e) Existing lighting will be redesigned and new lighting be designed, so as to minimise, via the use of directional lighting, light spill affecting residents in the East Mainland, Ashtonfield Areas and Black Hill areas.</p>
<p>10. Flora and Fauna</p>	<p>A Flora and Fauna Management Plan for the proposed conveyor corridor and stockpile expansion areas will be developed and implemented prior to any clearing occurring for the conveyor corridor and stockpile expansion: This plan will include:</p> <ul style="list-style-type: none"> • a vegetation clearance protocol that describes the measures to be taken in order to minimise and ameliorate any impact on flora and fauna in general, and threatened species in particular, during the clearing process. • a commitment to conduct pre-clearance surveys of areas to be cleared of vegetation by a suitably qualified biologist. Searches will be conducted for threatened species of flora or fauna, trees having potential habitat hollows and any habitat assets such as large hollow logs or rocks which could be used in later rehabilitation. If any threatened species of flora are found in the planned clearing areas the Flora and Fauna Management will provide for the consideration of the following options to minimise any impact to the threatened species of flora: <ul style="list-style-type: none"> - modification of the area to be cleared in order to leave the flora in place. - translocation of the flora to an area of similar habitat within the Donaldson or Bloomfield properties, applying the best available knowledge about the ecology and translocation of the species. • the pre-clearing survey will be conducted about 7 days prior to commencement and involve the following: <ul style="list-style-type: none"> - Trees having potential habitat hollows should be clearly marked with a band of survey paint around the stem; - Habitat trees watched at dusk to determine what if any fauna are using the hollows; - At a minimum all marked trees will be left standing for at least 2 nights following the clearing to allow any mammals to vacate the trees. However as most of the areas to be cleared are narrow or in close proximity to standing forest, it cannot be guaranteed that the mammals will leave and a person experienced in capturing and handling native fauna should be in attendance when these trees are pushed over; - Any trees found to contain bats should be left standing and soft-felled at dusk after the bats have left the hollows. This should be conducted under the supervision of a suitably experienced fauna ecologist. <p>An Ecological Monitoring Plan will be drafted and implemented prior to any mining which will impact on the areas of sub-tropical rainforest above Abel Underground Mine, and for Pambalong Nature Reserve, outside of the mining area to the south-east. These two areas will be monitored as follows:</p> <p>Sub-tropical Rainforest Monitoring plan</p> <p>The collection of the following data:</p> <ul style="list-style-type: none"> • At suitable locations, record the outer boundary between the rainforest and the surrounding dry forest in order to monitor the stability of the community; • Establish groundwater piezometers at suitable locations and record water depth; • Establish permanent transects along which floristic content is recorded; and • Monitor the stability of selected major rock formations that occur in or near the rainforest.

	<p>Pambalong Nature Reserve Monitoring</p> <p>The data to be collected would be as follows:</p> <ul style="list-style-type: none"> • Rainfall in the catchments supplying water to Pambalong Nature Reserve (PNR); • Water levels in PNR; • Annual fauna monitoring with emphasis on birds and amphibians; and • Broad vegetation communities and their boundaries
<p>11. Aboriginal Heritage</p>	<p>11.1 During any construction phase if any Aboriginal sites or relics are uncovered the NSW OEH will be informed. In the event that a site or relic is found then work in the area of the find will cease until it is assessed for significance and an appropriate management strategy is devised if necessary, in accordance with the Aboriginal Heritage Management Plan.</p> <p>11.2 An Aboriginal Heritage Management Plan will be implemented in consultation with the relevant Aboriginal stakeholders to specify the policies and actions required to mitigate and manage the potential impacts of the proposal on Aboriginal heritage.</p> <p>11.3 The plan will provide procedures for:</p> <ul style="list-style-type: none"> (a) ongoing Aboriginal consultation and involvement, (b) maintenance of an Aboriginal site database, (c) management of recorded sites within the investigation area, (d) further archaeological investigation prior to undermining, <p>The plan will be regularly verified to establish that it is functioning as designed (ie. policies adhered to and actions implemented) to the standard required.</p> <p>11.4 Continued use of surface infrastructure and construction of new surface infrastructure will be assessed against the location of identified Aboriginal heritage evidence and where impacts may occur, mitigation measures will be implemented as specified in the Aboriginal Heritage Management Plan.</p> <p>11.5 The Company will seek to minimise impacts to identified and potential Aboriginal heritage evidence within the northern investigation area and to conserve identified evidence where impacts are not required to occur for operational reasons.</p> <p>11.6 The Company will seek to mitigate impacts to identified and potential Aboriginal heritage evidence within the northern investigation area where impacts must occur for operational reasons.</p> <p>11.7 Staged systematic archaeological survey of each section proposed to be undermined in the southern investigation area will occur with the participation of an appropriately qualified archaeologist and the Aboriginal stakeholders prior to any underground mining in that section. The survey will sample the geographic extent of each section. The nature, level of integrity, potential impacts and scientific and cultural significance of any evidence identified will be assessed in consultation with the Aboriginal stakeholders and mitigation measures implemented as per the Aboriginal Heritage Management Plan.</p> <p>11.8 Where site types susceptible to subsidence impacts (grinding grooves and rock shelters) are identified within the southern investigation area, an assessment of the potential impacts of subsidence will be undertaken by an appropriately qualified expert. Where it is determined that subsidence may impact a grinding groove or rock shelter site (including shelters with 'Potential Archaeological Deposits'), mitigation measures will be implemented in accordance with the Aboriginal Heritage Management Plan.</p>

	<p>11.9 A regional monitoring network for Aboriginal heritage across the Abel, Tasman, Donaldson and Bloomfield sites will be established, including continuation of the existing programme of monitoring in the Donaldson Bushland Conservation Areas, monitoring before and after undermining for a sample of Aboriginal sites within the southern investigation area for which it is not anticipated that subsidence related impacts will occur, monitoring before and after undermining for all Aboriginal sites for which it is inferred that undermining may result in impacts in order to ensure the adequacy of conservation measures around those sites, and documentation of the results of all monitoring in an annual report.</p> <p>11.10 The Company will continue to consult with and involve the registered Aboriginal stakeholders, particularly the Local Aboriginal Land Councils, in the ongoing management of the heritage resources within the investigation area as per the Aboriginal Heritage Management Plan.</p> <p>11.11 Should any previously unrecorded Aboriginal heritage evidence be identified within the lease area during the course of operations, the Company will ensure that this evidence is subject to temporary conservation and is recorded and appropriate management strategies are implemented in consultation with the Aboriginal community as per the Aboriginal Heritage Management Plan. The Company will maintain a current database providing details of all identified Aboriginal heritage evidence within the lease area so that the Aboriginal Heritage Management Plan can be effectively implemented and records for any Aboriginal sites identified and copies of all reports prepared in relation to ongoing monitoring and archaeological studies associated with the project will be lodged in a timely manner with OEH.</p> <p>11.12 In order to form an integrated monitoring network for Aboriginal heritage across the Abel, Tasman, Donaldson and Bloomfield sites, it is proposed for the duration of the mining leases to:</p> <ul style="list-style-type: none"> (a) Continue the existing programme of monitoring in the Donaldson Bushland Conservation Areas to ensure that the condition of a sample of Aboriginal heritage sites that occur within the northern investigation area is regularly assessed. This will involve monitoring on an annual basis the seven existing datum points within the Conservation Area by a qualified archaeologist and representatives of the Mindaribba LALC; (b) A sample of Aboriginal heritage sites within the southern investigation area, comprising site types for which it is not anticipated that subsidence related impacts will occur, will be monitored before and after undermining in their vicinity to confirm the accuracy of these predictions. This will involve inspections prior to undermining then at set periods after undermining by a qualified archaeologist and representatives of the relevant LALC; (c) All Aboriginal heritage sites for which it is inferred that undermining may result in impacts (ie. rock shelter and grinding groove sites) will be monitored before and after undermining in their vicinity to ensure the adequacy of conservation measures around those sites. This will involve inspections prior to undermining then at set periods after undermining by a qualified archaeologist and representatives of the relevant LALC; (d) An annual report documenting the results of monitoring will be prepared and provided to the relevant LALC and OEH detailing the methodology of the inspections, conditions of the environment and Aboriginal heritage evidence at the relevant sites, comparisons with previously reported descriptions of each site, identification of any natural and/or human impacts during the intervening period, and identification of any implications for ongoing management and protection of the Aboriginal heritage evidence throughout the lease areas.
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<p>12. Environmental Management System</p>	<p>The EMS will address, separately for the Abel Underground Mine and the Bloomfield CHPP (unless otherwise specified), the following specific issues for both construction and operation of the proposed mine:</p> <ul style="list-style-type: none"> • Construction Management Plan; • Community Involvement Plan; • Noise Monitoring Program; • Water Management Plan; • Waste Management Plan; • Air Quality Monitoring Program; • Erosion and Sediment Control Plan; • Flora and Fauna Management Plan; • Aboriginal Heritage Management Plan; • Landscape Management Plan; • Rehabilitation Management Plan; • <i>Tetratheca juncea</i> Management Plan; • Groundwater Monitoring Program; • Subsidence Management Plan; • Surface Water Management Plan; • Dam Monitoring and Management Strategy; • Gas Management Plan; and • Bloomfield CHPP and RLF Environmental Management Plan <p>Where appropriate the above plans will be integrated plans which will apply across the following mining operation areas:</p> <ul style="list-style-type: none"> • Abel Underground Mine; • Tasman Underground Mine; • Donaldson Open Cut Mine; and • Bloomfield Coal Handling and Preparation Plant (CHPP) and Rail Loading Facility (RLF). <p>The Environmental Management System will include:</p> <ul style="list-style-type: none"> • The Company Environmental Policy that guides the direction of environmental management and provides Company commitment to environmental protection, mitigation and management. • Objectives, including legislative requirements to be met and relevant guidelines and Standards; • Work procedures, which detail in practical terms what will be undertaken, when and by whom; • Monitoring, including what will be monitored, when and where this will occur, and reporting of results; • Review procedures, being when the management plan and contents will be reviewed; • Feedback mechanisms, to ensure that any required changes to the Plan, due to a review or other mechanism such as other risk assessment, are made and the plan updated; • Training, describing how employees and contractors are trained in the documented procedures and updated on an ongoing basis when changes are made; and • Emergency response procedures.
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	<p>The Company will prepare and implement an Environmental Due Diligence Training Program which will focus on the following matters:</p> <ul style="list-style-type: none"> • The EMS; • Environment Protection legislation; • Understanding Due Diligence; • Specific Environmental Impacts of construction and operation of the mine; • The Company Safety Health Environmental Policy; • Reporting and recording environmental incidents; • Site environmental management. <p>The mine Site Manager or his/her nominee shall be responsible for implementing the EMS.</p>
<p>12. Rehabilitation</p>	<p>The Company commits to rehabilitating the Abel Underground Mine area and Abel pit top in accordance with DP&I and DRE guidelines. This includes ongoing rehabilitation in response to mine subsidence as well as rehabilitation of pit top areas after completion of mining.</p> <p>The Company will provide a Mine Closure Plan as part of the MOP required under the relevant condition of the mining lease for the Abel Underground Mine. This Mine Closure Plan will be produced in consultation with DP&I, DRE and other stakeholders as required.</p>
<p>13. Site Security</p>	<p>Unauthorised entry of people into the Abel Underground Mine Portal Surface works and the Bloomfield CHPP is to be prevented to ensure site security and to prevent damage to components of the mine particularly damage which may result in harm to the environment.</p>
<p>14. Community Consultation</p>	<p>A Community Consultative Committee will be created which will meet on a regular basis to review environmental performance of the Abel Underground Mine and the Bloomfield CHPP.</p> <p>Membership of the Committee is to be determined by the Company and the Committee is to be chaired by an Independent Facilitator and will include representatives of the local community and adjoining property holders, DP&I and local councils.</p> <p>The Environment Protection Licence for the mine will require the Company to keep a record of all complaints made in relation to pollution arising from any activity to which this Licence applies and will also specify the details to be provided in the record and a complaints handling procedure.</p> <p>The Environment Protection Licence for the mine will require that a telephone complaints line operates during the operating hours of the premises for the purpose of receiving any complaints from members of the public and that the telephone number of this line be notified to the community.</p> <p>A 24 hour telephone complaints line will be maintained and the local community will be notified of the phone number. Complaints received would be recorded. All information from the complainant, including the nature of the complaint would also be recorded.</p> <p>The appropriate site manager or his/her nominee will undertake an immediate investigation into the cause of any complaint relating to operations of the site and in particular environmental issues and will ensure that corrective action is taken as required.</p> <p>The appropriate site manager or his/her nominee will provide the complainant with an explanation of the cause of any environmental incident and details of any actions taken to mitigate its effect.</p> <p>If necessary, the appropriate site manager would initiate further corrective action, such as introducing changes in operational procedures, work instructions or modifications to equipment etc as may be required to reduce the possibility of further environmental incidents.</p> <p>A record of all complaints received will be kept on site for 4 years.</p>

<p>15. Environmental Incidents</p>	<p>15.1 A Pollution Incident Response Management Plan (PIRMP) would be implemented for the site which will describe the general policy and approach to be adopted by the Company when managing and responding to an emergency or incident at the site. The PIRMP will contain a specific definition of 'incident' and 'environmental incident' which is to be consistent with the definition of 'incident' in the POEO Act.</p> <p>15.2 In accordance with Part 5.7 of the POEO Act, the appropriate site manager must notify the NSW EPA of 'incidents' which occur in the course of operations of the Abel Underground Mine where material harm to the environment is caused or threatened, as soon as practicable after they become aware of the incident or threatened material harm.</p> <p>15.3 Initial notification of an 'incident' (as defined) is to be made by telephoning the NSW EPA's Pollution Line.</p> <p>15.4 The following information will be required by the Company:</p> <ul style="list-style-type: none"> • The time, date, nature, duration and location of the incident; • The location of the place where pollution is occurring or is likely to occur; • The nature, the estimated quantity or volume and the concentration of any pollutants involved; • The circumstances in which the incident occurred (including the cause of the incident, if known); • The action taken or proposed to be taken to deal with the incident and any resulting pollution or threatened pollution; and • Other relevant information. <p>15.5 The appropriate site manager will assess specific incidents taking into consideration the impact(s) on the environment, to determine whether what resources are required to determine what response is required, or to assist in responding to the impacts. The appropriate site manager would contact an outside agency if required.</p> <p>15.6 All employees working on the site will be responsible for ensuring that the appropriate site manager is informed of any environmental incidents. All environmental incidents would be recorded on an Environmental Incident Report form. As required by Part 5.7 of the POEO Act and the EPL, the Site Manager must notify the NSW EPA of incidents, or the threat of material harm to the environment, as soon as practicable after they become aware of the incident or threat of material harm.</p> <p>15.7 The management strategies for responding to and controlling incidents/emergencies will include the following:</p> <p>General Procedures</p> <ul style="list-style-type: none"> • Provide adequate resources including staffing and fire fighting equipment; • Training of staff so that a high level of preparedness is maintained by all people who could be involved in an emergency; • Provide a first aid station which would be fully equipped and maintained at the site; and • Periodic review and update of emergency procedures for the site. <p>Fire</p> <ul style="list-style-type: none"> • Consultation has been initiated with the NSW Rural Fire Service and this would be ongoing; • Consult with adjoining landholders; • Undertake hazard reduction as required; • Provide fire fighting equipment at site buildings; • Provide clear signposting and access for all fire fighting equipment; • Make available water for fire fighting from water holding tanks or mains; and
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	<ul style="list-style-type: none"> Regularly inspect and maintain fire fighting equipment.
	<p>Chemicals</p> <ul style="list-style-type: none"> Store all chemicals in appropriately banded areas in accordance with their Material Safety Data Sheets (MSDS) and the relevant Australian Standards; and Store all fuels or flammable solvents in adequately ventilated areas <p>15.8 All environmental incidents are to be recorded on an Pollution Incident Notification form.</p> <p>15.9 An Environmental Incident Folder is to be maintained and shall contain the following:</p> <ul style="list-style-type: none"> Copies of work instructions on how to deal with particular situations; Incident contact names/numbers; and Pollution Incident Notification form containing all the details required in the PIRMP procedure.

Company Contribution Initiatives

Donaldson Coal Pty Ltd committed in 2007 to providing the following monetary contributions towards environmental and community enhancements:

No.	Proposed Activities	Monetary Value
1.	<p>Conservation</p> <p>The company will contribute \$1,000,000 to be distributed over ten years from the commencement of the Abel Underground Mine by a community trust to be established for the purpose.</p> <p>These monies will be able to be expended by the trust on environmental education or research or environmental management works or activities in State Conservation Area lands or other environmentally valuable lands that lie within or above Donaldson's mining leases and exploration licences or other land owned by the company.</p>	\$1,000,000
2.	<p>Community Welfare</p> <p>The company will contribute \$250,000 over 5 years from the commencement of the Abel Underground Mine to be spent as decided by a community trust on educational needs, community works or other works or activities of benefit to the community within the Abel underground mine area.</p>	\$250,000
3.	<p>Road Safety</p> <p>The company will contribute \$250,000 towards the cost of upgrading the intersection of Black Hill Rd and John Renshaw Drive, provided that construction of the upgrade is initiated by June 2009.</p>	\$250,000
4.	<p>Employment Generation</p> <p>The Company also operates the Donaldson Job Creation Trust, a charitable trust already in operation set up to distribute \$1,000,000 over ten years. Monies are expended on job training, job creation and Youth at Risk programs in the Lower Hunter. \$500,000 of these monies remained to be spent at the time of project approval.</p>	\$500,000
Total		\$2,000,000

Subsidence Specific Commitments by the Company

<p>A. Principal Residences</p>	<p>The Company commits to producing and implementing a plan of management for each Principal Residence existing at the date of approval of this project. A Principal Residence is defined as an existing building capable of being occupied as a separate domicile and used for such purpose. The plan of management will be produced and implemented as follows:</p> <p>A1. Each Principal Residence will be individually assessed by the Mine Subsidence Board (MSB) /structural engineer who will determine tolerable levels for individual subsidence parameters. Tolerable limits are those limits which will result in no mitigation works being required to the Principal Residence due to subsidence impacts from the Abel Underground Mine.</p> <p>A2. Each Principal Residence will have a pre-mining survey to identify and record pre-existing imperfections that will not be covered by the MSB.</p> <p>A3. Such assessments will be done as and when the progression of the mining process dictates – i.e. mining may have commenced in other areas prior to the individual Principal Residence assessment being undertaken.</p> <p>A4. Tolerable levels will be set according to such factors as dwelling construction (e.g. brick veneer, clad), type (single, double storey), size (length and width), footings (slab, strip footings, piers), surface conditions (sand, rock, clay, steep slope) etc, with reference to the MSB Graduated Guidelines (compatible with AS 2870 and the Building Code of Australia).</p> <p>A5. The mine plan in proximity to each Principal Residence will be modified by the Company to maintain subsidence parameters within the tolerable levels determined above for each Principal Residence.</p> <p>A6. The mine plan will be reviewed by the MSB and the DRE prior to any Subsidence Management Plan being approved under the relevant lease.</p> <p>A7. Each Principal Residence will have a specific subsidence monitoring plan to monitor subsidence impacts before and after mining at the Principal Residence and to ensure that tolerable limits are achieved in practice.</p> <p>A8. The MSB has the responsibility to rectify any impacts to structures that may occur as a result of mining.</p> <p>In cases where the owner of the Principal Residence and the Company can agree to terms which permit second workings under the Principal Residence greater than those permitted above, the Company agrees to negotiate a plan of management similar to that proposed in the section of this Statement of Commitments titled "All Other Surface Structures".</p>
<p>B. Future Principal Residence</p>	<p>If there is no existing residence on a landholding and a residence is planned to be built, the site for this Future Principal Residence will be protected in the same way as that proposed above for Principal Residences. This commitment applies to a maximum of one Future Principal Residence per landholding.</p> <p>NOTE: Once the Mine Subsidence District is declared for the area all Future Principal Residences will require approval from the Mine Subsidence Board and must comply with the Mine Subsidence Compensation Act 1961.</p>
<p>C. Black Hill School</p>	<p>All buildings and structures located at Black Hill School will be managed as if they were a Principal Residence.</p>
<p>D. Black Hill Church and Cemetery</p>	<p>The Black Hill Church and cemetery will be managed as if they were a Principal Residence.</p>
<p>E. All Other Surface Structures</p>	<p>"All Other Surface Structures" is defined as any building or structure impacted by mining-induced subsidence from the Abel Underground Mine Project which is not categorised as a Principal Residence, Future Principal Residence, Black Hill Church and Cemetery or Black Hill School.</p> <p>The Company shall prepare and implement plans of management for the mitigation and remediation of any damage to All Other Surface Structures prior to any mining occurring that would impact on them.</p> <p>The plan of management will include:</p> <p>(a) pre-mining audit of the structure;</p>

	<p>(b) the provision of a plan of management as part of the SMP approval process which requires the Company to mitigate/remediate any damage to improvements associated with the structure in conjunction with the Mines Subsidence Board;</p> <p>(c) post-mining monitoring of the improvements associated with the Structure.</p> <p>The mitigation/remediation measures to be undertaken will be related to the extent of damage experienced – see Schedule 1 for details.</p>
F. Dams	<p>A Dam Monitoring and Management Strategy (DMMS) will be formulated for all dams prior to any mining occurring which will impact on the dams. The DMMS will provide for:</p> <p>F1. The individual inspection of each dam by a qualified engineer for:</p> <ul style="list-style-type: none"> • current water storage level; • current water quality (EC and pH); • wall orientation relative to the potential cracking; • wall size (length, width and thickness); • construction method and soil/fill materials; • wall status (presence of rilling/piping/erosion/vegetation cover); • potential for safety risk to people or animals; • downstream receptors, such as minor or major streams, roads, tracks or other farm infrastructure; and • potential outwash effects. <p>F2. Photographs of each dam will be taken prior to and after undermining, when the majority of predicted subsidence has occurred.</p> <p>F3. Dam water levels, pH and EC will be monitored prior to and after undermining to assess the baseline and post mining dam water level and water quality in order to determine whether rehabilitation is required.</p> <p>F4. In the event that subsidence/crack development monitoring indicates a significant potential for dam wall failure, dam water will be managed in one of the following manners:</p> <ul style="list-style-type: none"> • pumped to an adjacent dam to lower the water level to a manageable height that reduces the risk of dam wall failure, • discharged to a lower dam via existing channels if the water cannot be transferred, or • not transferred if the dam water level is sufficiently low to pose a minor risk. <p>An alternate water supply will be provided to the dam owner until the dam can be reinstated.</p> <p>F5. In the event of subsidence damage to any dams the Company shall remediate the damage and reinstate the dam in conjunction with the Mine Subsidence Board.</p>
G. Public Roads	<p>The Company shall prepare and implement a plan of management as part of the SMP process implemented under the mining lease for the Abel Underground Mine. This plan of management will ensure the safety and serviceability of public roads and 4WD tracks and existing fire fighting access tracks.</p>
H. Powerlines	<p>The Company shall prepare and implement a plan of management as part of the SMP process which will ensure the safety and serviceability of powerlines.</p>
I. Gas Pipeline	<p>The Company shall prepare and implement a plan of management as part of the SMP process which will ensure the safety and serviceability of the gas pipeline.</p>
J. Survey Marks	<p>At the completion of subsidence or otherwise as required by Government Authorities, the functionalities of any survey marks affected by subsidence will be fully restored to the satisfaction of the Government Authorities.</p>
K. Cliffs	<p>Trigger-action response plans (TARPs) will be developed by the Company based on consultation with DRE and Local Councils to ensure the general public and employees</p>

	<p>working in the vicinity of the cliffs are not exposed to rock falls caused by mine subsidence damage.</p> <p>Appropriate rock fall hazard controls may include such items as rock fall catch ditches, barrier fencing, earth mounds and warning signs installed at appropriate locations to promote awareness that a rock fall hazard could exist along the top and bottom of cliff lines that will be undermined.</p>
L. Water Supply	<p>In the event of interruptions to water supplies due to subsidence impacts on farm dams, water tank pipelines, water mains and irrigation systems within the application area, the Company commits to providing water supplies of equivalent quality and quantity to locations convenient to those affected until such time that the affected farm dams, water tanks, pipelines, water mains and irrigation systems are restored.</p>
M. General Surface Water Flow	<p>The Company shall prepare and implement a plan of management to maintain the surface drainage of areas surrounding any dwellings and other structures or infrastructure, where required. This plan shall include but not be limited to monitoring, mitigation or remediation of mining-induced ponding, drainage pattern changes and any resulting serviceability difficulties and/or hazards to the public.</p> <p>NOTE: Also see Water Supply.</p>
N. Public Safety	<p>The Company shall prepare and implement a surface safety management program to ensure public safety in any surface areas that may be affected by subsidence arising from the proposed underground mining. This program shall include, but not be limited to, regular monitoring of areas posing safety risks, erection of warning signs, entry restrictions, backfilling of dangerous surface cracks and securing of unstable man-made structures or rockmass, where required and appropriate, and the provision of timely notification of mining progress to the community and any other relevant Stakeholders where management of public safety is required.</p>
O. Landowner Agreements	<p>The Company will enter into separate arrangements with Coal and Allied for its Black Hill land and with the Catholic Diocese of Maitland and Newcastle with regard to an agreed mining schedule underneath these respective lands. These arrangements will set timeframes for the completion of mining beneath these areas.</p>

Schedule 1 - Subsidence Effects on All Other Surface Structures

This Schedule only applies to All Other Surface Structures and does not apply to Principal Residences as they are protected in accordance with the above commitments which relate only to them.

The main features that determine impact on buildings/structures are tilt and strain. Subsidence effects on buildings/structures are categorised according to the degree of structural damage that is likely to result from underground mining (Tables 1 and 2). These tables have been developed to assist the categorising of the subsidence impacts of this project. Accordingly, to determine the appropriate Preventative Mitigation Measures the following must occur in relation to the relevant surface structure:

1. Look at Table 1 and determine the appropriate Strain Damage Category
2. Look at Table 2 and determine the appropriate Tilt Damage Category
3. Look at Table 3 and using the Strain Damage Category from Table 1 and the Tilt Damage Category from Table 2 determine the appropriate Preventative Mitigation Measures.
4. Look at Table 4 and see the outlined of the Preventative Mitigation Measures provided by Table 3.

Table 1 – Determine Strain Damage Category

Damage Category	Description of typical damage to walls and required repair	Approximate crack width limit
0 (negligible)	Hairline cracks.	<0.1 mm
1 (very slight)	Fine cracks that do not need repair.	0.1 mm to 1.0 mm
2 (slight)	Cracks noticeable but easily filled. Doors and windows stick slightly.	1.0 mm to 5.0 mm
3 (moderate)	Cracks can be repaired and possibly a small amount of wall will need to be replaced. Doors and windows stick. Service pipes can fracture. Weather- tightness often impaired.	5.00 mm to 15.0 mm (or a number of cracks 3mm to 5mm in one group)
4 (severe)	Extensive repair work involving breaking-out and replacing sections of walls, especially over doors and windows. Window or doorframes distort. Walls lean or bulge noticeably. Some loss of bearing in beams. Service pipes disrupted.	15 mm to 25 mm but also depends on number of cracks
5 (very severe)	As above but worse, and requiring partial or complete rebuilding. Roof and floor beams lose bearing and need shoring up. Windows have been broken with distortion. If compressive damage, severe buckling and bulging of the roof and walls.	>25 mm

Table 2 - Tilt Damage Category

Damage Category	Tilt	Description of typical damage to walls and required repair
A (negligible)	<5	Unlikely that remedial work will be required.
B (tolerable)	5 to 7	Adjustment to roof drainage and wet area floors might be required.
C (questionable)	7 to 10	Minor structural work might be required to rectify tilt. Adjustments to roof drainage and wet area floors will probably be required and remedial work to surface water drainage and sewerage systems might be necessary.
D (intolerable)	>10	Considerable structural work might be required to rectify tilt. Jacking to level or rebuilding could be necessary in the worst cases. Remedial work to surface water drainage and sewerage systems might be necessary.

For some structures, the levels of damage shown in Tables 1 and 2 can be significantly reduced by various simple, preventative measures. The general types of management measures, and the residence types and categories of structural damage to which they apply, are provided in Table 4. The specific management measures for individual residences will be developed in consultation with the improvement owner and the Mine Subsidence Board, prior to mining.

Table 3 – Determine Preventative Mitigation Measures

Type of Construction		Strain Damage Category					Tilt Damage Category				
		0	1	2	3	4	5	A	B	C	D
1	Flat slab or waffle slab on ground	None	14	14 & 15	1, 15, 17, 18 & 1	1, 15, 17, 18, 20 & 25	1, 15, 17, 18, 20 & 25 or 21 & 26	None	16	11	11 & 25 or 21 & 26
2	Strip footing	None	14	14 & 15	1, 2, 15, 17, 18 & 19	1, 2, 15, 17, 18, 2 & 25	1, 2, 15, 17, 18, 20 & 25 or 21 & 26	None	16	12	13 & 25 or 21 & 26
3	In-ground concrete or steel piers	None	14	14 & 15	1, 2, 15, 17, 18 & 19	1, 2, 15, 17, 18, 2 & 25	1, 2, 15, 17, 18, 20 & 25 or 21 & 26	None	16	13	13 & 25 or 21 & 26
4	Below-ground construction with retaining walls or basement walls	None	14	14 & 15	1, 2, 15, 17, 18 & 19	1, 2, 15, 17, 18, 2 & 25	1, 2, 15, 17, 18, 20 & 25 or 21 & 26	None	16	13	13 & 25 or 21 & 26
5	Stiffened waffle slab on secondary foundations	None	14	14 & 15	1, 5, 14 & 18	1, 5, 14, 18, 19 & 25	1, 5, 14, 18, 20 & 25	None	5 & 18	5 & 18	5, 18 & 25
6	Suspended floor with ground clearance less than 600 mm	None	14	14 & 15	1, 3, 6 & 14	1, 3, 6, 14, 19 & 25	1, 3, 6, 14, 20 & 25	None	6 & 16	3 & 6	3, 6 & 25
7	Above-ground stilts or poles	None	14	14 & 15	1, 4, 6 & 14	1, 4, 6, 14, 19 & 25	1, 4, 6, 14, 20 & 25	None	4 & 6	4 & 6	4, 6 & 25
8	Above-ground brick piers	None	14	14 & 15	1, 3, 6 & 15	1, 3, 6, 14, 19 & 25	1, 3, 6, 14, 20 & 25	None	3 & 6	3 & 6	3, 6 & 25
9	Demountable building	None	14	5, 6 & 14	5, 6 & 14	5, 6 & 14	5, 6 & 14	None	5 & 6	5 & 6	5, 6 & 25
10	Paved areas, paths and driveways	None	None	None	7 or 8	7 or 8 & 24	7 or 8 & 24	None	None	None	11 or 24
11	Steel sheds & outbuildings	None	None	None	1 & 14	1, 9 & 17	9, 22 & 11 or 23	None	None	None	22 & 11 or 23
12	Fences & handrails	None	None	None	10	10	10	None	None	None	None

Strategies that can be used to ameliorate damage to building structures as mine subsidence occurs or to remedy the damage on completion of subsidence are listed below.

Table 4 - Preventative Mitigation Measures

1. Increase the capacity of structures to articulate by cutting vertical slots in the walls or slabs.
2. Excavate trenches or slots alongside the building to isolate the structure from ground strains.
3. Install jacks and relevel the structure as subsidence occurs. Rebuild piers on completion.
4. Install steel beams and jacks and relevel the structure as subsidence occurs.
5. Install jacks to relevel the building and provide packs and shims beneath bearers.
6. Provide flexible couplings to service pipes.
7. Remove pavers or paving slabs and replace after mining.
8. Cut slots in paths and drives and repair on completion of mining.
9. Provide temporary supports, bracings and ties if required to ensure the safety of the structure during mining.
10. Provide expansion or contraction joints in fences and handrails or temporarily remove a section.

Remedial Rehabilitation Measures

11. Raise slabs up to 300 mm using grout injection.
12. Raise walls using grout injection.
13. Underpin and jack walls to level.
14. Cosmetic repair and repainting.
15. Rehang sticking doors and adjust windows.
16. Releveling of wet area floors and roof gutters.
17. Major repairs and painting.
18. Repairs to service pipes.
19. Demolish small area of brickwork and repair.
20. Demolish brick walls and rebuild.
21. Completely demolish building and rebuild.
22. Provide jacks and relevel steel structure.
23. Break out and replace concrete floor slab to required levels.
24. Possibly remove paving or slabs, relevel subgrade and replace on completion of mining.
25. Possible repairs to drainage and sewerage pipes or septic tanks.
26. Provide temporary replacement structure.

Appendix D

Integrated Environmental Monitoring Program



FINAL

Abel Underground Coal (Integrated with Donaldson Open Cut, Tasman Underground and Bloomfield Open Cut Coal Mines)

Integrated Environmental Monitoring Program

December 2007

DON3-07-03 Integrated Monitoring Plan



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TABLE OF CONTENTS

1.0	INTRODUCTION	1
2.0	BACKGROUND AND OVERVIEW	2
3.0	PURPOSE AND OBJECTIVES	3
4.0	MONITORING PROGRAMS	4
4.1	NOISE MONITORING	4
4.2	BLASTING	5
4.3	AIR QUALITY MONITORING	6
4.4	SURFACE WATER MONITORING	7
4.5	GROUNDWATER MONITORING	8
4.6	ABORIGINAL AND CULTURAL HERITAGE MONITORING	9
4.7	FLORA AND FAUNA MONITORING	10
4.8	METEOROLOGICAL MONITORING	10
5.0	INTEGRATION OF MONITORING RESULTS	11
6.0	REPORTING AND REVIEWING	12
6.1	REPORTING	12
6.2	REVIEW	12

TABLES

Table 1 – Noise Monitoring

Table 2 – Blast Monitoring

Table 3 – Air Quality Monitoring

Table 4 – Surface Water Monitoring

Table 5 – Groundwater Monitoring

Table 6 – Aboriginal and Cultural Heritage Monitoring

Table 7 – Flora and Fauna Monitoring

FIGURES

Figure 1 – Aerial Site Plan

Figure 2 – Total Project Area

Figure 3 – All Monitoring Locations

Figure 4 – Noise Monitoring Locations

Figure 5 – Blast Monitoring Sites

Figure 6 – Air Sampling Locations

Figure 7 – Surface Water Monitoring Sites

Figure 8 – Piezometer Locations

Figure 9 – Archaeological Sites

Figure 10 - Flora and Fauna Monitoring Locations

1.0 INTRODUCTION

The Abel Underground Coal Mine ('Abel') is owned and operated by Donaldson Coal Pty Ltd ('Donaldson') which is located approximately 23 kilometres north-west of Newcastle, south of John Renshaw Drive. The Abel site is within the eastern section of Exploration Lease 5497 (EL5497) and has a surface area of approximately 2750 hectares. Donaldson also owns and operates the adjacent Donaldson Open Cut Mine which has been operation since 2001. The Abel site lies across both the Maitland and Cessnock Local Government Areas and the operation is approved to mine up to 4.5 Million tonnes per annum (Mtpa) of Run of Mine (ROM) coal over the next 21 years.

The operation will utilise a high productivity continuous miner based bord and pillar system, using pillar extraction techniques. Mine access and associated surface infrastructure will be located within the existing Donaldson Coal Mine open cut void, with the transfer of coal to the existing Bloomfield Coal Handling and Preparation Plant immediately to the north for coal washing and rail transport to the Port of Newcastle. **Figure 1** shows the location of the site.

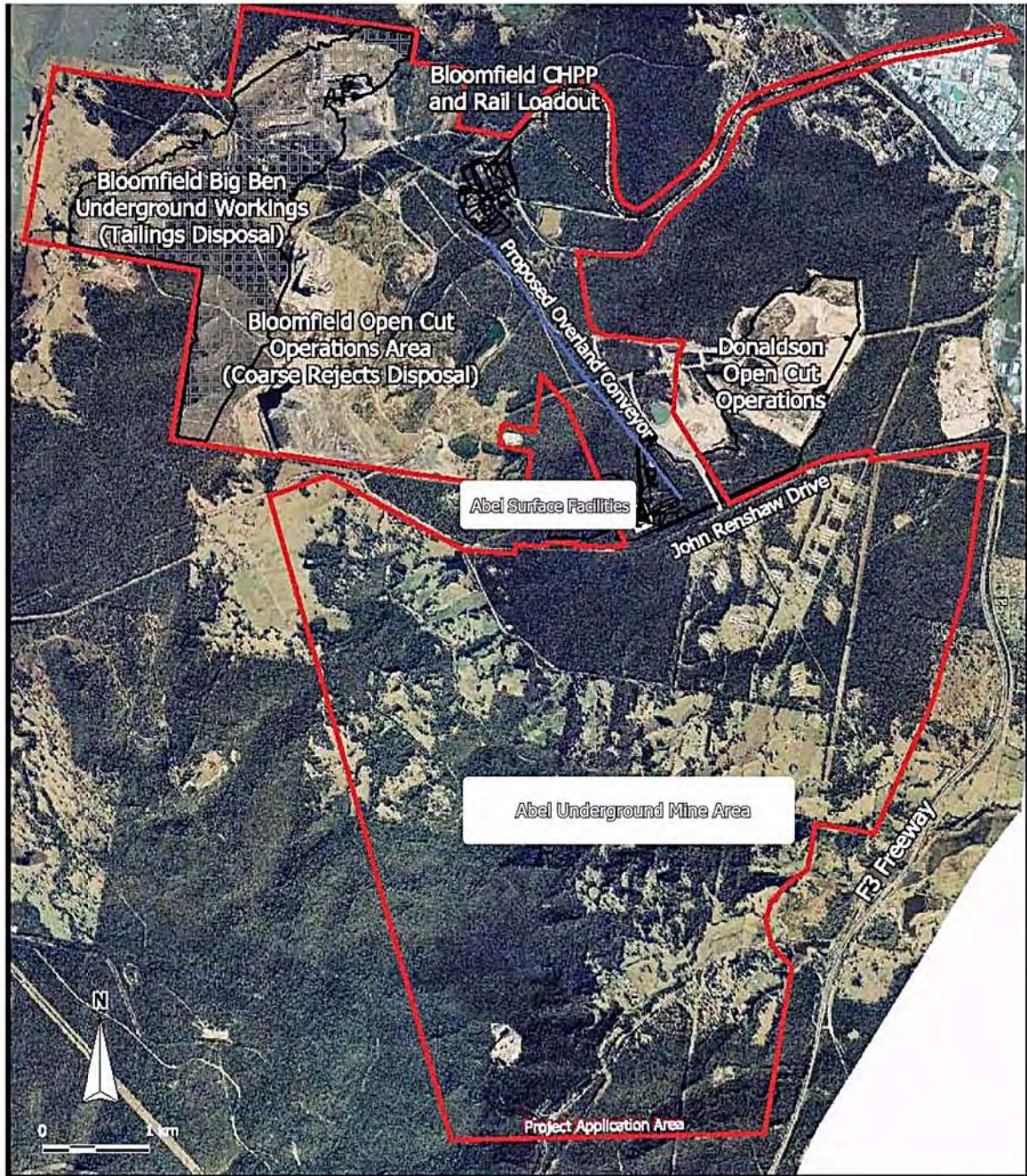
The Project Approval (05_0136) was issued on the 7 June 2007 for the development of the Abel Underground Mine. The Project Approval requires the preparation of an Environmental Monitoring Program that is integrated with the monitoring programs of the adjoining Bloomfield, Donaldson and Tasman mines.

The Abel Underground Mine Part 3A Environmental Assessment (Eco Central, August 2006) also commits to the development an integrated monitoring network for the Donaldson, Abel, Tasman and Bloomfield mines.


The Integrated Environmental Monitoring Program (IEMP) will assist the development of a sub-regional model of environmental data collection from a wide area. The integrated monitoring system will reduce duplication of monitoring on individual sites and identify sensitive areas that may be between mine sites that require monitoring to enable more effective sub- regional data sets. Data sharing across sites will give a more accurate indication of the condition of the environment and will be vital in creating further management and mitigation measures for sites. The increased data set will be important in determining cumulative impacts from the four sites on the sub-regional environment.

The integrated monitoring equipment will be operated, maintained and installed by a joint arrangement between Donaldson Coal Pty Ltd and Bloomfield Collieries Pty Ltd. All data from the Integrated Environmental Monitoring Program will be made available to both parties.

This Integrated Environmental Monitoring Program, including all monitoring locations, will be reviewed prior to the commencement of Abel mining operations. The Plan will also be reviewed following approval of the Bloomfield Colliery Part 3A application and in line with the Consultant's Recommendations and the Development Approval. Each mine site will undertake Individual site reporting for the site as required by the relevant approval instruments specific to each mine.




Abel Underground Mine Project
Aerial Site Plan

LEGEND					FIGURE 1 Abel Underground Mine Project Aerial Site Plan	Project: Prep of Integrated Monitoring Plan
						Client: Donaldson Coal Pty Ltd
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2.0 BACKGROUND AND OVERVIEW

The existing Donaldson Open Cut Mine has been given approval to operate until 2012 at which point the economic coal reserves will be exhausted. In September 2006, Donaldson Coal submitted an Environmental Assessment to the NSW Department of Planning for the Abel Underground Coal Mine and in June 2007 the project was given approval to develop the new underground area that will access coal reserves south of the Donaldson Open Cut Mine. A major benefit of this development is that the surface facilities area can be placed within existing areas of disturbance in the Donaldson Open Cut mine. Coal brought to the surface will be transported by truck and conveyor through the previously disturbed Donaldson mine lease area to the existing Bloomfield Coal Handling and Preparation Plant (CHPP) and Rail Loading Facility (RLF) for coal processing and loading. Bloomfield is currently approved to process 3.5 million tonnes per annum of product coal. As the Abel Underground Coal Mine starts producing coal it is expected there will be an increased in production through the Bloomfield CHPP of 30%. The development consent for Abel approves modifications to the CHPP infrastructure to facilitate this increase in production capacity. This enables the mine to access new coal resources while minimising the need for new facilities and land disturbance.

Figure 2 shows the total project area including the Abel Underground Mine area, parts of the existing Donaldson Open Cut mine that will be used for Abel surface infrastructure, and parts of the existing Bloomfield Colliery that will be used for the Abel Project, including the coal handling and preparation plant, rail loading facility and some access roads and water management structures. Underground workings and open cut areas within Bloomfield colliery are also shown in Figure 2 as some of these areas will be used for tailings disposal.

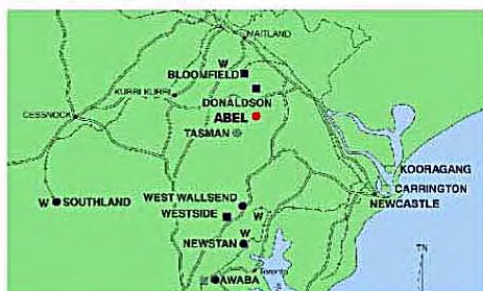
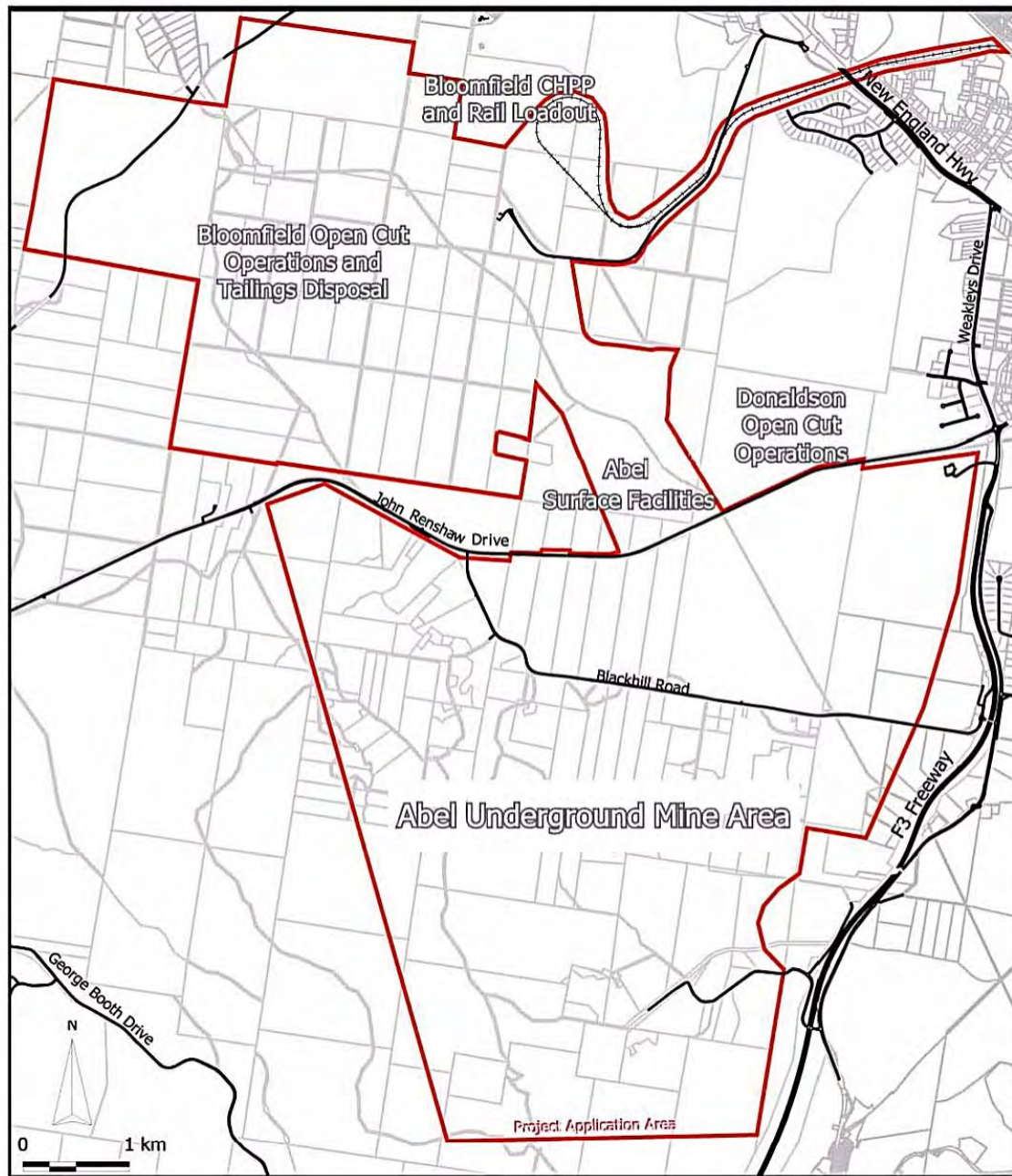
The Abel Underground Mine area, within which coal will be extracted, extends southwards from John Renshaw Drive towards Stockrington. It is bounded on the eastern side by the F3 Freeway and on the western side by a geological feature in the vicinity of Buttai Creek.


Abel Underground Coal Mine will extract coal from the Upper Donaldson and Lower Donaldson coal seams. These seams dip downwards at approximately 5 degrees towards the south of the Abel Underground Mine area, so that mining will become deeper as it progresses southwards. The depth of cover to mining ranges from 30 metres in the northern area immediately adjacent to John Renshaw Drive, to 450 metres at the southern boundary.

Access to the underground reserves will be from the Donaldson high wall north of John Renshaw Drive. A number of roadways will be driven under John Renshaw Drive with underground mining commencing on the southern side of John Renshaw Drive and progressing southwards. ROM coal will be transported via conveyor through the high wall to a stockpile located within the existing Donaldson area of disturbance. From the stockpile, coal will be transported to the existing Bloomfield CHPP, initially by truck but later by conveyor, where it will be processed and loaded onto rail.

The Project Approval (05_0136) for Abel was issued on the 7 June 2007 under Part 3A of the *Environmental Planning and Assessment Act 1979*. *Condition 2* in Schedule 5 of the Project Approval states that:

"The Proponent shall prepare and implement an Environmental Monitoring Program for the project to the satisfaction of the Director-General. This program must be submitted to the Director-General within 6 months of this approval, consolidate the various monitoring requirements in schedule 4 of this approval into a single document, and be integrated as far as is practicable with the monitoring programs of the adjoining Bloomfield, Donaldson and Tasman mines."



LEGEND					FIGURE 2 Abel Underground Mine Project Total Project Area (Including Bloomfield)	Project: Prep of Integrated Monitoring Plan	
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1	20/08/07	RC	SS	AH			

3.0 PURPOSE AND OBJECTIVES

The purpose of the Integrated Environmental Monitoring Program is to:

- Consolidate and integrate the monitoring programs for Abel, Donaldson, Tasman, and Bloomfield mines into one document;
- Address the relevant conditions of the Project Approval for Abel;
- Address the relevant commitments made within the Environmental Assessment for Abel; and
- Address the legislative requirements and guidelines relevant to the IEMP.

As part of the development and ongoing management of the Integrated Environmental Monitoring Program the primary objectives are to ensure that all current and proposed monitoring:

- locations provide adequate coverage when considered collectively, and are not unnecessarily duplicated;
- parameters are consistent across the sites;
- techniques are consistent across the sites; and
- frequencies are consistent across the sites, with the timing of monitoring synchronised where suitable.

The Monitoring to be included in the Integrated Environmental Monitoring Program includes:

- Noise;
- Blast;
- Air Quality;
- Surface Water;
- Groundwater;
- Meteorological;
- Flora and Fauna; and
- Aboriginal and Cultural Heritage.

The various monitoring programs that make up this IEMP have been prepared in consultation with the key government departments and agencies. These include the Department of Water and Energy (DWE), the Department of Environment and Climate Change (DECC) and the Maitland and Cessnock Councils.

4.0 MONITORING PROGRAMS

A summary of each of the monitoring programs is described in the sections below, including a table of the monitoring schedule and a figure showing monitoring locations. The locations of all the monitoring sites that are part of this IEMP are also shown in **Figure 3**. **Figure 3** show which monitoring sites relate to which mine, however, in many cases one monitoring location will be used for two or more sites. In these cases the monitoring site has been labelled as relating to the mine that has the primary responsibility for operation of the monitoring at that location.

The sections below provide an overview of the monitoring to be undertaken, and detailed information about any one monitoring aspect (including relevant criteria) can be found in the specific monitoring programs/plans. The relevant monitoring programs/plans for Abel are the:

- Abel Coal Project, Water Management Plan (Draft September 2007);
- Abel Underground Mine, Air Quality Monitoring Plan (Draft October 2007);
- Abel Mine Project, Noise Monitoring Program (September 2007) and Integrated Noise Monitoring Program, Donaldson Mine, Abel Mine, Tasman Mine, Bloomfield Mine and CHPP (Draft December 2007);
- Abel Underground Coal Mine, Flora and Fauna Management Plan (Draft October 2007); and
- Abel Aboriginal Heritage Management Plan (Final November 2007).

It should be noted that the monitoring outlined in the sections below is the minimum amount of monitoring to be carried out. Additional monitoring may be required from time to time, including monitoring undertaken internally for the day to day management of mine operations.

4.1 Noise Monitoring

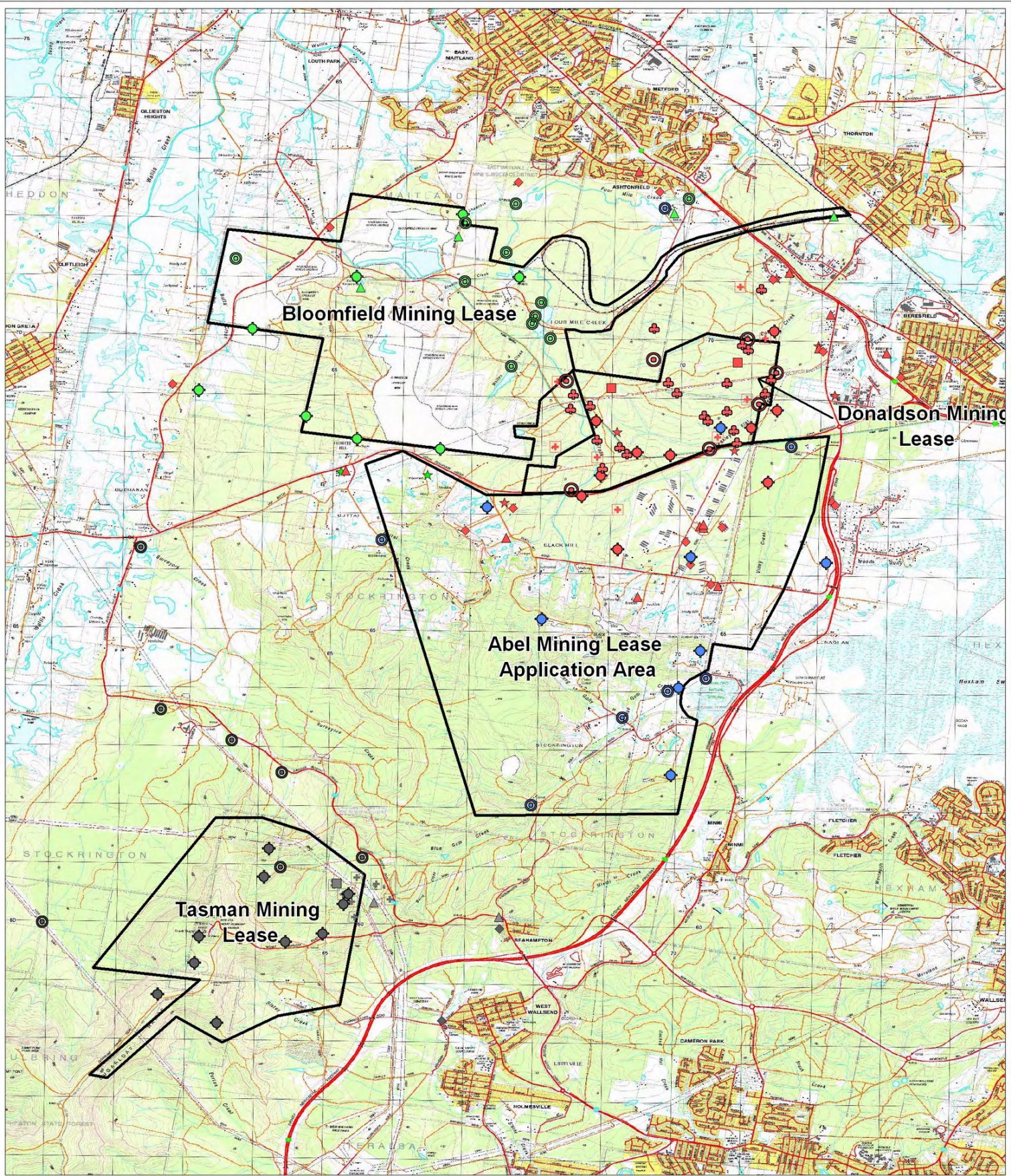
Table 1 describes the noise monitoring to be undertaken for Abel, Donaldson, Tasman, and Bloomfield mines. The locations of the noise monitoring sites are shown in **Figure 4**.

Table 1 – Noise Monitoring

Mine Site	Monitoring Type / Parameters	Monitoring Frequency	Monitoring Site Location / ID
Abel Underground & Donaldson Open Cut	Attended Noise Surveys (15 min measurement period)	Quarterly	A, F, G, K and L plus variable locations selected from B, C, D, E, H, I or J. (See Note 1)
	Unattended Noise Surveys (7 days continuously)	Quarterly	
Tasman Underground	Attended Noise Surveys (15 min measurement period)	Quarterly	M and N
Bloomfield Open Cut and CPP	Data from the Abel/Donaldson monitoring network is currently used for Bloomfield. Further locations will be added upon finalisation of the approval of the Bloomfield EA.		

Note 1: Monitoring is for Abel will be conducted at the four (4) potentially most affected locations, relevant to the mining operations occurring at the time

The noise measurement procedures employed throughout the monitoring program shall be guided by the requirements of AS 1055-1997 "Acoustics - Description and Measurement of Environmental Noise" and the NSW Industrial Noise Policy (INP).



LEGEND

- Abel
- Donaldson
- Bloomfield
- Tasman
- Weather Station
- Surface Water
- Dust
- Blast
- Piezometer
- Noise
- Flora and Fauna
- Archaeological

FIGURE 3

All Monitoring Locations

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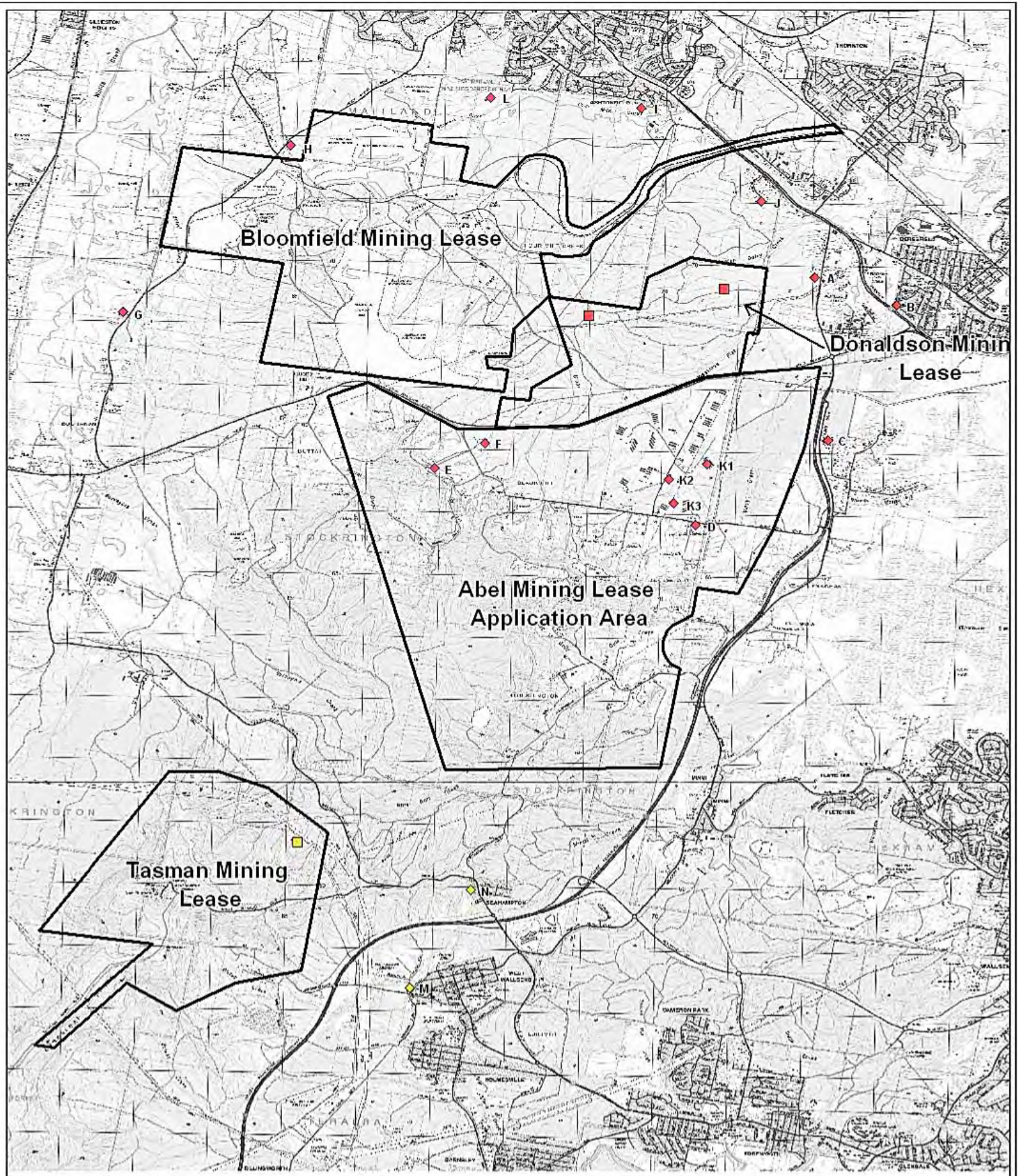
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LEGEND

- Abel
- Donaldson
- Noise
- Bloomfield
- Tasman
- Meteorological Station

FIGURE 4

Noise Monitoring Locations

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The monitoring locations chosen should be representative of noise emissions from mining operations and coal processing in order to determine compliance with the approval conditions and/ or allow the contributed noise level to be calculated at the nominated assessment locations.

Operator Attended Noise Surveys

Operator - attended noise measurements to quantify and characterise the maximum (L_{Amax}), the energy equivalent (L_{Aeq}), and background (L_{A90}) noise levels from ambient noise sources and mining operations over a 15 minute measurement period.

Tasman amenity noise levels will be assessed in accordance with the short term monitoring methodology outlined in Appendix B2 of the INP.

The operator shall quantify noise emissions and estimate the L_{Aeq}(Period) noise contribution from each of the mining operations for the day, evening and night time periods, as well as the overall level of ambient noise. During attended monitoring, digital recordings will be conducted to allow for additional post analysis of the mine noise levels and source identification.

Unattended Continuous Noise Logging

In order to supplement the operator-attended measurements, unattended continuous real time noise monitoring shall be conducted for a period of 7 days per quarter, to quantify overall ambient noise amenity levels resulting from mining, and processing emissions and other environmental noise sources. Data from unattended continuous noise logging will allow trends to be identified in ambient noise levels surrounding the mining operations and the assessment of cumulative noise impacts from all mining related noise sources in the area.

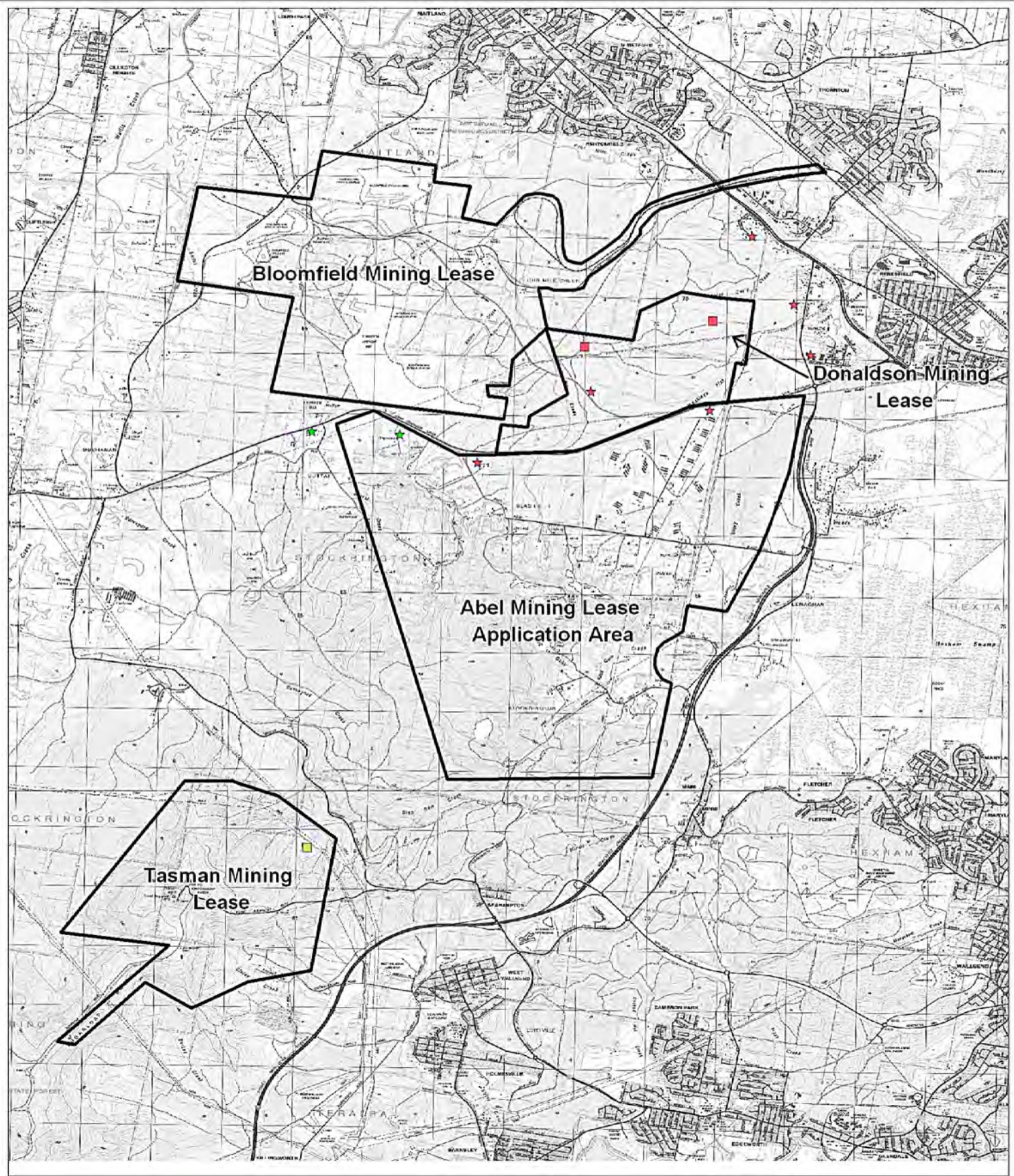
4.2 Blasting

Table 2 describes the noise monitoring to be undertaken for Abel, Donaldson, Tasman, and Bloomfield mines. The locations of the blast monitoring sites are shown in Figure 5.

Table 2 – Blast Monitoring

Mine Site	Monitoring Type / Parameters	Monitoring Frequency	Monitoring Site Location / ID
Abel Underground	No blasting is undertaken and no monitoring is required		
Donaldson Open Cut	Vibration (Peak Particle Velocity) Overpressure (Lin Peak)	During each blasting event	Fairfax Regional Printing Facility Bartter Poultry Farm Weakleys Drive (Chidgey) ABAKK Avalon Estate (Thornton) Hunter Water Pipeline
Tasman Underground	Vibration (Peak Particle Velocity)	During each shotfiring event to clear dykes	At the surface, with the location determined at the time of shotfiring
Bloomfield Open Cut and CPP	Vibration (Peak Particle Velocity) Overpressure (Lin Peak)	During each blasting event	Elliots (Trigger) McNaughtons

Monitoring locations are chosen to best represent the location and nature blasting of blasting occurring Donaldson and Bloomfield at the time.



LEGEND

	Abel		Bloomfield
	Donaldson		Tasman
	Blast		Meteorological Station

FIGURE 5
Blast Monitoring Sites

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Client: Donaldson Coal Pty Ltd

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The Donaldson monitoring equipment consists of a trigger unit and five blast monitors. The trigger unit is the closest monitor to Donaldson's blast area and is located on the Hunter Water Pipeline. When the Trigger Unit records a blast it triggers the other Donaldson monitors. All blast results are then sent to the Environment Managers Mobile Phone by SMS. The blast monitoring data is downloaded at the end of the day. Waveforms are recorded by the logger for each event. Peak Particle Velocity (ppv) and Overpressure.

The Bloomfield blast monitoring equipment consists of one trigger unit and one blast monitor. When the Elliots trigger unit records a blast it triggers the McNaughtons blast monitor.

Blast monitoring locations will be reviewed annually to determine if monitoring locations need to be changed to represent modifications to the mining operations.

4.3 Air Quality Monitoring

Table 3 describes the air quality monitoring to be undertaken for Abel, Donaldson, Tasman, and Bloomfield mines. The locations of the air quality monitoring sites are shown in Figure 6.

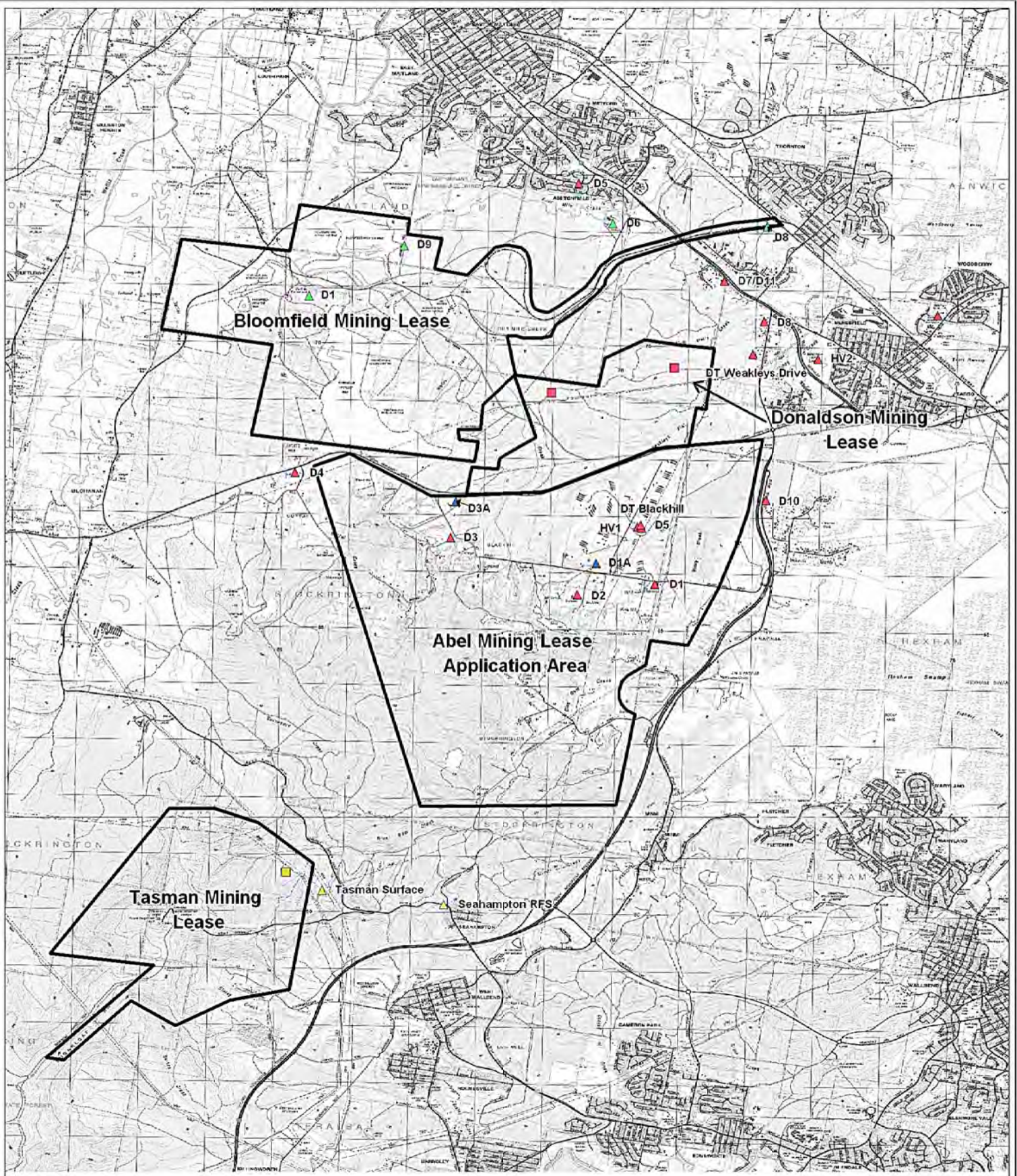
Table 3 – Air Quality Monitoring

Mine Site	Monitoring Type / Parameters	Monitoring Frequency	Monitoring Site Location / ID
Abel Underground & Donaldson Open Cut	Dust Deposition Gauges	Monthly	D1 , D1A, D2, D3, D3A, D4 D5, D7, D8, D10
	HVAS (TSP and PM ₁₀)	Continuous 6 day cycle	HV1, HV2
	Dust Traks (PM ₁₀)	Continuous 24 hour	Weakley's Drive and Bartter Site
	GRIMM (PM ₁₀ and PM _{2.5})	Two Events Per Year	Bartter Site
Tasman Underground	Dust Deposition Gauges	Monthly	Tasman Surface Seahampton RFS
	HVAS (TSP and PM ₁₀)		Seahampton RFS
Bloomfield Open Cut and CPP	Dust Deposition Gauges	Monthly	D1, D6, D8, D9.

The dust deposition monitoring will be done in accordance with AS/NZS 3580.10.1:2003 (Methods for sampling and analysis of ambient air - Determination of particulate matter - Deposited matter - Gravimetric method).

The High Volume Air Samplers will be maintained and operated in accordance with relevant Australian Standards. The HVAS monitoring TSP will do so in accordance with AS/NZS 3580.9.3:2003 (Methods for sampling and analysis of ambient air - Determination of suspended particulate matter - Total suspended particulate matter (TSP) - High volume sampler gravimetric method). The HVAS monitoring PM10 will do so over a six day continuous cycle in accordance with AS/NZS 3580.9-6:2003 (Methods for Sampling and Analysis of Ambient Air - Determination of Suspended Particulate Matter - PM10 High Volume Air Sampler with size selective inlet - Gravimetric method).

Bloomfield conducts internal background dust monitoring at locations additional to those shown in Figure 6.



LEGEND

- Abel
- Donaldson
- Dust
- Bloomfield
- Tasman
- Meteorological Station

All dust monitoring locations include a dust depositional gauge

FIGURE 6

Air Sampling Locations



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Project: DON3-07-03 Prep of Integrated Monitoring Plan

Client: Donaldson Coal Pty Ltd

File: V:\DON3-07-03 Prep of Integrated Monitoring Plan\Figures

Version	Date	Author	Checked	Approved
4	03/12/2007	SW		

4.4 Surface Water Monitoring

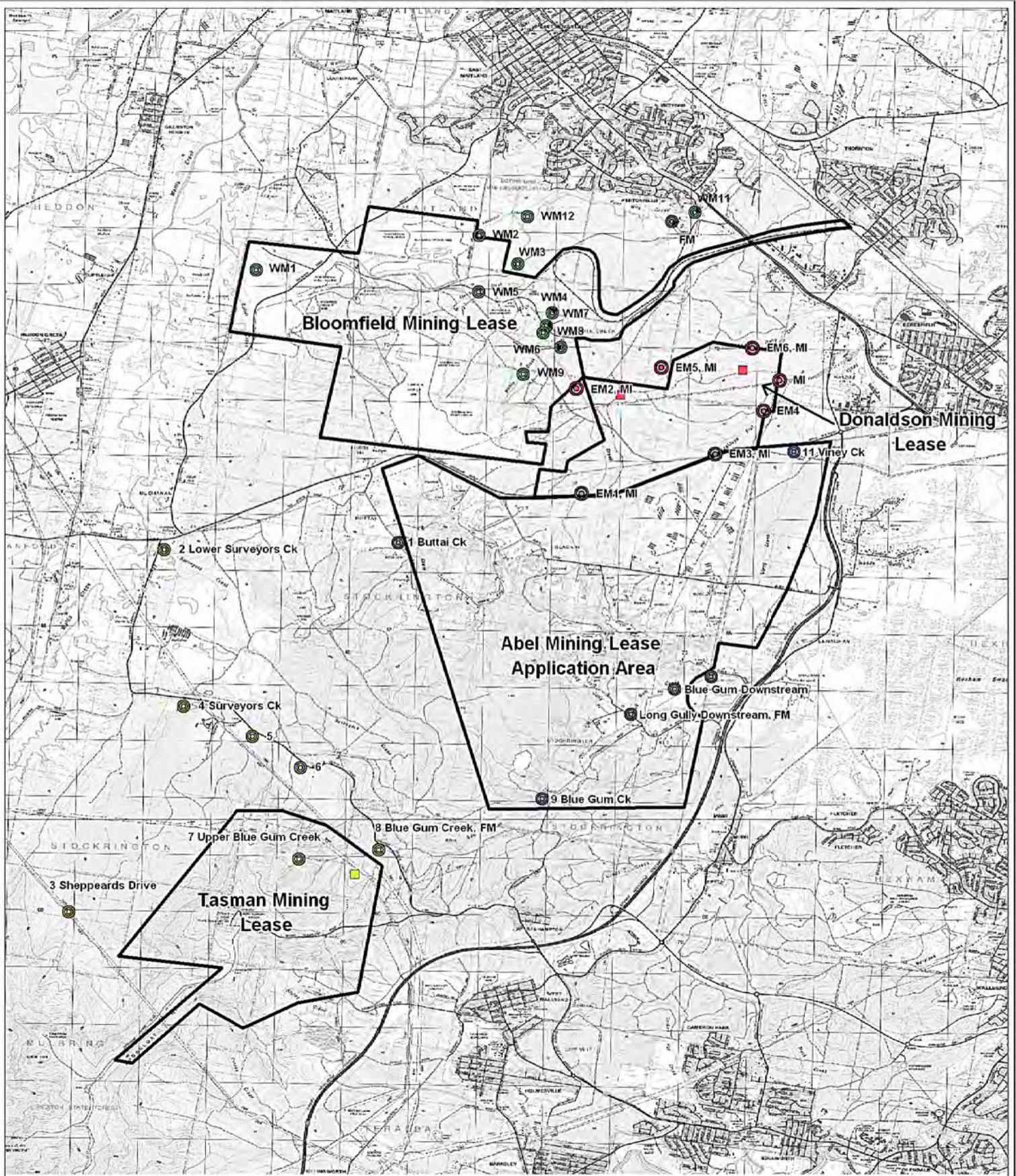
Table 4 describes the surface water monitoring to be undertaken for Abel, Donaldson, Tasman, and Bloomfield mines. The locations of the surface water monitoring sites are shown in Figure 7.

Table 4 – Surface Water Monitoring

Mine Site	Monitoring Type / Parameters	Monitoring Frequency	Monitoring Site Location / ID
Abel Underground	Water Quality - Partial Analysis	Monthly	Blue Gum Ck (Stockrington Rd) Blue Gum Ck (downstream) Long Gully (Downstream) Buttai Ck (Lings Rd)
	Water Quality - Full Analysis	Annually	Viney Ck (John Renshaw Dr) Pambalong Nature Reserve (Cedar Hill Dr)
	Macroinvertebrate monitoring	Biannually	Blue Gum Ck (Stockrington Rd) Pambalong Nature Reserve
	Flow Gauge Station (Water Level and Flow)- Automated	Continuous	Blue Gum Creek (Dog Hole Rd)
	Water Level	Monthly	Pambalong Nature Reserve (Cedar Hill Dr)
Donaldson Open Cut	Water Quality - Partial Analysis	Monthly	Four Mile Ck (John Renshaw Dr) – EM1 Four Mile Ck (ds Donaldson) - EM2 Weakleys Flat Ck (John Renshaw Dr) (EM3)
	Water Quality - Full Analysis	Annually	Weakleys Flat Ck (ds) (EM4) Scotch Dairy Ck (us) (EM5) Scotch Dairy (ds) (EM6)
	Macroinvertebrate monitoring	Biannually	Four Mile Ck (John Renshaw Dr) – EM1 Four Mile Ck (ds Donaldson) - EM2 Weakleys Flat Ck (John Renshaw Dr) (EM3) Weakleys Flat Ck (ds) (EM4) Scotch Dairy Ck (us) (EM5) Scotch Dairy (ds) (EM6)
Tasman Underground	Water Quality - Partial Analysis	Monthly	Blue Gum Ck (Tasman mine) Blue Gum Ck (George Booth Dr) Unnamed Tributaries (3 sites)
	Water Quality - Full Analysis	Annually	
	Flow Gauge Station (Water Level and Flow)- Automated	Continuous	Blue Gum Creek (George Booth Dr)
Bloomfield Open Cut and Washery	Water Quality - Partial Analysis (+ filterable iron)	Monthly	Elwells Creek (WM3 & WM5) Shamrock Creek (WM12) Four Mile Creek (Four Mile Workshop) (WM11)
	Water Quality - Full Analysis (+ filterable iron)	Annually	Water Storages (Possums Puddle, Possums Puddle Outflow, Lake Foster, Lake Kennerson)
	Flow Gauge Station - Automated	Continuous	Four Mile Creek (Four Mile Workshop)

Full Analysis (EC, TDS, TSS, pH, Chloride, Sulphates, Alkalinity (Bicarbonate), Alkalinity (Carbonate), Calcium, Magnesium, Sodium and Potassium)

Partial Analysis (EC, TDS, TSS, pH)



LEGEND

- Abel
- Bloomfield
- Donaldson
- Tasman
- Surface Water
- Meteorological Station
- MI Macroinvertebrate Monitoring
- FM Flow Monitoring

All Surface water monitoring locations include water quality monitoring

FIGURE 7

Surface Water Monitoring Sites



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Client: Donaldson Coal Pty Ltd

File: V:\DON3-07-03 Prep of Integrated Monitoring Plan\Figures

Version	Date	Author	Checked	Approved
4	03/12/2007	SW		

In addition to routine water quality monitoring shown in **Table 4**, monitoring will be undertaken in the event of any discharge. Water usage, external sourcing, rainfall on site, sediment dam overflows and discharges will also be monitored internally by the mines, with data compared to the results of the surface water monitoring program when necessary.

Water quality parameters will be measured using a combination of on-site monitoring and collection of grab samples for laboratory analysis.

Macro-invertebrates will be analysed using a system such as the SIGNAL index (especially developed for freshwaters of South Eastern Australia, with a specific index for the Hunter region) or AusRIVAS (an Australia wide index using reference sites for specific regions). On each occasion that biological monitoring is undertaken, a detailed field observation sheet is completed covering riparian (stream bank) vegetation, stream geomorphology, visual characteristics and odour to allow a Riparian-Channel-Environmental Inventory (RCE) to be calculated.

The surface water monitoring program has been designed to reduce duplication of monitoring on individual sites and identify sensitive areas that may be between mine sites that require monitoring to enable more effective subregional data sets. Monitoring will continue in areas prior to water entering these mining leases and after water passes through to determine if the mining operations are having an impact on surface water quality. Water quality impacts will be assessed in accordance with the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC).

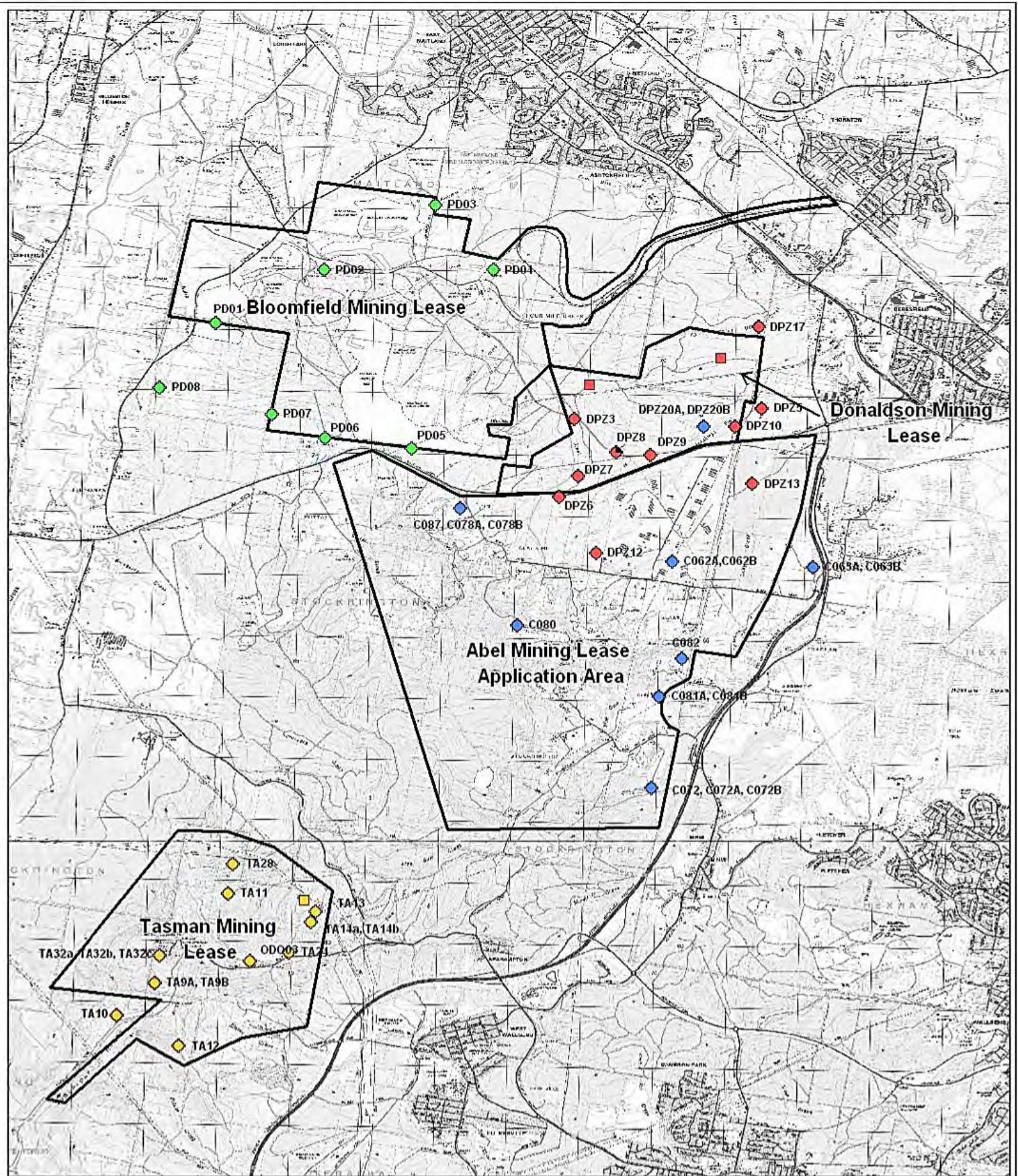
4.5 Groundwater Monitoring

Table 5 describes the groundwater monitoring to be undertaken for Abel, Donaldson, Tasman, and Bloomfield mines. The locations of the groundwater monitoring sites are shown in **Figure 8**.

Table 5 – Groundwater Monitoring

Mine Site	Monitoring Type / Parameters	Monitoring Frequency	Monitoring Site Location / ID
Abel Underground	Water Quality - Partial Analysis (EC, TDS, pH)	Quarterly	All standpipe peizometers shown on Figure 8
& Donaldson Open Cut	Water Quality - Full Analysis (EC, TDS, pH, Major cations and anions, Nutrients, Dissolved Metals)	Annually	
& Tasman Underground			Initially all peizometer locations shown on Figure 8 . (to be reviewed after 2 years)
& Bloomfield Open Cut and CPP	Standing water level	Monthly	

In addition to routine water quality monitoring shown in **Table 5**, there will be weekly measurement of the volume of mine water pumped from the underground workings. Separate inflow rates should be monitored if two or more separate mining areas are active at any time. Weekly measurement on site of the EC, TDS and pH of the mine water pumped from the underground workings will also occur.



LEGEND

- Abel
- Donaldson
- Bloomfield
- Tasman
- Piezometer
- Meteorological Station

FIGURE 8

Piezometer Locations

Project: DON3-07-03 Prep of Integrated Monitoring Plan

Client: Donaldson Coal Pty Ltd

File: V:\DON3-07-03 Prep of Integrated Monitoring Plan\Figures

Version	Date	Author	Checked	Approved
4	03/12/2007	SW		



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4.6 Aboriginal and Cultural Heritage Monitoring

Table 6 describes the Aboriginal and Cultural Heritage monitoring to be undertaken for Abel, Donaldson, Tasman, and Bloomfield mines. The locations of the Aboriginal and Cultural Heritage monitoring sites are shown in Figure 9.

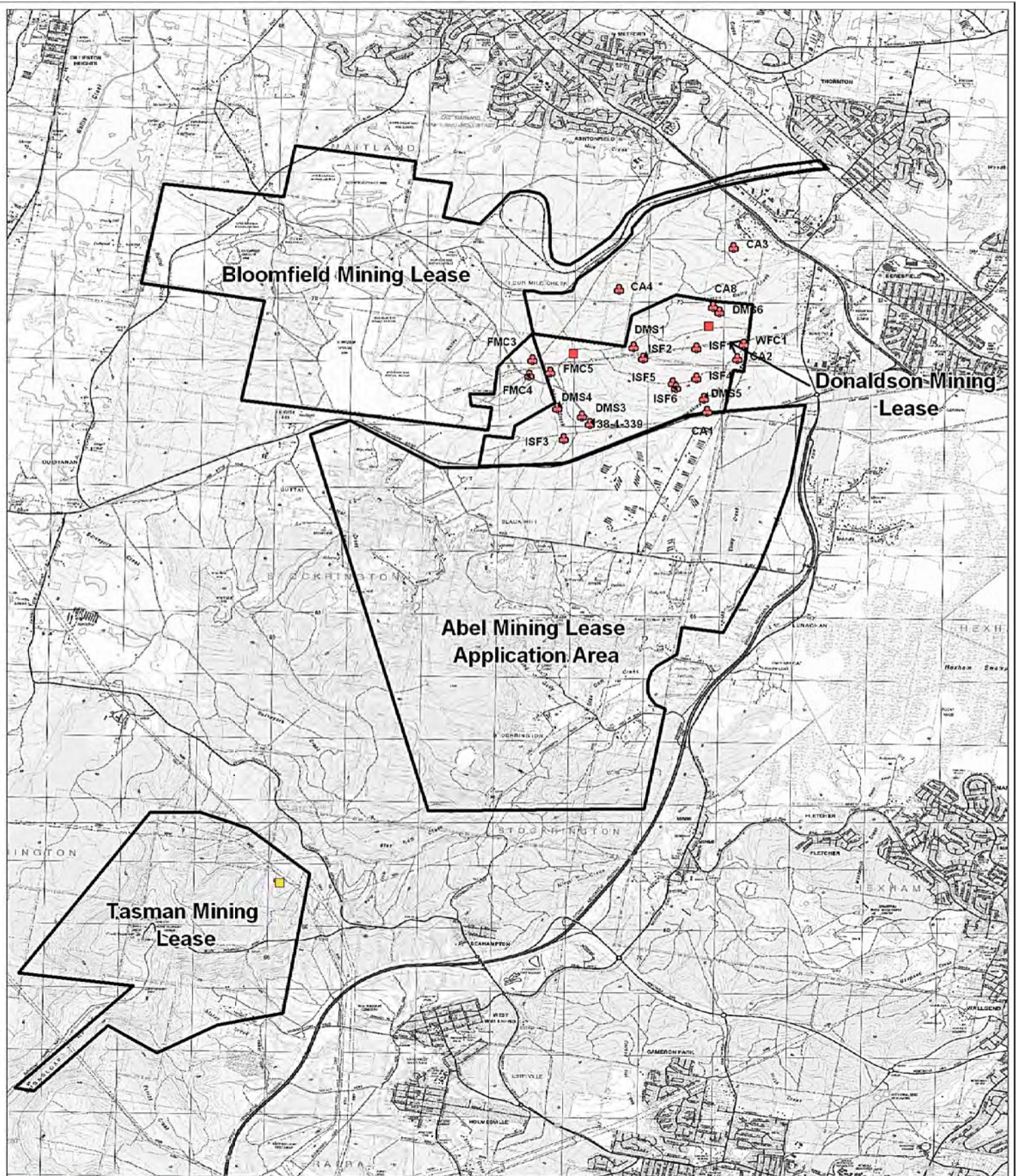
Table 6 – Aboriginal and Cultural Heritage Monitoring

Mine Site	Monitoring Type / Parameters	Monitoring Frequency	Monitoring Site Location / ID
Abel Underground	Visual Inspection of site condition	Before and after mining	Not yet determined (to be within Southern investigation area)
	Pre-clearance survey	Prior to clearance	Area to be cleared
Donaldson Open Cut	Visual Inspection of site condition	Annual	Locations shown on Figure 9
	Pre-clearance survey	Prior to clearance	Area to be cleared
Tasman Underground	Survey	Before and after mining	Above mine panels
Bloomfield Open Cut and CPP	Pre-clearance survey	Prior to/during clearance	Area to be cleared

The main area of Aboriginal significance within the four sites is the Donaldson Conservation area. The Integrated Monitoring program will involve monitoring on an annual basis the existing datum points within the Conservation Area by a qualified archaeologist and representatives of the LALC.

A staged systematic archaeological survey of each section proposed to be undermined in the Abel southern investigation area will occur with the participation of the Aboriginal stakeholders prior to any underground mining in that section. The survey will sample the geographic extent of each section.

A sample of Aboriginal heritage sites within the Abel southern investigation area, comprising site types for which it is not anticipated that subsidence related impacts will occur, will be monitored before and after undermining in their vicinity to confirm the accuracy of these predictions. This will involve inspections prior to undermining then at set periods after undermining by a qualified archaeologist and representatives of the relevant LALC.



LEGEND

- Abel
- Bloomfield
- Donaldson
- Tasman
- Archaeological Site
- Meteorological Station

FIGURE 9

Archaeological Sites

Project: DON3-07-03 Prep of Integrated Monitoring Plan

Client: Donaldson Coal Pty Ltd

File: V:\DON3-07-03 Prep of Integrated Monitoring Plan\Figures

Version	Date	Author	Checked	Approved
4	03/12/2007	SW		



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4.7 Flora and Fauna Monitoring

Table 7 describes the Flora and Fauna monitoring to be undertaken for Abel, Donaldson, Tasman, and Bloomfield mines. The locations of the Flora and Fauna monitoring sites are shown in Figure 10.

Table 7 – Flora and Fauna Monitoring

Mine Site	Monitoring Type / Parameters	Monitoring Frequency	Monitoring Site Location / ID
Abel Underground	Subtropical Rainforest (Floristic transects, stability of rock formations)	Not yet determined	Not yet determined
	Pambalong Nature Reserve (Annual fauna monitoring, monitoring of broad vegetation communities and their boundaries)	Not yet determined	Not yet determined
Donaldson Open Cut	Quadrats (Floristic content , vegetative structure, flora and fauna species list)	Quarterly	Locations shown on Figure 10
Tasman Underground	Quadrats (vegetative structure)	Annually	Locations shown on Figure 10
	Floristic content		
	Vertebrate fauna (trapping, recording, stagwatching, spotlighting, searches)		
Bloomfield Open Cut and CPP	Not monitored		

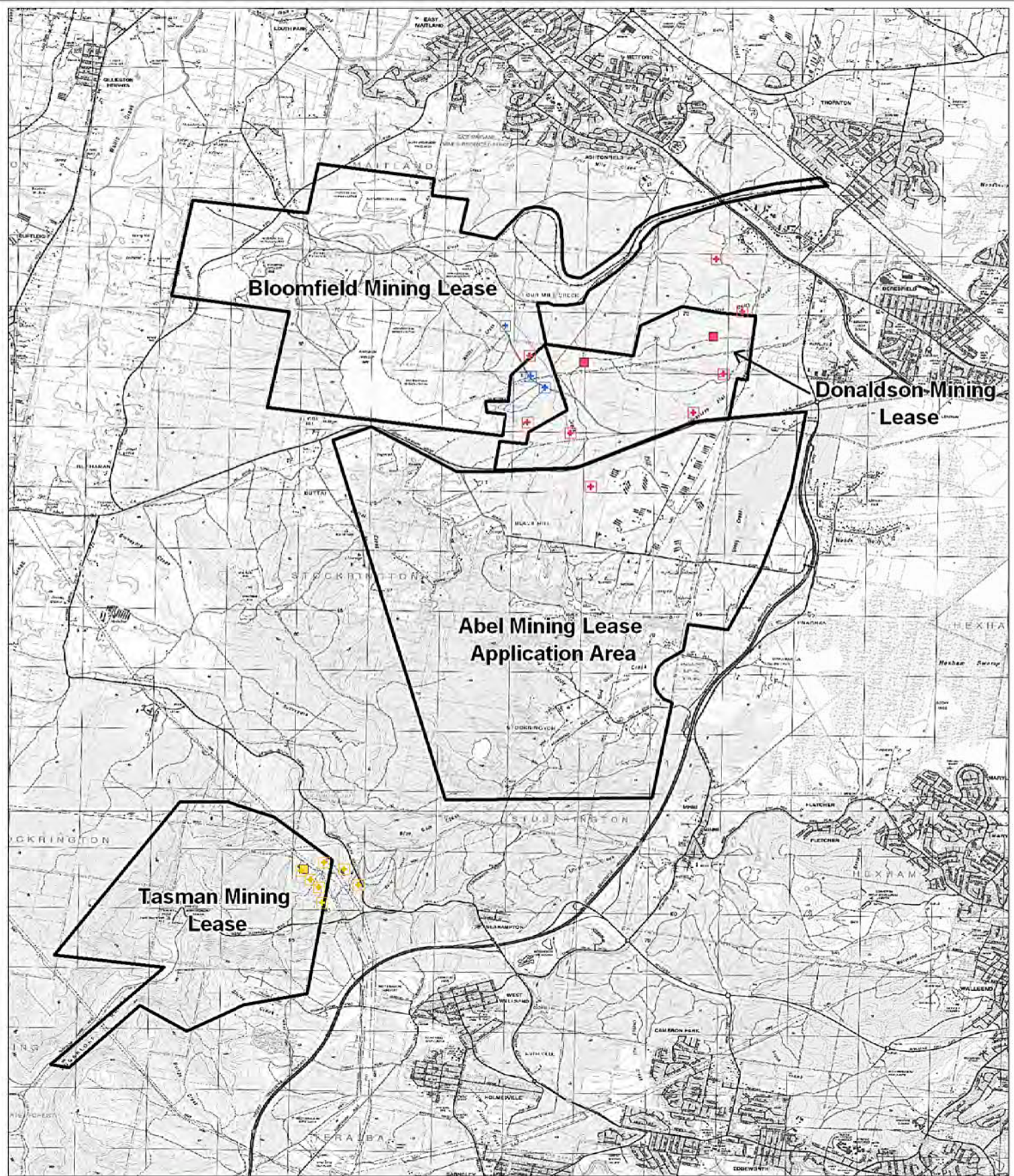
4.8 Meteorological Monitoring

Automated weather stations are located at Tasman and Donaldson sites. The location of the meteorological stations is shown in Figure 3.

Meteorological measurements shall be guided by the requirements of AS 2923-1987 "Ambient Air-Guide for Measurements of Horizontal Wind for Air Quality Applications" and the DECC. The automatic weather station situated on the Donaldson mine site is programmed to continuously record the following meteorological parameters:

- Mean wind speed;
- Mean Wind direction;
- Aggregate Rainfall; and
- Mean air Temperature.

At the time of writing this document, Donaldson Coal were in the process comparing the data obtained from two weather stations at Donaldson in order to decide which of the weather stations Donaldson Coal would continue to monitor from.



LEGEND

- Abel
- Bloomfield
- Donaldson
- Tasman
- + Flora and Fauna
- Meteorological Station

FIGURE 10

Flora and Fauna Monitoring Locations

Project: DON3-07-03 Prep of Integrated Monitoring Plan

Client: Donaldson Coal Pty Ltd

File: V:\DON3-07-03 Prep of Integrated Monitoring Plan\Figures

Version	Date	Author	Checked	Approved
3	29/11/2007	SW		



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5.0 INTEGRATION OF MONITORING RESULTS

The monitoring equipment will be installed, operated and maintained as the case may be by a joint arrangement between Abel, Donaldson, Tasman or Bloomfield. The data from all monitoring equipment will be available to all parties, but each party will only refer to data relevant to its operations. Responsibilities for operating the monitoring equipment, collecting and recording results and responding to complaints will be the responsibility of the respective Abel, Donaldson, Tasman or Bloomfield Environmental Managers. In some cases it may not be possible, by means of monitoring alone, to identify which of the mining operations is the cause of an exceedance of assessment criteria should this occur. In these cases the operations will act co-operatively in identifying and rectifying problems should these arise. It should be noted that adequate controls and buffer zones appear to have been provided for and exceedance of assessment criteria are not expected to occur.

The Integrated Environmental Monitoring Program will reduce duplication of monitoring on individual sites and identify sensitive areas across the sub - regional area. The monitoring program has been designed to create a more meaningful data set between each site. Where practical each site will monitor the same parameters at the same frequency and will use the same environmental contractor to monitor and maintain monitoring equipment to create a more consistent dataset.

A monthly environmental monitoring report will be produced and distributed to all sites.

6.0 REPORTING AND REVIEWING

6.1 Reporting

A summary of environmental monitoring for Abel, Donaldson, Tasman and Bloomfield will be presented annually in respective AEMR's to government agencies and stakeholders. Due to specific regulatory requirements, the timing of the site AEMR's cannot be synchronised. Each site reports monitoring data according to site specific requirements, using data deemed to be relevant at the time of operation.

A summary of environmental monitoring for the sites will be presented quarterly on the respective websites. Web links to the other mines within the Integrated Environmental Monitoring Program will be provided on the websites.

For mine operational purposes, a monthly environmental monitoring report will be produced by the environmental contractor (who undertakes the monitoring) and distributed to all sites.

Within 7 days of detecting an exceedance of approval limits or performance criteria, or an incident causing (or threatening to cause) material harm to the environment, the exceedance/incident shall be reported to the Department of Planning and any other relevant agency.

6.2 Review

The Integrated Environmental Monitoring Program, will be reviewed prior to the commencement of Abel mining operations and annually by the Abel, Donaldson, Tasman and Bloomfield Environmental Managers. The review of the IEMP will focus on monitoring locations, type of monitoring and monitoring frequency. The review of monitoring results will be used as part of a review to determine the requirements of monitoring. The IEMP will also be reviewed following approval of the Bloomfield Colliery Part 3A application and in line with the Development Approval.

The IEMP may be reviewed in a shorter time frame if monitoring results indicate a review of the monitoring program is required. The IEMP is to be reviewed upon significant changes to mining operations, such as the expansion of Bloomfield Operations, the closure of Donaldson Operations and progression of the Abel and Tasman longwall mining.