

# Development Consent

## Section 89E of the *Environmental Planning and Assessment Act 1979*

As delegate of the Minister for Planning, the Planning Assessment Commission of New South Wales (the Commission) approves the development application referred to in Schedule 1, subject to the conditions in Schedules 2 to 6.

These conditions are required to:

- prevent, minimise, and/or offset adverse environmental impacts;
- set standards and performance measures for acceptable environmental performance;
- require regular monitoring and reporting; and
- provide for the ongoing environmental management of the development.



Member of the Commission



Member of the Commission



Member of the Commission

Sydney

16 January 2018

### SCHEDULE 1

<b>Application Number:</b>	SSD 4974
<b>Applicant:</b>	Wyong Areas Coal Joint Venture
<b>Consent Authority:</b>	Minister for Planning
<b>Land:</b>	See Appendix 1
<b>Development:</b>	Wallarah 2 Coal Project

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## DEFINITIONS

AEP	Annual Exceedance Probability
Approved mine plan	The mine plan for Years 1-28 shown in Appendix 2
Annual review	The review required by condition 11 of Schedule 6
Applicant	Wyong Areas Coal Joint Venture, or any other person/s who rely on this consent to carry out the development that is subject to this consent
ARTC	Australian Rail Track Corporation
BCA	Building Code of Australia
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
Central Coast Water Supply	Refers to the catchments, watercourses and infrastructure that supply reticulated drinking water to the Central Coast LGA
Conditions of this consent	Conditions contained in Schedules 2 to 6 inclusive
Construction	The construction works for the development as described in the EIS. Construction work does not include surveys, acquisitions, fencing, investigative drilling or excavation, minor clearing, minor access roads, minor adjustments to services/utilities, works which allow isolation of the site so that access for construction can be provided (including service relocations) and establishing temporary facilities for construction (including for example an office and amenities compounds, temporary water and communications, construction compounds, materials storage compounds, maintenance workshops, testing laboratory or material stockpile areas).
Council	Central Coast Council
CPI	Consumer Price Index, as published by the Australian Bureau of Statistics
Crown Lands	Department of Primary Industries - Crown Lands
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 Environment
Development	The development as described in the documents in condition 2(a) of Schedule 2
Development area	All land to which the development application applies, including the longwall mining domains and the surface facilities sites, as listed in Appendix 1 and shown in Appendix 2
DoI Lands & Forestry	Department of Industry – Lands & Forestry
CLWD	Crown Lands and Water Division within Department of Primary Industry
DRG	Division of Resources and Geosciences of the Department
EIS	<i>Wallerah 2 Coal Project Environmental Impact Statement</i> dated April 2013, <i>Wallerah 2 Coal Project Response to Submissions</i> dated September 2013, <i>Residual Matters Report</i> dated October 2013, <i>Wallerah 2 Coal Project Amendment to Development Application SSD-4974</i> dated July 2016, <i>Wallerah 2 Coal Project Amendment to Development Application SSD-4974 Response to Submissions</i> dated November 2016, <i>Wallerah 2 Coal Project Amendment to Development Application SSD-4974 Planning Assessment Commission 2 Response Report</i> dated June 2017 and <i>Wallerah 2 Coal Project Amendment to SSD-4974 Response to DP&amp;E Queries over PAC2 Review Report</i> dated 13 July 2017
Environmental consequences	The environmental consequences of subsidence impacts, including: damage to built features; loss of surface water flows to the subsurface; loss of standing pools; slope changes to streams; adverse water quality impacts; development of iron bacterial mats; cliff falls; rock falls; landslides; damage to Aboriginal heritage sites; impacts on aquatic ecology; and ponding.
EPA	NSW Environment Protection Authority
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
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
Fisheries NSW	Fisheries NSW, within the Department of Primary Industries
Ha	Hectare
Heritage item	An item as defined under the <i>Heritage Act 1977</i> and/or an Aboriginal item, object or Aboriginal place as defined under the <i>National Parks and Wildlife Act 1974</i>
Incident	A set of circumstances that: <ul style="list-style-type: none"> <li>causes or threatens to cause material harm to the environment; and/or</li> </ul>

	<ul style="list-style-type: none"> <li>breaches or exceeds the limits or performance measures/criteria in this consent</li> </ul>
NPI	<i>Noise Policy for Industry</i> (2017) or any policy which updates or replaces this policy
Interim Construction Noise Guideline	<i>Interim Construction Noise Guideline</i> (DECC, 2009) or any policy which updates or replaces this policy
Jilliby SCA	Jilliby State Conservation Area
Land	As defined in the EP&A Act, except for where the term is used in the noise and air quality conditions in Schedules 4 and 5 of this consent where it is defined as 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 consent
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 operations	Includes all extraction, processing, handling, storage and transportation of coal carried out on the site
Minister	Minister for Planning, 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 development
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
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)
Public infrastructure	Linear and related infrastructure and the like that provides services to the general public, such as roads, railways, water supply, drainage, sewerage, gas supply, electricity, telephone, telecommunications, etc.
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 Applicant for obtaining independent experts to review the adequacy of any aspects of an Extraction Plan, or where such costs cannot be agreed, the costs determined by the dispute resolution process
Rehabilitation	The restoration of land disturbed by the development to a good condition and 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 development 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 to 1 (>63.4°)
ROM coal	Run-of-mine coal
SA NSW	Subsidence Advisory NSW (formerly the Mine Subsidence Board)
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, mini-wall panels or pillar extraction
Secretary	Secretary of the Department, or nominee
Site	All land within the Development area (see Appendices 1 and 2)
Statement of commitments	The Statement of Commitments included as Appendix 4
Steep slopes	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 Buttonderry Site, Tooheys Road Site, coal conveyor and rail load out facilities, ventilation shaft sites and any other site subject to proposed surface disturbance (excluding subsidence impacts) associated with the development (see Appendix 3)
TNSW	Transport for New South Wales

## **SCHEDULE 2**

### **ADMINISTRATIVE CONDITIONS**

#### **OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT**

1. In addition to meeting the specific performance measures and criteria established under this consent, the Applicant must implement all reasonable and feasible measures to prevent and/or minimise any material harm to the environment that may result from the construction, operation, or rehabilitation of the development.

#### **TERMS OF CONSENT**

2. The Applicant must carry out the development:
  - (a) generally in accordance with the EIS;
  - (b) generally in accordance with the Development Layout Plans; and
  - (c) in accordance with the conditions of this consent and the Statement of Commitments.

*Notes:*

- *The Development Layout Plans are shown in Appendices 2 to 3.*
- *The Statement of Commitments is shown in Appendix 4.*

3. If there is any inconsistency between the documents referenced in condition 2(a), the most recent document shall prevail to the extent of the inconsistency. However, the conditions of this consent shall prevail over all documents referenced in condition 2(a) to the extent of any inconsistency.
4. The Applicant must comply with any requirement/s of the Secretary arising from the Department's assessment of:
  - (a) any strategies, plans, programs, reviews, audits, reports or correspondence that are submitted in accordance with this consent (including any stages of these documents);
  - (b) any reviews, reports or audits undertaken or commissioned by the Department regarding compliance with this consent; and
  - (c) the implementation of any actions or measures contained in these documents.

#### **LIMITS ON CONSENT**

##### **Mining Operations**

5. The Applicant may carry out mining operations on the site until 16 January 2046.

*Note: Under this consent, the Applicant is required to rehabilitate the site and carry out additional undertakings to the satisfaction of either the Secretary or DRG. Consequently this consent 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 to a satisfactory standard.*

6. The Applicant may only carry out underground mining operations within the area covered by the approved mine plan.

##### **Coal Extraction and Transportation**

7. The Applicant must not extract more than 5 million tonnes of ROM coal from the site in any calendar year.
8. The Applicant must transport all ROM coal from the site by rail.

##### **Hours of Operation**

9. The Applicant may undertake mining operations 24 hours a day, 7 days a week.

##### **Construction Hours**

10. Except for construction which is carried out underground, the Applicant may only undertake construction activities between the hours of 7 am to 6 pm Monday to Friday, and 8 am to 1 pm Saturday, with no construction activities on Sundays or public holidays, unless otherwise agreed to by the Secretary in accordance with condition 2 of Schedule 4.

#### **STRUCTURAL ADEQUACY**

11. The Applicant must ensure that all new buildings and structures, and any alterations or additions to existing buildings and structure, that are part of the development are constructed in accordance with:
  - (a) the relevant requirements of the BCA; and

- (b) any additional requirements of the SA NSW where the building or structure is located on land within declared Mine Subsidence Districts.

*Notes:*

- *Under Part 4A of the EP&A Act, the Applicant 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 development.*
- *Under section 15 of the Mine Subsidence Compensation Act 1961, the Applicant is required to obtain SA NSW's approval before subdivision or constructing any improvements in a Mine Subsidence District.*

## **DEMOLITION**

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

## **PROTECTION OF PUBLIC INFRASTRUCTURE**

13. Unless the Applicant and the applicable authority agree otherwise, the Applicant must:
- (a) repair, or pay the full costs associated with repairing, any public infrastructure that is damaged by the development; and
  - (b) relocate, or pay the full costs associated with relocating, any public infrastructure that needs to be relocated as a result of the development.

*Note: This condition does not apply to damage to roads caused as a result of general road usage.*

## **OPERATION OF PLANT AND EQUIPMENT**

14. The Applicant must ensure that all plant and equipment used at the site is:
- (a) maintained in a proper and efficient condition; and
  - (b) operated in a proper and efficient manner.

## **NOTIFICATION OF COMMENCEMENT**

15. Prior to commencing development under this consent, the Applicant must notify the Department in writing of the date on which it will commence development permitted under this consent.

## **PLANNING AGREEMENT**

16. The Applicant must implement the Voluntary Planning Agreement made on 7 July 2014 with Wyong Shire Council titled '*Voluntary Planning Agreement Wyong Shire Council and Wyong Coal Pty Limited*' (Agreement) or if required by Council enter into a new VPA in accordance with the Applicant's offer to Wyong Shire Council to enter into a VPA, the terms of which are set out in Schedule 1 of the Agreement.

## **CROWN ROADS**

17. Prior to undertaking development within Nikko Road the Applicant must obtain the approval of DoI Lands & Forestry for closure of that road and have completed its purchase, except with the agreement of DoI Lands & Forestry.
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## SCHEDULE 3

### SPECIFIC ENVIRONMENTAL CONDITIONS – UNDERGROUND MINING

#### SUBSIDENCE

##### Performance Measures – Natural and Heritage Features etc

1. The Applicant must ensure that the development does not cause any exceedances of the performance measures in Table 1, to the satisfaction of the Secretary.

*Table 1: Subsidence Impact Performance Measures – Natural and Heritage Features, etc*

<b>Watercourses</b>	<b>Performance Measures</b>
6 <sup>th</sup> Order Streams and their alluvium	<ul style="list-style-type: none"> <li>• Negligible subsidence impacts and environmental consequences.</li> <li>• No connective cracking between the surface, or the base of the alluvium, and the underground workings.</li> </ul>
3 <sup>rd</sup> , 4 <sup>th</sup> and 5 <sup>th</sup> Order Streams and their alluvium	<ul style="list-style-type: none"> <li>• No subsidence impact or environmental consequence greater than minor.</li> <li>• No connective cracking between the surface, or the base of the alluvium, and the underground workings.</li> </ul>
1 <sup>st</sup> and 2 <sup>nd</sup> Order Streams	<ul style="list-style-type: none"> <li>• No subsidence impact or environmental consequence greater than predicted in the EIS.</li> <li>• No connective cracking between the surface and the underground workings.</li> </ul>
<b>Water Supply</b>	
Central Coast Water Supply, including Wyong River and Jilliby Jilliby Creek and their tributaries	<ul style="list-style-type: none"> <li>• Combined water loss of equal to or less than 300 megalitres/year while extraction of coal is being undertaken.</li> <li>• No water loss greater than 36.5 megalitres/year at or after the cessation of extraction of coal.</li> <li>• No environmental consequences greater than predicted in the EIS or as permitted under the performance measures for watercourses above.</li> </ul>
<b>Land</b>	
Minor cliffs	Environmental consequences (including occasional rockfalls, displacement or dislodgement of boulders or slabs, or fracturing) that are neither: <ul style="list-style-type: none"> <li>• greater than “minor” (as defined); nor</li> <li>• when summed together, impact on more than 3% of the total face area of such features within the mining area.</li> </ul>
Rock face features	Environmental consequences (including occasional rockfalls, displacement or dislodgement of boulders or slabs, or fracturing) that are neither: <ul style="list-style-type: none"> <li>• greater than “minor” (as defined); nor</li> <li>• when summed together, impact on more than 5% of the total face area of such features within the mining area.</li> </ul>
<b>Biodiversity</b>	
Threatened species, threatened populations, or endangered ecological communities	Negligible environmental consequences.
<b>Heritage sites</b>	
Aboriginal heritage sites listed in Table 1 of Appendix 5	Negligible subsidence impacts or environmental consequences
Historic heritage sites listed in Table 2 of Appendix 5	Negligible loss of heritage value.
Other Aboriginal and historic heritage sites	Negligible subsidence impacts or environmental consequences.
<b>Mine workings</b>	
First workings under an approved Extraction Plan beneath any feature where performance measures in this table require negligible subsidence impacts or negligible environmental consequences	To remain longterm stable and non-subsiding.
Second workings	To be carried out only within the approved mine plan, in accordance only with an approved Extraction Plan.

**Notes:**

- Classification of streams in accordance with Strahler stream order system.

- The Applicant 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 consent (see condition 7 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 and monitoring programs. In the event of a dispute over the appropriateness of proposed methods, the Secretary will be the final arbiter.
- In the case of features within the Jilliby State Conservation Area, the Secretary's satisfaction can only be expressed following consultation with OEH.

2. If the Applicant causes an exceedance of any Subsidence Impact Performance Measure (see Table 1) for *Watercourses* or for *Water Supply* that is deemed by the Secretary to be substantial and not capable of being offset under condition 3 of this Schedule, then the Secretary may impose requirements on the Applicant to:
- revise components of its Extraction Plan;
  - change its future mine plan; and/or
  - cease mining until the cause of the exceedance is properly understood and measures have been implemented by the Applicant to prevent a re-occurrence of the exceedance,
- to the satisfaction of the Secretary.

*Notes:*

- Any action under this condition must be proportionate with the significance of the subsidence impact or environmental consequence.
- Any action under this condition does not limit other actions by the Department under the penalty powers or enforcement provisions of the EP&A Act.

## Offsets

3. If the Applicant exceeds the performance measures in Table 1 and the Secretary determines that:
- it is not reasonable or feasible to remediate the subsidence impact or environmental consequence; or
  - remediation measures implemented by the Applicant have failed to satisfactorily remediate the subsidence impact or environmental consequence;
- then the Applicant must provide a suitable offset to compensate for the subsidence impact or environmental consequence, to the satisfaction of the Secretary.

*Notes:*

- Any offset required under this condition must be proportionate with the significance of the subsidence impact or environmental consequence.
- Any offset required under this condition does not limit other actions by the Department under the penalty powers or enforcement provisions of the EP&A Act.
- For compensatory measures relating to the Central Coast Water Supply, see condition 17 of Schedule 4.

## Performance Measures – Built Features

4. The Applicant must ensure that the development does not cause any exceedances of the performance measures in Table 2, to the satisfaction of the Secretary.

Table 2: Subsidence Impact Performance Measures

Key Public Infrastructure	Performance Measures
<ul style="list-style-type: none"> <li>M1 Motorway;</li> <li>Doyalson Link Road M1 overbridge;</li> <li>Public roads affected by flooding resulting from mine subsidence;</li> <li>Mardi to Mangrove Creek Dam Pipeline;</li> <li>Main Northern Railway; and</li> <li>Electricity transmission lines and towers.</li> </ul>	<p>Always safe and serviceable.</p> <p>Damage that does not affect safety or serviceability must be fully repairable, and must be fully repaired.</p>
Other Infrastructure	
<ul style="list-style-type: none"> <li>Electricity distribution lines and poles;</li> <li>Buttonderry Waste Management Facility;</li> <li>Other public infrastructure</li> </ul>	<p>Always safe.</p> <p>Serviceability should be maintained wherever practicable.</p>
Privately-owned residences and their means of access	Loss of serviceability must be fully compensated.
Other privately-owned built features and improvements, including farm dams, swimming pools, tennis courts, roads, tracks and fences	Damage must be fully repairable, and must be fully repaired or else replaced or fully compensated.
Public safety	
Public Safety	Negligible additional risk.

Notes:

- *The Applicant will be required to define more detailed performance indicators for each of these performance measures in the Built Features Management Plans or Public Safety Management Plan (see condition 7 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 Secretary will be the final arbiter.*
- *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.*
- *Requirements under this condition may be met by measures undertaken in accordance with the Mine Subsidence Compensation Act 1961, or any legislation which replaces it.*

5. Any dispute between the Applicant and the owner of any built feature over the interpretation, application or implementation of the performance measures in Table 2 is to be settled by the Secretary, following consultation with DRG. Any decision by the Secretary shall be final and not subject to further dispute resolution under this consent.

### First Workings

6. Subject to condition 7 below, the Applicant may carry out first workings within the underground mining area, other than in accordance with an approved Extraction Plan, provided that DRG is satisfied that the first workings are designed to remain stable and non-subsiding in the long term, 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 negligible resulting direct subsidence impacts.*

### Extraction Plan

7. The Applicant must prepare an Extraction Plan for all second workings on site to the satisfaction of the Secretary. Each Extraction Plan must:
- (a) be prepared in consultation with DRG and CLWD and by suitably qualified and experienced persons whose appointment has been endorsed by the Secretary;
  - (b) cover not more than five longwalls in total;
  - (c) be approved by the Secretary before the Applicant carries out any of the second workings covered by the plan;
  - (d) include detailed plans of existing and proposed first and second workings and overlying surface features, including any applicable adaptive management measures;
  - (e) include adequate consideration of mine roof and floor conditions, pillar width to height ratio, final pillar design dimensions and the long-term stability of pillars which has been undertaken in consultation with DRG;
  - (f) provide revised predictions of the potential subsidence effects, subsidence impacts and environmental consequences of the proposed mining covered by the Extraction Plan, incorporating any relevant information obtained since this consent;
  - (g) describe in detail the performance indicators that would be implemented to ensure compliance with the performance measures in Tables 1 and 2, and manage or remediate any impacts and/or environmental consequences to meet the rehabilitation objectives in condition 40 of Schedule 4;
  - (h) include a:
    - (i) Subsidence Monitoring Program which has been prepared in consultation with DRG to:
      - describe the ongoing conventional and non-conventional subsidence monitoring program;
      - provide data to assist with the management of risks associated with conventional and non-conventional subsidence;
      - validate the conventional and non-conventional subsidence predictions;
      - analyse the relationship between the predicted and resulting conventional and non-conventional subsidence effects and predicted and resulting impacts under the plan and any ensuring environmental consequences; and
      - inform the adaptive management process in paragraph (viii) below;
    - (ii) Built Features Management Plan which has been prepared in consultation with DRG, to manage the potential subsidence impacts of the proposed underground workings on built features, and which:
      - has been prepared in consultation with the owner/s of potentially affected feature/s;
      - addresses in appropriate detail all items of key public infrastructure (with particular consideration of transmission lines and towers (including angle towers), other public infrastructure and all classes of other built features);
      - recommends appropriate pre-mining mitigation measures to reduce subsidence impacts;
      - recommends appropriate remedial measures and includes commitments to mitigate, repair, replace or compensate 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;
- (iii) Water Management Plan which has been prepared in consultation with Council, EPA and CLWD, which provides for the management of potential impacts and/or environmental consequences of the proposed underground workings on watercourses and aquifers, including:
    - detailed baseline data on:
      - surface water flows and quality in water bodies that could be affected by subsidence;
      - groundwater levels, yield and quality in the region, including for privately-owned registered bores and wells;
    - surface and groundwater impact assessment criteria, including trigger levels for investigating any potentially adverse impacts on water resources or water quality;
    - a flood management protocol to:
      - identify secondary access routes for those properties that could potentially be adversely impacted by 1% AEP flood events;
      - regularly consult with landowners that would not have either a primary or secondary access route during 1% AEP flood events;
      - provide up-to-date information (including subsidence and flooding predictions) to the State Emergency Service and Council regarding privately-owned residences that could be adversely affected by lack of access during 1% AEP flood events; and
      - work with landowners, State Emergency Service and Council to develop evacuation plans to ensure landowners know what to do in the event of emergency as a result of a 1% AEP flood event;
    - a description of any adaptive management practices implemented to guide future mining activities in the event of greater than predicted impacts on aquatic habitat;
    - a program to validate the surface water and groundwater models for the development, and compare monitoring results with modelled predictions; and
    - a plan to respond to any exceedances of the surface water and groundwater assessment criteria;
  - (iv) Biodiversity Management Plan which has been prepared in consultation with OEH, which establishes a baseline data for the existing habitat on the site, including water table depth, vegetation condition, stream morphology and threatened species habitat, and provides for the management of 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, EECs and water dependent ecosystems;
  - (v) Land Management Plan which has been prepared in consultation with any affected public authorities, which provides for the management of potential impacts and/or environmental consequences of the proposed underground workings on land in general, with a specific focus on cliffs, minor cliffs, rock face features, steep slopes and agricultural enterprises;
  - (vi) Heritage Management Plan which has been prepared in consultation with OEH and relevant stakeholders for both Aboriginal and non-Aboriginal heritage, which provides for the management of potential environmental consequences of the proposed second workings on Aboriginal and non-Aboriginal heritage and includes all requirements under condition 26 of Schedule 4;
  - (vii) Public Safety Management Plan which has been prepared in consultation with DRG, which ensures public safety and manages access on the site;
  - (viii) Trigger Action Response Plan/s addressing all features in Tables 1 and 2, which contain:
    - appropriate triggers to warn of increased risk of exceedance of any performance measure;
    - specific actions to respond to high risk of exceedance of any performance measure to ensure that the measure is not exceeded;
    - 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; and
    - an assessment of remediation measures that may be required if exceedances occur and the capacity to implement those measures;
  - (ix) proposes appropriate revisions to the Rehabilitation Management Plan required under condition 42 in Schedule 4; and
  - (x) includes a program to collect sufficient baseline data for future Extraction Plans.

The Applicant must implement the approved Extraction Plan for the development.

*Notes:*

- *In accordance with condition 5 of Schedule 6, 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.*
- *The burden of proof that any declines in performance of privately-owned registered bores and wells were not due to mining impacts rests with the Applicant.*

- 8. The Applicant must ensure that the management plans required under conditions 7(h)(ii)-(x) above include:
  - (a) an assessment of the potential environmental consequences of the Extraction Plan, incorporating any relevant information that has been obtained since this consent; and
  - (b) a detailed description of the measures that would be implemented to remediate predicted impacts.

## Water Monitoring Program

9. Prior to longwall extraction and as part of each Extraction Plan, the Applicant must prepare a Water Monitoring Program for the areas of the development subject to or potentially affected by underground mining, to the satisfaction of the Secretary. This program must:
- (a) be prepared in consultation with Council, CLWD and the EPA, by suitably qualified and experienced persons whose appointment has been approved by the Secretary;
  - (b) be approved by the Secretary prior to the commencement of longwall mining;
  - (c) assess all affected sections of 6<sup>th</sup>, 5<sup>th</sup>, 4<sup>th</sup> and 3<sup>rd</sup> order streams and their alluvium;
  - (d) assess a representative sample of affected sections of 2<sup>nd</sup> and 1<sup>st</sup> order streams (including the affected sections of Hue Hue Creek);
  - (e) be capable of differentiating between subsidence impacts and related environmental consequences and background variations for stream morphology, baseflows, stream flows and water quality and flooding;
  - (f) regularly undertake groundwater age dating from nested piezometers to identify any downward leakage of water from surface watercourses, associated alluvium or shallow groundwater systems; and
  - (g) include a:
    - (i) surface water monitoring program to monitor and report on:
      - the baseline data as collected under condition 7(h)(iii) above;
      - stream morphology (including the establishment of surveyed cross sections and longitudinal sections at key locations);
      - stream flows and water quality;
      - any changes resulting from subsidence impacts, including potential impacts on town water extraction availability under various climatic scenarios;
      - stream and riparian vegetation health, including threatened species habitat, particularly within the Jilliby SCA; and
      - channel and bank stability; and
    - (ii) groundwater monitoring program to monitor and report on:
      - the baseline data as collected under condition 7(h)(iii) above;
      - baseflows;
      - groundwater inflows to the underground mining operations;
      - the height of groundwater depressurization;
      - background changes in groundwater yield/quality against mine-induced changes, in particular, on groundwater bore users in the vicinity of the site;
      - groundwater dependent ecosystems; and
      - acid mine drainage; and
    - (iii) flooding monitoring program to monitor and report on:
      - updated flood modelling;
      - measures to minimise, manage and mitigate (whether prospectively or retrospectively) flood impacts on key public infrastructure, other public infrastructure, residences, other built features and privately-owned land; and
      - private properties where mitigation measures are not reasonable or feasible and compensation would instead be offered; and
    - (iv) Trigger Action Response Plan/s to manage the risk of unexpected impacts to surface water, groundwater and as a result of flooding.

The Applicant must implement the approved Water Monitoring Program as approved by the Secretary.

10. Prior to the approval of any Extraction Plan covering extraction of any of Longwalls 6N, 10N and 15N, and at any other time directed by the Secretary, the Applicant must prepare a Central Coast Water Supply Monitoring Program for the areas of the development that could potentially impact the Central Coast Water Supply, to the satisfaction of the Secretary. These programs must:
- (a) be prepared in consultation with CLWD, Council and the EPA, by suitably qualified and experienced persons whose appointment has been approved by the Secretary;
  - (b) be informed by and inform the Water Management Plan and Water Monitoring Program as required by conditions 7(h)(iii) and 9 above;
  - (c) be capable of determining compensation requirements under condition 17 of Schedule 4 below; and
  - (d) monitor and report on:
    - (i) the baseline data as collected under condition 7(h)(iii) above;
    - (ii) stream morphology;
    - (iii) stream flows and quality;
    - (iv) baseflow losses associated with mining and the application of compensation requirements under condition 17 of Schedule 4; and
    - (v) any changes resulting from subsidence impacts, including potential impacts on town water extraction availability under various climatic scenarios and the quality of waterbodies that contribute to the Central Coast Water Supply.

The Applicant must implement the approved Central Coast Water Supply Monitoring Program as approved by the Secretary.

### **Independent Audits of Subsidence Impacts**

11. Within six months of the completion of each of Longwalls 5N, 9N and 14N and at any other time directed by the Secretary, the Applicant must conduct an independent audit of the subsidence, surface water, and ground water impacts of the development. The audit:
  - (a) must be conducted by a suitably qualified, experienced and independent team of experts, including a subsidence expert, hydrogeologist and hydrologist, whose appointment has been endorsed by the Secretary;
  - (b) scope must be determined prior to the audit, in consultation with Council, CLWD and DRG, to the satisfaction of the Secretary;
  - (c) must review the monitoring data for the development;
  - (d) identify any trends in the monitoring data;
  - (e) examine the subsidence, surface water, and groundwater impacts of the development;
  - (f) compare these impacts against the relevant impact assessment criteria and predictions in the EIS; and, if necessary;
  - (g) recommend measures to reduce, mitigate, or remediate these impacts; and
  - (h) review the Trigger Action Response Plan/s and performance indicators.
12. If the independent audit determines that the subsidence, surface water, and/or ground water impacts resulting from the underground mining operations are greater than those predicted in the EIS, the Applicant must:
  - (a) assess the significance of these impacts;
  - (b) investigate measures to minimise these impacts, including modifying current and subsequent mine plans; and
  - (c) describe what measures would be implemented to reduce, minimise, mitigate or remediate these impacts in the future;to the satisfaction of the Secretary.

### **Payment of Reasonable Costs**

13. The Applicant must pay all reasonable costs incurred by the Department to engage suitably qualified, experienced and independent persons to review the adequacy of any aspect of an Extraction Plan.
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## SCHEDULE 4

### SPECIFIC ENVIRONMENTAL CONDITIONS – GENERAL

#### NOISE

##### Construction Noise

1. The Applicant must ensure that the noise generated by construction complies with the requirements of the *Interim Construction Noise Guideline*.

##### Out of Hours Construction Works

2. If the Applicant proposes to undertake any construction works outside the hours specified in condition 10 of Schedule 2, then the Applicant must prepare and implement an Out of Hours Work Protocol for these works to the satisfaction of the Secretary. This protocol must be prepared in consultation with the EPA and the residents who would be affected by the noise generated by these works, and be consistent with the requirements of the *Interim Construction Noise Guideline*. The Applicant must not carry out any out of hours construction works before this protocol has been approved by the Secretary.

##### Additional Mitigation Upon Request

3. At least 3 months prior to first commencing construction of any of the conveyor, transfer station and train load-out facility, the Applicant must notify the owners of all residences listed in Table 3 in writing of the date on which this construction will commence.

Upon receiving a written request following this notification from the owner of any residence listed in Table 3, the Applicant must implement additional mitigation measures at the residence, in consultation with the landowner, in respect of the basis on which that residence is identified in Table 3.

These measures must be reasonable and feasible, and directed towards reducing the noise impacts of the development on the residence. In the case of noise, mitigation may include measures such as double-glazing, insulation and/or air conditioning.

If within 3 months of receiving this request from the owner, the Applicant and the owner 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 Secretary for resolution.

Table 3: Land subject to additional mitigation upon request

Mitigation basis	Residence
Noise	R72 (P16), R74 (P15), R75 (P14)

Note: The location of the land referred to in Table 3 is shown on the figure in Appendix 7.

##### Operational Noise Criteria

4. Except for the carrying out of construction, the Applicant must ensure that the noise generated by the development does not exceed the criteria in Table 4 at any residence on privately-owned land, or within the Jilliby SCA.

Table 4: Operational Noise Criteria dB(A)

Location	Day L <sub>Aeq</sub> (15 min)	Evening L <sub>Aeq</sub> (15 min)	Night L <sub>Aeq</sub> (15 min)	Night L <sub>A1</sub> (1 min)
P1	35	35	35	45
P2	35	35	35	45
P3	40	40	40	45
P4	35	35	35	45
P5	35	35	35	45
P6	39	39	39	45
P7	42	42	42	45
P8	45	45	44	45
P9	42	42	42	45
P10	37	37	37	45
P13	42	42	42	45
P14	46	46	46	52
P15	46	46	46	52
P16	42	42	42	45
P17	40	40	40	45
	L <sub>Aeq</sub> (period)			

Jilliby SCA	50 (when in use)	-
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*Note: To identify the locations referred to in Table 4, refer to Appendix 7.*

Noise generated by the development is to be measured in accordance with the relevant requirements and exemptions (including certain meteorological conditions) of the *NPI*. Appendix 6 sets out the meteorological conditions under which these criteria apply, and the requirements for evaluating compliance with these criteria.

However, the noise criteria in Table 4 do not apply if the Applicant has an agreement with the relevant landowner to exceed the noise criteria, and the Applicant has advised the Department in writing of the terms of this agreement.

## Operating Conditions

5. The Applicant must:
  - (a) implement best management practice to minimise the construction, operational, road and rail noise of the development;
  - (b) use the best available technology, where reasonable and feasible, in noise reduction construction materials for the conveyor, transfer station and train load out facility;
  - (c) minimise the noise impacts of the development during meteorological conditions when the noise criteria in this consent do not apply (see Appendix 6);
  - (d) operate an on-site noise management system that uses a combination of predictions, forecasting and real-time noise monitoring of all noise associated with the development, including:
    - noise during construction and operations;
    - road noise generated by vehicles associated with the development; and
    - noise generated by employee commuter vehicles on public roads, particularly on Hue Hue Road and Bushells Ridge Road;
 to ensure compliance with the relevant conditions of this consent;
  - (e) carry out noise monitoring (monthly or as otherwise agreed with the Secretary) to determine whether the development is complying with the relevant conditions of consent; and
  - (f) regularly assess noise monitoring data and modify and/or stop operations on site to ensure compliance with the relevant conditions of this consent, to the satisfaction of the Secretary.

*Notes:*

- *For areas where construction noise is predicted to be at or below 35 dB(A) and/ or below operational noise criteria at sensitive receptors, this is likely to provide sufficient justification for the need to operate outside of recommended standard hours as specified in the Interim Construction Noise Guideline.*

## Noise Management Plan

6. The Applicant must prepare a Noise Management Plan for the development to the satisfaction of the Secretary. This plan must:
  - (a) be prepared in consultation with EPA;
  - (b) be approved by the Secretary prior to the commencement of the construction of the surface facilities sites, unless otherwise agreed by the Secretary;
  - (c) describe the measures that would be implemented to ensure:
    - compliance with the noise criteria and operating conditions in this consent;
    - best practice management is being employed; and
    - the noise impacts of the development are minimised during meteorological conditions under which the noise criteria in this consent do not apply (see Appendix 6);
  - (d) seek to minimise road traffic noise generated by employee commuter vehicles on public roads, particularly on Hue Hue Road and Bushells Ridge Road;
  - (e) describe the proposed noise management system in detail;
  - (f) include a noise monitoring program that:
    - uses a combination of real-time and supplementary attended monitoring to evaluate the performance of the development; and
    - evaluates and reports on:
      - the effectiveness of the on-site noise management system;
      - compliance against the noise criteria in this consent; and
      - compliance against the noise operating conditions in condition 4 above; and
    - defines what constitutes a noise incident, and includes a protocol for identifying and notifying the Department and relevant stakeholders of any noise incidents.

The Applicant must implement the approved Noise Management Plan as approved by the Secretary.

## AIR QUALITY & GREENHOUSE GAS

### Odour

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

### Air Quality Criteria

8. The Applicant must ensure that all reasonable and feasible avoidance and mitigation measures are employed so that particulate emissions generated by the development do not cause exceedances of the criteria listed in Table 5 at any residence on privately-owned land.

Table 5: Air quality criteria

Pollutant	Averaging Period	Criterion	
Particulate matter < 10 µm (PM <sub>10</sub> )	Annual	a, d 30 µg/m <sup>3</sup>	
Particulate matter < 10 µm (PM <sub>10</sub> )	24 hour	b 50 µg/m <sup>3</sup>	
Particulate matter < 2.5 µm (PM <sub>2.5</sub> )	Annual	a, d 8 µg/m <sup>3</sup>	
Particulate matter < 2.5 µm (PM <sub>2.5</sub> )	24 hour	b 25 µg/m <sup>3</sup>	
Total suspended particulates (TSP)	Annual	a, d 90 µg/m <sup>3</sup>	
<sup>c</sup> Deposited dust	Annual	b 2 g/m <sup>2</sup> /month	a, d 4 g/m <sup>2</sup> /month

Notes to Table 5:

a Cumulative impact (ie increase in concentrations due to the development plus background concentrations due to all other sources).

b Incremental impact (ie increase in concentrations due to the development alone, with zero allowable exceedances of the criteria over the life of the development).

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.

d Excludes extraordinary events such as bushfires, prescribed burning, dust storms, sea fog, fire incidents or any other activity agreed by the Secretary.

e "Reasonable and feasible avoidance and mitigation measures" include, but are not limited to, the operational requirements in conditions 9 – 11 of Schedule 4 to develop and implement an air quality management system that ensures operational responses to the risks of exceedance of the criteria.

### Operating Conditions

9. The Applicant must:
- implement all reasonable and feasible measures to minimise the:
    - odour, fume (including spontaneous combustion) and dust emissions of the development; and
    - release of greenhouse gas emissions from the development;
  - minimise any visible off-site air pollution generated by the development;
  - minimise the surface disturbance of the site generated by the development;
  - implement a methane gas capture and flaring system during underground mining operations, which is designed, maintained and operated so as to prevent greenhouse gas emissions where reasonable or feasible;
  - operate a comprehensive air quality management system that uses a combination of predictive meteorological forecasting and real-time air quality monitoring data to guide the day to day planning of mining operations and the implementation of both proactive and reactive air quality mitigation measures to ensure compliance with the relevant conditions of this consent;
  - regularly assess meteorological and air quality monitoring data and relocate, modify and/or stop operations on site to ensure compliance with the air quality criteria in this consent; and
  - minimise the air quality impacts of the development during adverse meteorological conditions and extraordinary events (see note d to Table 5 above),
- to the satisfaction of the Secretary.

Note: The methane gas flaring system must comply with the POEO Act and Regulation, unless an EPL authorises otherwise.

### Air Quality & Greenhouse Gas Management Plan

10. The Applicant must prepare a detailed Air Quality & Greenhouse Gas Management Plan for the development to the satisfaction of the Secretary. This plan must:
- be prepared in consultation with EPA;
  - be approved by the Secretary prior to the commencement of the construction of the surface facilities sites;

- (c) describe the measures that would be implemented to ensure:
  - capture and flaring of methane produced by underground coal mining;
  - compliance with the air quality criteria and operating conditions in this consent;
  - best practice management is being employed; and
  - the air quality impacts of the development are minimised during adverse meteorological conditions and extraordinary events;
- (d) describe the proposed on-site air quality management system; and
- (e) include an air quality monitoring program that:
  - uses monitors to evaluate the performance of the development against the air quality criteria in this consent;
  - adequately supports the air quality management system;
  - evaluates and reports on:
    - the effectiveness of the on-site air quality management system;
    - compliance against the air quality criteria in this consent; and
    - compliance against the air quality operating conditions in condition 9 above; 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.

The Applicant must implement the approved Air Quality & Greenhouse Gas Management Plan as approved by the Secretary.

*Note: "Methane produced by underground coal mining" does not include methane within Mine Ventilation Air.*

### **Feasibility Study for the Beneficial Use of Methane**

11. Within 2 years of commencing second workings, the Applicant must complete a detailed feasibility study of the options for beneficial use of methane produced by underground coal mining at the site, to the satisfaction of the Secretary.

Where a beneficial use option is considered to be reasonable and feasible in the immediate or short term, then the Applicant must implement the option within 2 years of completion of the study, to the satisfaction of the Secretary. Where a beneficial use option is only considered to be reasonable and feasible at a later date in the mine life, then the Applicant must implement the option by the time specified by the Secretary, to the satisfaction of the Secretary.

*Note: beneficial use options may reduce or replace the need to capture and flare methane under conditions 9 and 10 of this Schedule.*

### **METEOROLOGICAL MONITORING**

12. Prior to the commencement of development under this consent and for the life of the development, the Applicant must ensure that there is a 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 atmospheric stability category determined by the sigma theta method in accordance with the *NPI*.

### **WATER**

#### **Water Supply**

13. The Applicant must 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.

*Note: Under the Water Management Act 2000, the Applicant is required to obtain the necessary water licences for the development.*

#### **Water Pollution**

14. Unless an EPL authorises otherwise, the Applicant must comply with Section 120 of the POEO Act.
15. The Applicant must:
  - (a) design, install and maintain a water treatment plant to ensure no uncontrolled or untreated discharge of mine water off-site;
  - (b) ensure the maximum concentration limits in any treated mine water for metals, salinity suspended solids and pH discharged to surface waters are in accordance with the limits set in the EPL; and
  - (c) ensure any treated mine water discharged to surface water has no adverse ecotoxic effect

## Compensatory Water Supply

16. Prior to the commencement of extraction of coal, the Applicant must notify any owner of privately-owned land whose water supply could potentially be affected by the development of their right to a compensatory water supply, if their water supply is adversely and directly impacted as a result of the development.

The Applicant must provide a compensatory water supply to any owner of privately-owned land whose water supply is adversely and directly impacted (other than a negligible impact) as a result of the development, in consultation with CLWD and to the satisfaction of the Secretary.

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

If the Applicant 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 Secretary for resolution.

If the Applicant is unable to provide an alternative long-term supply of water, then the Applicant must provide alternative compensation to the satisfaction of the Secretary.

*Note: The burden of proof that any loss of surface water or groundwater access was not due to mining impacts rests with the Applicant.*

## Central Coast Water Supply Compensatory Arrangement

17. Prior to the approval of any Extraction Plan that authorises extraction of Longwall 6N, the Applicant must establish and implement a Central Coast Water Supply Compensatory Arrangement which provides 300 megalitres per annum of water to the Central Coast Water Supply system. The Central Coast Water Supply Compensatory Arrangement must:
- be prepared in consultation with Council and CLWD;
  - be submitted for the approval of the Secretary not less than 12 months prior to the planned extraction of Longwall 6N;
  - supply mine water treated to an appropriate level for release into the receiving environment in the Central Coast Water Supply including an equivalent or better quality for pH, dissolved oxygen and electrical conductivity as the receiving environment;
  - discharge at least 300 megalitres per annum of treated water directly into the Central Coast Water Supply system at a location mutually agreed with Council;
  - incorporate an on-line water quality monitoring system that monitors river water quality upstream and downstream of the discharge point, and has the capability to connect to and integrate into Council's supervisory control and data acquisition system, in order to ensure that required water quality parameters for discharged treated water are met;
  - operate at least until the cessation of mining operations (see condition 5 of Schedule 2); and
  - include operational procedures for the compensatory water transfer system, agreed with Council, to ensure that operation of the system is compatible with Council's water supply infrastructure.

Any dispute over the implementation of the Arrangement may be referred by either party to the Secretary for resolution.

*Note: This condition does not remove any obligation for the Applicant to obtain:*

- necessary water licences for the development under the Water Management Act 2000; and
- approval for the construction and implementation of the Water Supply Compensatory Arrangement under the EP&A Act.

## Water Management Performance Measures

18. The Applicant must ensure that the development does not cause any exceedance of the performance measures in Table 6, to the satisfaction of the Secretary.

Table 6: Water Management Performance Measures

Feature	Performance Measure
Water Management - General	<ul style="list-style-type: none"><li>Minimise the use of clean water on site</li><li>Minimise the use of water from external sources</li></ul>
Discharges of mine water	<ul style="list-style-type: none"><li>Ensure that there are no uncontrolled or untreated discharges of mine water off-site</li></ul>
Construction and operation of linear infrastructure (including conveyors and the rail siding)	<ul style="list-style-type: none"><li>Design, install and maintain erosion and sediment controls generally in accordance with the series <i>Managing Urban Stormwater: Soils and Construction</i> including Volume 1, Volume 2A – <i>Installation of Services</i> and Volume 2C – <i>Unsealed Roads</i></li></ul>

	<ul style="list-style-type: none"> <li>Design, install and maintain the infrastructure within 40 m of watercourses generally in accordance with the <i>Guidelines for Controlled Activities on Waterfront Land</i> (DPI 2007), or its latest version</li> <li>Design, install and maintain creek crossings generally in accordance with the <i>Policy and Guidelines for Fish Friendly Waterway Crossings</i> (NSW Fisheries, 2003), <i>Why Do Fish Need To Cross The Road? Fish Passage Requirements for Waterway Crossings</i> (NSW Fisheries 2003) and <i>Guidelines for Watercourse Crossings on Waterfront Land</i> (DPI Water 2012) or their latest versions</li> <li>Ensure all works on waterfront land are consistent with CLWD's <i>Guidelines for Controlled Activities on Waterfront Land</i> (NOW, 2012)</li> </ul>
Sediment Dams	<ul style="list-style-type: none"> <li>Design, install and maintain the dams generally in accordance with the series <i>Managing Urban Stormwater: Soils and Construction – Volume 1 and Volume 2E Mines and Quarries</i></li> </ul>
Clean water diversions & storage infrastructure	<ul style="list-style-type: none"> <li>Design, install and maintain the clean water system to capture and convey the 100 year ARI flood</li> <li>Maximise as far as reasonable and feasible the diversion of clean water around disturbed areas on site</li> </ul>
Mine water storages	<ul style="list-style-type: none"> <li>Design, install and maintain mine water storage infrastructure to ensure no unlicensed or uncontrolled discharge of mine water off-site</li> <li>Minimise discharges to surface waters as far as reasonable and practicable</li> <li>Mine water storage infrastructure is designed to store a 50 year ARI 72 hour storm event</li> <li>On-site storages (including mine infrastructure dams, groundwater storage and treatment dams) are suitably lined to comply with a permeability standard of <math>&lt; 1 \times 10^{-9}</math> m/s</li> </ul>
Chemical and hydrocarbon storage	<ul style="list-style-type: none"> <li>Chemical and hydrocarbon products to be stored in bunded areas in accordance with the relevant Australian Standards</li> </ul>
Aquatic and riparian ecosystems, including affected sections of Wallarah Creek	<ul style="list-style-type: none"> <li>Maintain or improve baseline channel stability</li> <li>Develop site-specific in-stream water quality objectives in accordance with ANZECC 2000 and <i>Using the ANZECC Guidelines and Water Quality Objectives in NSW</i> procedures (DECC 2006), or its latest version</li> </ul>

## Water Management Plan

19. Prior to carrying out any development for all areas that are not, or will not, be subject to condition 7 of Schedule 3 (including the surface facilities sites), unless the Secretary agrees otherwise, the Applicant must prepare a Water Management Plan for the development, to the satisfaction of the Secretary. This plan must:
- be prepared in consultation with CLWD, Fisheries NSW and the EPA, by suitably qualified and experienced persons whose appointment has been approved by the Secretary;
  - be approved by the Secretary prior to the commencement of the construction of the surface facilities sites;
  - include detailed performance criteria and describes measures to ensure that the Applicant complies with the Water Management Performance Measures (see Table 6);
  - in addition to the standard requirements for management plans (see condition 3 of Schedule 6), this plan must include a:
    - Site Water Balance that:
      - includes details of:
        - sources and security of water supply, including contingency planning for future reporting periods;
        - water make in the underground workings;
        - water use and management on site;
        - any off-site water discharges; and
        - reporting procedures, including the preparation of a site water balance for each calendar year; and
      - investigates and implements all reasonable and feasible measures to minimise water use on site;

- (ii) Surface Facilities Water Management Plan, that includes:
  - detailed baseline data on water flows and quality in the water bodies that could be affected by the surface facilities sites and other surface activities, including, but not limited to, Wallarah Creek;
  - a geomorphological assessment of Wallarah Creek to identify any existing erosion;
  - a detailed description of water management systems for each surface facilities site, including:
    - clean water diversion systems;
    - erosion and sediment controls; and
    - any water storages, including mine water management and treatment systems;
  - measures to minimise potable water use and to reuse and recycle water;
  - detailed objectives and performance criteria, including trigger levels for investigating any potentially adverse impacts associated with the development for:
    - downstream surface water quality;
    - downstream flooding impacts;
    - downstream water users;
    - stream and riparian vegetation health for rivers and creeks and their tributaries potentially impacts by the development;
    - restoration of an appropriate drainage network on the rehabilitated areas of the site; and
    - control of any potential water pollution from the rehabilitated areas of the site;
  - details of the water licensing requirements for all water storages (ie exempt, within harvestable rights or requires a licence);
  - a program to monitor and report on:
    - effectiveness of the mine water management and treatment system;
    - the performance measures listed in Table 6;
    - water flows, water quality and fluvial geomorphology in watercourses that could be affected by the surface facilities sites and other surface activities;
    - impacts on water users;
    - downstream flooding impacts;
    - stream health; and
    - channel stability;
  - reporting procedures for the results of the monitoring program; and
  - a plan to respond to any exceedances of the performance measures, and repair, mitigate and/or offset any adverse surface water impacts of the development, including measures to provide compensatory water supply to any affected water user under condition 16 of this Schedule;
- (iii) Erosion and Sediment Control Plan that:
  - is consistent with the requirements of the Landcom's Managing Urban Stormwater: Soils and Construction Manual (Volume 2E Mines and Quarries);
  - identifies activities that could cause soil erosion and generate sediment;
  - describes measures to minimise soil erosion and the potential for the transport of sediment to downstream waters;
  - describes the location, function and capacity of erosion and sediment control measure structures; and
  - describes what measures would be implemented to maintain (and if necessary decommission) the structures over time; and
- (iv) Brine Treatment Management Plan, that includes:
  - a detailed description of processes for managing brine treatment on site and disposal of brine and salt in underground mine workings, including:
    - the volumes of brine and salt produced;
    - the capacity of on-site and underground storages for brine and salt;
    - measures to monitor and mitigate any impacts of underground brine and salt storage on groundwater and surface water resources; and
- (v) Groundwater Management Plan, which is consistent with CLWD's guideline entitled *Groundwater Monitoring and Modelling Plans – Introduction for prospective mining and petroleum activities*, and includes:
  - detailed baseline data of groundwater levels, yield and quality in the region that could be affected by the development, including licensed privately-owned groundwater bores and a detailed survey/schedule of groundwater dependent ecosystems;
  - groundwater assessment criteria including trigger levels for investigating any potentially adverse groundwater impacts;
  - a program to monitor and report on:
    - groundwater inflows transferred to the surface water management system;
    - the seepage/leachate from water storages and emplacements;
    - impacts of the development on:
      - regional and local (including alluvial) aquifers;
      - groundwater supply of potentially affected landowners; and
      - groundwater dependent ecosystems (including rules for the management of groundwater level impacts to protect GDEs) and riparian vegetation;

- a program to validate the groundwater model for the development, including an independent review of the model every 3 years, and comparison of monitoring results with modelled predictions; and
- a plan to respond to any exceedances of the performance measures.

The Applicant must implement the approved Water Management Plan as approved by the Secretary.

## BIODIVERSITY

### Frog Research Program

20. The Applicant must prepare and implement a research program into threatened frog species in the area to the satisfaction of the Secretary and allocate \$167,545 in total to this program for expenditure over a period of 4 years from the date of the program's approval. This program must:
- be prepared in consultation with OEH, and submitted to the Secretary for approval within 12 months of the date of commencement of this consent;
  - include a baseline study to identify and describe the existing populations of threatened frog species in the sections of Jilliby SCA within the development area, including the Stuttering, Giant Barred, Giant Burrowing, Green-thighed, Green and Golden Bell and Littlejohn's Tree Frogs;
  - establish a monitoring program for the life of the development on the presence, population trends, and health of threatened frog species;
  - be directed at research into improving the prediction, assessment, remediation and/or avoidance of subsidence impacts and environmental consequences and/or key threatening processes on threatened frog species; and
  - be targeted at genuine research, as opposed to implementing other matters required by this consent.

The Applicant must:

- provide updates on the status of the research program in the Annual Review; and
  - publish the findings of the research in a peer reviewed journal;
- to the satisfaction of the Secretary.

*Note: The amount of \$167,545 must be indexed according to the Annual CPI for NSW from the date of commencement of this consent until the date of approval of the Frog Research Program.*

### Biodiversity Offset Strategy

21. The Applicant must implement the Biodiversity Offset Strategy described in the EIS and summarised in Table 7 to the satisfaction of the Secretary.

*Table 7: Summary of the Biodiversity Offset Strategy*

Area	Offset Type	Minimum Size (ha)
Hue Hue Road Offset area	Blackbutt-Turpentine open forest (EEC)	9.0
	Rough-barked Apple – Red Gum Grassy Woodland (EEC)	0.4
	Spotted Gum – Broad-leaved Ironbark grassy open forest (EEC)	55.4
	Remnant native vegetation	55.7
Tooheys Road Site North area	Paperbark swamp forest (EEC)	3.3
	Swamp Mahogany swamp forest (EEC)	0.3
	Remnant native vegetation	38.6
Tooheys Road Site South area	Swamp Mahogany swamp forest (EEC)	6.2
	Paperbark swamp forest (EEC)	0.6
	Blackbutt-Turpentine open forest (EEC)	7.8
	Remnant native vegetation	19.7
Jilliby SCA	Funding to OEH for conservation projects in Jilliby SCA	\$26,850 per annum whenever coal is being extracted beneath Jilliby SCA

*Notes: To identify the areas referred to in Table 7 refer to the applicable figure in Appendix 8.  
The amount/s of \$26,850 must be indexed according to the Annual CPI for NSW from the date of commencement of this consent until the date/s when the annual amounts become payable.*

### Long-Term Security of Offsets

22. Within 12 months of the commencement of construction of the surface facilities sites, unless the Secretary agrees otherwise, the Applicant must make suitable arrangements to provide appropriate long-term security for the land within the Biodiversity Offset Strategy identified in Table 7, to the satisfaction of the Secretary.

*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, or Voluntary Conservation Agreement.*

### **Biodiversity Management Plan**

23. The Applicant must prepare a Biodiversity Management Plan for all areas of the development that are not, or will not, be subject to condition 7 of Schedule 3, to the satisfaction of the Secretary. This plan must:
- (a) be prepared in consultation with OEH and Fisheries NSW;
  - (b) be approved by the Secretary prior to the commencement of construction of the surface facilities sites;
  - (c) describe how the implementation of the Biodiversity Offset Strategy would be integrated with the overall rehabilitation of the site;
  - (d) establish baseline data for the existing habitat in the offsite biodiversity offset area, including vegetation condition and threatened species habitat;
  - (e) describe the short, medium, and long-term measures that would be implemented to:
    - manage impacts of clearing vegetation, including pre-clearance surveys;
    - manage remnant vegetation and habitat in the offsite biodiversity offset area and on the site; and
    - implement the Biodiversity Offset Strategy, including detailed performance and completion criteria;
  - (f) include a detailed description of the measures that would be implemented to:
    - minimise the impacts to fauna on site;
    - control weeds and feral pests;
    - manage salinity;
    - control erosion;
    - control access; and
    - manage bushfire risk; and
  - (g) include a seasonally-based program to monitor and report on the effectiveness of these measures, and progress against the detailed performance and completion criteria;
  - (h) identify the potential risks to the successful implementation of the Biodiversity Offset Strategy, and include a description of the contingency measures that would be implemented to mitigate these risks;
  - (i) include a mechanism for the payment of the conservation funding component of the Biodiversity Offset Strategy as detailed in Table 7, to the satisfaction of OEH; and
  - (j) include details of who would be responsible for monitoring, reviewing, and implementing the plan.

The Applicant must implement the approved Biodiversity Management Plan as approved by the Secretary.

*Note: The Biodiversity Management Plan and Rehabilitation Management Plan need to be substantially integrated for achieving biodiversity objectives for the rehabilitated mine site.*

### **Conservation Bond**

24. Within 6 months of the approval of the Biodiversity Management Plan in condition 23 of Schedule 4, the Applicant must lodge a conservation bond with the Department to ensure that the Biodiversity Offset Strategy is implemented in accordance with Table 7 and the performance and completion criteria described in the Biodiversity Management Plan.

The sum of the bond must be determined by:

- (a) calculating the full cost of implementing the Biodiversity Offset Strategy (other than land acquisition costs); and
- (b) 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 Secretary, the Secretary will release the bond to the Applicant.

If the Biodiversity Offset Strategy is not completed generally in accordance with the completion criteria in the Biodiversity Management Plan, the Secretary will call in all or part of the conservation bond, and arrange for the satisfactory completion of the relevant works.

### **HERITAGE**

#### **Protection of Aboriginal Heritage Items**

25. Unless otherwise authorised under the *National Parks and Wildlife Act 1974*, the Applicant must ensure that the development does not cause any direct or indirect impact on identified Aboriginal heritage items located outside approved disturbance areas on the site.

*Note: Identified Aboriginal heritage items are listed in Table 1 in Appendix 5.*

## **Aboriginal Cultural Heritage Management Plan**

26. The Applicant must prepare an Aboriginal Cultural Heritage Management Plan for the development, for all areas that are not, or will not, be subject to condition 7 of Schedule 3, to the satisfaction of the Secretary. This plan must:
- (a) be prepared in consultation with OEH and the Aboriginal community;
  - (b) be approved by the Secretary prior to commencement of construction of the surface facilities sites;
  - (c) include a description of the measures that would be implemented for:
    - managing the discovery of human remains or previously unidentified heritage items on site;
    - ensuring any workers on site receive suitable heritage inductions and that suitable records are kept of these inductions;
    - protecting, monitoring and/or managing the heritage items identified in Table 1 (including any proposed archaeological investigations and/or salvage);
    - conserving the sites outside approved disturbance areas, including measures that would be implemented to secure, analyse and record any sites at risk of subsidence impacts;
    - maintaining and managing reasonable access for Aboriginal stakeholders to heritage items on site;
    - ongoing consultation with the Aboriginal stakeholders in the conservation and management of Aboriginal cultural heritage on site; and
    - a trigger action response plan to manage unexpected subsidence impacts.

The Applicant must implement the approved Aboriginal Cultural Heritage Management Plan as approved by the Secretary.

## **TRANSPORT**

### **Monitoring of Coal Transport**

27. The Applicant must monitor and report on:
- (a) the amount of coal transported from the site (on a daily basis);
  - (b) the date and time of each train movement from the site; and
  - (c) make these records publicly available on its website at the end of each quarter.

### **Traffic Management Plan**

28. Prior to the commencement of construction activities or within three months of the commencement of development under this consent (whichever is sooner), the Applicant must prepare a Traffic Management Plan for the development to the satisfaction of the Secretary. This plan must:
- (a) be prepared in consultation with RMS, Council and TNSW;
  - (b) include measures to minimise traffic impacts that may occur during the construction of surface infrastructure; and
  - (c) include a program to monitor and report on the effectiveness of these measures.

The Applicant must implement the approved Traffic Management Plan as approved by the Secretary.

### **Nikko Road Access Management Plan**

29. Prior to the commencement of construction activities affecting Nikko Road, the Applicant must prepare a Nikko Road Access Management Plan for the development to the satisfaction of the Secretary. This plan must:
- (a) be prepared in consultation with adjacent owners of privately-owned land;
  - (b) include detailed designs for the proposed upgrades of Nikko Road which provide:
    - a 6-m wide road with an all-weather surface;
    - a bridge over Spring Creek at rail level;
    - a bi-directional ramp from the current unformed track to rail level adjacent to Spring Creek; and
    - managed access at agreed locations, including emergency access to adjacent owners of privately-owned land and emergency services; and
  - (c) include measures to ensure the road is maintained in a good state of repair over the life of the development.

The Applicant must implement the approved Nikko Road Access Management Plan as approved by the Secretary.

### **Nikko Road Post-Mining Management**

30. If the ownership of Nikko Road reserve is transferred to the Applicant, then upon completion of mining operations, the Applicant must:
- (a) transfer ownership of Nikko Road to Council; if agreed to by Council;
  - (b) ensure the road is in a good state of repair prior to this transfer;

- (c) hold a meeting with Council 12 months prior to this transfer, so that Council can nominate what capital improvements or infrastructure installed by the Applicant are to be removed or modified prior to the transfer; and
- (d) remove any unnecessary capital improvements or infrastructure as requested by Council prior to this transfer, or reimburse Council for the cost of removing the nominated items.

### **Tooheys Road**

- 31. The Applicant must ensure that Tooheys Road is kept open during the life of the development and maintained in a good state of repair for access by the general public and emergency service vehicles.
- 32. If the ownership of Tooheys Road reserve is transferred to the Applicant, then upon completion of mining operations, the Applicant must transfer ownership of Tooheys Road to Council; if agreed to by Council.

### **M1 Motorway and Doyalson Link Road**

- 33. The Applicant must:
  - (a) design and construct the incline drift tunnel to avoid direct or consequential interaction with existing bridge piles or any effect on bridge structures located within the Doyalson Link Road or the M1 Motorway corridors; and
  - (b) undertake vibration monitoring during construction of the drift tunnel to confirm vibration levels are within normal infrastructure operational service levels for these bridge structures.
- 34. Prior to undertaking construction of the overland conveyor and/or incline drift tunnel within a road corridor the Applicant must:
  - (a) undertake a risk assessment consistent with the requirements of the RMS Draft "*Technical Guide to Mine Risk Assessment IAM-AM-TP1-160-G01 – Version 1 draft with cover page February 2015*" (or latest version) for works within a road corridor;
  - (b) enter into a Works Authorisation Deed with RMS in respect of construction of the overland conveyor and/or incline drift tunnel within the road corridor; and
  - (c) enter into any other access agreement(s) with RMS and/or the Council that RMS and/or the Council considers necessary in respect of the ongoing use and maintenance of the incline drift tunnel, overland conveyor and related infrastructure within road corridors.

*Note: In the event of a dispute over the access agreement(s), then then either party may refer the matter to the Secretary for resolution.*

## **VISUAL**

### **Visual Amenity and Lighting**

- 35. The Applicant must:
  - (a) implement all reasonable and feasible measures to minimise the visual and off-site lighting impacts of the development;
  - (b) ensure no fixed outdoor lights shine above the horizontal or above the building line or any illuminated structure;
  - (c) take all practicable measures to further reduce visual impacts from the development, including:
    - screen planting along Hue Hue Road as shown in the Rehabilitation Management Plan;
    - other appropriate visual impact mitigation measures for private residences within 2 kilometres, and with direct views, of the Tooheys Road Site; and
  - (d) ensure that all external lighting associated with the development complies with *Australian Standard AS4282 (INT) 1997 - Control of Obtrusive Effects of Outdoor Lighting*;
  - (e) ensure that the visual appearance of all buildings, structures, facilities or works (including paint colours and specifications) is aimed at blending as far as possible with the surrounding landscape; and
  - (f) take all practical measures to shield views of mining operations from users of public roads and privately-owned residences,

to the satisfaction of the Secretary.

## **WASTE**

- 36. The Applicant must:
  - (a) implement all reasonable and feasible measures to minimise and monitor the waste generated by the development;
  - (b) ensure that the waste generated by the development is appropriately stored, handled and disposed of;
  - (c) manage on-site sewage treatment and disposal in accordance with the requirements of Council and EPA; and
  - (d) monitor and report on the effectiveness of waste management and minimisation measures in the Annual Review,

to the satisfaction of the Secretary.

## BUSHFIRE MANAGEMENT

37. The Applicant must:

- (a) ensure that the development is suitably equipped to respond to fires on site including;
- (b) fitting the coal conveyor system and coal loading facility with a water pipeline that includes fire fighting off-take points that can be used by emergency services;
- (c) assist the Rural Fire Service and emergency services as much as possible if there is a fire in the vicinity of the site; and
- (d) prepare a Bushfire Management Plan to the satisfaction of the Rural Fire Service, for the approval of the Secretary.

The Applicant must implement the approved Bushfire Management Plan as approved by the Secretary.

## EXPLORATION ACTIVITIES & SURFACE INFRASTRUCTURE

### Gas Drainage

38. The Applicant must 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 Secretary.

### Exploration Activities and Minor Surface Infrastructure Management Plan

39. Prior to carrying out exploration activities on site under this consent that would cause surface disturbance or the construction and/or upgrade of minor surface infrastructure, the Applicant must prepare an Exploration Activities and Minor Surface Infrastructure Management Plan for the development to the satisfaction of the Secretary. This Plan must:

- (a) be prepared by suitably qualified and experienced person/s whose appointment has been endorsed by the Secretary;
- (b) be prepared in consultation with DRG and OEH;
- (c) include a description of the measures that would be implemented for:
  - managing exploration activities;
  - managing construction and operation of minor surface infrastructure and associated access tracks;
  - consulting with and compensating affected landowners;
  - assessing noise, air quality, traffic, biodiversity, heritage, public safety and other impacts in accordance with approved methods;
  - beneficial re-use or flaring of drained hydrocarbon gases, wherever practicable;
  - avoiding significant impacts and minimisation of impacts generally;
  - avoiding threatened species, populations or their habitats and EECs;
  - minimising clearance and disturbance of native vegetation;
  - minimising erosion and sedimentation;
  - achieving applicable standards and goals; and
  - rehabilitating disturbed areas.

The Applicant must implement the approved Exploration Activities and Minor Surface Infrastructure Management Plan as approved by the Secretary.

*Note: 'Minor Surface Infrastructure' includes service boreholes, ventilation shafts, pipelines, transformers, gas drainage boreholes and the like.*

## REHABILITATION

### Rehabilitation Objectives

40. The Applicant must rehabilitate the site to the satisfaction of DRG. This rehabilitation must be generally consistent with the proposed rehabilitation strategy described in the EIS and comply with the objectives in Table 8.

Table 8: Rehabilitation Objectives

Feature	Objective
All areas of the site affected by the development	<ul style="list-style-type: none"><li>• Safe</li><li>• Hydraulically and geotechnically stable</li><li>• Non-polluting</li><li>• Fit for the intended post-mining land use(s)</li></ul>
Areas proposed for native ecosystem re-establishment	<ul style="list-style-type: none"><li>• Establish self-sustaining ecosystems comprising flora species selected to re-establish and complement local and regional biodiversity</li></ul>

Areas proposed for agricultural or pastoral use	<ul style="list-style-type: none"> <li>The land capability classification for the relevant nominated agricultural activity for each relevant domain is restored and self-sustaining.</li> </ul>
Other areas affected by the development	<ul style="list-style-type: none"> <li>Restore ecosystem function, including maintaining or establishing self-sustaining ecosystems comprised of local native plant species for the intended post mining land use(s).</li> </ul>
Surface infrastructure	<ul style="list-style-type: none"> <li>Decommissioned and removed, unless further approval is obtained for their retention and post-mining use.</li> </ul>
Portals and vent shafts	<ul style="list-style-type: none"> <li>Decommissioned</li> <li>Negligible impacts to threatened species (eg bats)</li> </ul>
Built features damaged by mining operations	<ul style="list-style-type: none"> <li>Repair to pre-mining condition or equivalent unless the: <ul style="list-style-type: none"> <li>owner agrees otherwise; or</li> <li>damage is fully restored, repaired or compensated for under the <i>Mine Subsidence Compensation Act 1961</i></li> </ul> </li> </ul>
Final landforms	<ul style="list-style-type: none"> <li>Consistent with surrounding topography to minimise visual impacts</li> <li>Incorporate relief patterns and design principles consistent with natural drainage</li> </ul>
Rehabilitation materials	<ul style="list-style-type: none"> <li>Soil and vegetative materials from areas disturbed under this consent (including topsoils, substrates and seeds) are recovered, managed and used as rehabilitation resources</li> </ul>
Watercourses subject to subsidence impacts or environmental consequences that are greater than negligible	<ul style="list-style-type: none"> <li>Hydraulically and geomorphologically stable</li> <li>Aquatic ecology and riparian vegetation that is the same or better than prior to grant of this consent</li> </ul>
Watercourses subject to mine-water discharges	<ul style="list-style-type: none"> <li>Hydraulically and geomorphologically stable</li> <li>Aquatic ecology and riparian vegetation that is the same or better than prior to grant of this consent</li> </ul>
Water quality	<ul style="list-style-type: none"> <li>Water retained on site is fit for the intended post-mining land use(s)</li> <li>Water management is consistent with any regional catchment management strategy and the site-specific in-stream water quality objectives for Aquatic and Riparian Ecosystems, including affected sections of Wallarah Creek (see Table 6).</li> </ul>
Community	<ul style="list-style-type: none"> <li>No additional risk to public safety than prior to grant of this consent</li> <li>Minimise adverse socio-economic effects associated with mine closure</li> </ul>

*Notes: These rehabilitation objectives apply to all subsidence impacts and environmental consequences caused by all underground mining in the development area and to all surface infrastructure components of the development. Where remediation of watercourses is likely to cause subsidence impacts or environmental consequences greater than those that require rehabilitation, alternative equivalent works may be undertaken within the affected watercourse.*

### Progressive Rehabilitation

41. The Applicant must rehabilitate the site progressively, that is, as soon as reasonably practicable following disturbance. All reasonable and feasible measures must be taken to minimise the total area exposed for dust generation at any time.

### Rehabilitation Management Plan

42. The Applicant must prepare a Rehabilitation Management Plan for the development to the satisfaction of DRG. This plan must:
- be prepared in consultation with OEH, RMS, CLWD, Council, the CCC and the Department;
  - be submitted to DRG for approval prior to commencement of construction of the surface facilities sites;
  - be prepared in accordance with any relevant DRG guideline and be consistent with the rehabilitation objectives in the EIS and in Table 8;
  - include detailed performance and completion criteria for evaluating the performance of the rehabilitation of the site (including progressive rehabilitation), and triggering remedial action (if necessary);
  - describe the measures that would be implemented to ensure compliance with the relevant conditions of this consent, and address all aspects of rehabilitation including progressive rehabilitation, mine closure, final landform, final land use(s) and final land use domains;
  - include interim rehabilitation where necessary to minimise the area exposed for dust generation;
  - include a program to monitor and report on the effectiveness of the rehabilitation measures and progress against the detailed performance and completion criteria;
  - build to the maximum extent practicable on the other management plans required under this consent; and

- (i) address all aspects of mine closure and rehabilitation, including post mining land use domains, rehabilitation objectives, completion criteria and rehabilitation monitoring and management.

Notes:

- *The Rehabilitation Management Plan should address all land impacted by the development.*
- *The Rehabilitation Management Plan may be combined with a Mining Operations Plan required under any mining lease granted for the development.*
- *The Biodiversity Management Plan and Rehabilitation Management Plan require substantial integration to achieve biodiversity objectives for the rehabilitated mine site.*

## **Mine Closure**

- 43. At least 5 years prior to the planned cessation of mining operations, the Applicant must prepare a Mine Closure Plan for the development to the satisfaction of the Secretary. The Mine Closure Plan must:
  - (a) be prepared in consultation with DRG and Council;
  - (b) define the objectives and criteria for mine closure;
  - (c) investigate options for the future use of the surface facilities sites in a manner consistent with the *Central Coast Regional Plan* and/or other extant regional planning strategies;
  - (d) investigate ways to minimise the adverse socio-economic effects associated with mine closure, including reduction in local employment levels;
  - (e) describe the measures that would be implemented to minimise or manage the ongoing environmental effects of the project; and describe how the performance of these measures would be monitored over time.

The Applicant must implement the approved Mine Closure Plan as approved by the Secretary.

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## **SCHEDULE 5**

### **ADDITIONAL PROCEDURES**

#### **NOTIFICATION OF LANDOWNERS**

1. As soon as practicable, and no longer than 7 days after obtaining monitoring results showing:
  - (a) an exceedance of any relevant criteria in Schedule 4, the Applicant must notify affected landowners in writing of the exceedance, and provide regular monitoring results to these landowners until the development is again complying with the relevant criteria; and
  - (b) an exceedance of any relevant air quality criteria in Schedule 4, the Applicant must 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 the development to be exceeding the relevant criteria in Schedule 4, then he/she may ask the Secretary in writing for an independent review of the impacts of the development on his/her land.

If the Secretary is satisfied that an independent review is warranted, then within 2 months of the Secretary's decision the Applicant must:

- (a) commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Secretary, to:
    - consult with the landowner to determine his/her concerns;
    - conduct monitoring to determine whether the development is complying with the relevant criteria in Schedule 4; and
    - if the development is not complying with these criteria then identify the measures that could be implemented to ensure compliance with the relevant criteria;
  - (b) give the Secretary and landowner a copy of the independent review; and
  - (c) comply with any written requests made by the Secretary to implement any findings of the review.
-

**SCHEDULE 6**  
**ENVIRONMENTAL MANAGEMENT, REPORTING AND AUDITING**

**ENVIRONMENTAL MANAGEMENT**

**Environmental Management Strategy**

1. The Applicant must prepare an Environmental Management Strategy for the development to the satisfaction of the Secretary. This strategy must:
  - (a) be submitted to the Secretary for approval within 6 months of the Secretary requiring preparation of the strategy by notice to the Applicant;
  - (b) provide the strategic framework for environmental management of the development;
  - (c) identify the statutory approvals that apply to the development;
  - (d) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the development;
  - (e) describe the procedures that would be implemented to:
    - keep the local community and relevant agencies informed about the operation and environmental performance of the development;
    - receive, record, handle and respond to complaints;
    - resolve any disputes that may arise during the course of the development;
    - respond to any non-compliance;
    - respond to emergencies; and
  - (f) include:
    - copies of any strategies, plans and programs approved under the conditions of this consent;
    - a full description of and clear plan depicting all monitoring requirements to be implemented under this consent; and
    - a clear plan depicting all the monitoring required to be carried out under the conditions of this consent.

The Applicant must implement any Environmental Management Strategy as approved by the Secretary.

**Evidence of Consultation**

2. Where consultation with any State or local agency is required by the conditions of this consent, the Applicant must:
  - (a) consult with the relevant agency prior to submitting the required document to the Secretary for approval;
  - (b) submit evidence of this consultation as part of the relevant document;
  - (c) describe how matters raised by the agency have been addressed and any matters not resolved; and
  - (d) include details of any outstanding issues raised by the agency and an explanation of disagreement between the agency and the Applicant.

**Management Plan Requirements**

3. The Applicant must ensure that the management plans required under this consent are prepared in accordance with any relevant guidelines, and include:
  - (a) detailed baseline data;
  - (b) a description of:
    - the relevant statutory requirements (including any relevant approval, licence or lease conditions);
    - any relevant limits or performance measures/criteria; and
    - the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the development 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:
    - impacts and environmental performance of the development; and
    - 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 development over time;
  - (g) a protocol for managing and reporting any:
    - incidents;
    - complaints;
    - non-compliances with statutory requirements; and
    - exceedances of the impact assessment criteria and/or performance criteria; and
  - (h) a protocol for periodic review of the plan.

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

## Revision of Strategies, Plans and Programs

4. Within 3 months of the:
- (a) submission of an incident report under condition 8 below; or
  - (b) submission of an Annual Review under condition 11 below;
  - (c) submission of an audit report under condition 12 below; and
  - (d) approval of any modification to this consent,
- the Applicant must review the strategies, plans, and programs required under this consent to the satisfaction of the Secretary. The Applicant must notify the Department in writing of any such review being undertaken. Where this review leads to revisions in any such document, then within 6 weeks of the review the revised document must be submitted for the approval of the Secretary.

*Note: The purpose of this condition is to ensure the strategies, plans and programs are updated on a regular basis, and to incorporate any recommended measures to improve the environmental performance of the development.*

## Updating and Staging of Strategies, Plans or Programs

5. To ensure that strategies, plans or programs required under this consent are updated on a regular basis, and that they incorporate any appropriate additional measures to improve the environmental performance of the development, the Applicant may at any time submit revised strategies, plans or programs for the approval of the Secretary. With the agreement of the Secretary, the Applicant may also submit any strategy, plan or program required by this consent on a staged basis.

The Secretary may approve a revised strategy, plan or program required under this consent, or the staged submission of any of these documents, at any time. With the agreement of the Secretary, the Applicant may prepare a revision of or a stage of a strategy, plan or program without undertaking consultation with all parties nominated under the applicable condition in this consent.

While any strategy, plan or program may be submitted on a staged basis, the applicant will need to ensure that the operations associated with the development 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/s of the development to which the strategy, plan or program applies; the relationship of this stage/s to any future stages; and the trigger for updating the strategy, plan or program.

## Adaptive Management

6. The Applicant must assess and manage development-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 consent and may be subject to penalty or offence provisions under the EP&A Act or EP&A Regulation, notwithstanding offsetting actions taken pursuant to condition 3 of Schedule 3.

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

- (a) take all reasonable and feasible steps to ensure that the exceedance ceases and does not reoccur;
  - (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;
  - (c) within 14 days of the exceedance occurring, submit a report to the Secretary describing these remediation options and any preferred remediation measures or other course of action; and
  - (d) implement remediation measures as directed by the Secretary;
- to the satisfaction of the Secretary.

## COMMUNITY CONSULTATIVE COMMITTEE

7. The Applicant must operate a Community Consultative Committee (CCC) for the development, to the satisfaction of the Secretary. This CCC must be operated in general accordance with the Department's *Community Consultative Committee Guidelines, November 2016* or its latest version.

*Notes:*

- *The CCC is an advisory committee. The Department and other relevant agencies are responsible for ensuring that the Applicant complies with this consent.*
- *In accordance with the guideline, the Committee should comprise an independent chair and appropriate representation from the Applicant, Council, recognised environmental groups and the local community.*

## REPORTING

### Incident Reporting

8. The Applicant must immediately notify the Secretary (using the contact name, email address and phone number provided by the Department from time to time) and any other relevant agencies of any incident.
9. Within 7 days of the date of the incident, the Applicant must provide the Secretary and any relevant agencies with a detailed report on the incident, and such further reports as may be requested. This report must include the time and date of the incident, details of the incident, measures implemented to prevent re-occurrence and must identify any non-compliance with this consent.

### Regular Reporting

10. The Applicant must provide reporting on the environmental performance of the development on its website, on a monthly basis and in accordance with any other reporting arrangements in any plans or programs approved under the conditions of this consent.

### Annual Review

11. By the end of March each year following commencement of this consent, or other timing as may be agreed by the Secretary, the Applicant must submit a report to the Department reviewing the environmental performance of the development to the satisfaction of the Secretary. This review must:
  - (a) describe the development (including any rehabilitation) that was carried out in the previous 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 development over the previous calendar year, which includes a comparison of these results against the:
    - relevant statutory requirements, limits or performance measures/criteria;
    - requirements of any plan or program required under this consent;
    - monitoring results of previous years; and
    - relevant predictions in the documents listed in condition 2(a) of Schedule 2;
  - (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 development;
  - (e) identify any discrepancies between the predicted and actual impacts of the development, 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 development.

The Applicant must ensure that copies of the Annual Review are submitted to Council and are available to the CCC and any interested person upon request.

## INDEPENDENT ENVIRONMENTAL AUDIT

12. Within 12 months of the date of commencing development under this consent, and every 3 years thereafter, unless the Secretary directs otherwise, the Applicant must commission, commence and pay the full cost of an Independent Environmental Audit of the development. This audit must:
  - (a) be conducted by a suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary;
  - (b) include consultation with CLWD, Council and other relevant agencies, and the CCC;
  - (c) assess the environmental performance of the development and whether it is complying with the relevant requirements in this consent and any relevant EPL, necessary water licences for the development or Mining Lease (including any assessment, strategy, plan or program required under these approvals);
  - (d) review the adequacy of strategies, plans or programs required under the abovementioned approvals;
  - (e) recommend appropriate measures or actions to improve the environmental performance of the development, and/or any assessment, strategy, plan or program required under the abovementioned approvals; and
  - (f) be conducted and reported to the satisfaction of the Secretary

*Note: This audit team must be led by a suitably qualified auditor and include experts in any fields specified by the Secretary.*

13. Within 12 weeks of commencing each audit, or as otherwise agreed by the Secretary, the Applicant must submit a copy of the audit report to the Secretary and any other State and local agency that requests it, together with its response to any recommendations contained in the audit report, and a timetable for the implementation of any measures proposed to address the recommendations. The Applicant must implement these recommendations, to the satisfaction of the Secretary.

## ACCESS TO INFORMATION

14. Within 6 months of the date of commencement of this consent, the Applicant must:
- (a) make the following information publicly available on its website:
    - the documents listed in condition 2(a) of Schedule 2;
    - current statutory approvals for the development;
    - all approved strategies, plans and programs required under the conditions of this consent;
    - a comprehensive summary of the monitoring results of the development, reported in accordance with the specifications in any conditions of this consent, or any approved plans and programs;
    - a complaints register, updated monthly;
    - minutes of CCC meetings;
    - the annual reviews of the development;
    - any independent environmental audit of the development, and the Applicant's response to the recommendations in any audit;
    - any other matter required by the Secretary; and
  - (b) keep this information up-to-date, to the satisfaction of the Secretary.
-

## APPENDIX 1: SCHEDULE OF LAND

Surface Facilities - Tooheys Road Site	
DP260217	3
DP260217	1
DP658436	128
DP755245	124
DP755245	126
DP755245	102
DP755245	103
DP1032847	194
DP705480	168
DP258584	4
DP260217	5
DP260217	4
DP1191556	4
Motorway Link Road	
Tooheys Road	
Nikko Road (Crown Road)	
Exploration Licences	
A405	
EL6514 (Boral - clay)	
ML554 (Boral)	
Special Crown Lease 1984_7 Gosford (Boral)	

Above Underground Drift	
DP258692	31
DP719762	4
DP239089	10
DP239704	7
DP239704	8
DP239704	9
DP239704	6
DP239704	11
DP239704	4
DP240205	2
DP258692	33
DP259530	19
DP259531	5
DP603941	3
Exploration Licences	
A405	
EL4911	
EL6514 (Boral - clay)	

Buttonderry Site	
DP791157	1

DP791157	2
Exploration Licences	
EL4911	

Western Shaft Site	
DP581339	1
Wyong State Forest	
Exploration Licences	
EL4911	

Above Extraction Area	
DP825848	6
DP703391	3
DP1006209	1
DP1006209	2
DP1010570	1
DP1010570	2
DP1010979	1251
DP1010979	1252
DP1018301	21
DP1018301	22
DP1019048	100
DP1019048	101
DP1021290	7003
DP1028066	121
DP1028066	122
DP1028066	123
DP1028066	124
DP1028066	125
DP1028066	126
DP1028066	127
DP1030614	1922
DP1030614	1923
DP1031782	1255
DP1033538	6101
DP1033538	6102
DP1049672	1257
DP1049672	1258
DP1063979	25
DP1067367	10
DP1067367	11
DP1067367	12
DP1079430	13
DP1083358	12
DP1083358	11

DP1089118	100
DP1089118	101
DP1090449	44
DP1092061	1
DP1092061	2
DP109417	1
DP1102951	26
DP1110331	1
DP1110331	2
DP1114254	1
DP1114254	2
DP1128180	261
DP1128180	262
DP1133862	103
DP114801	1
DP114801	2
DP1153971	1
DP1153971	2
DP126207	1
DP244881	1
DP244881	2
DP246677	1
DP246677	6
DP246677	7
DP246677	8
DP246727	2
DP246727	3
DP246727	4
DP246727	6
DP251953	7
DP251953	16
DP251953	20
DP251953	21
DP251953	5
DP251954	5
DP251954	8
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DP258965	3
DP258965	4
DP258965	5
DP258965	6
DP258965	7
DP258965	8
DP258965	9
DP258965	11
DP258965	12

DP258965	13
DP258965	14
DP258965	15
DP261557	30
DP261577	20
DP265516	2011
DP265516	2012
DP304136	1
DP330671	1
DP335191	1
DP3391	14
DP34871	1
DP410301	1
DP419700	2
DP4562	5
DP4562	7
DP503562	701
DP503562	702
DP527126	1
DP534677	1
DP534677	2
DP555826	1
DP555826	3
DP569812	31
DP569812	32
DP569812	33
DP578580	1
DP581339	1
DP598151	1
DP613648	10
DP613648	11
DP615333	3
DP615334	1
DP618001	12
DP619990	22
DP622808	1
DP657923	79
DP657924	150
DP657925	147
DP661854	109
DP661855	109
DP663620	6
DP663621	121
DP665252	16
DP665506	147
DP666736	6
DP700109	47

DP703391	1
DP703391	2
DP710526	222
DP715159	21
DP715159	22
DP731090	23
DP731090	24
DP739318	102
DP740438	3
DP740438	4
DP740438	5
DP740438	6
DP740438	7
DP740438	8
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DP740438	10
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DP755271	32
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DP755271	42
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DP755271	76
DP755271	78

DP755271	106
DP755271	107
DP755271	110
DP755271	111
DP755271	112
DP755271	117
DP755271	122
DP755271	148
DP755271	151
DP755271	160
DP755271	170
DP755271	178
DP755271	179
DP755271	200
DP755271	202
DP755271	203
DP755271	206
DP755271	213
DP755271	215
DP755271	216
DP755271	217
DP755271	222
DP755271	235
DP755271	236
DP755271	248
DP755271	252
DP755271	85
DP755271	201
DP773590	151
DP773590	152
DP773780	101
DP773780	102
DP785369	10
DP785369	11
DP788250	210
DP788250	211
DP788250	212
DP788251	221
DP788251	222
DP790135	2
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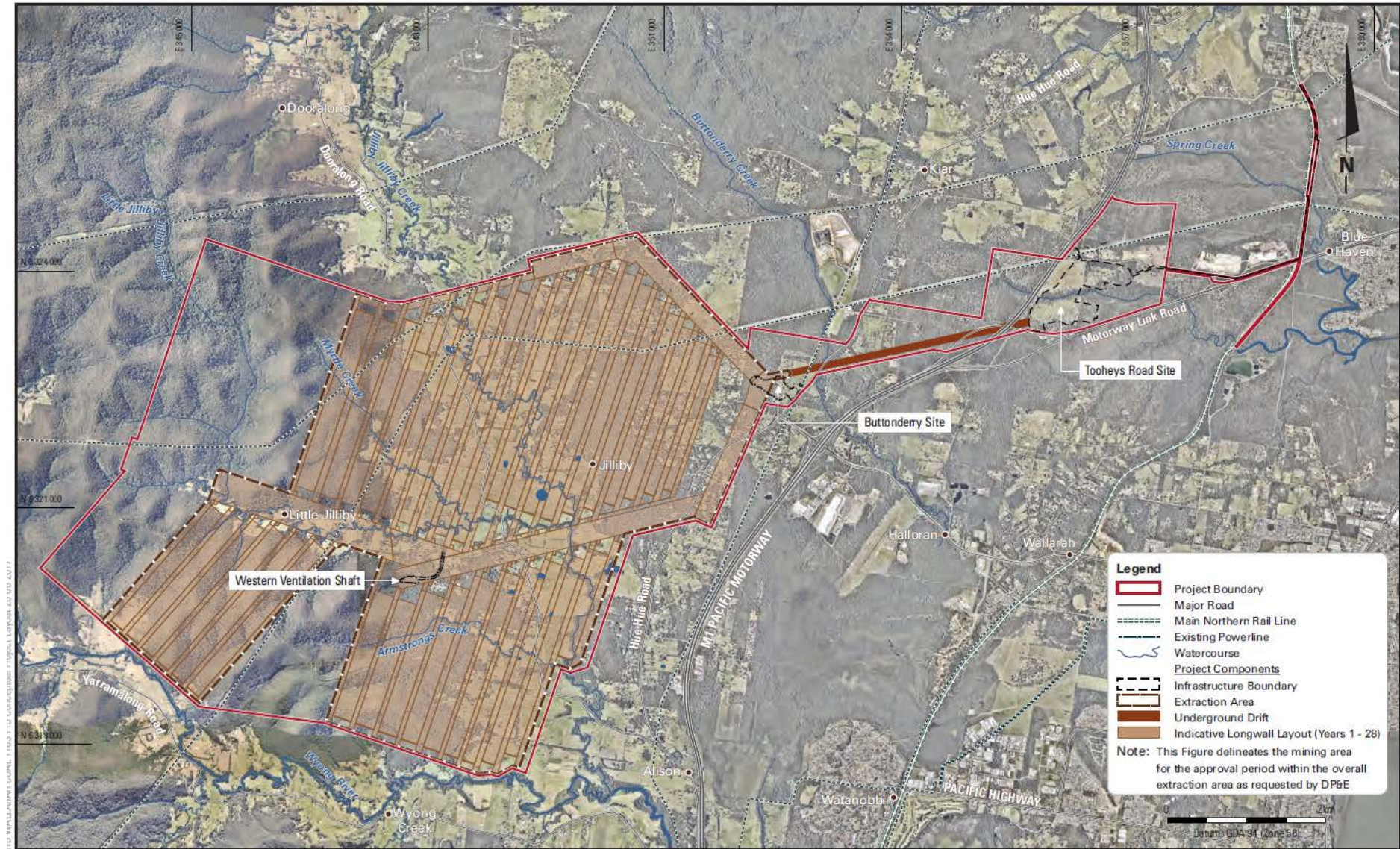
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DP810889	61
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DP813795	404
DP816322	19
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DP816322	36
DP818092	4
DP825848	1
DP825848	2

DP825848	3
DP825848	7
DP825848	8
DP830153	1
DP830153	25
DP830153	26
DP837287	1
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DP837287	3
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DP837287	10
DP837287	11
DP837287	12
DP837287	13
DP837287	14
DP837287	15
DP843986	1
DP843987	10
DP843987	11
DP847172	121
DP847172	122
DP847172	123
DP847172	124
DP848003	191
DP848003	192
DP851685	21
DP851685	22
DP851954	2
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DP859716	4
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DP859716	7
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DP861701	11

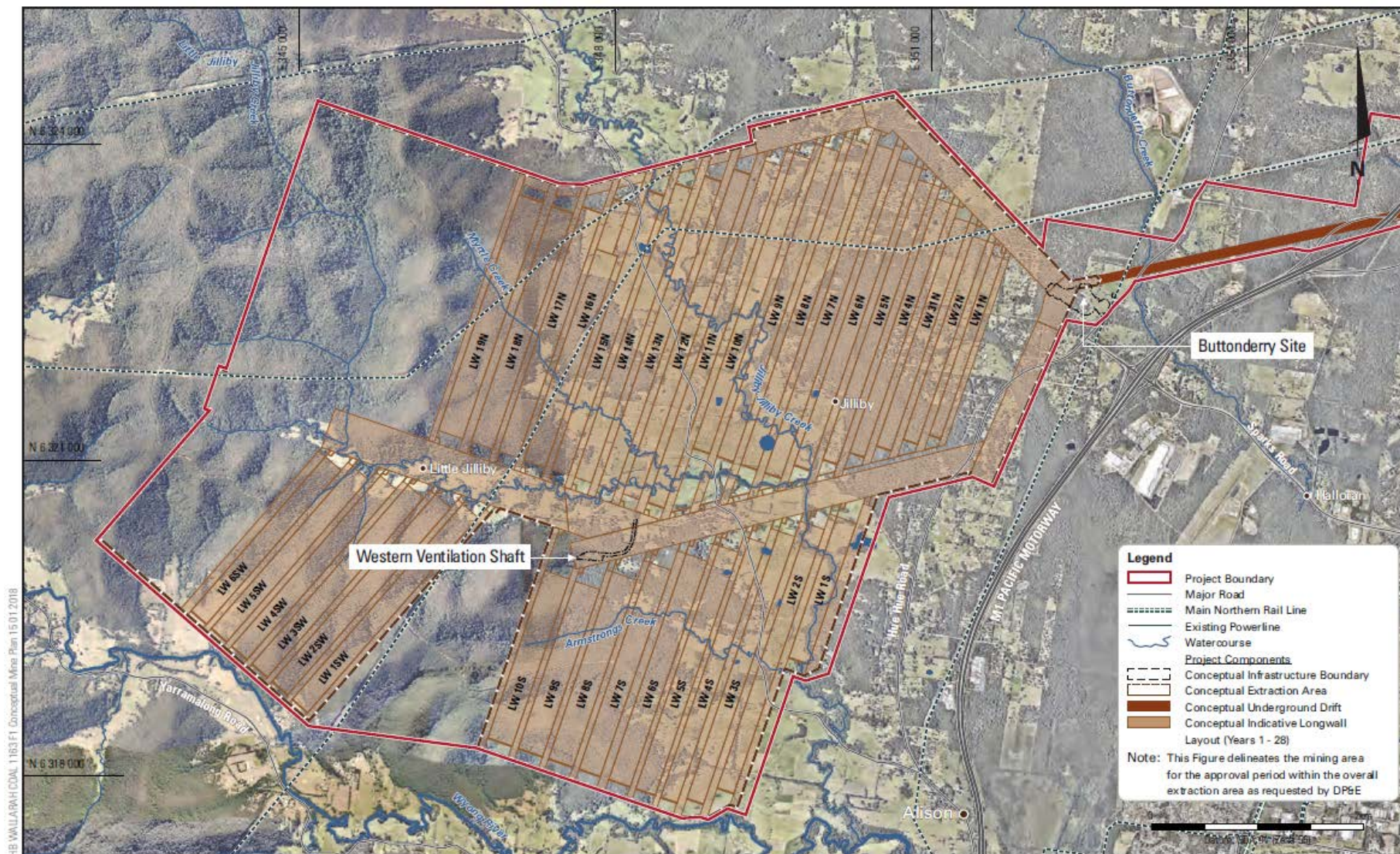
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DP864374	1
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DP864374	4
DP866438	10
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DP867346	611
DP869537	1
DP869537	2
DP869537	3
DP869537	4
DP869537	5
DP869761	32
DP870564	33
DP870564	34
DP875041	20

DP876121	101
DP876433	11
DP876828	7
DP876828	8
DP876828	9
DP876828	11
DP877470	1202
DP882345	3
DP921810	1
DP922748	1
DP929372	1
DP929372	2
DP986881	1
Wyong State Forest	
Exploration Licences	
A405	
EL4911	

## APPENDIX 2: DEVELOPMENT AREA



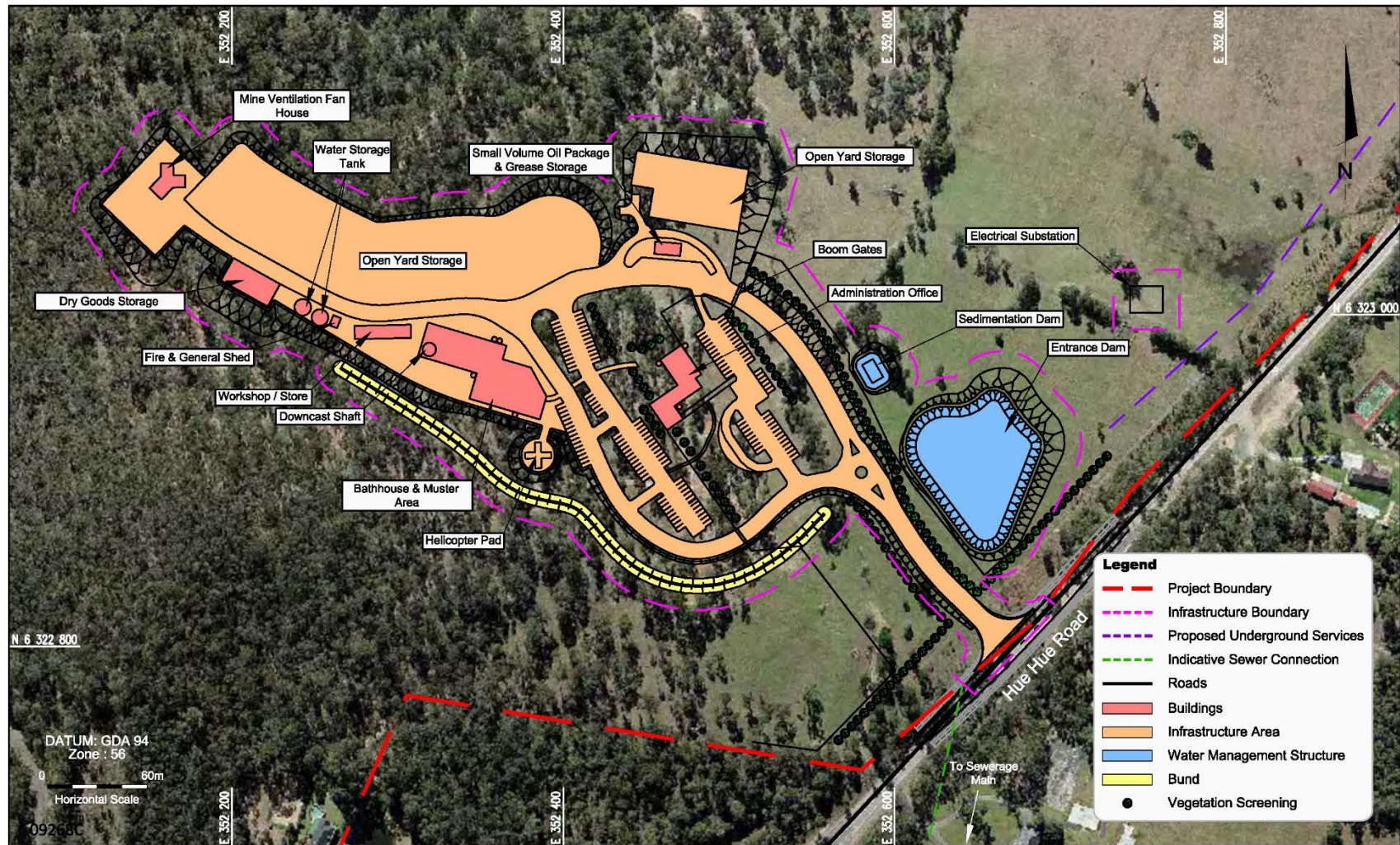
WALLARAH 2 COAL PROJECT



WALLARAH 2 COAL PROJECT

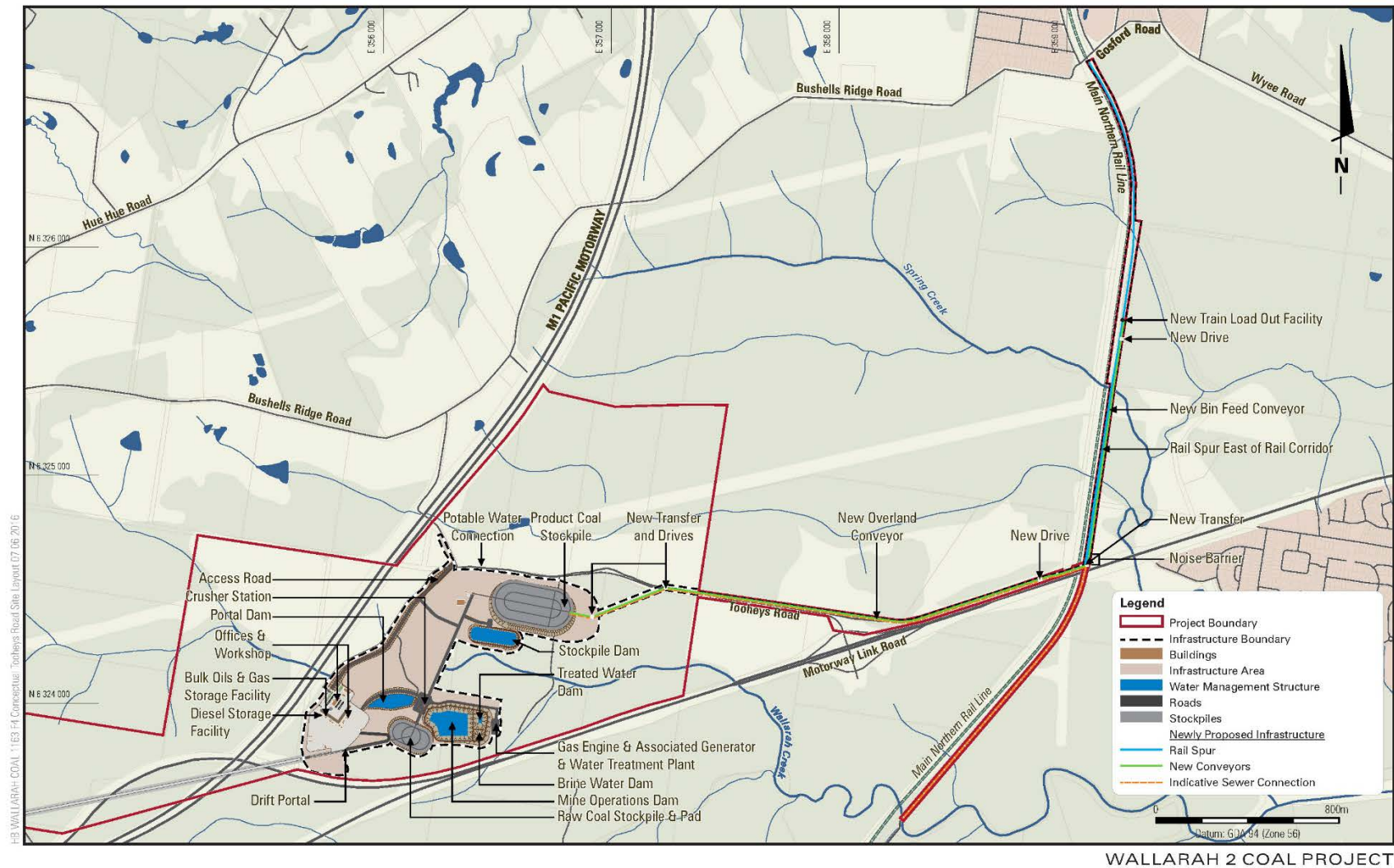
Conceptual Mine Plan

### APPENDIX 3: DEVELOPMENT LAYOUT



WALLARAH 2 COAL PROJECT

Figure 1: Buttanderry Site



**Figure 2: Tooheys Road Site**

#### APPENDIX 4: STATEMENT OF COMMITMENTS

Ref	Measure
<b>Project</b>	
1	Conduct the Project generally in accordance with the Environmental Impact Statement (EIS) and the Amendment Document.
2	Both Tooheys Road and Buttonderry sites will be connected to the sewer system.
3	Consultation will be carried out with the Central Coast Council (Council) to encourage sharing of monitoring data from the Buttonderry Waste Management Facility to identify any potential impacts and to facilitate appropriate adaptive management responses.
4	Provide detailed geological mapping information to Office of Environment & Heritage (OEH) in a suitable format, if requested.
5	An all-weather access road will be developed along the section of Nikko Road that is the subject of road closure application. This access road will have a minimum width of 6 m and will be located adjacent to the proposed rail spur and bin feed conveyor. The road will provide safe access to owners of the adjoining land.
6	Register an easement over the section of Nikko Road within the Project Boundary to provide legal access to other users.
7	Once the Project is developed, the section of Nikko Road to the north of the Motorway Link Road will be accessible to vehicles along its entire 1.5 km length. Crossings of Spring Creek and its tributaries will provide all-weather access along Nikko Road.
8	Prepare a Nikko Road Access Management Plan in consultation with affected landholders generally in accordance with the conceptual design and indicative accesses (detailed design to be finalised during consultation).
9	Nikko Road ownership transfer to Council at end of mine life.
10	A chain link fence will be constructed along the western side of the access road to separate road users and unauthorised personnel from the proposed infrastructure.
11	Amended Project will manage and operate trains in accordance with axle loading and other requirements stipulated by Sydney Trains.
12	Implement the commitments between WACJV and Transgrid as generally documented in the 'Modification Processes Agreement – Wallarah 2 Coal Transmission Line 2M/22 Modification'.
13	The Amended Project will remain within the Project Boundary.
14	Tooheys Road is the access to the Tooheys Road site which will be manned 24/7. During operations, WACJV will not physically close or restrict access to Tooheys Road.
<b>Environmental Management</b>	
15	Develop and implement an Environmental Management System in consultation with the relevant regulators (and the Aboriginal community where relevant) consistent with Section 7 of the EIS which shall comprise management plans as stipulated in the development consent and: <ul style="list-style-type: none"> <li>• Land Clearance Protocol;</li> <li>• Traffic and Transport Management Plan (TTMP);</li> <li>• Soil and Land Capability Procedure (including an Acid Sulphate Soils Management Procedure);</li> <li>• Land Management Plan;</li> <li>• Waste Management Plan; and</li> <li>• Landscape Management Plan.</li> </ul>
16	Will not undertake exploration or remediation works within the Jilliby State Conservation Area (SCA) unless authorised to do so as conditions of development consent or under other appropriate approvals.
17	The existing monitoring program shall be revised and updated in consultation with relevant regulators over the life of the Project in consideration of operations and impacts.
<b>Subsidence</b>	
18	The Extraction Plan will include a Trigger Action Response Plan (TARP) to allow WACJV to respond to impacts as they arise and enable adaptive management to occur over the life of the Project.

19	Subsidence monitoring will be conducted before, during and after secondary extraction of each longwall to enable periodic evaluation of environmental consequences against the predictions in the EIS.
20	Monitoring will also be conducted post-mining to evaluate the success of remediation programs.
21	The PSMPs will be progressively completed for all landholders (including all agricultural enterprises) within the Subsidence Impact Limit (SIL) as shown Figure 7 and 14, respectively in the EIS.
22	All private bores and their use, along with septic tanks will be identified through the PSMP process in consultation with individual landholders. Any required risk mitigation strategies will also be identified at that time in consultation with landholders and relevant regulators.
23	Consult with Transgrid and the Subsidence Advisory NSW to develop a plan for managing impacts to high angle tension transmission towers.
24	Consult with Roads & Maritime Services (RMS) during the preparation of Extraction Plans to consider the potential impacts of far-field horizontal movements on bridges along the M1 Motorway.
25	Management plans will include the progression of subsidence associated with individual longwall panels and will present detailed hydraulic and geomorphic assessments to identify erosion risk areas.
26	Prior to undertaking works within the Motorway Link Road reserve, WACJV will undertake a comprehensive risk assessment in consultation with the asset owner consistent with the draft <i>Technical Guide to Mine Risk Assessment IAM-AM-TP1-160-G01 - Version 1</i> (RMS, 2015).  WACJV will also enter into a deed with RMS as discussed during consultation.
27	The Construction Noise and Vibration Management Plan for the Amended Project will include commitments to monitor vibration at the bridge supports for the Motorway Link Road overpass.
28	Consultation between WACJV and the turf farm operator will occur during the preparation of the PSMP.
<b>Water</b>	
29	The Water Management System will be managed and operated generally as described in the EIS.
30	WACJV's commitment to comparing the results of the Wyong River Catchment Flood Study to the results in the Flood Impact Assessment (FIA) once they are made available to WACJV for that purpose, and will also prepare and submit a supplementary report that compares the results of the FIA to the Wyong River Catchment Flood Study.
31	In consideration of the findings from the groundwater and surface water assessments, the Water Management Plan will ensure that the monitoring program as described is implemented and maintained so that the modelled predictions and assumptions can be verified and any potentially unforeseen water impacts can be identified and managed.
32	Implement measures to monitor groundwater depressurisation and quality and investigate departures from modelled or monitoring data trends.
33	Undertake a stream stability monitoring and management program in order to detect potential impacts of mining induced subsidence.
34	Include in the Erosion & Sediment Control Plan measures to minimise the risk of impacts to Spring Creek during construction of the rail spur and conveyors.
35	Detailed risk assessments for streams will be included in Extraction Plans considering potential management measures.
36	Water quality monitoring for treated water discharges into Wallarah Creek will include testing for "ecotoxic" effects.
37	Water and sediment sampling in Spring Creek will continue to be undertaken on a six-monthly basis and compared to the baseline data.
38	The crossings of Spring Creek (and its tributaries) will be designed so that the impacts on flood regimes are within the predictions of the flood modelling. WACJV will consult with the appropriate regulatory authorities during the detailed design phase.
39	Consult with Council regarding the alignment of the proposed sewer connection, as well as service connections to the Tooheys Road and Buttonderry Sites more generally.

40	Obtain the necessary Water Access Licences (WAL) to account for its predicted impacts to water resources.
41	Repair or replace any private water supply works that are damaged by subsidence.
42	Final design and construction of the transfer system will be completed during the extraction of Longwall Panels 4N - 5N. WACJV will repatriate 300 ML/year of treated water to Central Coast Water Supply (CCWS) for the remaining operational life of the Project.
43	A Water Treatment Plant (WTP) will be constructed and treat water prior to discharge to Wallarah Creek.
<b>Air Quality</b>	
44	The dust management and mitigation measures that were committed to in the EIS and Amendment Document shall be included in the Air Quality and Greenhouse Gas Management (AQGMP).
45	Implement best practice load profiling and will water spray the surface of loaded coal wagons.
46	An Energy and Greenhouse Strategy will be developed within two years after the commencement of longwall coal extraction. The strategy will address interim and long term energy and greenhouse management plans and initiatives, including monitoring, reporting and continuous improvement.
47	Air quality emissions will be monitored using the revised environmental monitoring program to ensure compliance with relevant air quality criteria. The existing monitoring network will be reviewed and augmented for the Project.
48	Investigate the feasibility of beneficial re-use of the captured methane for on-site power generation.
49	Transfer stations for the conveyor system will be fully enclosed to reduce dust and noise emissions.
50	All conveyors will be fitted with a roof and one side wall to provide shielding. The elevated gantry crossing the Main Northern Rail Line will be enclosed.
<b>Noise</b>	
51	Noise management and mitigation measures that were committed to in the EIS and Amendment Document shall be included in the Noise Management Plan.
52	Construction of a noise barrier adjacent to the southern extent of the rail spur (or an alternative measure to achieve similar noise mitigation).
53	When conditions dictate the need for further noise mitigation, only two of the four locomotive units will be operated whilst a train is idling on the rail spur.
54	The environmental monitoring program will incorporate regular noise monitoring surrounding the Tooheys Road and Buttonderry Sites which is representative of the closest sensitive receivers.
55	During construction of the rail spur, personnel will be transported to the site via bus.
56	The Amended Project is not expected to cause any noise exceedances at Properties 57 and 58, however WACJV will consult with these landowners to discuss management of noise impacts.
57	Rock hammers will not be utilised during the construction phase of the Amended Project.
58	Consult landowners P14, P15 and P16 and offer to apply acoustic treatments in accordance with the recommendations of the 'Voluntary Land Acquisition Management Policy' (VLAMP).
59	Offer alternative accommodation during scheduled out of hours works in consultation with or where requested by the residents.
60	Provide best available "reasonable and feasible" noise reduction technology to ensure the predicted modelled outcomes are met and shall document this in the Noise Management Plan.
61	During the construction phase, preference will be given to contractors that are able to use low noise emission equipment. Site personnel will be inducted and educated about best practice work methods to minimise noise.
62	Rail construction works will generally be scheduled for standard daytime hours, however some activities at other times may be required as requested by Sydney Trains.
<b>Ecology/Biodiversity</b>	
63	The Biodiversity Management Plan (BMP) will incorporate the management and mitigation

	methods in the EIS.
64	The Biodiversity Offset Strategy as described in the EIS will be implemented for the life of the Project.
65	Prior to the clearing of any native vegetation, the Land Clearance Protocol as described in the EIS will be utilised.
66	Further surveys for threatened frog species will be conducted once survey conditions are appropriate as documented in the BMP.
67	Aquatic ecology monitoring will be undertaken in the Autumn and Spring survey periods. Sampling will be undertaken at sites upstream and downstream of sections of streams affected by subsidence in accordance with the BMP.
68	Impacts to ecology will occur generally as described in the Amendment Document.
69	Adopt an appropriate mechanism for securing the Biodiversity Offset Strategy.
70	Pre-clearance surveys for orchid species will be undertaken in accordance with the BMP.
<b>Traffic and Transport</b>	
71	The TTMP will incorporate the management and mitigation in the EIS.
72	Three to four train cycles per day will generally be required.
73	Consult with Council to develop an agreement for addressing road safety issues.
74	Obtain accreditation of the proposed rail infrastructure from the National Rail Safety Regulator.
75	The Project will transport all coal to port via rail.
76	Traffic associated with construction will be managed in accordance with Traffic Control at Work Sites (Roads and Traffic Authority, 2010) (or latest version)
77	Prior to construction of the western ventilation shaft, the TTMP will be revised to include measures for local traffic management to minimise the disruption on Jilliby Road in the vicinity of Jilliby Public School in consultation with the school.
<b>Heritage</b>	
78	The Aboriginal Cultural Heritage Management Plan will be guided by specific policies and procedures to manage Aboriginal archaeological sites within the Project Boundary and periodically reviewed in consultation with Aboriginal stakeholders and relevant regulators.
79	The Historic Heritage Management Plan will incorporate management strategies to limit the potential impacts of the Project on historical heritage items and will be prepared in consultation with relevant regulators.
<b>Visual</b>	
80	Landscape mitigation measures will be undertaken at the Tooheys Road Site using native vegetation to achieve a reduction in the visual impacts of the Site.
81	Upon receiving a written request from an owner of privately-owned land with direct views to the Tooheys Road site from a residence within 2 km of the Tooheys Road Site, WACJV will implement reasonable and feasible additional visual impact mitigation measures (such as landscaping treatments or vegetation screens) in consultation with the landowner, to the satisfaction the Secretary.
82	For the Buttonderry Site, effective landscape enhancement will be achieved by screen planting along the Hue Hue Road Boundary and particularly adjacent to the entrance and the access roadway subject to traffic visibility safety requirements.
83	The transfer stations and train load out bin will be automated so that personnel movements to these structures are limited. As a result, the need for external lighting in the vicinity of the new infrastructure will be minimal
84	Colours for the exteriors of proposed structures will be chosen so that visual integration with the surrounding landscape is optimised.
85	Infrastructure near publicly accessible areas will be constructed using a "natural" colour scheme.
86	Wherever practicable, external lights will be directed downwards and will employ low lux lamps to minimise light spill.
<b>Social</b>	
87	Continue to implement and regularly revise the Stakeholder Engagement Strategy throughout construction, operation and decommissioning of the Project.
88	Use its best endeavours to achieve 70% (including 10% Indigenous) local hires for its operational workforce.
<b>Land Resources</b>	
89	The Soil and Land Capability Procedure (including management of Acid Sulphate Soils) will be developed in consideration of the mitigation and management measures in the EIS.

90	The Land Management Plan will include measures to manage weeds and feral animals on WACJV owned land within the Project Boundary.
91	In order to reduce the potential for Project related impacts on the publicly owned forest resources managed by Forests NSW, the strategies detailed in the EIS will be implemented during construction and operation of the Project.
92	Conduct risks assessments and put in place appropriate safety measures to ensure the safety of its workforce, the local community and its equipment in the event of bushfire.
93	The structures along Nikko Road will be constructed of non-flammable or fire resistant material where practicable material (i.e. steel structure and steel cladding with minimal internal flammable components).
<b>Contamination</b>	
94	Remediation of the existing minor hydrocarbon contamination at the Buttonderry Site will be conducted in accordance with the EIS.
95	If excavation of the bund within the Boral Montoro premises is required, the risk of contamination will be investigated by a qualified specialist prior to the activity.
<b>Waste</b>	
96	A Waste Management System will be developed for the Project to promote waste avoidance and resource recovery by developing appropriate strategies and programs in accordance with relevant regulations.
<b>Rehabilitation</b>	
97	In accordance with the Landscape Management Plan, rehabilitation areas will be monitored on a regular basis to ensure that rehabilitation objectives are being met and that sustainable revegetation, remediation and long term landform sustainability is achieved.
98	Completion criteria for mine closure will be developed and agreed in consultation with the relevant government agencies and community and incorporated into the final Mine Closure Plan.
99	Prior to the commencement of operations, a risk assessment will consider the potential risks to achieving successful rehabilitation outcomes.
<b>General</b>	
100	Consult with NSW Crown Lands regarding the necessary acquisitions of Crown Land required for the Project, at the relevant time.
101	Assist with the provision of data and expert advice to Council for emergency planning.

## APPENDIX 5: HERITAGE SITES

**Table 1:** *Aboriginal Heritage Sites*

Site	Description
WC-OS2	Open site (artefact scatter including flakes, cores and chips)
WSF-AG3	Axe grinding groove site
WSF-AG4	Axe grinding groove site
45-3-3040	Axe grinding groove site
45-3-3041	Axe grinding groove site
45-3-3042	Axe grinding groove site

**Table 2:** *Historic Heritage Sites*

Site	Description
1	Brick & Iron Silo
3	Dwelling "Bangalow"
K	Dwelling
M	Little Jilliby Road Bridge

## APPENDIX 6: NOISE ASSESSMENT

### Applicable Meteorological Conditions

1. The noise criteria in Tables 3 and 4 in Schedule 4 are to apply to a receiver under all meteorological conditions except under:
  - (a) wind speeds greater than 3 m/s at 10 m above ground level; or
  - (b) stability category F temperature inversion conditions and wind speeds greater than 2 m/s at 10 m above ground level; or
  - (c) stability category G temperature inversion conditions.

### 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 required under condition 12 of Schedule 4.

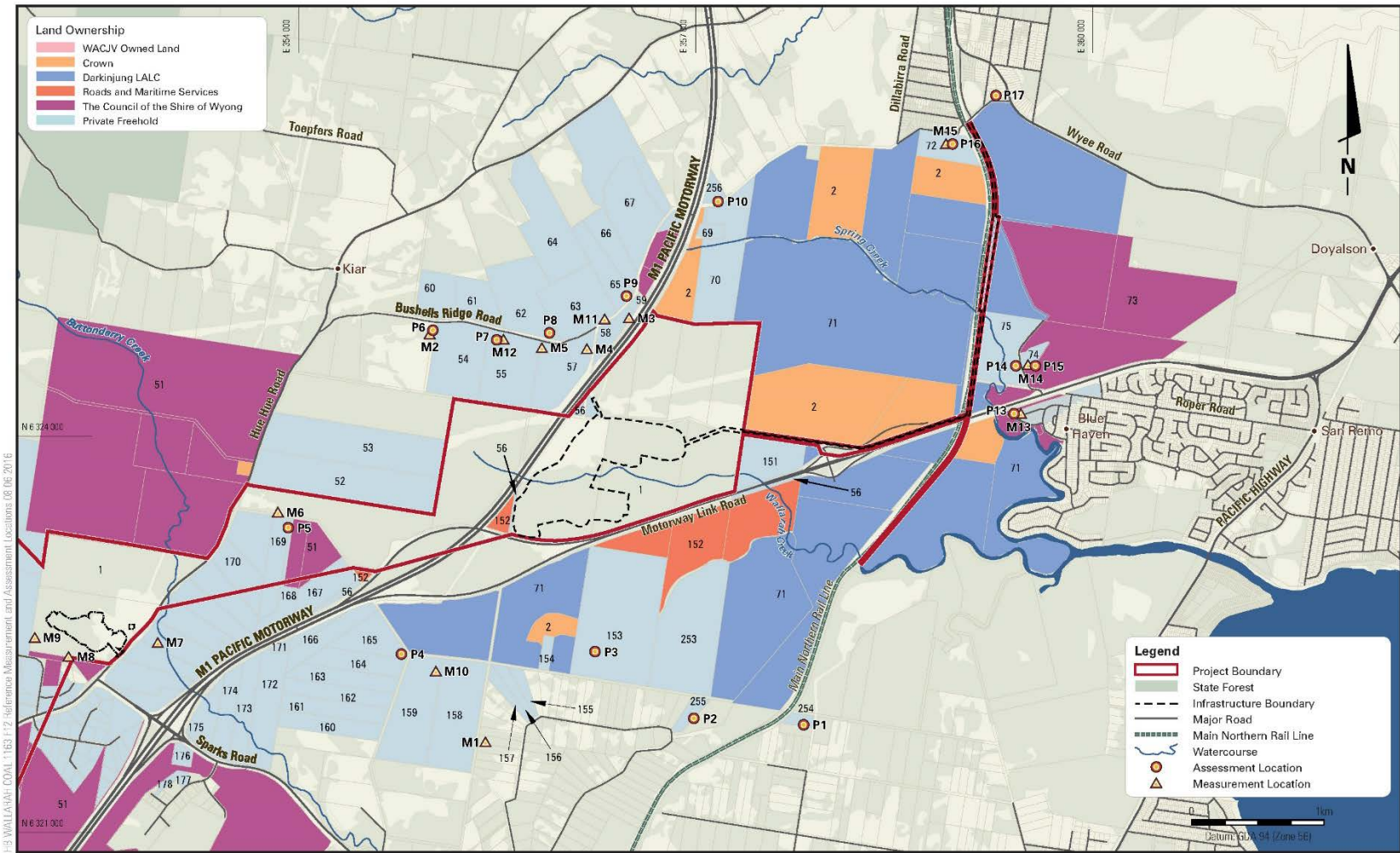
### Compliance Monitoring

3. Attended monitoring is to be used to evaluate compliance with the relevant conditions of this consent.
4. The monitoring must be carried out at least once a month (at least two weeks apart) for the first 12 months following commencement of development under this consent, then quarterly thereafter, unless the Secretary directs otherwise.

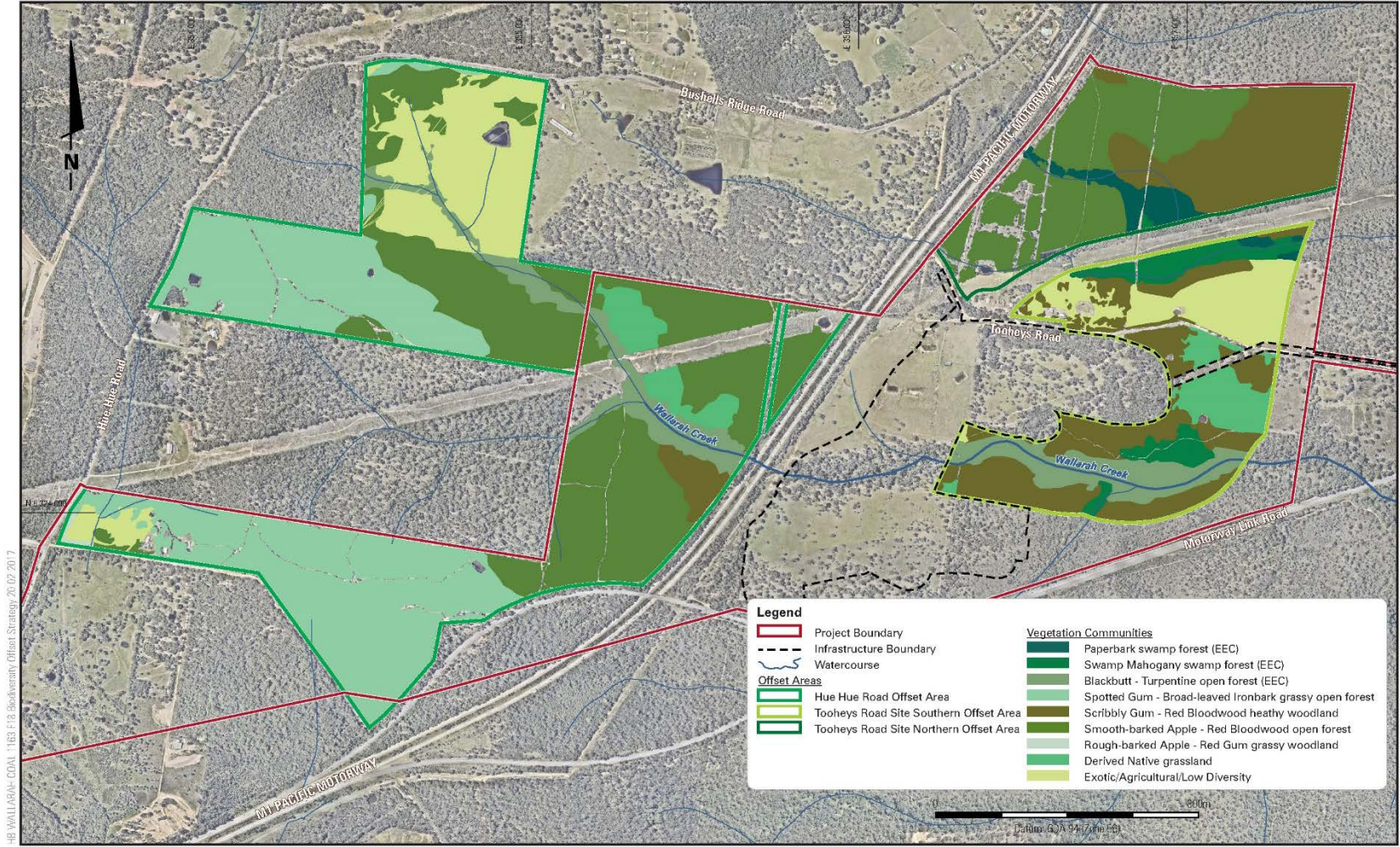
*Note: The Secretary may direct that the frequency of attended monitoring increase or decrease at any time during the life of the development.*

5. Unless the Secretary agrees otherwise, this monitoring is to be carried out in accordance with the relevant requirements for reviewing performance set out in the NPI, 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 7: NOISE RECEIVER LOCATIONS



APPENDIX 8: OFFSET AREAS



WALLARAH 2 COAL PROJECT