



ASSESSMENT REPORT

Moolarben Coal Mine

OC4 South West Modification - Stage 1 (05_0117 MOD 11) & Stage 2 (08_0135 MOD 1)

1 BACKGROUND

The Moolarben Coal Mine is located approximately 40 kilometres northeast of Mudgee (see Figure 1), between the Ulan and Wilpinjong Coal Mines. Moolarben Coal Operations Pty Ltd (MCO) operates the Moolarben Coal Mine on behalf of the Moolarben Joint Venture (Moolarben Coal Mines Pty Ltd (MCM), Sojitz Moolarben Resources Pty Ltd and a consortium of Korean power companies). MCO and MCM are wholly owned subsidiaries of Yancoal Australia Limited.

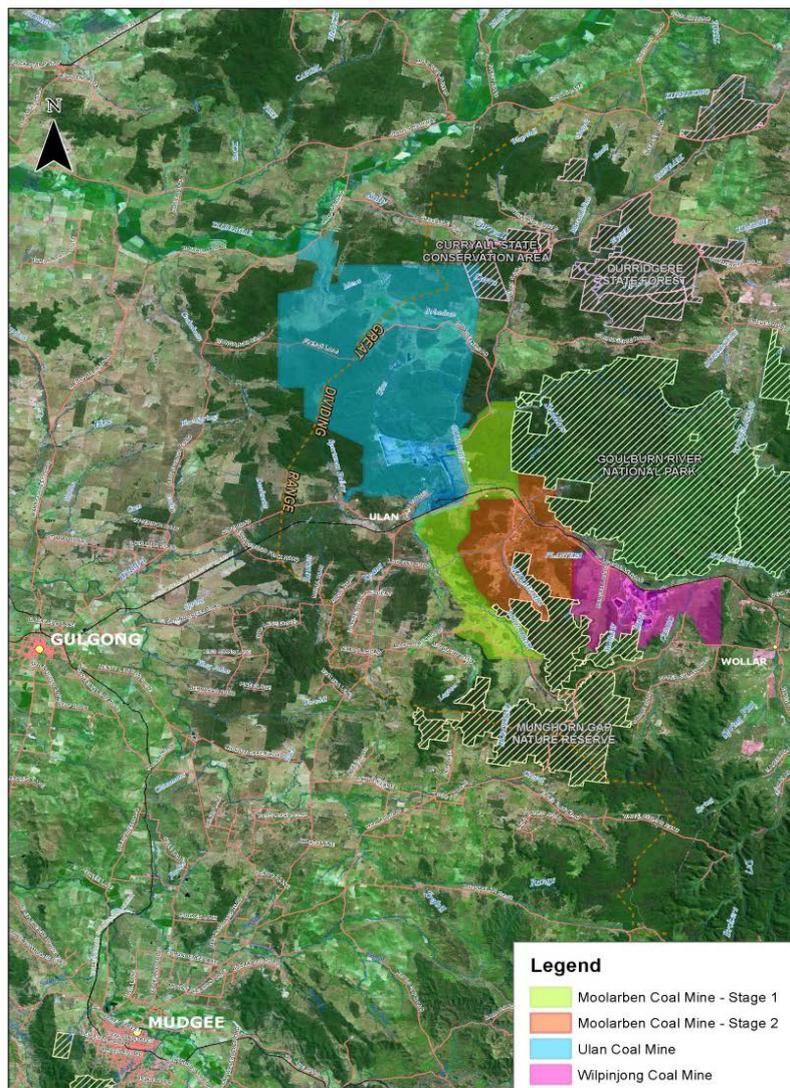


Figure 1: Regional Context

1.1. Stage 1 Project

Moolarben Coal Project Stage 1 was approved by the Minister for Planning on 6 September 2007 under the now repealed Part 3A of the *Environmental Planning & Assessment Act 1979* (EP&A Act), following an Independent Hearing and Assessment Panel. This project approval has been modified on ten occasions.

The general layout of the approved Stage 1 operations is shown in blue outline in Figure 2.

To date, MCO has constructed the mine's surface infrastructure, and is currently open pit mining in OC1 and OC2. MCO is yet to commence Stage 1 underground mining operations (UG4).

1.2. Stage 2 Project

A separate application for Moolarben Coal Project Stage 2 was approved by the Planning Assessment Commission (PAC) on 30 January 2015, under Part 3A of the EP&A Act. Stage 2 involves expanding mining operations further east of Stage 1, developing two additional underground mining domains (UG1 and UG2) and one additional large open cut mining pit (OC4).

Stage 2 will be operated concurrently with Stage 1, and together the two projects will form a single, integrated mining complex with a range of shared infrastructure, including the existing coal handling and preparation plant and rail facilities. All ROM coal from Stage 2 operations will be delivered to the Stage 1 surface infrastructure area for processing and despatch by rail. Construction of the Stage 2 facilities is yet to commence.

The general layout of the approved Stage 2 operations is shown in yellow outline in Figure 2.

2 PROPOSED MODIFICATION

MCO asked the Minister for Planning under S75W of the EP&A Act (05_0117 MOD 11) to further modify its Stage 1 project approval and Stage 2 project approval (see Appendix A and B).

The components of the modification and how they relate to each approval is presented in Table 1 and are presented in Figure 2.

Table 1: *Elements of modification and relationship to existing project approvals*

Component	Stage 1 Project Approval	Stage 2 Project Approval
Construction of the OC4 south-west haul road between OC4 and OC1 (and therefore the approved Stage 2 Haul Road would not need to be constructed).		Modification 1
Refinements to associated infrastructure layout at OC4 (wholly located within the approved surface disturbance footprint).		Modification 1
Backfilling of the northern OC1 final void to approximately pre-mining elevations.	Modification 11	

The proposed modification for Stage 1 MOD 11 and Stage 2 MOD 1 is discussed in detail in the Environmental Assessment (EA – see Appendix G) and Response to Submissions (RTS - see Appendix I) that addressed both modifications concurrently.

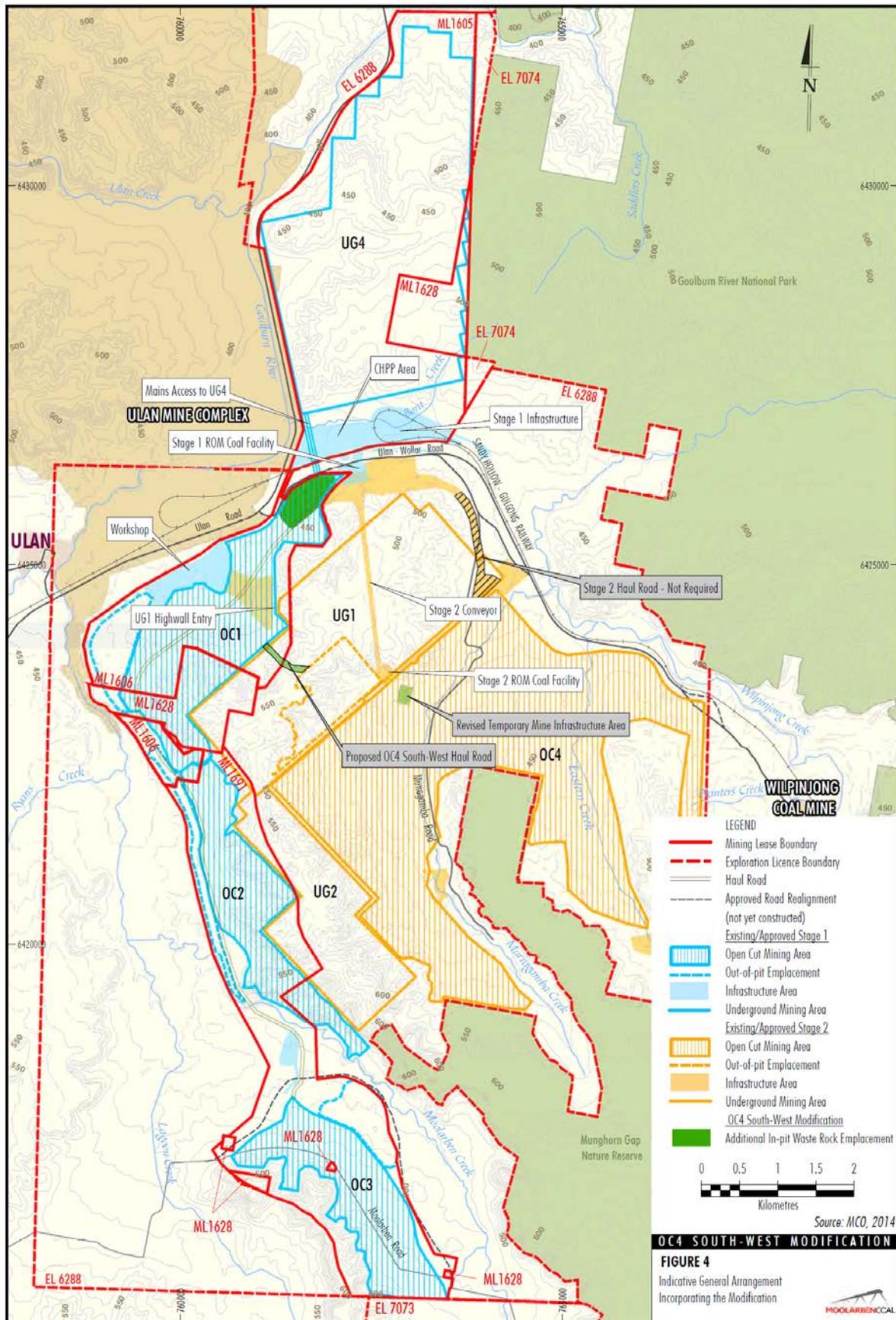


Figure 2: Indicative general arrangement incorporating the modification

2.1 Project Justification

As mining operations in OC1 have progressed, MCO has reviewed the mine sequence and infrastructure layout. MCO indicates that the revised location for the haul road enables the use of established haul roads in OC1 to transport ROM coal from OC4 via a shorter more direct route with less disturbance and sediment and water management and sediment control measures that integrate with water storages in OC1 or OC4 without the need for dedicated water management structure.

The currently approved northern void in OC1 provides access to UG4. Mining in UG4 is not proposed to commence until mining in UG1 is complete. The preferred access to UG4 is now from UG1. The Department notes that the approval for access to UG4 via UG1 would be sought as part of a separate application. The current modification does not remove the access to UG4 from OC1 until such time as the alternate access is approved.

As the northern void in OC1 is no longer required for access to UG4, it can therefore provide additional in-pit waste rock emplacement storage for open cut operations. MCO indicate that backfilling OC1 reduces the number of voids in the landscape, improves compatibility with surrounding land uses in the long term and following rehabilitation, reduces the catchment excision.

3 STATUTORY CONTEXT

3.1 Section 75W

Moolarben Coal Project Stage 1 and Stage 2 were approved separately under Part 3A of the Environmental Planning and Assessment Act 1979 (EP&A Act). Although Part 3A was repealed on 11 October 2011, the projects remain 'transitional Part 3A projects' under Schedule 6A of the EP&A Act, and hence any modification to these approvals are to be made under the former Section 75W of the Act.

Based on its assessment, the Department is satisfied that the applications can be characterised as modifications to the existing approvals (rather than new projects in their own right) as the proposal would:

- not change the approved mining methods and systems;
- not change the total approved total coal output from the mine;
- not change the approved mining area;
- not significantly increase the environmental impacts of the projects;
- result in minor changes to the approved layout of the projects.

3.2 Approval Authority

The Minister for Planning is the approval authority for the application. However, under the Minister for Planning's delegation of 16 February 2015, the Executive Director, Resource Assessments and Business Systems, may determine the application as no reportable political donations have been made, Mid-Western Regional Council did not object and there were fewer than 25 public objections.

4 CONSULTATION

The Department publicly exhibited the applications and accompanying EA from 5 May until 22 May 2015. The Department made the modification application publicly available on its website on 5 May 2015, and consulted with key agencies about the proposed modifications.

The Department received 16 submissions, including 6 from government agencies. Eight of the 10 public submissions objected to the project, the remaining 2 supported it. Full copies of all submissions are included in Appendix H.

The **Environment Protection Authority** (EPA) raised concerns about the noise assessment and surface water and made comment on the Environment Protection Licence (EPL). The concerns about noise related to the meteorological data used and the scenarios modelled (2016 and 2018) and how they related to the scenarios modelled in previous modification assessments that showed exceedances for some residences of 2-3 dB (A). This issue is addressed in section 5.1.

The EPA sought more information on changes to the water management system design and the management of dirty water along the conveyor. The EPA also sought more information on changes to

the water management system design including mapping of the modifications, the ROM area, the surface water infrastructure and the management of dirty water along the conveyor trace and on the ongoing need for mine water dam 10 and OC1 mine water dam 1, given the modification to fill the northern void in OC1. These issues are addressed in section 5.3.

The EPA noted the current environment protection licence would need to be varied if the proposal is approved.

The **Mid-Western Regional Council** did not object to the modification but recommended that the noise and air quality management mitigation measures in the EA be incorporated into the approval. This is discussed further in sections 5.1 and 5.4.

Roads and Maritime Services considered that the modification would not result in changes to traffic impacts or product transport and consequently made no submission on the modification.

The **Department of Primary Industries** (NSW Office of Water) (NOW) did not have any concerns about the relocated haul road or refining the Stage 2 OC4 pit mining schedule and layout of the temporary infrastructure area.

NOW requested further information regarding whether backfilling OC1 would have any impacts on groundwater, whether it would intercept groundwater and the impact on the quality and quantity of groundwater, whether the site water balance would need to be amended and the impacts on the projected maximum take of groundwater. These issues are discussed further in section 5.3.

The **Office of Environment and Heritage** (OEH) raised concern about the lack of information in the EA providing a comparative assessment of the impacts of the two haul routes such as a comparison of potential habitats, species and vegetation types. OEH considered that three species listed in the EA as being unlikely to occur had the potential to occur: *Acacia ausfeldii*, Spotted-tail Quoll and Squirrel Glider and Gilbert's Whistler. These issues are discussed further in section 5.2.

OEH notes that the northern void in OC1 was originally proposed to provide access to UG1 and that the access for UG4 via UG1 would be subject to a separate application. OEH stated that they may have comments on the impacts of a future modification with respect to biodiversity and heritage. The Department notes that future modifications would be addressed in that approval process when submitted.

The Department of Industry and Investment **Division of Resources and Energy** (DRE) considered that the modification results in a smaller disturbance footprint, that the filling of the final void of OC1 is a positive outcome and the realignment of the haul road connecting OC4 to OC1 would result in operational efficiencies and a reduced disturbance footprint. DRE considered that the current conditions of approval met its requirements.

The submissions from the community and two community groups (Mudgee District Environment Group and Hunter Communities Network) raised issues about increased noise and air quality impacts. These issues are discussed further in sections 5.1 and 5.4. Members of the community also raised issues about the visual impact and biodiversity impacts of the modification. These issues are addressed in sections 5.2 and 5.4.

The Mudgee District Environment Group and a member of the community expressed concern about the noise modelling scenarios, whether modelling had taken into account the elevation of the revised haul road, whether the modelling had included activities in OC2 and concern about the differences between the noise contours and noise predictions. These issues are addressed in section 5.1.

Several public submissions raised concerns about the existing mining operations rather than commenting on the specific merits of the proposal. The submissions raised concerns about:

- existing noise levels and the complaints management system;
- low frequency noise impacts;
- landowners wishing to leave the area due to mining impacts should be compensated; and
- relying on real time dust and noise management to meet criteria is unacceptable and puts the community at risk.

While many of these are principally compliance issues or criticisms of decisions that have already been made, the Department notes that:

- the existing noise levels were set after an extensive assessment process and the Department and EPA continue to monitor compliance against these limits;
- the current approvals require penalties to be applied to any monitoring results if low frequency rates are a significant factor, in accordance with the provisions in the *NSW Industrial Noise Policy*;
- there are safeguards in the current approval for landowners where higher noise impacts are expected and these landowners are entitled to additional noise mitigation or have voluntary acquisition rights consistent with the guidance in the *Voluntary Land Acquisition and Mitigation Policy*;
- the triggers for action in the real time dust and noise management systems are set well below the relevant dust and noise criteria in the approval to ensure suitable action is taken before any non-compliance occurs.

Submissions were received from Gallangabang Aboriginal Corporation Company and Wellington Valley Wiradjuri Aboriginal Corporation Company. These groups raised concerns that they had not been involved in identifying any heritage sites. This issue is discussed further in section 5.4.

MCO has considered these submissions in its Response to Submissions report (RTS - see Appendix I). The Department has subsequently considered all issues in the submissions and MCO's response in its assessment.

5 ASSESSMENT

The applications for Stage 1 MOD 11 and Stage 2 MOD 1 were supported by one EA that addressed both modifications concurrently. The Department has also addressed the assessment of both modifications concurrently in this assessment report.

In assessing the merits of the proposal, the Department has considered:

- the EA and conditions of approval for the Moolarben Coal Project Stage 1 and Stage 2;
- submissions and response to submissions;
- relevant environmental planning instruments, policies and guidelines; and
- the requirements of the EP&A Act.

The Department's assessment has focussed on the key issues of noise, biodiversity and water management.

A summary of other issues is provided in section 5.4.

5.1 Noise Impact

The EA includes an assessment of the noise impact for the modification. The Department is satisfied that the predictions:

- used the same meteorological data (WS3) as the previous assessment for MOD 9 (addressing a concern of the EPA);
- modelled the elevated haul road (addressing a concern of the Mudgee District Environment Group);
- indicate that there would not be low frequency noise generated by the modification (addressing a concern of the Hunter Communities Network); and
- appropriately applied the Voluntary Land Acquisition and Mitigation Policy (addressing a concern of the Mudgee District Environment Group and a member of the community).

The noise assessment indicates that there would be no exceedance of the current project approval noise limits at any privately owned receivers or vacant land for the modification based on the continued implementation of the noise management strategy.

The impacts of the modification were modelled for a 2016 and 2018 operating scenario. Based on the current mine plan, scenarios were chosen to capture maximum production, maximum working elevations and operations closest to the key receivers to the west and south west from operations on the western side of OC4, assume all ROM coal to be transported along the haul road using the maximum number of haul trucks. Modelling all maximum coal transport by haul trucks is conservative because the OC4 south-west haul road is located closer to receivers to the west than the overland conveyor alignment. MCO advised that any transport of coal on the conveyor would reduce the number of trucks required, and therefore reduce noise emissions.

The Mudgee District Environment Group stated the modelling scenarios had not considered mining operations in OC2. Notwithstanding the operating scenarios modelled, the approval contains noise criteria which the company is required to meet. The noise criteria will not be changed by this modification. The existing project approvals also include requirements for a Noise Management Plan, implementation of mitigation measures, predictive meteorological forecasting, real time noise monitoring and attended noise monitoring. The Department notes that this plan would be updated following the modification.

The EPA raised concerns about how the modelled scenarios for 2016 and 2018 relate to the previous assessments particularly for Stage 1 MOD 9. The Department notes that the residences that had exceedances of the intrusive noise criteria in the Stage 1 MOD 9 assessment, and have been already adequately addressed in the existing approvals by either:

- having project specific noise levels in the existing project approvals (residences 31, 63, 70 and 75); or
- already having provision in the approvals for mitigation upon request (residence 30) and acquisition (residence 32).

The Department is satisfied that the proposed modification would be unlikely to increase the level of noise impact at all nearby residences. The current approvals include noise criteria and requirements to report on compliance against the noise criteria and requirements for compliance monitoring to be conducted in accordance with the NSW *Industrial Noise Policy* which also includes penalties for modifying factors such as low frequency noise. The Department will continue to monitor MCO's performance and, if necessary, conduct enforcement action under the *Environmental Planning and Assessment Act 1979* to ensure it complies.

5.2 Biodiversity

Most elements of the modification are located within areas that have been approved for disturbance through the existing project approvals with the exception of the revised haul road. As the existing project approvals covered the impact of the disturbance for the Stage 2 out-of-pit emplacement area, the Department has focussed its assessment for biodiversity on the portion crossing UG1, from OC1 to the northern edge of Stage 2 out-of-pit emplacement area. The associated disturbance for that portion will be 5.1 hectares.

The revised haul road replaces the approved Stage 2 haul road which would have disturbed 18.5 hectares of vegetation. The Stage 2 project approval included detailed requirements for a Biodiversity Offset Strategy and Biodiversity Management Plan. Although the revised haul road nominally sits within the boundary of Stage 1, for the purposes of assessment the Department considers that this portion lies within Stage 2 (provided for in the Stage 2 approval which covers this land) for the purposes of comparison of impacts.

The EA included an assessment of the impacts to biodiversity from the modification. The Department is satisfied that that:

- the revised haul road contains two vegetation types and that neither vegetation type is related to any threatened ecological communities listed under TSC or EPBC Act;
- habitat assessments were conducted for 39 species which have potential or are likely in the area and concluded the modification is unlikely to result in significant impacts to biodiversity;
- habitat assessments adequately addressed the species that were likely to occur based on the field survey and previous surveys (addressing a concern of OEH);

- the habitat assessments were based on the conservative assumption that the vegetation clearing would occur in addition to the clearing for the approved haul road (rather than instead of);
- the current Biodiversity Offset Strategy developed for Stage 2 adequately covers the proposed impacts from the modification with surplus area; and
- the area will be rehabilitated at the completion of mining as part of the rehabilitation plan to be revised to include the modification.

The approved haul road contains a total of 18.5 ha of vegetation comprising:

- Derived grasslands of the slopes on the Merriwa Plateau (secondary grasslands and shrublands) (17.4 ha).
- White Box – Narrow-leaved Ironbark shrubby open forest on hills of the central Hunter Valley, Sydney Basin (Western Slopes Dry Sclerophyll Forest) (1.1 ha).

The revised haul road contains a total of 5.1 ha of vegetation comprising:

- Grey Gum - Narrow-leaved Stringybark - Ironbark Woodland on ridges of the upper Hunter Valley (1.8ha).
- White Box – Narrow-leaved Ironbark Shrubby Open Forest on hills of the central Hunter Valley (3.3 ha).

The Department recognises the concern of OEH, that the vegetation communities to be cleared by the approved haul road are not exactly the same as those proposed to be cleared for the revised haul road. However, the threatened species with potential habitat associated with the approved haul road will generally have the same habitat associated with the revised haul road and none of the vegetation types are related to any threatened ecological communities listed under TSC or EPBC Act. The Department also notes that the grassland in the approved haul road grassland has recently improved to the extent that if the area were remapped to contemporary standards it would be classified as forest or woodland rather than grassland and that larger area is now retained by removing the need to clear the approved haul road. The Department also notes that the revised haul road will be rehabilitated following mining in accordance with a revised rehabilitation management plan.

The Department is satisfied that the modification does not increase the impact to biodiversity as the approved haul road has similar habitat and potential threatened species to the revised haul road, and there is an overall net benefit of the reduced area of clearing resulting from the revised haul road compared to the approved haul road (i.e. 5.1 ha compared to 18.5 ha) and the overall removal of vegetation and fauna habitat is considered to be minor within the regional context. The Department is satisfied that the current Biodiversity Offset Strategy developed for Stage 2 adequately covers the proposed impacts from the revised haul road with surplus area.

The Department considers that there is a positive outcome for biodiversity.

5.3 Water Management

The EA includes an assessment of the surface water impact of the modification. The Department is satisfied that:

- there would be no significant change to the site water balance as the revised haul road is located within a catchment area currently reporting to water storages in the approved water management system and therefore there is no consequential increase in the catchment area reporting to the water management system;
- the northern void in OC1 to be filled was not proposed to be used as a water storage in the water management system and therefore there is no consequential loss of water storage;
- the removal of the Stage 2 haul road removes the associated impact to Wilpingong Creek catchment; and
- the modification would not increase previously predicted groundwater inflow or drawdown is expected as a result of the modification and no additional water licence entitlements would be required.

The Department notes that MCO is currently updating the complex wide Water Management Plan for the approved Stage 1 and Stage 2 operations and that as required by the project approvals, this would occur in consultation with NOW and the EPA. The Department is satisfied that the concerns of EPA about changes to the water management system design / mapping and ongoing need for mine

water dam 10 and OC1 mine water dam 1 (described in environmental assessment for Stage 1 MOD 9) can be addressed through the framework of the Water Management Plan and its revisions.

The Department notes that the backfilling of OC1 northern void means that final treatment of this area would be consistent with the remainder of the OC1 pit. The Department notes that this modification will not change the approved extent of OC1, or increase the maximum mining rate and following backfilling and rehabilitation, surface drainage would be reinstated reducing catchment excision post-mining. NOW is satisfied that its issues regarding groundwater have been addressed.

The northern void on OC1 resulted in the potential for water that accumulated in the void becoming very saline through evaporation and subsequently impacting groundwater. The approval subsequently included a requirement that the sub-crop line of the Ulan Seam be lined. As the northern void would now be backfilled, the requirement for lining the northern void is redundant. This is supported by NOW.

The Department is satisfied that the modification does not increase the impact to surface water and that surface water at the site would be managed in accordance with the framework of the Water Management Plan. The Department notes that the complex wide Water Management Plan is currently being updated and that as required by the project approvals, this would occur in consultation with NOW and EPA. The Department notes that in fact, there is a positive outcome for surface water due to the removal of the Stage 2 haul road and associated impact to Wilpingong Creek catchment.

5.4 Other issues

Table 1 summarises the Department's consideration of other issues associated with the proposed modification.

Table 1: – Assessment of other issues

Issue	Potential impacts and consequences	Conclusion & Recommendation
<i>Air quality</i>	<ul style="list-style-type: none"> The EA includes an assessment of the air quality impacts for the modification modelled for 2016, considered to be the worst case scenario for air quality as it has the worst case ROM coal and waste rock extraction, first year of maximum fleet operations in OC4, fleet in OC4 focussed in the west resulting in potential impacts at Ulan and Cooks Gap and dumping of overburden on the OC4 out-of-pit emplacement. The assessment indicates that the air quality impact would be generally within the existing envelope of impact already approved. The existing project approvals including conditions to minimise air quality impacts such as implementing an air quality management plan and implementing best practice management practice to manage emissions. The Department notes that the air quality management plan would be updated to incorporate the modification. The Department is satisfied that no new exceedances of the project approval limits are predicted from the modification and the proposed modification would be unlikely to increase the level of air quality impact at nearby residences. 	<ul style="list-style-type: none"> No additional conditions of approval required to manage air quality impacts for Stage 1 or 2.
<i>Visual</i>	<ul style="list-style-type: none"> The EA included an assessment of the visual impact from previously assessed sensitive viewpoints. The EA states that there are potential views from a small section of Ulan Road however, the views would be in the context of other existing or approved mining infrastructure and therefore the visual impact of the revised haul road would be minimal. Although there would be lighting requirements for the haul road, the scale and intensity of the impact would be similar to the approved complex. The filling of the northern void in OC1 would reduce the long term visual impact in comparison to the approved void for OC1. The other elements of the modification would not alter the visual landscape as they are located in approved areas of disturbance Community submissions expressed concern that the revised haul road would be cut into the ridgeline and stated that it was unlikely any previously assessed viewpoints or residences would have direct views of the haul road. 	<ul style="list-style-type: none"> No additional conditions of approval required to manage visual amenity for Stage 1 or 2.

Issue	Potential impacts and consequences	Conclusion & Recommendation
	<ul style="list-style-type: none"> The Department is satisfied that no additional visual amenity impacts would result and that where limited views of the haul may be available they would be viewed in the context of existing mine infrastructure. 	
<i>Aboriginal Cultural Heritage</i>	<ul style="list-style-type: none"> The proposed modification covers a new area of disturbance for the revised haul road over UG1. This area of disturbance was addressed in an Aboriginal Cultural Heritage Assessment (ACHA). The ACHA states it included consultation in accordance with the applicable OEH guidelines and that stakeholder groups with an interest in the Moolarben Coal Complex have been previously identified and the existing parties were contacted and consulted. Four representatives from Registered Aboriginal Parties attended two field surveys. Four entities provided comment on the draft ACHA which were addressed in the final ACHA. No Aboriginal objects were identified in the area of disturbance for the revised haul road and the modification would not impact known aboriginal archaeological or cultural heritage values. The ACHA considered that no Aboriginal objects or areas of cultural heritage value were likely to occur within the subject area. Two Aboriginal groups, Gallangabang Aboriginal Corporation Company (GACC) and Wellington Valley Wiradjuri Aboriginal Corporation Company (WVWACC), raised concerns that they had not been involved in identifying any heritage sites. WVWAC and GACC had not previously identified interest in the Moolarben Coal Complex. MCO advises that when WVWACC registered its interest, it was provided with the draft ACHA for review and comment which it provided and was included in the finalisation of the ACHA (although WVWACC was not individually identified in the report in accordance with its request at that time). The Department is satisfied that appropriate consultation has been conducted. The approved Stage 2 haul road would have impacted a single Aboriginal site which as a result of the modification will no longer be impacted. The Stage 2 project approval included conditions relating to further archaeological assessment work required for the approved Stage 2 haul road. The Department considers that the relevant condition Stage 2 project approval can be updated to reflect the removal of the approved Stage 2 haul road. The Department is satisfied that no additional Aboriginal Cultural Heritage impacts would result and the net impact of the project is positive as the Aboriginal site that was to be impacted for the approved Stage 2 haul road would no longer be impacted. In accordance with the existing project approvals, the Heritage Management Plan would be updated to address the modification. 	<ul style="list-style-type: none"> No additional conditions required to manage Aboriginal Cultural Heritage impacts. Remove the condition for further archaeological assessment for approved Stage 2 haul road that is no longer relevant.
<i>Land resources</i>	<ul style="list-style-type: none"> No BSAL land is located within the modification disturbance area. There would be no impact to agricultural productivity as there are no agricultural activities currently being undertaken in the area. The Department is satisfied that no additional land resource impacts would result. 	<ul style="list-style-type: none"> No additional conditions required to manage land resource impacts.
<i>Rehabilitation and Final Landform</i>	<ul style="list-style-type: none"> The northern void in OC1 will be backfilled to approximately pre-mining levels. This would result in one less void in the final landform, a reduction in catchment excision following rehabilitation and improved compatibility with surrounding land uses in the long-term. The Rehabilitation Management Plan would be updated to incorporate the modification. The Department considers that the modification results in a positive benefit following rehabilitation. 	<ul style="list-style-type: none"> No additional conditions required. The rehabilitation plan in the appendix to the Stage 2 approval is updated to reflect the modification.

Issue	Potential impacts and consequences	Conclusion & Recommendation
<i>Other issues</i>	<ul style="list-style-type: none"> The modification does not change the blast locations, sizes or frequencies. The modification does not materially change the annual greenhouse gas emissions. No non-Aboriginal heritage sites have been identified in the disturbance areas. There would not be additional impacts from the modification to capacity, condition, safety or efficiency of the surrounding network. RMS considered that the modification would not result in changes to traffic impacts or product transport. There is no aquatic habitat within the modification disturbance area and ephemeral watercourses nearby the modification area are unlikely to provide potential aquatic habitat. The modification would not change the existing potential risks or hazard consequences identified in the existing Preliminary Hazard Analyses. The Department is satisfied that no additional impacts would result. 	<ul style="list-style-type: none"> No additional conditions required.

6 RECOMMENDED CONDITIONS

No additional conditions are required to regulate the environmental impacts of the mine as a result of the proposed modification. The Department has prepared Notice of Modification for Stage 1 and Stage 2 (see Appendix C, D, E and F) to reflect the removal of approved elements of the previous approvals that are no longer relevant and update the plans provided in appendices to the approvals.

MCM has reviewed and accepted the proposed conditions.

7 CONCLUSION

The Department has assessed the modification application and associated EA in accordance with the relevant requirements of the EP&A Act, including the objects of the Act and the principles of ecologically sustainable development.

This assessment has found that the proposed modifications would be unlikely to increase the environmental impacts associated with the approved projects.

The revised haul road would result in a reduced disturbance footprint than the approved Stage 2 haul road and is more operationally efficient. The Department is satisfied that the revised haul road is not likely to result in significant impacts to any threatened biodiversity and reduces the impact to Aboriginal heritage by avoiding one site that was to be impacted by the approved haul road. Further, the Department is satisfied that the current Biodiversity Offset Strategy developed for Stage 2 adequately covers the proposed impacts from the revised haul road with surplus area.

The Department is satisfied that the modification does not increase the impact to surface water and that surface water at the site would be managed in accordance with the framework of the Water Management Plan and in fact, there is a positive outcome for surface water due to the removal of the Stage 2 haul road and associated impact to Wilpingong Creek catchment.

The northern void in OC1 would be backfilled to pre-mining elevations providing additional in-pit waste storage, resulting in one less void in the landscape and improving compatibility with surrounding land uses in the long term and following rehabilitation, reduces the catchment excision.

The adjustments to associated infrastructure are consistent with the current approvals.

Consequently, the Department is satisfied that the proposed modification is in the public interest and should be approved.

8 RECOMMENDATION

It is **RECOMMENDED** that the Executive Director, Resource Assessments and Business Systems:

- **consider** the findings and recommendations of this report;
- determine that the proposed modification (05_0117 MOD11) falls within the scope of section 75W of the EP&A Act;
- determine that the proposed modification (08_0135 MOD1) falls within the scope of section 75W of the EP&A Act;
- approve the modification applications under Section 75W of the EP&A Act; and
- **sign** the attached Notice of Modifications (Appendix C and D).



Nicole Brewer
Team Leader
Resource Assessments

21/8/15

 21/8/15

David Kitto
Executive Director
Resource Assessments & Business Systems

APPENDIX A: STAGE 1 - MODIFICATION APPLICATION

Request to Modify a Major Project or Concept Project

Introduction & Notes

Please Note: You will be assigned one Job Number per application for a modification to a major project. If you have multiple approvals that you wish to modify you must lodge a separate modification application for each major project approval.

Schedule 6A of the *Environmental Planning & Assessment Act 1979*, provides that section 75W continues to apply for the purpose of the modification of a project applications and concept plan approved before or after the repeal of Part 3A of the Act.

A Part 4 consent which was subject to clause 8J(8) of the *Environmental Planning & Assessment Regulation 2000* prior to the repeal of Part 3A, can also be modified under section 75W.

This form should be used to request the Minister to modify a Project Approval or Concept Plan Approval under section 75W of the Act.

Before lodging this form you should contact the Department of Planning and Environment to confirm the supporting documentation required to assess the modification. The Director General may issue environmental assessment requirements that must be complied with before your request will be considered by the Minister.

Supporting documents can be attached in Step 6 of this form. N.B. the file(s) comprising your supporting documents must be in "pdf" format, non-secured and no more than 10Mb.

Persons lodging applications are required to declare reportable political donations (including donations of \$1,000 or more) made in the previous two years. For more details, go to www.planning.nsw.gov.au/donations.

Applicant Details

Title: Mr

Firstname: Mark

Surname: Jacobs

Day Phone: 02 8583 5910

Fax:

Mobile: 0408 634 613

Email: mark.jacobs@yancoal.com.au

Company: Moolarben Coal Operations Pty Limited

ABN: 59 077 939 569

Physical Address: 363 George Street Sydney, NSW 2000

Postal Address: 363 George Street Sydney, NSW 2000

Site details

Site Title: Moolarben Mine

Job Title: Modification to Stage 1 Project

Is new land involved? no

Modification Details

Description: Construction of a new south west haul road. Deletion of the approved north east haul road Backfilling of the OC1 void Alterations to site water management systems Refinements to the surface mine infrastructure

Capital Investment Value: \$0.00

Construction "jobs":

Operational "jobs":

Landowner's Consent
Provided?

Approvals

Would the development otherwise, but for section 89J of the EP&A Act, require any of the following (select all that apply)?

- the concurrence under Part 3 of the Coastal Protection Act 1979 of the Minister administering that Part of that Act
- a permit under section 201, 205 or 219 of the Fisheries Management Act 1994
- an approval under Part 4, or an excavation permit under section 139, of the Heritage Act 1977
- an Aboriginal heritage impact permit under section 90 of the National Parks and Wildlife Act 1974
- an authorisation referred to in section 12 of the Native Vegetation Act 2003 (or under any Act repealed by that Act) to clear native vegetation or State protected land
- a bush fire safety authority under section 100B of the Rural Fires Act 1997
- a water use approval under section 89, a water management work approval under section 90 or an activity approval under section 91 of the Water Management Act 2000

Do you require any of the following approvals in order to carry out the development (select all that apply)?

- an aquaculture permit under section 144 of the Fisheries Management Act 1994
- an approval under section 15 of the Mine Subsidence Compensation Act 1961
- a mining lease under the Mining Act 1992
- a petroleum production lease under the Petroleum (Onshore) Act 1991
- an environment protection licence under Chapter 3 of the Protection of the Environment Operations Act 1997 (for any of the purposes referred to in section 43 of that Act)
- a consent under section 138 of the Roads Act 1993
- a licence under the Pipelines Act 1967
- an aquifer interference approval under the Water Management Act 2000

[Online information provided by the applicant](#)

- a mining lease under the Mining Act 1992
- an environment protection licence under Chapter 3 of the Protection of the Environment Operations Act 1997 (for any of the purposes referred to in section 43 of that Act)

Supporting Documents

What supporting documents are you submitting with this application? *

Environmental Assessment
Other explanatory documentation
Landowners Consent

Note: Under clause 8F of the *Environmental Planning and Assessment Regulation 2000* as it applied prior to the repeal of Part 3A, certain applications under Part 3A of the Act do not require consent of the landowner, however, the proponent is required to give notice of the application (e.g. linear infrastructure, mining & petroleum projects).

Submitted supporting files:

Landowner's consent attached?

- no
- Reason: Landowners' consent not required for mining applications under Part 3A

Submitted files:

- Moolarben OC4 South-West Modification EA - Part A.pdf
- Moolarben OC4 South-West Modification EA - Part B.pdf
- Attachment 1 - Stage 1 Project Approval (05_0117) (OC4 Modification).pdf
- Attachment 2 - Stage 2 Project Approval (08_0135)(OC4 Modification).pdf
- Attachment 3 - Site Verification Certificate (OC4 Modification).pdf
- Appendix A - Noise Assessment (OC4 Modification).pdf
- Appendix B - Air Quality Assessment (OC4 Modification).pdf
- Appendix C - Flora and Fauna Assessment (OC4 Modification).pdf
- Appendix D - Surface Water Assessment Review (OC4 Modification).pdf
- Appendix E - Aboriginal Cultural Heritage Assessment (OC4 Modification).pdf

Political Donation

Persons lodging applications are required to declare reportable political donations (including donations of \$1,000 or more) made in the previous two years. For more details, go to www.planning.nsw.gov.au/donations.

Do you need to make a political donations disclosure statement?

Online information provided by the applicant

- No

Submitter details

Name: Mark Jacobs

Capacity: General Manager, Environment & Community

Submitted: 2015-04-17 17:38:1429256325

APPENDIX B: STAGE 2 MODIFICATION APPLICATION

Request to Modify a Major Project or Concept Project

Introduction & Notes

Please Note: You will be assigned one Job Number per application for a modification to a major project. If you have multiple approvals that you wish to modify you must lodge a separate modification application for each major project approval.

Schedule 6A of the *Environmental Planning & Assessment Act 1979*, provides that section 75W continues to apply for the purpose of the modification of a project applications and concept plan approved before or after the repeal of Part 3A of the Act.

A Part 4 consent which was subject to clause 8J(8) of the *Environmental Planning & Assessment Regulation 2000* prior to the repeal of Part 3A, can also be modified under section 75W.

This form should be used to request the Minister to modify a Project Approval or Concept Plan Approval under section 75W of the Act.

Before lodging this form you should contact the Department of Planning and Environment to confirm the supporting documentation required to assess the modification. The Director General may issue environmental assessment requirements that must be complied with before your request will be considered by the Minister.

Supporting documents can be attached in Step 6 of this form. N.B. the file(s) comprising your supporting documents must be in "pdf" format, non-secured and no more than 10Mb.

Persons lodging applications are required to declare reportable political donations (including donations of \$1,000 or more) made in the previous two years. For more details, go to www.planning.nsw.gov.au/donations.

Applicant Details

Title: Mr

Firstname: Mark

Surname: Jacobs

Day Phone: 02 8583 5910

Fax:

Mobile: 0408 634 613

Email: mark.jacobs@yancoal.com.au

Company: Moolarben Coal Operations Pty Limited

ABN: 59 077 939 569

Physical Address: 363 George Street Sydney, NSW 2000

Postal Address: 363 George Street Sydney, NSW 2000

Site details

Site Title: Moolarben Mine

Job Title: Modification to Stage 2 Project

Is new land involved? no

Modification Details

Description: Construction of a new south west haul road. Deletion of the approved north east haul road. Backfilling of the OC1 void. Alterations to site water management systems. Refinements to the surface mine infrastructure.

Capital Investment Value: \$0.00

Construction "jobs":

Operational "jobs":

Landowner's Consent
Provided?

Approvals

Would the development otherwise, but for section 89J of the EP&A Act, require any of the following (select all that apply)?

- the concurrence under Part 3 of the Coastal Protection Act 1979 of the Minister administering that Part of that Act
- a permit under section 201, 205 or 219 of the Fisheries Management Act 1994
- an approval under Part 4, or an excavation permit under section 139, of the Heritage Act 1977
- an Aboriginal heritage impact permit under section 90 of the National Parks and Wildlife Act 1974
- an authorisation referred to in section 12 of the Native Vegetation Act 2003 (or under any Act repealed by that Act) to clear native vegetation or State protected land
- a bush fire safety authority under section 100B of the Rural Fires Act 1997
- a water use approval under section 89, a water management work approval under section 90 or an activity approval under section 91 of the Water Management Act 2000

Do you require any of the following approvals in order to carry out the development (select all that apply)?

- an aquaculture permit under section 144 of the Fisheries Management Act 1994
- an approval under section 15 of the Mine Subsidence Compensation Act 1961
- a mining lease under the Mining Act 1992
- a petroleum production lease under the Petroleum (Onshore) Act 1991
- an environment protection licence under Chapter 3 of the Protection of the Environment Operations Act 1997 (for any of the purposes referred to in section 43 of that Act)
- a consent under section 138 of the Roads Act 1993
- a licence under the Pipelines Act 1967
- an aquifer interference approval under the Water Management Act 2000

[Online information provided by the applicant](#)

- a mining lease under the Mining Act 1992
- an environment protection licence under Chapter 3 of the Protection of the Environment Operations Act 1997 (for any of the purposes referred to in section 43 of that Act)

Supporting Documents

What supporting documents are you submitting with this application? *

Environmental Assessment
Other explanatory documentation
Landowners Consent

Note: Under clause 8F of the *Environmental Planning and Assessment Regulation 2000* as it applied prior to the repeal of Part 3A, certain applications under Part 3A of the Act do not require consent of the landowner, however, the proponent is required to give notice of the application (e.g. linear infrastructure, mining & petroleum projects).

Submitted supporting files:

Landowner's consent attached?

- no
- Reason: Landowners' Consent is not required for applications under Part 3A for Mining Projects

Submitted files:

- Moolarben OC4 South-West Modification EA - Part A.pdf
- Moolarben OC4 South-West Modification EA - Part B.pdf
- Attachment 1 - Stage 1 Project Approval (05_0117) (OC4 Modification).pdf
- Attachment 2 - Stage 2 Project Approval (08_0135)(OC4 Modification).pdf
- Attachment 3 - Site Verification Certificate (OC4 Modification).pdf
- Appendix A - Noise Assessment (OC4 Modification).pdf
- Appendix B - Air Quality Assessment (OC4 Modification).pdf
- Appendix C - Flora and Fauna Assessment (OC4 Modification).pdf
- Appendix D - Surface Water Assessment Review (OC4 Modification).pdf
- Appendix E - Aboriginal Cultural Heritage Assessment (OC4 Modification).pdf

Political Donation

Persons lodging applications are required to declare reportable political donations (including donations of \$1,000 or more) made in the previous two years. For more details, go to www.planning.nsw.gov.au/donations.

Do you need to make a political donations disclosure statement?

Online information provided by the applicant

- No

Submitter details

Name: Mark Jacobs

Capacity: General Manager, Environment & Community

Submitted: 2015-04-17 17:51:1429257074

APPENDIX C: STAGE 1 - NOTICE OF MODIFICATION

Notice of Modification

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

As delegate for the Minister for Planning, I modify the Project Approval referred to in Schedule 1, subject to the conditions in Schedule 2.



David Kitto
Executive Director
Resource Assessments & Business Systems

Sydney 21 AUGUST 2015

SCHEDULE 1

Project Approval 05_0117 for the Moolarben Coal Project Stage 1, granted by the Minister for Planning on 6 September 2007.

SCHEDULE 2

1. In the list of DEFINITIONS, insert:

EA (MOD 11)	Modification Application 05_0117 MOD 11 and accompanying OC4 South West Modification Environmental Assessment from Moolarben Coal Operations Pty Limited dated April 2015 and the response to submission dated June 2015.
-------------	---

2. In the list of DEFINITIONS, replace Moolarben Stage 1 mine with :

Moolarben Stage 1 mine	The approved mining operations and associated development enclosed within the blue dashed line on the figure in Appendix 2.
------------------------	---

3. In the list of DEFINITIONS, replace Moolarben Stage 2 mine with :

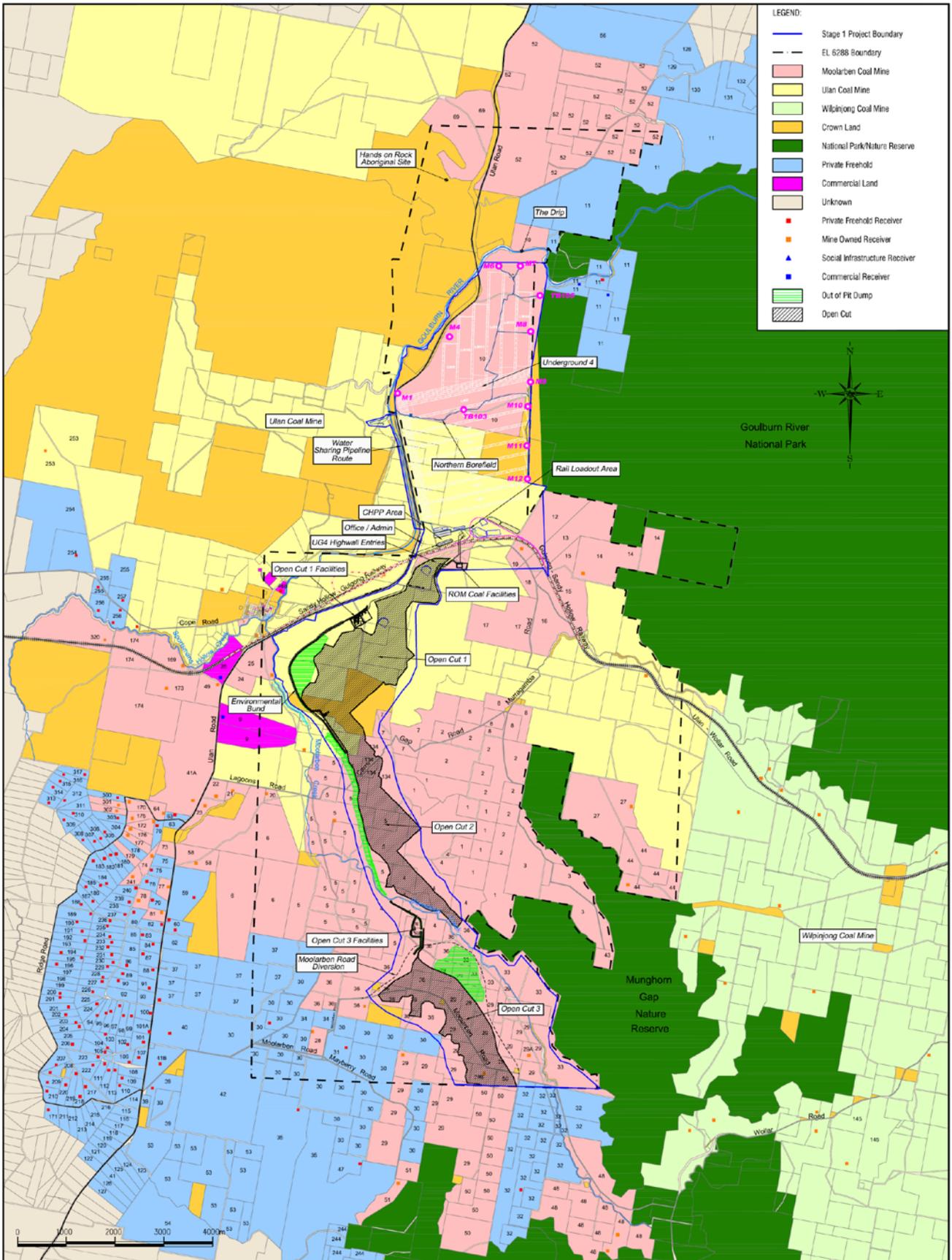
Moolarben Stage 2 mine	The approved mining operations and associated development enclosed within the yellow dashed line on the figure in Appendix 2.
------------------------	---

4. In condition 2 of Schedule 2, delete all words after "EA (MOD 10);" (except the Notes), and insert:

(l)	EA (MOD 11);
(m)	statement of commitments; and
(n)	the conditions of this approval."

5. In condition 32 of Schedule 3, delete the row in Table 11 setting performance measures for the Ulan Seam sub-crop line of the most northerly final void.

6. In Appendix 2 replace all figures with the following:



LEGEND:

- Stage 1 Project Boundary
- EL 6288 Boundary
- Moolarben Coal Mine
- Ulan Coal Mine
- Wilpinjong Coal Mine
- Crown Land
- National Park/Nature Reserve
- Private Freehold
- Commercial Land
- Unknown
- Private Freehold Receiver
- Mine Owned Receiver
- Social Infrastructure Receiver
- Commercial Receiver
- Out of Pit Dump
- Open Cut

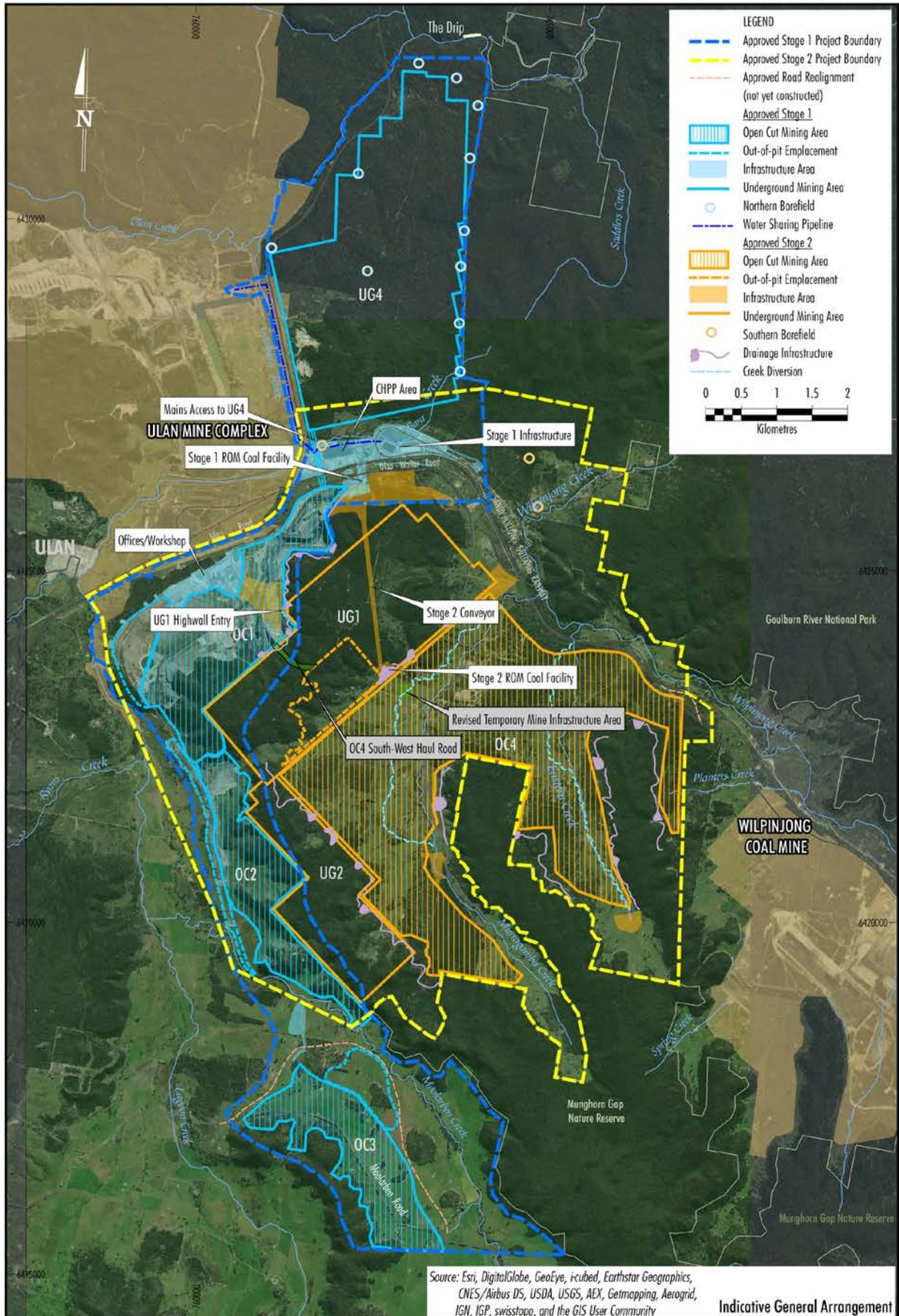
Rev	Drawn	Description	Approved


 Prepared by Pegasus Survey & Drafting Ph: 02 65 718888

Moolarben Coal Operations
General Overview of Stage 1 Project

Date: 02.12.13	Scale: 1:70000	Drawn: CD	Checked: MM	Approved: MM
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Drawing No. 09471
Revision No. C
Sheet Size A3



APPENDIX D: STAGE 2 - NOTICE OF MODIFICATION

Notice of Modification

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

As delegate for the Minister for Planning, I modify the Project Approval referred to in Schedule 1, subject to the conditions in Schedule 2.



David Kitto
Executive Director
Resource Assessments & Business Systems

Sydney 21 AUGUST 2015

SCHEDULE 1

Project Approval 08_0135 for the Moolarben Coal Project Stage 2, granted by the Planning and Assessment Commission Minister for Planning on 30 January 2015.

SCHEDULE 2

1. In the list of DEFINITIONS, insert:

EA	The Moolarben Coal Project Stage 2 Environmental Assessment Report (6 volumes), dated March 2009 as modified by the: <ul style="list-style-type: none">• preferred project report, dated January 2012;• response to submissions, dated June 2012;• residual matters report, dated August 2012;• Groundwater Accounting and Water Sharing Plan prepared by RPS Aquaterra Pty Ltd, dated 13 June 2012;• Surface water information prepared by Worley Parsons Services Pty Ltd, dated 28 September 2012, 15 October 2012 and 9 November 2012;• Biodiversity Offset Strategy prepared by Cumberland Ecology Pty Ltd, dated December 2012;• Water Licensing Report – Wollar Creek Water Source prepared by Dundon Consulting Pty Ltd, dated 11 June 2013;• <i>OC4 South-West Modification Environmental Assessment</i>, dated April 2015 and associated response to submissions, dated June 2015
----	--

2. In the list of DEFINITIONS, replace Moolarben Stage 1 mine with :

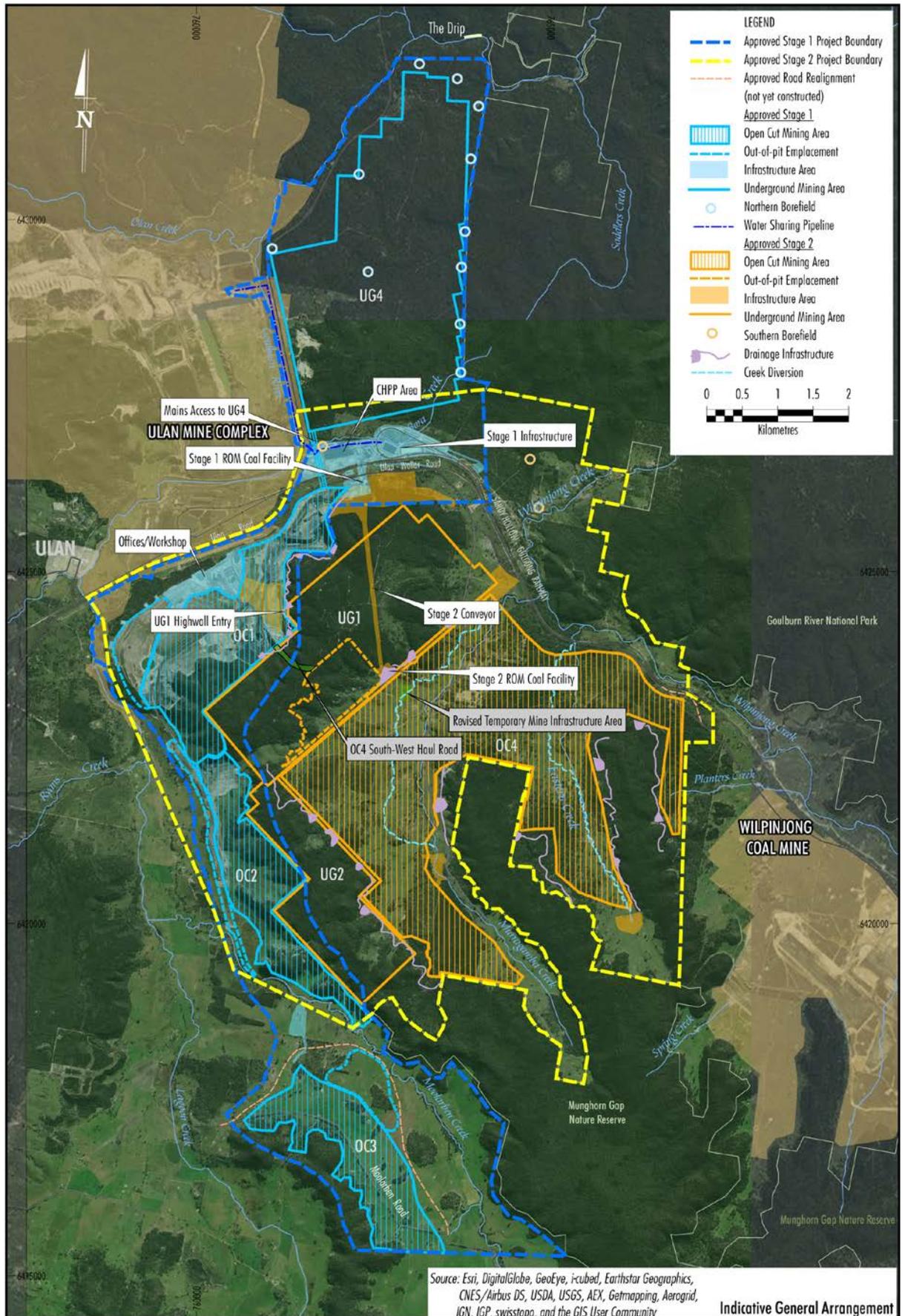
Moolarben Stage 1 mine	The approved mining operations and associated development enclosed within the blue dashed line on the figures in Appendix 2.
------------------------	--

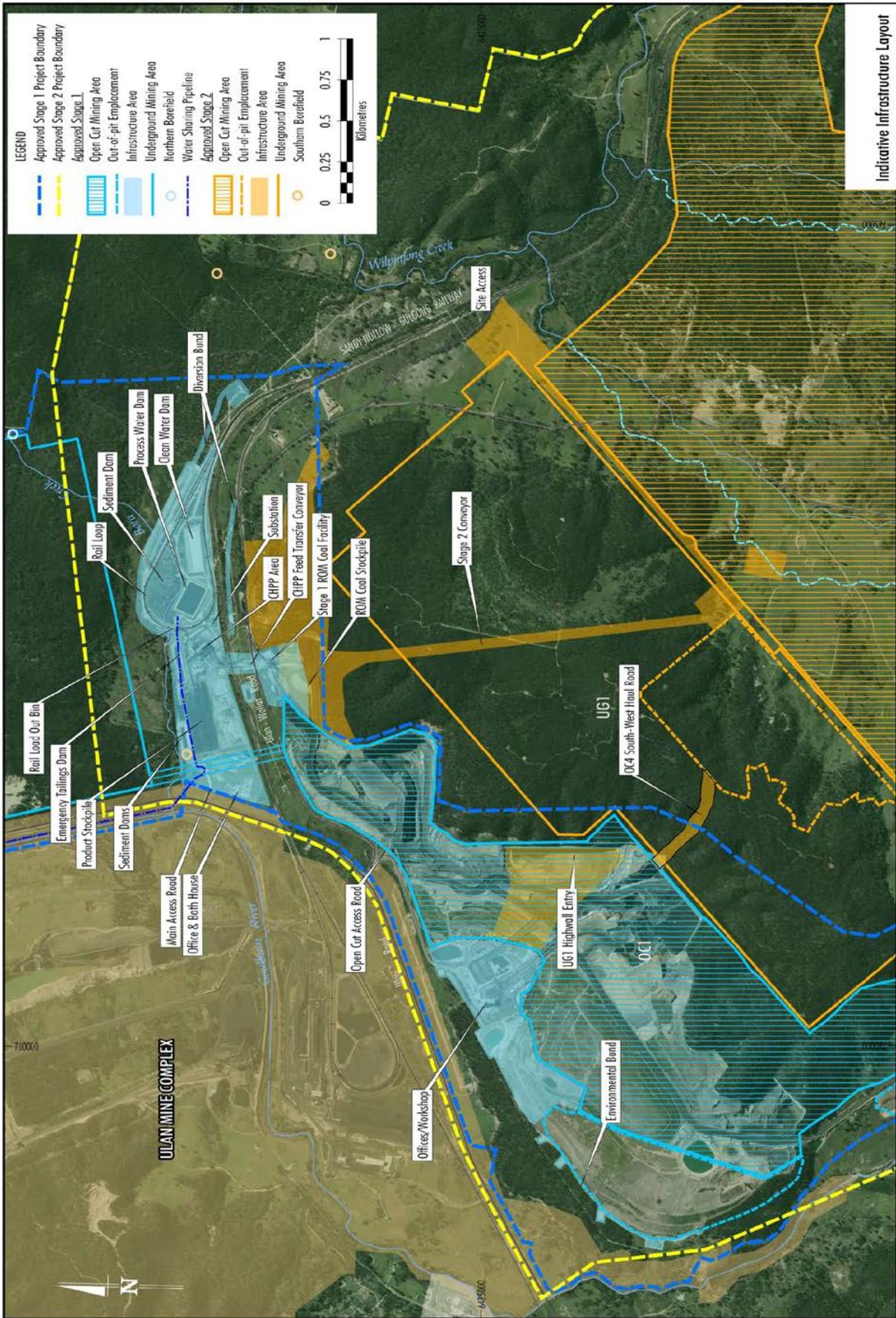
3. In the list of DEFINITIONS, replace Moolarben Stage 2 mine with :

Moolarben Stage 2 mine	The approved mining operations and associated development enclosed within the yellow dashed line on the figure in Appendix 2.
------------------------	---

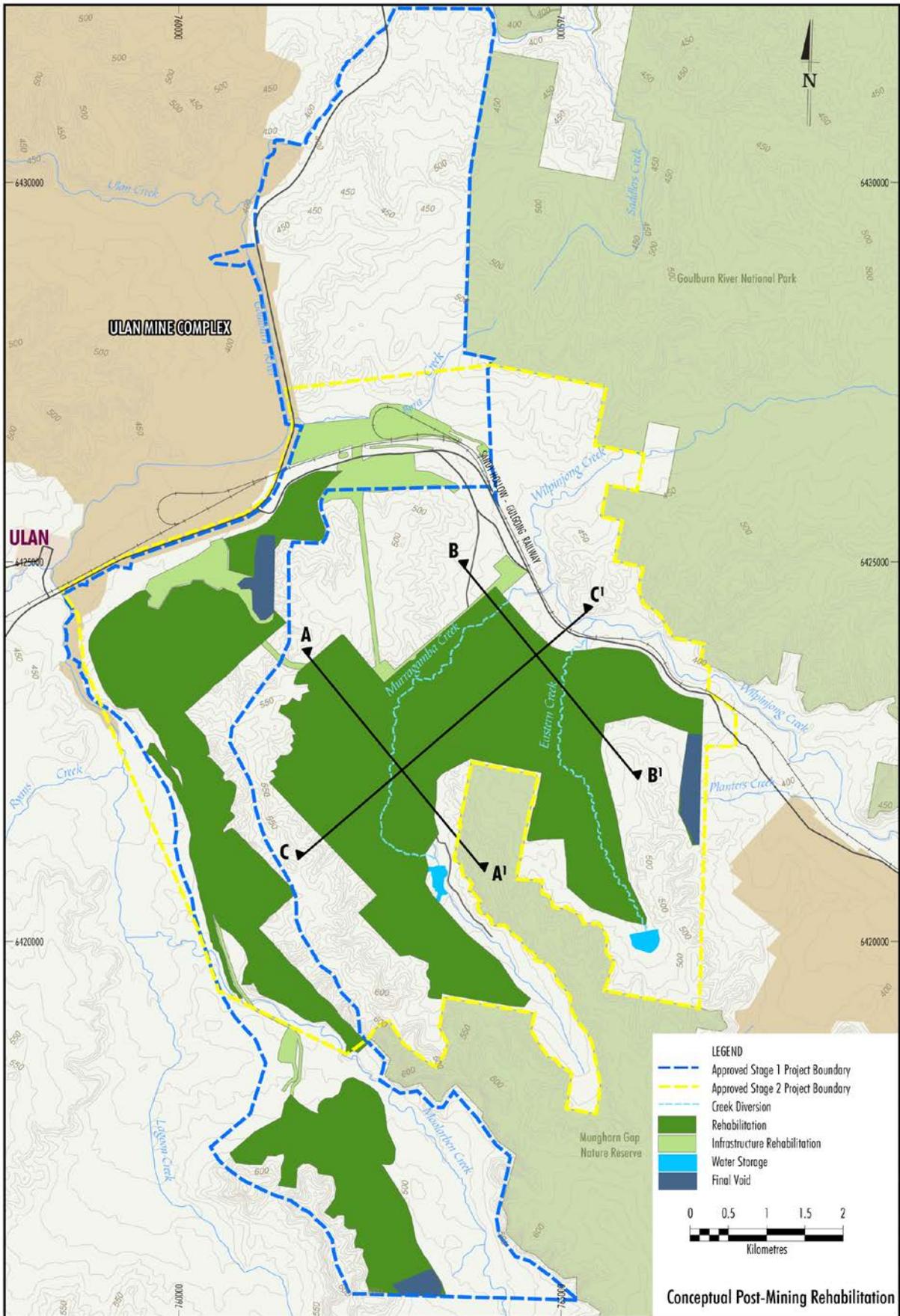
4. In condition 42(a) of Schedule 3, delete the words 'and the northern section of the proposed Haul Road,'

5. In Appendix 2 replace all figures with the following:





7. In Table 8.1 in Appendix 8 in the row for S2MC002 delete all words in column for “Final Management Measure” and insert:
“No impact. No management measure required.”
8. In Appendix 10 replace the figure with the following:



**APPENDIX E: STAGE 1 - PROJECT APPROVAL AS PROPOSED TO BE
MODIFIED**

Project Approval

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

I approve the project application referred to in schedule 1, subject to the conditions in schedules 2 to 5.

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 project.

Red type represents the November 2008 modification (MOD 1)

Blue type represents the December 2008 modification (MOD 2)

Green type represents the June 2009 modification (MOD 4)

Purple type represents the October 2009 modification (MOD 5)

Orange type represents the January 2010 modification (MOD 6)

Pink type represents the May 2010 modification (MOD 8)

Violet text represents the January 2011 modification (MOD 7)

Aqua text represents the June 2014 modification (MOD 9)

Maroon text represents the January 2015 modification (MOD3)

Olive green type represents the April 2015 modification (MOD 10)

Brown type represents the July 2015 modification (MOD 11)

Frank Sartor MP
Minister for Planning

Sydney

2007

SCHEDULE 1

Application Number:	05_0117
Proponent:	Moolarben Coal Mines Pty Limited
Approval Authority:	Minister for Planning
Land:	See Appendix 1
Project:	Moolarben Coal Project Stage 1

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DEFINITIONS

Annual review	The review required by condition 4 of Schedule 5
ARTC	Australian Rail Track Corporation Ltd
BCA	Building Code of Australia
Blast misfires	The failure of one or more holes in a blast pattern to initiate
Built features	Includes any building or work erected or constructed on land, and includes dwellings and infrastructure such as any formed road, street, path, walk, or driveway; any pipeline, water, sewer, telephone, gas or other service main
CCC	Community Consultative Committee
Conditions of this approval	Conditions contained in Schedules 2 to 5 inclusive
Council	Mid-Western Regional Council
CPI	Australian Bureau of Statistics Consumer Price Index
Day	The period from 7am to 6pm on Monday to Saturday, and 8am to 6pm on Sundays and Public Holidays
DEC	NSW Department of Education and Communities
Department	Department of Planning and Environment
DPI	Department of Primary Industries
DRE	Division of Resources and Energy (within Department of Trade and Investment, Regional Infrastructure and Services)
EA	The report titled <i>Moolarben Coal Project Environmental Assessment, Volumes 1-5</i> , dated September 2006, as modified by the Preferred Project Report submitted to the Department in December 2006 and the response to submissions.
EA (MOD 1)	The <i>Application to Make Modifications to the Project Approval for the Moolarben Coal Project</i> , prepared by Wells Environmental Services and dated August 2008.
EA (MOD 2)	The <i>Environmental Assessment - Section 75W Modification Application</i> , prepared by Coffey Natural Systems and dated December 2008.
EA (MOD 3)	Environmental assessment titled <i>Moolarben Coal Project Stage 2 Environmental Assessment Report</i> (6 volumes), dated March 2009 as modified by the preferred project report, dated January 2012; the response to submissions dated June 2012; the residual matters report dated August 2012; and the following supplementary information: <ul style="list-style-type: none"> a) Groundwater Accounting and Water Sharing Plan prepared by RPS Aquaterra Pty Ltd and dated 13 June 2012; b) Surface water information prepared by Worley Parsons Services Pty Ltd and dated 28 September 2012, 15 October 2012 and 9 November 2012; c) Biodiversity Offset Strategy prepared by Cumberland Ecology Pty Ltd and dated December 2012; d) <i>Water Licensing Report – Wollar Creek Water Source</i> prepared by Dundon Consulting Pty Ltd and dated 11 June 13.
EA (MOD 4)	The <i>Documentation in Support of the Balloon Loop Modification</i> , prepared by Wells Environmental Services and dated April 2009.
EA (MOD 5)	The <i>Environmental Assessment - Section 75W Modification Application</i> , prepared by Coffey Natural Systems and dated July 2009, associated response to submissions dated August 2009, and supplementary information dated September 2009.
EA (MOD 6)	The <i>Environmental Assessment - Section 75W Modification Application</i> , prepared by Coffey Natural Systems and dated December 2009.
EA (MOD 7)	The <i>Environmental Assessment – Section 75W Modification Application</i> , prepared by Coffey Natural Systems Pty Ltd and dated March 2010, and associated response to submissions dated June 2010, and supplementary information dated 2 November 2010 and 6 December 2010.
EA (MOD 8)	The <i>Environmental Assessment – Section 75W Modification Application</i> , prepared by Moolarben Coal Operations Pty Ltd and dated April 2010.
EA (MOD 9)	The <i>Environmental Assessment for the Moolarben Coal Project Stage 1 Optimisation Modification</i> prepared by EMGA Mitchell McLennan Pty Limited and dated May 2013, and associated response to submissions dated September 2013, and supplementary information dated 2 October 2013, 14 October 2013 and 15 October 2013.
EA (MOD 10)	Modification Application 05_0117 MOD 10 and accompanying letter reports from Moolarben Coal Operations Pty Limited dated 24 February 2015 and 17 March 2015
EA (MOD 11)	Modification Application 05_0117 MOD 11 and accompanying OC4 South West Modification Environmental Assessment from Moolarben Coal Operations Pty Limited dated April 2015 and the response to submission dated June 2015.
EEC	Endangered ecological community, as defined under the TSC Act
EPA	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>
EPBC Act	Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i>

EPL	Environment Protection Licence under the POEO Act
Evening	Evening is defined as the period from 6pm to 10pm
Executive Director Mineral Resources	Executive Director of Mineral Resources, within DRE, or equivalent position
Feasible	Feasible relates to the engineering coordinates and what is practical to build or implement
Heritage Item	An item as defined under the <i>Heritage Act 1977</i> and/or an Aboriginal 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"> causes, or threatens to cause, material harm to the environment; and/or breaches or exceeds the limits or performance measures/criteria in this approval
Land	As defined in the EP&A Act, except for where the term is used in the noise and air quality conditions in Schedules 3 and 5 of this approval where it is defined to mean the whole of a lot, or contiguous lots owned by the same landowner, in a current plan registered at the Land Titles Office at the date of this approval
Material harm to the environment	Actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial
Mine water	Water that accumulates within, or drains from active mining and infrastructure areas (synonymous with dirty water)
Mining operations	Includes the removal and emplacement of overburden, and extraction, processing, handling, storage and transport of coal on site
Minister	Minister for Planning, or delegate
Minor	Not very large, important or serious
Mitigation	Activities associated with reducing the impacts of the project
Moolarben mine complex	The combined operations of the Moolarben Stage 1 and Stage 2 mines
Moolarben Stage 1 mine	The approved mining operations and associated development enclosed within the blue dashed line on the figure in Appendix 2.
Moolarben Stage 1 mine surface infrastructure area	The approved surface infrastructure area, including the coal handling and preparation plant and the rail loop, as shown on the figures in Appendix 2
Moolarben Stage 2 mine	The approved mining operations and associated development enclosed within the yellow dashed line on the figure in Appendix 2.
Mtpa	Million tonnes per annum
Negligible	Small and unimportant, such as to be not worth considering
Night	The period from 10pm to 7am on Monday to Saturday, and 10pm to 8am on Sundays and Public Holidays
NOW	NSW Office of Water, within DPI
NP&W Act	<i>National Parks & Wildlife Act 1974</i>
OEH	Office of Environment and Heritage
P&I	NSW Planning & Infrastructure
POEO Act	<i>Protection of the Environment Operations Act 1997</i>
Privately-owned land	Land that is not owned by a public agency, or a mining company (or its subsidiary)
Project	The development as described in the EA, and adequately modified by other EAs
Proponent	Moolarben Coal Mines Pty Limited, or any other person or persons who rely on this approval to carry out the development that is subject to this approval
Public Infrastructure	Linear and related infrastructure 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
Rehabilitation	The restoration of land disturbed by the project to a good condition, and ensure it is safe, stable and non-polluting
RFS	Rural Fire Service
RMS	Roads and Maritime Services
ROM	Run-of-mine
Secretary	Secretary of the Department, or nominee
Site	The land referred to in Appendix 1
Statement of commitments	The Proponent's commitments in Appendix 3
TSC Act	<i>Threatened Species Conservation Act 1995</i>
Ulan Road Strategy	The strategy prepared by the Arrb Group Limited, dated December 2011 as amended by the Director-General's letter dated 25 May 2013
VPA	Voluntary planning agreement under the EP&A Act

SCHEDULE 2 ADMINISTRATIVE CONDITIONS

OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT

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

TERMS OF APPROVAL

2. The Proponent shall carry out the project generally in accordance with the:

- (a) EA;
- (b) EA (MOD 1);
- (c) EA (MOD 2);
- (d) EA (MOD 4);
- (e) EA (MOD 5);
- (f) EA (MOD 6);
- (g) EA (MOD 7);
- (h) EA (MOD 8);
- (i) EA (MOD 9);
- (j) EA (MOD 3);
- (k) EA (MOD 10);
- (l) EA (MOD 11);
- (m) statement of commitments; and
- (n) the conditions of this approval.

Notes:

- The general layout of the project is shown in Appendix 2; and
- The statement of commitments is shown in Appendix 3.

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

LIMITS ON APPROVAL

Mining Operations

5. The Proponent may carry out mining operations on the site until 31 December 2038.

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

Coal Extraction

6. The Proponent shall not extract more than:
 - (a) 8 million tonnes of ROM coal from the open-cut mining operations of the project in any calendar year except 2015 and 2016;
 - (b) 9 million tonnes of ROM coal from the open-cut mining operations of the project in the calendar years 2015 and 2016; and
 - (c) 4 million tonnes of ROM coal from the underground mining operations of the project in any calendar year.

Coal Processing

7. The Proponent shall not process more than 13 million tonnes of coal from the Moolarben mine complex in any calendar year.

Coal Transport

8. The Proponent shall ensure that:
 - (a) all product coal is transported from the Moolarben mine complex by rail; and
 - (b) no more than 5 laden trains leave the Moolarben mine complex each day.

STRUCTURAL ADEQUACY

9. The Proponent shall ensure that all new buildings and structures, and any alterations or additions to existing buildings and structures, are constructed in accordance with the relevant requirements of the BCA.

Notes:

- Under Part 4A of the EP&A Act, the Proponent is required to obtain construction and occupation certificates for the proposed building works.
- Part 8 of the EP&A Regulation sets out the requirements for the certification of the project.

DEMOLITION

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

PROTECTION OF PUBLIC INFRASTRUCTURE

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

Note: This condition does not apply to any damage to public infrastructure subject to compensation payable under the Mine Subsidence Compensation Act 1961, or to damage to roads caused as a result of general road usage.

OPERATION OF PLANT AND EQUIPMENT

12. The Proponent shall ensure that all plant and equipment used at the site, or in connection with the project, is:
- (a) maintained in a proper and efficient condition; and
 - (b) operated in a proper and efficient manner.

STAGED SUBMISSION OF STRATEGIES, PLANS OR PROGRAMS

13. With the approval of the Secretary, the Proponent may:
- (a) submit any strategy, plan or program required by this approval on a progressive basis; and
 - (b) combine any strategy, plan, program, review, audit or report required by this approval with any similar strategy, plan, program, review, audit or report required under Project Approval 08_0135 for the Moolarben Coal Project Stage 2.

Notes:

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

VOLUNTARY PLANNING AGREEMENT

14. Within 12 months of this approval, the Proponent shall enter into a planning agreement with Council in accordance with:
- (a) Division 6 of Part 4 of the EP&A Act; and
 - (b) the terms of the Proponent's offer to the Minister on 4 September 2007, which includes the matters set out in Appendix 4.
-

SCHEDULE 3
ENVIRONMENTAL CONDITIONS - GENERAL

NOISE

Noise Criteria

Acquisition Upon Request

- 1A. Upon receiving a written request for acquisition from an owner of the land listed in Table 1A, the Applicant shall acquire the land in accordance with the procedures in conditions 10 and 11 of Schedule 4.

Table 1A: Land subject to acquisition upon request

Receiver ID
32

Note: To interpret the land referred to in Table 1, see the applicable figures in Appendix 5.

Transitional Acquisition and Mitigation Arrangements

- 1B. Any receiver that had made a written request for acquisition or mitigation prior to the determination of Modification 3, on 30 January 2015 shall be granted the acquisition or mitigation options in accordance with the condition that applied at the date of that request.

Note: Receivers 30, 63, 70, 75 and 31 were granted mitigation on request rights with the approval of Modification 9 in June 2014. A new Voluntary Land Acquisition and Mitigation Policy was gazetted on 19 December 2014, consequently the conditions have been updated to reflect the new policy, however transitional arrangements are provided for the owners of any privately owned land, if a written request for acquisition or mitigation had already been made, prior to the determination of Modification 3.

1. The Proponent shall ensure that the noise generated by the Moolarben mine complex does not exceed the noise criteria in Table 1 at any residence on privately-owned land or the other specified locations.

Table 1: Noise criteria dB(A)

Land Number	Day	Evening	Night	
	<i>L_{Aeq}(15min)</i>	<i>L_{Aeq}(15min)</i>	<i>L_{Aeq}(15min)</i>	<i>L_{A1}(1min)</i>
30, 63	39	39	39	45
70	37	37	37	45
75	36	36	36	45
31	36	35	35	45
All other privately owned residences	35	35	35	45
Ulan Primary School		35 (internal) when in use		-
Ulan Anglican Church		35 (internal) when in use		-
Ulan Catholic Church		35 (internal) when in use		-
Goulburn River National Park		50		-
Munghorn Gap Nature Reserve				-

Note: To interpret the land referred to in Table 1 see the applicable figures in Appendix 5.

Noise generated by the complex is to be measured in accordance with the relevant requirements of the NSW Industrial Noise Policy. Appendix 6 sets out the meteorological conditions under which these criteria apply, and the requirements for evaluating compliance with these criteria.

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

Land Acquisition Criteria

2. If the noise generated by the Moolarben mine complex exceeds the criteria in Table 2A at any residence on privately-owned land, then upon receiving a written request for acquisition from an owner of the land listed in Table 2A, the Proponent shall acquire the land in accordance with the procedures in conditions 10 and 11 of Schedule 4.

Table 2A: Acquisition criteria dB(A) L_{Aeq} (15min)

Receiver ID	Day <i>(L_{Aeq} (15min))</i>	Evening <i>(L_{Aeq} (15min))</i>	Night <i>(L_{Aeq} (15min))</i>
63	43	43	42

Receiver ID	Day (L_{Aeq} (15min))	Evening (L_{Aeq} (15min))	Night (L_{Aeq} (15min))
All other privately-owned residences	40	40	40

Note: To interpret the land referred to Table 2A, see the applicable figures in Appendix 5.

3. If the noise generated by the Moolarben mine complex contributes to exceedances of the relevant criteria in Table 2 on more than 25% of any privately-owned land (and a dwelling could be built on that land under existing planning controls), the Proponent shall, upon receiving a written request for acquisition from the landowner, acquire the land in accordance with the procedures in conditions 10-11 of Schedule 4.

Table 2: Land acquisition criteria

Day/Evening/Night L_{Aeq}(period)	Receiver
55/50/45	All privately-owned land

Note: Noise generated by the complex is to be measured in accordance with the relevant requirements of the NSW Industrial Noise Policy. Appendix 6 sets out the meteorological conditions under which these criteria apply, and the requirements for evaluating compliance with these criteria.

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

Noise Mitigation Criteria

4. If the noise generated by the Moolarben mine complex exceeds the criteria in Table 3A at any privately owned residence, then upon receiving a written request the Proponent shall implement additional noise mitigation measures (such as double-glazing, insulation and/or air conditioning) at the residence in consultation with the landowner. These measures must be reasonable and feasible, and directed towards reducing the noise impacts of the project on the residence.

If within 3 months of receiving this request from the owner, the Proponent 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 3A: Mitigation criteria dB(A) L_{Aeq} (15min)

Receiver ID	Day (L_{Aeq} (period))	Evening (L_{Aeq} (15min))	Night (L_{Aeq} (15min))
63	40	40	39
All other privately owned residences	37	37	37

Note: To interpret the land referred to Table 3A, see the applicable figures in Appendix 5.

Mitigation Upon Request

5. Upon receiving a written request from the owner of the residence on the land listed in Table 3, the Proponent shall implement additional noise mitigation measures (such as double-glazing, insulation and/or air conditioning) at the residence in consultation with the landowner. These measures must be reasonable and feasible, and directed towards reducing the noise impacts of the complex on the residence.

If within 3 months of receiving this request from the owner, the Proponent 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 noise mitigation upon request

Receiver ID
30

Note: To interpret the land referred to in Table 3 see the applicable figures in Appendix 5.

Operating Conditions

6. The Proponent shall:
- implement best management practice to minimise the operational, road and rail noise of the project;
 - operate a comprehensive noise management system on site that uses a combination of predictive meteorological forecasting and real-time noise monitoring data to guide the day to day planning of

- mining operations, and the implementation of both proactive and reactive noise mitigation measures to ensure compliance with the relevant conditions of this approval;
- (c) minimise the noise impacts of the project during meteorological conditions when the noise limits in this approval do not apply (see Appendix 6);
- (d) only use locomotives and rolling stock that are approved to operate on the NSW rail network in accordance with the noise limits in ARTC's EPL;
- (e) co-ordinate noise management with the noise management at Ulan and Wilpinjong mines to minimise cumulative noise impacts; and
- (f) carry out regular monitoring to determine whether the project is complying with the relevant conditions of this approval, to the satisfaction of the Secretary.

Noise Management Plan

7. The Proponent shall prepare and implement a Noise Management Plan for the project to the satisfaction of the Secretary. This plan must:
- (a) be prepared in consultation with the EPA and be submitted to the Secretary for approval by 31 March 2015;
 - (b) describe the measures that would be implemented to ensure compliance with the noise criteria and operating conditions in this approval;
 - (c) describe the proposed noise management system in detail;
 - (d) include a monitoring program that:
 - uses attended noise monitoring to evaluate compliance of the project against the noise criteria in this approval;
 - includes a program to calibrate and validate the real-time noise monitoring results with the attended monitoring results over time (so the real-time noise monitoring program can be used as a better indicator of compliance with the noise criteria in this approval and trigger for further attended monitoring);
 - evaluates and reports on:
 - the effectiveness of the noise management system; and
 - compliance against the noise operating conditions; and
 - defines what constitutes a noise incident, and includes a protocol for identifying and notifying the Department and relevant stakeholders of any noise incidents.

BLASTING

Blasting Criteria

8. The Proponent shall ensure that the blasting on the Moolarben mine complex does not cause exceedances of the criteria in Table 4.

Table 4: Blasting criteria

Location	Airblast overpressure (dB(Lin Peak))	Ground vibration (mm/s)	Allowable exceedance
Residence on privately owned land, churches and schools	120	10	0%
	115	5	5% of the total number of blasts over a period of 12 months
All public infrastructure	-	50 (or a limit determined by the structural design methodology in AS 2187.2-2006, or its latest version, or other alternative limit for public infrastructure, to the satisfaction of the Secretary)	0%

However, these criteria do not apply if the Proponent has a written agreement with the relevant owner, and has advised the Department in writing of the terms of this agreement.

Blasting Hours

9. The Proponent shall only carry out blasting on the site between 9am and 5pm Monday to Saturday inclusive. No blasting is allowed on Sundays, public holidays, or at any other time without the written approval of the Secretary.

Blasting Frequency

10. The Proponent may carry out a maximum of:

- (a) 2 blasts a day; and
- (b) 9 blasts a week, averaged over a calendar year, at the Moolarben mine complex.

This condition does not apply to blasts that generate ground vibration of 0.5 mm/s or less at any residence on privately-owned land, blasts misfires or blasts required to ensure the safety of the mine or its workers.

Note: For the purposes of this condition, a blast refers to a single blast event, which may involve a number of individual blasts fired in quick succession in a discrete area of the mine.

Property Inspections

11. If the Proponent receives a written request from the owner of any privately-owned land within 2 kilometres of any approved open cut mining pit on site for a property inspection to establish the baseline condition of any buildings and/or structures on his/her land, or to have a previous property inspection updated, then within 2 months of receiving this request the Proponent shall:
- (a) commission a suitably qualified, experienced and independent person, whose appointment is acceptable to both parties to:
 - establish the baseline condition of any buildings and other structures on the land, or update the previous property inspection report; and
 - identify measures that should be implemented to minimise the potential blasting impacts of the project on these buildings and/or structures; and
 - (b) give the landowner a copy of the new or updated property inspection report.

If there is a dispute over the selection of the suitably qualified, experienced and independent person, or the Proponent or the landowner disagrees with the findings of the property inspection report, either party may refer the matter to the Secretary for resolution.

Property Investigations

12. If the owner of any privately-owned land claims that buildings and/or structures on his/her land have been damaged as a result of blasting on the site, then within 2 months of receiving this claim the Proponent shall:
- (a) commission a suitably qualified, experienced and independent person, whose appointment is acceptable to both parties to investigate the claim; and
 - (b) give the landowner a copy of the property investigation report.

If this independent property investigation confirms the landowner's claim, and both parties agree with these findings, then the Proponent shall repair the damage to the satisfaction of the Secretary.

If there is a dispute over the selection of the suitably qualified, experienced and independent person, or the Proponent or the landowner disagrees with the findings of the independent property investigation, then either party may refer the matter to the Secretary for resolution.

Operating Conditions

13. The Proponent shall:
- (a) implement best practice blasting management to:
 - protect the safety of people and livestock in the surrounding area;
 - protect public or private infrastructure/property in the surrounding area from any damage; and
 - minimise the dust and fume emissions of any blasting;
 - (b) operate a suitable system to enable the public to get up-to-date information on the proposed blasting Schedule on site; and
 - (c) co-ordinate the timing of blasting on site with the timing of blasting at the Ulan and Wilpinjong mines to minimise cumulative blasting impacts, to the satisfaction of the Secretary.
14. The Proponent shall not undertake blasting on site within 500 metres of:
- (a) any public road;
 - (b) the Gulgong to Sandy Hollow Railway Line;
 - (c) the Wollar-Wellington 330kV Transmission Line; or
 - (d) any land outside the site not owned by the Proponent, unless the Proponent has:
 - demonstrated to the satisfaction of the Secretary that the blasting can be carried out closer to the infrastructure or land without compromising the safety of people or livestock or damaging the infrastructure and/or other buildings and structures; and
 - updated the Blast Management Plan to include the specific measures that would be implemented while blasting is being carried out within 500 metres of the infrastructure or land; or

- a written agreement with the relevant infrastructure owner or landowner to allow blasting to be carried out closer to the infrastructure or land, and the Proponent has advised the Department in writing of the terms of this agreement.

Blast Management Plan

15. The Proponent shall prepare and implement a Blast Management Plan for the project prior to undertaking any blasting on site to the satisfaction of the Secretary. This plan must:
- be prepared in consultation with the EPA and be submitted to the Secretary for approval by 31 March 2015;
 - describe the measures that would be implemented to ensure compliance with the blast criteria and operating conditions of this approval;
 - propose and justify any alternative ground vibration limits for public infrastructure in the vicinity of the site (if relevant); and
 - include a monitoring program for evaluating compliance with the blasting criteria and operating conditions of this approval.

AIR QUALITY

Odour

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

Air Quality Criteria

17. The Proponent shall ensure that all reasonable and feasible avoidance and mitigation measures are employed so that particulate matter emissions generated by the Moolarben mine complex do not cause exceedances of the criteria listed in Tables 5, 6 and 7 at any residence on privately owned land.

Table 5: Long term impact assessment criteria for particulate matter

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

Table 6: Short term impact assessment criterion for particulate matter

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

Table 7: Long term impact assessment criteria for deposited dust

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

Notes to Tables 5-7:

^a Cumulative (i.e. incremental increase in concentrations due to the complex plus background concentrations due to all other sources);

^b Incremental impact (i.e. incremental increase in concentrations due to the complex on its own);

^c Deposited dust is to be assessed as insoluble solids as defined by Standards Australia, AS/NZS 3580.10.1:2003: Methods for Sampling and Analysis of Ambient Air - Determination of Particulate Matter - Deposited Matter - Gravimetric Method; and

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

Mine-owned Land

18. The Proponent shall ensure that all reasonable and feasible avoidance and mitigation measures are employed so that particulate matter emissions generated by the Moolarben mine complex do not cause exceedances of the criteria listed in Tables 8, 9 and 10 at any occupied residence on mine-owned land (including land owned by another mine) unless:
- the tenant and landowner has been notified of any health risks associated with such exceedances in accordance with the notification requirements under Schedule 4 of this approval;
 - the tenant of any land owned by the Proponent can terminate their tenancy agreement without penalty at any time, subject to giving reasonable notice, and the Proponent uses its best endeavours to provide assistance with relocation and sourcing of alternative accommodation;

- (c) air mitigation measures such as air filters, a first flush roof water drainage system and/or air conditioning) are installed at the residence, if requested by the tenant and landowner (if the residences is owned by another mine);
 - (d) particulate matter air quality monitoring is regularly undertaken to inform the tenant and landowner of the actual particulate emissions; and
 - (e) data from this monitoring is presented to the tenant in an appropriate format, for a medical practitioner to assist the tenant in making informed decisions on the health risks associated with occupying the property,
- to the satisfaction of the Secretary.

Air Quality Acquisition Criteria

19. If particulate matter emissions generated by the **Moolarben mine complex** exceed the **incremental** criteria, or contribute to **an** exceedance of the relevant cumulative criteria, in Tables 8, 9 and 10 at any residence on privately-owned land or on more than 25% of any privately-owned land (and a dwelling could be built on that land under existing planning controls), then upon receiving a written request for acquisition from the landowner, the Proponent shall acquire the land in accordance with the procedures in conditions 10-11 of Schedule 4.

Table 8: Long term land acquisition criteria for particulate matter

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

Table 9: Short term land acquisition criteria for particulate matter

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

Table 10: Long term land acquisition criteria for deposited dust

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

Notes to Tables 8-10:

^a **Cumulative** (i.e. incremental increase in concentrations due to the **complex** plus background concentrations due to all other sources);

^b **Incremental impact** (i.e. incremental increase in concentrations due to the **complex** on its own);

^c **Deposited dust** is to be assessed as insoluble solids as defined by Standards Australia, AS/NZS 3580.10.1:2003: Methods for Sampling and Analysis of Ambient Air - Determination of Particulate Matter - Deposited Matter - Gravimetric Method; and

^d **Excludes extraordinary events** such as bushfires, prescribed burning, dust storms, fire incidents, **illegal activities** or any other activity agreed by the Secretary.

Operating Conditions

20. The Proponent shall:
- (a) implement best management practice to minimise the off-site odour, fume and dust emissions of the project;
 - (b) implement all reasonable and feasible measures to minimise the release of greenhouse gas emissions from the site;
 - (c) minimise any visible off-site air pollution generated by the project;
 - (d) minimise the surface disturbance of the site;
 - (e) 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 approval;
 - (f) minimise the air quality impacts of the project during adverse meteorological conditions and extraordinary events (see Note d under Table 9); and
 - (g) co-ordinate the air quality management on site with the air quality management at the Ulan and Wilpinjong mines to minimise cumulative air quality impacts,
- to the satisfaction of the Secretary.

Air Quality Management Plan

- 20A. The Proponent shall prepare and implement an Air Quality Management Plan for the project to the satisfaction of the Secretary. This plan must:

- (a) be prepared in consultation with the EPA and be submitted to the Secretary for approval by 31 March 2015;
- (b) describe the measures that would be implemented to ensure compliance with the relevant air quality criteria and operating conditions of this approval;
- (c) describe the air quality management system;
- (d) include an air quality monitoring program that:
 - uses a combination of real-time and supplementary monitors to evaluate the performance of the project against the air quality criteria in this approval;
 - adequately supports the air quality management system;
 - evaluates and reports on the:
 - the effectiveness of the air quality management system; and
 - compliance against the air quality operating conditions;
 - defines what constitutes an air quality incident, and includes a protocol for identifying and notifying the Department and relevant stakeholders of any air quality incidents.

METEOROLOGICAL MONITORING

- 20B. For the life of the project, the Proponent shall ensure that there is a meteorological station in the vicinity of the site that:
- (a) complies with the requirements in the Approved Methods for Sampling of Air Pollutants in New South Wales guideline; and
 - (b) is capable of continuous real-time measurement of temperature lapse rate in accordance with the NSW Industrial Noise Policy, unless a suitable alternative is approved by the Secretary following consultation with the EPA.

ULAN PUBLIC SCHOOL

- 20C. The Proponent shall consult with DEC and, if requested:
- (a) implement agreed reasonable and feasible measures to ameliorate potential noise and/or dust impacts to Ulan Public School; or
 - (b) on a reasonable basis relating to the adverse effect of noise and/or dust from the project, contribute to or meet reasonable costs toward relocating the school.

21. (deleted)

22. (deleted)

23. (deleted)

24. (deleted)

25. (deleted)

SUBSIDENCE

Subsidence – Natural Features

26. The Proponent shall:
- (a) ensure that the Drip, Goulburn River Gorge and bed of the Goulburn River (see Appendix 7) remain outside the zone of recorded subsidence damage for longwall mining in NSW;
 - (b) minimise subsidence damage to Cliff Line 3 (see Appendix 7); and
 - (c) reduce the likelihood of subsidence damage to:
 - Aboriginal sites 264, 282, 283, 286, 287 (see Appendix 7) to low; and
 - Aboriginal site 280 (see Appendix 7) to moderate.

Note: The mine layout and design will be reviewed during the assessment of each subsidence management plan (see below), which will be informed by both the end-of panel reports (see condition 26 below) and each independent environmental audit (see condition 10 of Schedule 5). Consequently, the final mine plan may differ in minor respects from the mine plan shown in Appendix 7. However, the revised mine plan would need to comply with the performance criteria specified in this condition.

Subsidence Management Plan

27. The Proponent shall prepare and implement a Subsidence Management Plan (SMP) for the project to the satisfaction of the Director-General of DRE. This plan must:
- (a) be prepared in accordance with the latest version (or subsequent replacement) of the:
 - New Approval Process for Management of Coal Mining Subsidence - Policy; and
 - Guideline for Applications for Subsidence Management Approvals;
 - (b) be approved prior to the carrying out any underground mining operations that could cause subsidence;
 - (c) include a detailed program to monitor:
 - the height of fracturing above the goaf of the longwall panels;

- surface subsidence above the longwall panels, including all near and far field components of subsidence;
 - the impact of surface subsidence on surface features, including flora and fauna, threatened species, and any surface water quality and/or flows; and
 - the effectiveness of any subsidence mitigation measures; and
- (d) a program to validate the subsidence prediction methodology for the project, and calibrate it to sit specific conditions.

End-of-Panel Report

28. Prior to completion of each longwall panel, the Proponent shall:
- (a) prepare an end-of-panel report analysing the subsidence, surface water, and groundwater impacts of the panel, and the cumulative impacts of this panel combined with any other longwall panels;
 - (b) commission suitably qualified subsidence and groundwater experts whose appointment has been approved by the Secretary to review the end-of-panel report, and if necessary recommend changes to the monitoring programs and/or mine plan for subsequent panels; and
 - (c) submit a copy of the end-of-panel report and expert review to the Department, DRE and any other relevant agencies.

WATER

Water Supply

29. The Proponent shall ensure that:
- (a) it has sufficient water for all stages of the project, and if necessary, adjust the scale of operations on site to match its available water supply; and
 - (b) any water supply constraints do not compromise any aspect of the environmental performance of the mine.

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

Compensatory Water Supply

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

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

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

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

Water Pollution

31. Unless an EPL authorises otherwise, the Proponent shall comply with section 120 of the POEO Act.

Water Management Performance Measures

32. The Proponent shall comply with the performance measures in Table 11 to the satisfaction of the Secretary.

Table 11: Water Management Performance Measures

Feature	Performance Measure
Water Management - General	<ul style="list-style-type: none"> • Minimise cumulative water impacts with the other mines in the region • Maximise water sharing with the other mines in the region • Minimise the use of clean water on site
The Drip	<ul style="list-style-type: none"> • Nil
Construction and operation of linear infrastructure	<ul style="list-style-type: none"> • Design, install and maintain erosion and sediment controls generally in accordance with the series Managing Urban Stormwater: Soils and Construction including Volume 1, Volume 2A – Installation of Services and Volume 2C – Unsealed Roads • Design, install and maintain the infrastructure within 40 m

Feature	Performance Measure
	<ul style="list-style-type: none"> of watercourses generally in accordance with the <i>Guidelines for Controlled Activities on Waterfront Land (DPI 2007)</i>, or its latest version Design, installation and maintenance of creek crossings generally in accordance with the Policy and Guidelines for Fish Friendly Waterway Crossings (NSW Fisheries, 2003) and Why Do Fish Need To Cross The Road? Fish Passage Requirements for Waterway Crossings (NSW Fisheries 2003), or their latest versions
Mine Sediment Dams	<ul style="list-style-type: none"> Design, install and maintain the dams generally in accordance with the series Managing Urban Stormwater: Soils and Construction – Volume 1 and Volume 2E Mines and Quarries
Clean water diversion & storage infrastructure	<ul style="list-style-type: none"> Use best endeavours to upgrade the existing clean water systems to capture and convey the 100 year ARI flood Maximise as far as reasonable and feasible the diversion of clean water around disturbed areas on site
Mine water storages	<ul style="list-style-type: none"> Mine water storage infrastructure is designed to store a 50 year ARI 72 hour storm event On-site storages (including tailings dams, mine infrastructure dams, groundwater storage and treatment dams) are suitably lined to comply with a permeability standard of $< 1 \times 10^{-9}$ m/s
Tailings, acid forming and potentially acid forming materials	(c) In-pit emplacement, encapsulation or capping to prevent the migration of pollutants beyond the pit shell
In-pit emplacement of tailings, acid forming and potentially acid forming materials	<ul style="list-style-type: none"> Emplacement, encapsulation and capping to prevent or minimise the migration of pollutants beyond the pit shell of seepage from out of pit emplacement areas Adequate freeboard within the pit void to minimise the risk of discharge to surface waters
Chemical and hydrocarbon storage	<ul style="list-style-type: none"> Chemical and hydrocarbon products to be stored in bunded areas in accordance with the relevant Australian Standard
Aquatic and riparian ecosystem, including the relevant sections of Moolarben Creek, Bora Creek and the Goulburn River	<ul style="list-style-type: none"> Maintain or improve baseline channel stability 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

Water Management Plan

33. The Proponent shall prepare and implement a Water Management Plan for the project to the satisfaction of the Secretary. This plan must:
- (a) be prepared in consultation with NOW and the EPA, by suitably qualified and experienced persons whose appointment has been approved by the Secretary and be submitted to the Secretary for approval by 31 March 2015;
 - (a1) include reference to the National Water Quality Management Strategy;
 - (a2) include detailed performance criteria and describe measures to ensure that the Proponent complies with the Water Management Performance Measures (see Table 11);
 - (b) in addition to the standard requirements for management plans (see Condition 3 of Schedule 5), this plan must include a:
 - (i) Site Water Balance that:
 - includes details of:
 - sources and security of water supply, including contingency planning for future reporting periods;
 - water use and management on site, including details of water sharing between neighbouring mining operations;
 - reporting procedures, including the preparation of a site water balance for each calendar year;
 - describes the measures that would be implemented to:
 - minimise clean water use on site;
 - maximise water sharing with the other mines in the region;
 - (ii) Surface Water Management Plan, that includes:
 - detailed baseline data on water flows and quality in the water bodies that could be affected by the project;
 - a detailed description of the water management system on site;
 - detailed plans, including design objectives and performance criteria, for the:

- in-pit emplacement areas for tailings, acid forming and potentially acid forming materials;
 - final voids (see the Rehabilitation Objectives in Table 13);
 - detailed performance criteria for the following, including trigger levels for investigating any potentially adverse impacts associated with the project:
 - the water management system;
 - downstream surface water quality;
 - downstream flooding impacts and
 - stream and riparian vegetation health for Moolarben Creek, Bora Creek, and the Goulburn River;
 - a program to monitor and report on:
 - the effectiveness of the water management system; and
 - surface water flows and quality, stream and riparian vegetation health in the watercourses that could be affected by the project; and
 - downstream flooding impacts;
 - reporting procedures for the results of the monitoring program; and
 - a plan to respond to any exceedances of the performance criteria, and mitigate any adverse surface water impacts of the project;
- (iii) Groundwater Management Plan, that includes:
- detailed baseline data on groundwater levels, yield and quality in the region and privately-owned groundwater bores that could be affected by the project;
 - groundwater assessment criteria, including trigger levels for investigating any potentially adverse groundwater impacts;
 - a program to monitor and report on:
 - groundwater inflows to the underground and open cut mining operations;
 - the seepage/leachate from water storages, emplacements, backfilled voids and final voids;
 - background changes in groundwater yield/quality against mine-induced changes;
 - impacts of the project on:
 - regional and local (including alluvial) aquifers;
 - groundwater supply of potentially affected landowners; and
 - groundwater dependent ecosystems (including the Drip) and riparian vegetation;
 - a program to validate the groundwater model for the project, and compare the monitoring results with modelled predictions; and
 - a plan to respond to any exceedances of the groundwater assessment criteria.
- (iv) a protocol that has been prepared in consultation with the owners of the Ulan and Wilpinjong mines to:
- minimise cumulative water quality impacts;
 - review opportunities of increased water sharing between these projects;
 - co-ordinate water quality monitoring programs as far as practicable;
 - undertake joint investigations/studies in relation to complaints/exceedances of trigger levels where cumulative impacts are considered likely; and
 - co-ordinate modelling programs for validation, re-calibration and re-running of groundwater models.

BIODIVERSITY

Biodiversity Offset Strategy

34. The Proponent shall implement the biodiversity offset strategy for the project summarised in Table 12, and shown conceptually in Appendix 8, to the satisfaction of the Secretary.

Table 12: Summary of Biodiversity Offset Strategy

Area	Offset Type	Minimum Size Hectares
Area 3 Property 6	Conserve: <ul style="list-style-type: none"> • 6 ha of existing EEC Enhance and conserve: <ul style="list-style-type: none"> • 2.6 ha of regenerating EEC 	8.6
Areas 1, 2 and 3 Properties 6, 10, 12, 13, 14 and 15	Enhance existing vegetation: <ul style="list-style-type: none"> • 1282 ha of native vegetation Revegetate: <ul style="list-style-type: none"> • 48 ha of existing disturbed land to EEC 	1330
Area 1 Properties 12, 13, 14 and 15	Revegetate: <ul style="list-style-type: none"> • 153 ha of cleared land to native vegetation 	153

Clark	Enhance existing vegetation: <ul style="list-style-type: none"> • 300 ha of existing native vegetation • 32 ha of EEC 	332
Clifford	Enhance existing vegetation: <ul style="list-style-type: none"> • 19 ha of native vegetation • 62 ha of EEC 	81
Elward	Enhance existing vegetation: <ul style="list-style-type: none"> • 146 ha of native vegetation • 24 ha of EEC 	170
Property 5	Enhance existing vegetation: <ul style="list-style-type: none"> • 40 ha of native vegetation • 25 ha of EEC 	65
Properties 24 and 25	Enhance existing vegetation: <ul style="list-style-type: none"> • 59 ha of native vegetation • 4 ha of EEC 	63
Bobadeen	Enhance existing vegetation: <ul style="list-style-type: none"> • 8 ha of native vegetation • 159 ha of EEC 	167
Moolarmoo	Enhance existing vegetation: <ul style="list-style-type: none"> • 25 ha of native vegetation • 19 ha of EEC 	44

Note: The EEC referred to in this table is the White Box Yellow Box Blakely's Red Gum Woodland as defined under the TSC Act and White Box Yellow Box Blakely's Red Gum Grassy Woodland as defined under the EPBC Act.

Long Term Security of Offset

35. By the end of June 2015, unless otherwise agreed by the Secretary, the Proponent shall make suitable arrangements to provide appropriate long-term security for the offset areas in Table 12 in perpetuity, in consultation with OEH and to the satisfaction of the Secretary.

Note: The preferred mechanisms for the provision of long-term conservation security are via Biobanking Arrangements and additions to the OEH Estate.

Biodiversity Management Plan

36. The Proponent shall prepare and implement a Biodiversity Management Plan for the project to the satisfaction of the Secretary. This plan must:
- be prepared in consultation with OEH and be submitted to the Secretary for approval by 31 March 2015;
 - describe the short, medium, and long term measures that would be implemented to:
 - manage the remnant vegetation and habitat on the site and in the offset areas;
 - minimise biodiversity impacts of the project; and
 - implement the biodiversity offset strategy, including detailed performance and completion criteria;
 - include detailed performance and completion criteria for evaluating the performance of the biodiversity offset strategy, and triggering remedial action (if necessary);
 - include a detailed description of the measures that would be implemented for:
 - enhancing the quality of existing vegetation and fauna habitat;
 - restoring native vegetation and fauna habitat on the biodiversity offset areas through focusing on assisted natural regeneration, targeted vegetation establishment and the introduction of naturally scarce fauna habitat features (where necessary);
 - maximising the salvage of resources within the approved disturbance area - including vegetative, soil and cultural heritage resources – for beneficial reuse in the enhancement of the biodiversity areas or rehabilitation area;
 - rehabilitating the environmental bunds on site as soon as practicable and maintaining the landscaping on the bunds once it has been established;
 - collecting and propagating seed;
 - minimising the impacts on fauna on site, including undertaking pre-clearance surveys;
 - managing any potential conflicts between the proposed restoration works in the biodiversity areas and any Aboriginal heritage values (both cultural and archaeological);
 - managing salinity;
 - controlling weeds and feral pests;
 - controlling erosion;
 - managing grazing and agriculture on site;
 - controlling access; and
 - bushfire management;
 - include a seasonally-based program to monitor and report on the effectiveness of these measures, and progress against the detailed performance and completion criteria;

- (f) 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 against these risks; and
- (g) include details of who would be responsible for monitoring, reviewing, and implementing the plan.

Conservation Bond

37. By 30 June 2015, unless otherwise agreed by the Secretary, the Proponent shall lodge a Conservation Bond with the Department to ensure that the biodiversity offset strategy is implemented in accordance with the performance and completion criteria of the Biodiversity Management Plan. The sum of the bond shall 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, to the satisfaction of the Secretary.

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.

If the 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.

Notes:

- Existing bonds which have been paid for the Redhills, Area 1, Area 2 and Area 3 biodiversity offset areas remain current and are satisfactory to fulfill the requirements of this condition for those areas;
- Alternative funding arrangements for long-term management of the Biodiversity Offset Strategy, such as provision of capital and management funding as agreed by OEH as part of a Biobanking Agreement or transfer to conservation reserve estate can be used to reduce the liability of the conservation and biodiversity bond, and
- The sum of the bond may be reviewed in conjunction with any revision to the biodiversity offset strategy.

HERITAGE

Protection of Aboriginal Heritage Items

38. Unless otherwise authorised under the NP&W Act, the Proponent shall ensure that the project does not cause any direct or indirect impact on the identified Aboriginal heritage items located outside the approved disturbance area of the project.

Note: Identified Aboriginal heritage items are listed in Appendix 9.

Heritage Management Plan

39. The Proponent shall prepare and implement a Heritage Management Plan for the project to the satisfaction of the Secretary within six (6) months from the date of approval for MOD 9. This plan must:
- (a) be prepared by suitably qualified and experienced persons whose appointment has been endorsed by the Secretary;
 - (b) be prepared in consultation with OEH and the Aboriginal stakeholders (in relation to the management of Aboriginal heritage values);
 - (c) include results of further archaeological survey of the 10 hectares of land (as identified on Figure 10 of Appendix F of the EA) that has not been surveyed, and any land adjacent to the open cut mines that has not been surveyed and may be subject to blasting impacts;
 - (d) include the following for the management of Aboriginal Heritage:
 - a detailed archaeological test excavation and potential salvage program for site S1MC331;
 - a detailed archaeological test excavation and potential salvage program for sites S1MC343 and S1MC344, if it is determined by a qualified archaeologist that these sites may be subject to impacts associated with blasting;
 - a description of the measures that would be implemented for:
 - protecting, monitoring and/or managing the heritage sites/items identified in Appendix 9 and any sites identified during the surveys required in (c) above;
 - conserving the sites outside the surface disturbance area, including measures that would be implemented to secure, analyse and record the sites at risk of subsidence and/or blasting;
 - managing the discovery of any human remains or previously unidentified Aboriginal objects on site;
 - 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 both on site and within any Aboriginal heritage conservation areas; and
 - ensuring any workers on site receive suitable heritage inductions prior to carrying out any development on site, and that suitable records are kept of these inductions;

- a strategy for the storage of any heritage items salvaged on site, both during the project and in the long term;
- (e) include a detailed plan for the implementation of the mitigation and management measures outlined for the specified heritage items in Appendix 10, including archival recording, historical research and archaeological assessment prior to any disturbance.

40. (deleted)

41. (deleted)

42. (deleted)

43. (deleted)

44. (deleted)

45. (deleted)

46. (deleted)

47. (deleted)

48. (deleted)

49. (deleted)

50. (deleted)

51. (deleted)

52. (deleted)

53. (deleted)

TRANSPORT

Road Works

54. Prior to the commencement of mining operations in open cut 2, the Proponent shall divert or close Carrs Gap Road to the satisfaction of Council.
55. Prior to the commencement of mining operations in open cut 3, the Proponent shall divert or close Moolarben Road to the satisfaction of Council.

Note: These road works must be constructed in accordance with the relevant RMS or Austroads standards, and signposted and lit in accordance AS 1742 – Manual of Uniform Traffic Control Devices and AS/NZS 1158: 2005 – Lighting for Roads and Public Spaces.

Ulan Road Strategy

56. The Proponent shall:
- (a) work with Council and the owners of the Ulan and Wilpinjong mines to agree to develop a detailed plan for the implementation of the Ulan Road Strategy; and
 - (b) make financial contributions towards the implementation of this detailed plan, in accordance with the requirements in the plan, with its share of the mining companies' contribution for the implementation of the strategy to be proportionate to its share of mining-related traffic to be generated on the road during the life of the strategy.

If there is any dispute between the various parties involved in either the development of the detailed plan for the implementation of the strategy, or the implementation of the strategy, then any of the parties may refer the matter to the Secretary for resolution.

57. (deleted)

TRAFFIC MANAGEMENT

58. The Proponent shall:
- (a) schedule the shift changes on site to occur outside of school bus hours; and
 - (b) co-ordinate the shift changes on site with the shift changes of the adjoining Ulan and Wilpinjong mines to minimise the potential cumulative traffic impacts of the shift changes at the three mines.

Rail Transport – West

59. The Proponent shall not transport any coal west of the site through Gulgong and Mudgee without the written approval of the Secretary. In seeking this approval, the Proponent shall submit a report to the Secretary that:
- (a) has been prepared in consultation with Council;
 - (b) demonstrates that the railway line has been suitably upgraded to accommodate the proposed coal train traffic;
 - (c) describes:
 - the expected tonnages, train size, number, and rail scheduling of the proposed coal train movements (both laden and unladen);
 - the measures that would be implemented to minimise, mitigate and/or manage the ongoing environmental effects of these coal train movements; and
 - how the performance of these measures would be monitored.

Monitoring of Coal Transport

60. The Proponent shall monitor the:
- (a) amount of coal transported from the site each year; and
 - (b) date and time of each train movement generated by the project.

VISUAL

Additional Visual Impact Mitigation

61. Upon receiving a written request from the owner of any residence on privately-owned land which has, or would have, significant direct views of the mining operations and infrastructure on site during the project, the Proponent shall implement additional visual impact mitigation measures (such as landscaping treatments or vegetation screens) to reduce the visibility of these mining operations and infrastructure from the residences on their properties.

These mitigation measures must be reasonable and feasible, and must be implemented within a reasonable timeframe.

If the Proponent 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.

Notes:

- *The additional visual impact mitigation measures must be aimed at reducing the visibility of the mining operations on site from significantly affected residences, and do not require measures to reduce the visibility of the mining operations from other locations on the affected properties.*
- *The additional visual impact mitigation measures do not necessarily have to include the implementation of measures on the affected property itself (i.e. the additional measures could involve the implementation of measures outside the affected property boundary that provide an effective reduction in visual impacts).*

Operating Conditions

62. The Proponent shall:
- (a) implement best management practice to minimise the visual and off-site lighting impacts of the project;
 - (b) ensure no fixed outdoor lights shine above the horizontal;
 - (c) ensure no in-pit mobile lighting rigs shine above the pit wall and other mobile lighting rigs do not shine above the horizontal;
 - (d) ensure that all external lighting associated with the project complies with *Australian Standard AS4282 (INT) 1997 – Control of Obtrusive Effects of Outdoor Lighting* or its latest version;
 - (e) provide for the establishment of trees and shrubs and/or the construction of mounding or bunding to minimise visual and lighting impacts on the Proponent's land adjoining public roads with views of the site;
 - (f) 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, to the satisfaction of the Secretary.

BUSHFIRE MANAGEMENT

63. The Proponent shall:
- (a) ensure that the project is suitably equipped to respond to any fires on site; and
 - (b) assist the RFS and emergency services as much as practicable if there is a fire in the vicinity of the site.

WASTE

64. The Proponent shall:

- (a) implement all reasonable and feasible measures to minimise the waste (including coal reject) generated by the project;
- (b) ensure that the waste generated by the project is appropriately stored, handled and disposed of; and
- (c) monitor and report on effectiveness of the waste minimisation and management measures in the Annual Review.

REHABILITATION

Rehabilitation Objectives

65. The Proponent shall rehabilitate the site to the satisfaction of the Executive Director Mineral Resources. This rehabilitation must be generally consistent with the proposed rehabilitation described in the EA (and depicted conceptually in the figure in Appendix 8), and comply with the objectives in Table 13.

Table 13: Rehabilitation Objectives

Feature	Objective
Mine site (as a whole)	<ul style="list-style-type: none"> • Safe, stable and non-polluting; • Constructed landforms are to drain to the natural environment (excluding the final voids); • Final landforms are to be consistent with the surrounding topography of the area, taking into account relief patterns and principles; and • Minimise visual impact of final landforms as far as is reasonable and feasible.
Final Voids	<ul style="list-style-type: none"> • Minimise the size and depth of final voids so far as is reasonable and feasible, subject to meeting the objectives below; • Minimise the drainage catchment of the final void so far as is reasonable and feasible; • Negligible high wall instability risk; • The size and depth of the final voids must be designed having regard to their function as long-term groundwater sinks, to ensure that groundwater flows across the back-filled pit towards the final void; and • Minimise risk of flood interaction for all flood events up to and including the Probable Maximum Flood level.
Surface infrastructure	<ul style="list-style-type: none"> • To be decommissioned and removed, unless the Executive Director, Mineral Resources agrees otherwise.
Agricultural land	<ul style="list-style-type: none"> • Establish agricultural land in areas indicated in the figure in Appendix 8 to a similar agricultural suitability to that existing prior to mining.
Other Land	<ul style="list-style-type: none"> • Restore ecosystem function, including maintaining or establishing self-sustaining ecosystems comprised of: <ul style="list-style-type: none"> • native forests and woodland, including EECs; • habitat for threatened fauna species; and • wildlife corridors (as indicated in the figure in Appendix 8).
Community	<ul style="list-style-type: none"> • Ensure public safety; and • Minimise the adverse socio-economic effects associated with mine closure.

Progressive Rehabilitation

66. The Proponent shall 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. Interim rehabilitation strategies shall be employed when areas prone to dust generation cannot yet be permanently rehabilitated.

Note: It is accepted that some parts of the site that are progressively rehabilitated may be subject to further disturbance at some later stage of the project.

67. The Proponent shall progressively landscape the environmental bunds on site.

Rehabilitation Management Plan

68. The Proponent shall prepare and implement a Rehabilitation Management Plan for the project to the satisfaction of the Executive Director, Mineral Resources. This plan must:
- (a) be prepared in consultation with the Department, NOW, OEH, Council and the CCC;
 - (b) be submitted to the Executive Director, Mineral Resources for approval by 31 March 2015;
 - (c) be prepared in accordance with any relevant DRE guideline;
 - (c1) provide for the periodic review and updating of the rehabilitation plans and management strategies to ensure best practice landform design and establishment strategies are employed

- (d) describe how the rehabilitation of the site would be integrated with the implementation the biodiversity offset strategy;
- (e) include detailed performance and completion criteria for evaluating the performance of the rehabilitation of the site, and triggering remedial action (if necessary);
- (f) describe the measures that would be implemented to ensure compliance with the relevant conditions of this approval, and address all aspects of rehabilitation including mine closure, final landform, and final land use;
- (g) include interim rehabilitation where necessary to minimise the area exposed for dust generation;
- (h) include a program to monitor, independently audit and report on the effectiveness of the measures, and progress against the detailed performance and completion criteria; and
- (i) build to the maximum extent practicable on the other management plans required under this approval.

The Drip

69. Notwithstanding the approval of Modification 9, there is to be no extraction of the additional coal resource approved under Modification 9 until the land tenure and surrounds associated with the natural feature known as ‘the Drip’ is resolved to ensure its conservation to the satisfaction of the Secretary and the Office of Environment and Heritage.

This does not prohibit the implementation of the components for Modification 9 including construction and operation the approved water management infrastructure upgrade works.

GREENHOUSE GAS

Energy Savings Action Plan

70. The Proponent shall prepare and implement an updated Energy Savings Action Plan for the project to the satisfaction of the Secretary. This plan must:
- (a) be prepared in consultation with NOW;
 - (b) be prepared in accordance with the Guidelines for Energy Savings Action Plans (DEUS 2005, or its latest version);
 - (c) be submitted to the Secretary for approval; and
 - (d) include an updated program to monitor the effectiveness of measures to reduce energy use on site.

Gas Drainage

71. The Proponent shall implement all reasonable and feasible measures to minimise the greenhouse gas emissions from the underground mining operations to the satisfaction of the Secretary.
72. Prior to carrying out underground mining operations, the Proponent shall submit an updated Greenhouse Gas Minimisation Plan to the Secretary. This plan must:
- (a) identify options for minimising greenhouse gas emissions from underground mining operations, with a particular focus on capturing and/or using these emissions;
 - (b) investigate the feasibility of implementing each option;
 - (c) propose the measures that would be implemented in the short to medium term on site; and
 - (d) include a research program to inform the continuous improvement of the greenhouse gas minimisation measures on site.

SUBSIDENCE

Performance Measures – Natural and Heritage Features

73. The Proponent shall ensure that the project does not cause any exceedances of the performance measures in Table 14, to the satisfaction of the Secretary.

Table 14: Subsidence Impact Performance Measures

Special Feature	
The Drip	Nil impact or environmental consequences
Water Resources	
Goulburn River and the bed of the Goulburn River	Negligible impact or environmental consequences
Land	
Cliff Line 3	See condition 26
Heritage Sites	
Aboriginal heritage sites 264, 280, 282, 283, 286 and 287	See condition 26
Historic heritage sites	No greater subsidence impact or environmental consequences than predicted in the EA
Mine workings	
First workings under an approved	To remain long-term stable and non-subsiding.

Extraction Plan beneath any feature where performance measures in this table require negligible impact, negligible consequence or negligible loss	
Second workings	To be carried out only within the longwall mining domains, in accordance with an approved Extraction Plan.

Notes:

- The locations of the features referred to in Table 14 are shown in Appendix 7.
- The Proponent will be required to define more detailed performance indicators (including impact assessment criteria) for each of these performance measures in the various management plans that are required under this approval.
- Measurement and/or monitoring of compliance with performance measures and performance indicators is to be undertaken using generally accepted methods that are appropriate to the environment and circumstances in which the feature or characteristic is located. These methods are to be fully described in the relevant management plans. In the event of a dispute over the appropriateness of proposed methods, the Secretary will be the final arbiter.
- The requirements of this condition only apply to the impacts and consequences of mining operations, construction or demolition undertaken following the date of this approval.

Offsets

74. If the Proponent exceeds the performance measures in Table 14 and the Secretary determines that:
- it is not reasonable or feasible to remediate the impact or environmental consequence; or
 - remediation measures implemented by the Proponent have failed to satisfactorily remediate the impact or environmental consequence;
- then the Proponent shall provide a suitable offset to compensate for the impact or environmental consequence, to the satisfaction of the Secretary.

*Note: Any offset required under this condition must be proportionate with the significance of the impact or environmental consequence.
Impacts to the Drip cannot be offset and consequently the proponent shall ensure that the project has no impact on the Drip or the water supply to the Drip.*

Performance Measures – Built Features

75. The Proponent shall ensure that the project does not cause any exceedances of the performance measures in Table 15, to the satisfaction of the Secretary.

Table 15: Subsidence Impact Performance Measures – Built Features

Key public infrastructure:	
Gulgong-Sandy Hollow Railway Line Wollar-Wellington 330kV Transmission Line	Always safe and serviceable. Damage that does not affect safety or serviceability must be fully repairable, and must be fully repaired.
Other infrastructure:	
Roads	Safe, serviceable and repairable unless the owner agrees otherwise in writing
Other built features and improvements, including fences	Serviceability should be maintained wherever practicable. Loss of serviceability must be fully compensated. Damage must be fully repairable, and must be fully repaired or else replaced or fully compensated.
Public Safety	
Public safety	Negligible additional risk

Notes:

- The locations of the features referred to in Table 15 are shown in Appendix 7.
 - The Proponent will be required to define more detailed performance indicators for each of these performance measures in Built Features Management Plans or Public Safety Management Plan (see condition 74 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.
 - The requirements of this condition only apply to the impacts and consequences of mining operations undertaken following the date of this approval.
 - Requirements under this condition may be met by measures undertaken in accordance with the Mine Subsidence Compensation Act 1961.
 - Requirements regarding safety or serviceability do not prevent preventative or mitigatory actions being taken prior to or during mining in order to achieve or maintain these outcomes.
76. Any dispute between the Proponent and the owner of any built feature over the interpretation, application or implementation of the performance measures in Table 15 is to be settled by the Secretary, following consultation with the Executive Director Mineral Resources. Any decision by the Secretary shall be final and not subject to further dispute resolution under this approval.

Extraction Plan

77. The Proponent shall prepare and implement an Extraction Plan for all second workings on site to the satisfaction of the Secretary. Each extraction plan must:
- (a) be prepared by suitably qualified and experienced persons whose appointment has been endorsed by the Secretary;
 - (b) be approved by the Secretary before the Proponent carries out any of the second workings covered by the plan;
 - (c) include detailed plans of existing and proposed first and second workings and any associated surface development;
 - (d) include detailed performance indicators for each of the performance measures in Tables 14 and 15;
 - (e) provide revised predictions of the potential subsidence effects, subsidence impacts and environmental consequences of the proposed second workings, incorporating any relevant information obtained since this approval;
 - (f) describe the measures that would be implemented to ensure compliance with the performance measures in Tables 14 and 15, and manage or remediate any impacts and/or environmental consequences;
 - (g) include a Built Features Management Plan, which has been prepared in consultation with DRE and the owners of affected public infrastructure, to manage the potential subsidence impacts and/or environmental consequences of the proposed second workings, and which:
 - i. addresses in appropriate detail all items of key public infrastructure and other public infrastructure and all classes of other built features;
 - ii. has been prepared following appropriate consultation with the owner/s of potentially affected feature/s;
 - iii. recommends appropriate remedial measures and includes commitments to mitigate, repair, replace or compensate all predicted impacts on potentially affected built features in a timely manner; and
 - iv. 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 of longwalls which may impact the infrastructure;
 - (h) include a Water Management Plan, which has been prepared in consultation with EPA and NOW, which provides for the management of the potential impacts and/or environmental consequences of the proposed second workings on watercourses and aquifers, including:
 - i. surface and groundwater impact assessment criteria, including trigger levels for investigating any potentially adverse impacts on water resources or water quality;
 - ii. a program to monitor and report stream flows, assess any changes resulting from subsidence impacts and remediate and improve stream stability;
 - iii. a program to monitor and report groundwater inflows to underground workings;
 - iv. a program to predict, manage and monitor impacts on groundwater bores on privately-owned land; and
 - (i) include a Biodiversity Management Plan, which has been prepared in consultation with OEH, which provides for the management of the potential impacts and/or environmental consequences of the proposed second workings on aquatic and terrestrial flora and fauna, with a specific focus on threatened species, populations and their habitats; endangered ecological communities; and water dependent ecosystems;
 - (j) include a Land Management Plan, which has been prepared in consultation with any affected public authorities, to manage the potential impacts and/or environmental consequences of the proposed second workings on land in general;
 - (k) include a Heritage Management Plan, which has been prepared in consultation with OEH and relevant stakeholders for both Aboriginal and historic heritage, to manage the potential environmental consequences of the proposed second workings on both Aboriginal and non-Aboriginal heritage items, and reflects all requirements under conditions 38-39 of schedule 3;
 - (l) include a Public Safety Management Plan, which has been prepared in consultation with DRE, to ensure public safety in the mining area;
 - (m) include the Subsidence Management Plan required in condition 27 and a Subsidence Monitoring Program, which has been prepared in consultation with DRE, to:
 - i. describe the on-going subsidence monitoring program;
 - ii. provide data to assist with the management of the risks associated with subsidence;
 - iii. validate the subsidence predictions;
 - iv. analyse the relationship between the predicted and resulting subsidence effects and predicted and resulting impacts under the plan and any ensuing environmental consequences;
 - v. inform the contingency plan and adaptive management process; and
 - vi. inform the End-of-Panel report required in condition 28;
 - (n) include a contingency plan that expressly provides for adaptive management where monitoring indicates that there has been an exceedance of any performance measure in Tables 14 and 15, or where any such exceedance appears likely;
 - (o) proposes appropriate revisions to the Rehabilitation Management Plan required under condition 68 of Schedule 3; and

- (p) include a program to collect sufficient baseline data for future Extraction Plans.

Note: To identify the longwall mining domains referred to in this condition, see Appendix 2.

- 78. The Proponent shall ensure that the management plans required under conditions 77(g)-(l) above include:
 - (a) an assessment of the potential environmental consequences of the Extraction Plan, incorporating any relevant information that has been obtained since this approval; and
 - (b) a detailed description of the measures that would be implemented to remediate predicted impacts.

First Workings

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

Payment of Reasonable Costs

- 80. The Proponent shall pay all reasonable costs incurred by the department to engage suitably qualified, experienced and independent experts to review the adequacy of any aspect of an Extraction Plan.
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SCHEDULE 4 ADDITIONAL PROCEDURES

NOTIFICATION OF LANDOWNERS/TENANTS

1. By the end of **March 2015**, the Proponent shall:
 - (a) notify in writing the owners of:
 - (a) any land in Table 1A and any land or residence exceeding the criteria in Tables 2A and 2 (respectively) of Schedule 3 that they have the right to require the Proponent to acquire their land at any stage during the project;
 - (b) any residence on the land listed in Table 3 and any residence exceeding the criteria in Table 3A of Schedule 3 that they have the right to request the Proponent for additional noise mitigation measures to be installed at their residence at any stage during the project; and
 - any privately-owned land within 2 kilometres of the approved open cut mining pit/s that they are entitled to ask for an inspection to establish the baseline condition of any buildings or structures on their land, or to have a previous property inspection report updated;
 - (b) notify the tenants of any mine-owned land of their rights under this approval; and
 - (c) send a copy of the NSW Health fact sheet entitled "Mine Dust and You" (as may be updated from time to time) to the owners and/or existing tenants of any land (including mine-owned land) where the predictions in the EA identify that dust emissions generated by the project are likely to be greater than the relevant air quality criteria in Schedule 3 at any time during the life of the project.
2. Prior to entering into any tenancy agreement for any land owned by the Proponent that is predicted to experience exceedances of the recommended dust and/or noise criteria, or for any of the land listed in Table 3 that is subsequently purchased by the Proponent, the Proponent shall:
 - (a) advise the prospective tenants of the potential health and amenity impacts associated with living on the land, and give them a copy of the NSW Health fact sheet entitled "Mine Dust and You" (as may be updated from time to time); and
 - (b) advise the prospective tenants of the rights they would have under this approval, to the satisfaction of the Secretary.
3. As soon as practicable after obtaining monitoring results showing:
 - (a) (a) an exceedance of any relevant criteria in Schedule 3, the Proponent shall notify affected landowners in writing of the exceedance, and provide regular monitoring results to each affected landowner until the project is again complying with the relevant criteria; and
 - (b) (b) an exceedance of the relevant air quality criteria in Schedule 3, the Proponent shall send a copy of the NSW Health fact sheet entitled "Mine Dust and You" (as may be updated from time to time) to the affected landowners and/or existing tenants of the land (including the tenants of any mine-owned land).

INDEPENDENT REVIEW

4. If an owner of privately-owned land considers the project to be exceeding the criteria in Schedule 3, then he/she may ask the Secretary in writing for an independent review of the impacts of the project 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 Proponent shall:

- (a) commission a suitably qualified, experienced and independent expert, whose appointment has been approved by the Secretary, to:
 - consult with the landowner to determine his/her concerns;
 - conduct monitoring to determine whether the project is complying with the relevant impact assessment criteria in Schedule 3; and
 - if the project is not complying with these criteria then:
 - o determine if more than one mine is responsible for the exceedance, and if so the relative share of each mine regarding the impact on the land;
 - o identify the measures that could be implemented to ensure compliance with the relevant criteria; and
 - (b) give the Secretary and landowner a copy of the independent review.
5. (deleted)
 6. (deleted)
 7. (deleted)
 8. (deleted)
 9. (deleted)

LAND ACQUISITION

10. Within 3 months of receiving a written request from a landowner with acquisition rights, the Proponent shall make a binding written offer to the landowner based on:
- (a) the current market value of the landowner's interest in the land at the date of this written request, as if the land was unaffected by the project, having regard to the:
 - existing and permissible use of the land, in accordance with the applicable planning instruments at the date of the written request; and
 - presence of improvements on the land and/or any approved building or structure which has been physically commenced at the date of the landowner's written request, and is due to be completed subsequent to that date, but excluding any improvements that have resulted from the implementation of the additional noise and/or air quality mitigation measures in **conditions 4 and 5** of Schedule 3;
 - (b) the reasonable costs associated with:
 - relocating within the Mid-western Regional local government area, or to any other local government area determined by the Secretary; and
 - obtaining legal advice and expert advice for determining the acquisition price of the land, and the terms upon which it is to be acquired; and
 - (c) reasonable compensation for any disturbance caused by the land acquisition process.

However, if at the end of this period, the Proponent and landowner cannot agree on the acquisition price of the land and/or the terms upon which the land is to be acquired, then either party may refer the matter to the Secretary for resolution.

Upon receiving such a request, the Secretary will request the President of the NSW Division of the Australian Property Institute to appoint a qualified independent valuer to:

- consider submissions from both parties;
- determine a fair and reasonable acquisition price for the land and/or the terms upon which the land is to be acquired, having regard to the matters referred to in paragraphs (a)-(c) above;
- prepare a detailed report setting out the reasons for any determination; and
- provide a copy of the report to both parties.

Within 14 days of receiving the independent valuer's report, the Proponent shall make a binding written offer to the landowner to purchase the land at a price not less than the independent valuer's determination.

However, if either party disputes the independent valuer's determination, then within 14 days of receiving the independent valuer's report, they may refer the matter to the Secretary for review. Any request for a review must be accompanied by a detailed report setting out the reasons why the party disputes the independent valuer's determination. Following consultation with the independent valuer and both parties, the Secretary will determine a fair and reasonable acquisition price for the land, having regard to the matters referred to in paragraphs (a)-(c) above, the independent valuer's report, the detailed report of the party that disputes the independent valuer's determination and any other relevant submissions.

Within 14 days of this determination, the Proponent shall make a binding written offer to the landowner to purchase the land at a price not less than the Secretary's determination.

If the landowner refuses to accept the Proponent's binding written offer under this condition within 6 months of the offer being made, then the Proponent's obligations to acquire the land shall cease, unless the Secretary determines otherwise.

11. The Proponent shall pay all reasonable costs associated with the land acquisition process described in condition 10 above, including the costs associated with obtaining Council approval for any plan of subdivision (where permissible), and registration of this plan at the Office of the Registrar-General.

**SCHEDULE 5
ENVIRONMENTAL MANAGEMENT, AUDITING AND REPORTING**

ENVIRONMENTAL MANAGEMENT

Environmental Management Strategy

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

Adaptive Management

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

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

- (a) take all reasonable and feasible steps to ensure that the exceedance ceases and does not recur;
- (b) consider all reasonable and feasible options for remediation (where relevant) and submit a report to the Department describing those options and any preferred remediation measures or other course of action; and
- (c) implement remediation measures as directed by the Secretary, to the satisfaction of the Secretary.

Management Plan Requirements

3. The Proponent shall ensure that the management plans required under this approval are prepared in accordance with any relevant guidelines, and include:
 - (a) detailed baseline data;
 - (b) a description of:
 - the relevant statutory requirements (including any relevant approval, licence or lease conditions);
 - any relevant limits or performance measures/criteria;
 - the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the project or any management measures;
 - (c) a description of the measures that would be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria;
 - (d) a program to monitor and report on the:
 - impacts and environmental performance of the project;
 - effectiveness of any management measures (see c above);
 - (e) a contingency plan to manage any unpredicted impacts and their consequences;
 - (f) a program to investigate and implement ways to improve the environmental performance of the project over time;
 - (g) a protocol for managing and reporting any:
 - 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.

Annual Review

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

Revision of Strategies, Plans and Programs

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

Note: This is to ensure the strategies, plans and programs are updated on a regular basis, and incorporate any recommended measures to improve the environmental performance of the project.

Community Consultative Committee

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

Notes:

- The CCC is an advisory committee. The Department and other relevant agencies are responsible for ensuring that the Proponent complies with this approval; and
- The CCC should be comprised of an independent chair and appropriate representation from the Proponent, Council, recognised environmental groups and the local community.

REPORTING

Incident Reporting

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

Regular Reporting

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

AUDITING

9. By 31 December 2015, and every 3 years thereafter, unless the Secretary directs otherwise, the Proponent shall commission and pay the full cost of an Independent Environmental Audit of the project. This audit must:
 - (a) be conducted by a suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary;
 - (b) include consultation with the relevant agencies;

- (c) assess the environmental performance of the project and assess whether it is complying with the requirements in this approval, and any other relevant approvals, relevant EPL/s and/or Mining Lease (including any assessment, plan or program required under these approvals);
- (d) review the adequacy of any approved strategy, plan or program required under the abovementioned approvals; and
- (e) recommend measures or actions to improve the environmental performance of the Moolarben mine complex, and/or any strategy, plan or program required under these approvals.

Note:

- *Notwithstanding the timing referred to above, audits must be carried out prior to the completion of longwall panels 4 and 8. The Proponent must liaise with the Department to determine the precise date of these audits.*
- *This audit team should be led by a suitably qualified auditor, and include experts in the field of subsidence, surface water and groundwater management, noise, ecology and mine rehabilitation.*

10. Within 6 weeks of completing this audit, or as otherwise agreed by the Secretary, the Proponent shall submit a copy of the audit report to the Secretary with a response to any recommendations contained in the audit report.

ACCESS TO INFORMATION

11. The Proponent shall:
- (a) make the following information publicly available on its website:
 - the EA;
 - current statutory approvals for the project;
 - approved strategies, plans or programs required under the conditions of this approval;
 - a comprehensive summary of the monitoring results of the project, which have been reported in accordance with the various plans and programs approved under the conditions of this approval;
 - a complaints register, which is to be updated on a monthly basis;
 - minutes of CCC meetings;
 - the last five annual reviews;
 - any independent environmental audit, and the Proponent's response to the recommendations in any audit;
 - any other matter required by the Secretary; and
 - (b) keep this information up to date,
 - (c) investigate and report on reasonable and feasible measures to make predictive meteorological data and real time monitoring data publicly available on its website to the satisfaction of the Secretary.
-

**APPENDIX 1:
SCHEDULE OF LAND**

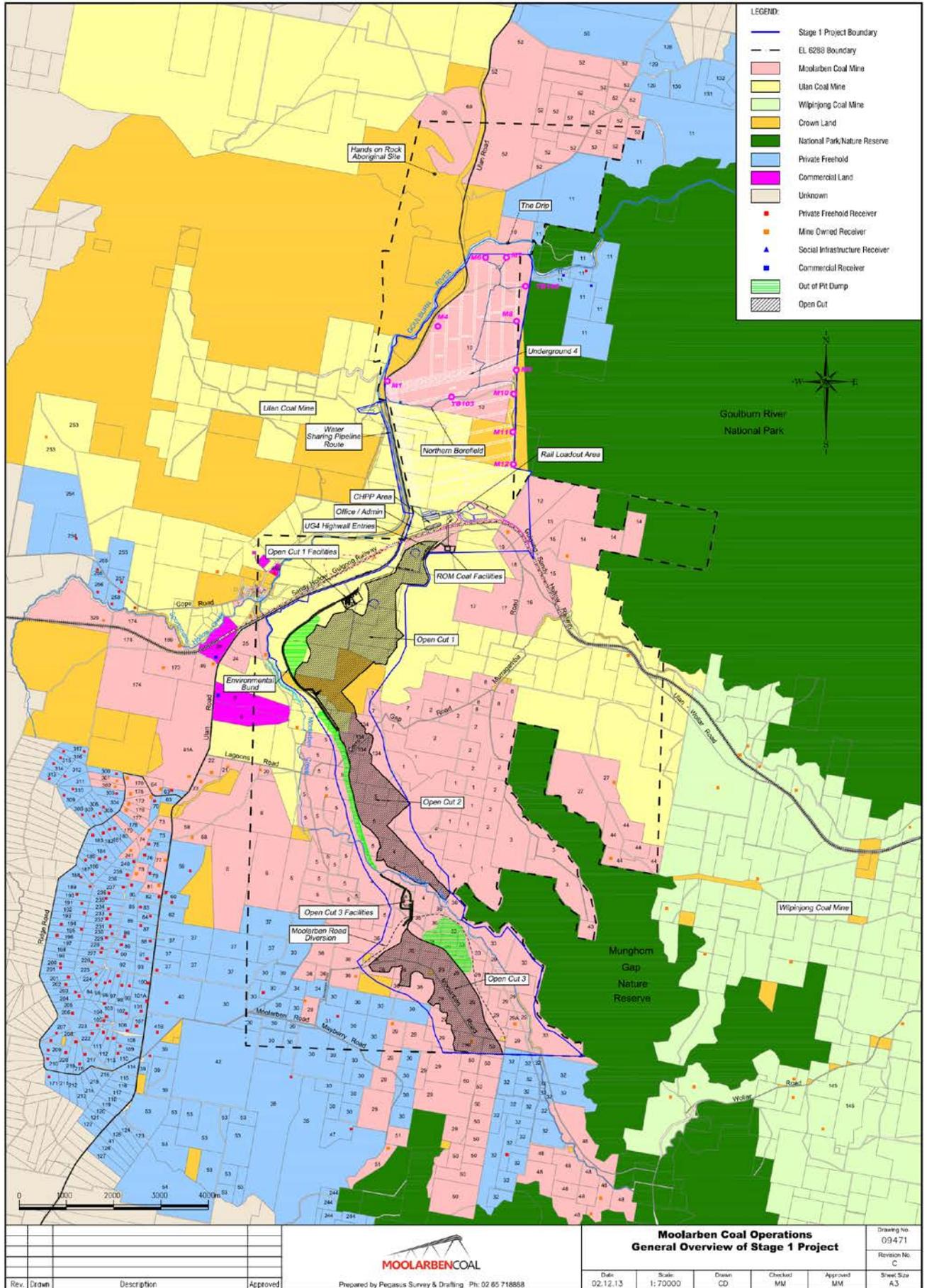
Owner	Description	Parish	County	EA ID
Moolarben Coal Operations Pty Ltd	Lot 1 DP 817487	Lennox	Phillip	-
Moolarben Coal Operations Pty Ltd	Pt. Lot 102 DP 755442	Moolarben	Phillip	50
Moolarben Coal Operations Pty Ltd	Pt. Lot 157 DP 755442	Moolarben	Phillip	50
Moolarben Coal Operations Pty Ltd	Pt. Lot 6 DP 115031	Moolarben	Phillip	50
DJ & JG Stokes	Pt. Lot 208 DP 755442	Moolarben	Phillip	32
DJ & JG Stokes	Pt. Lot 4 DP 575167	Moolarben	Phillip	32
DJ & JG Stokes	Pt. Lot 65 DP 755442	Moolarben	Phillip	32
DJ & JG Stokes	Pt. Lot 88 DP 755442	Moolarben	Phillip	32
Moolarben Coal Operations Pty Ltd	Lot 1 DP 115031	Moolarben	Phillip	36
Moolarben Coal Operations Pty Ltd	Lot 2 DP 115031	Moolarben	Phillip	36
Moolarben Coal Operations Pty Ltd	Lot 89 DP 755442	Moolarben	Phillip	36
Moolarben Coal Operations Pty Ltd	Lot 98 DP 755442	Moolarben	Phillip	36
Moolarben Coal Operations Pty Ltd	Pt. Lot 140 DP 755442	Moolarben	Phillip	36
Moolarben Coal Operations Pty Ltd	Pt. Lot 218 DP 755442	Moolarben	Phillip	36
Moolarben Coal Operations Pty Ltd	Pt. Lot 238 DP 755442	Moolarben	Phillip	36
Moolarben Coal Operations Pty Ltd	Pt. Lot 260 DP 755442	Moolarben	Phillip	36
Moolarben Coal Operations Pty Ltd	Pt. Lot 261 DP 755442	Moolarben	Phillip	36
Moolarben Coal Operations Pty Ltd	Lot 107 DP 755442	Moolarben	Phillip	29
Moolarben Coal Operations Pty Ltd	Lot 108 DP 755442	Moolarben	Phillip	29
Moolarben Coal Operations Pty Ltd	Lot 145 DP 755442	Moolarben	Phillip	29
Moolarben Coal Operations Pty Ltd	Lot 16 DP 755442	Moolarben	Phillip	29
Moolarben Coal Operations Pty Ltd	Lot 17 DP 755442	Moolarben	Phillip	29
Moolarben Coal Operations Pty Ltd	Lot 18 DP 755442	Moolarben	Phillip	29
Moolarben Coal Operations Pty Ltd	Lot 19 DP 755442	Moolarben	Phillip	29
Moolarben Coal Operations Pty Ltd	Lot 248 DP 755442	Moolarben	Phillip	29
Moolarben Coal Operations Pty Ltd	Lot 40 DP 755442	Moolarben	Phillip	29
Moolarben Coal Operations Pty Ltd	Lot 45 DP 755442	Moolarben	Phillip	29
Moolarben Coal Operations Pty Ltd	Lot 50 DP 755442	Moolarben	Phillip	29
Moolarben Coal Operations Pty Ltd	Lot 51 DP 755442	Moolarben	Phillip	29A
Moolarben Coal Operations Pty Ltd	Lot 53 DP 755442	Moolarben	Phillip	29
Moolarben Coal Operations Pty Ltd	Lot 64 DP 755442	Moolarben	Phillip	29
Moolarben Coal Operations Pty Ltd	Pt. Lot 167 DP 755442	Moolarben	Phillip	29
Moolarben Coal Operations Pty Ltd	Pt. Lot 170 DP 755442	Moolarben	Phillip	29
Moolarben Coal Operations Pty Ltd	Pt. Lot 172 DP 755442	Moolarben	Phillip	29B
Moolarben Coal Operations Pty Ltd	Pt. Lot 183 DP 755442	Moolarben	Phillip	29
Moolarben Coal Operations Pty Ltd	Lot 146 DP 755442	Moolarben	Phillip	33
Moolarben Coal Operations Pty Ltd	Lot 52 DP 755442	Moolarben	Phillip	33
Moolarben Coal Operations Pty Ltd	Lot 63 DP 755442	Moolarben	Phillip	33
Moolarben Coal Operations Pty Ltd	Lot 99 DP 755442	Moolarben	Phillip	33
Moolarben Coal Operations Pty Ltd	Pt. Lot 205 DP 755442	Moolarben	Phillip	33
Moolarben Coal Operations Pty Ltd	Pt. Lot 289 DP 704098	Moolarben	Phillip	33
Moolarben Coal Operations Pty Ltd	Pt. Lot 93 DP 755442	Moolarben	Phillip	134
Moolarben Coal Operations Pty Ltd	Pt. Lot 93 DP 755454	Wilpinjong	Phillip	134
Moolarben Coal Operations Pty Ltd	Lot 119 DP 755442	Moolarben	Phillip	5
Moolarben Coal Operations Pty Ltd	Lot 44 DP 755442	Moolarben	Phillip	5
Moolarben Coal Operations Pty Ltd	Pt. Lot 1 DP 803204	Moolarben	Phillip	5
Moolarben Coal Operations Pty Ltd	Pt. Lot 192 DP 755442	Moolarben	Phillip	5
Moolarben Coal Operations Pty Ltd	Pt. Lot 193 DP 755442	Moolarben	Phillip	5
Moolarben Coal Operations Pty Ltd	Pt. Lot 37 DP 755442	Moolarben	Phillip	5
Moolarben Coal Operations Pty Ltd	Pt. Lot 60 DP 755442	Moolarben	Phillip	5
Moolarben Coal Operations Pty Ltd	Pt. Lot 61 DP 755442	Moolarben	Phillip	5
Moolarben Coal Operations Pty Ltd	Pt. Lot 62 DP 755442	Moolarben	Phillip	5
Moolarben Coal Operations Pty Ltd	Pt. Lot 95 DP 755442	Moolarben	Phillip	4
Moolarben Coal Operations Pty Ltd	Lot 109 DP 755442	Moolarben	Phillip	4

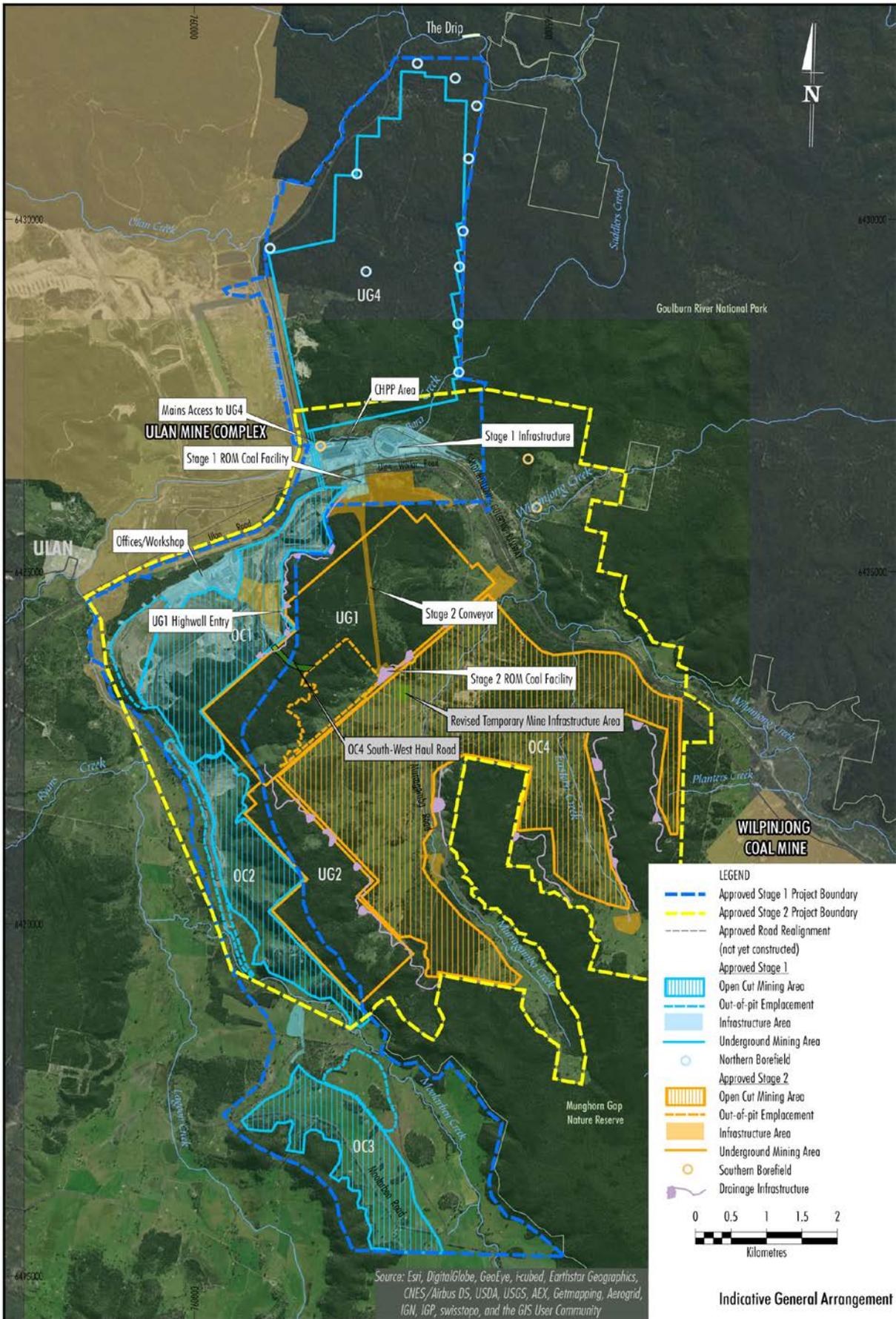
Owner	Description	Parish	County	EA ID
Moolarben Coal Operations Pty Ltd	Lot 110 DP 755442	Moolarben	Phillip	4
Moolarben Coal Operations Pty Ltd	Lot 223 DP 755442	Moolarben	Phillip	4
Moolarben Coal Operations Pty Ltd	Lot 234 DP 755442	Moolarben	Phillip	4
Moolarben Coal Operations Pty Ltd	Pt. Lot 112 DP 755454	Wilpinjong	Phillip	4
Moolarben Coal Operations Pty Ltd	Pt. Lot 113 DP 755454	Wilpinjong	Phillip	4
Moolarben Coal Operations Pty Ltd	Pt. Lot 228 DP 755442	Moolarben	Phillip	4
Moolarben Coal Operations Pty Ltd	Pt. Lot 229 DP 755442	Moolarben	Phillip	4
Moolarben Coal Operations Pty Ltd	Pt. Lot 96 DP 755454	Wilpinjong	Phillip	4
RB Cox	Pt. Lot 125 DP 755442	Moolarben	Phillip	30
Moolarben Coal Operations Pty Ltd	Pt. Lot 2 DP 878678	Wilpinjong	Phillip	13
Moolarben Coal Operations Pty Ltd	Pt. Lot 262 DP 755442	Moolarben	Phillip	7
Moolarben Coal Operations Pty Ltd	Pt. Lot 30 DP 755439	Lennox	Phillip	10
Moolarben Coal Operations Pty Ltd	Pt. Lot 7 DP 878678	Wilpinjong	Phillip	19
Moolarben Coal Operations Pty Ltd	Pt. Lot 97 DP 755454	Wilpinjong	Phillip	1
Moolarben Coal Operations Pty Ltd	Pt. Lot 6 DP 878678	Wilpinjong	Phillip	18
Moolarben Coal Operations Pty Ltd	Pt. Lot 3 DP 878678	Wilpinjong	Phillip	15
Moolarben Coal Operations Pty Ltd	Pt. Lot 11 DP 1152406	Wilpinjong/Lennox	Phillip	12
Ulan Coal Mines Ltd.	Lot 1 DP 722881	Moolarben	Phillip	46
Ulan Coal Mines Ltd.	Lot 178 DP 755442	Moolarben	Phillip	46
Ulan Coal Mines Ltd.	Lot 179 DP 755442	Moolarben	Phillip	46
Ulan Coal Mines Ltd.	Lot 2 DP 722882	Lennox	Phillip	46
Ulan Coal Mines Ltd.	Lot 272 DP 755442	Moolarben	Phillip	46
Ulan Coal Mines Ltd.	Lot 277 DP 755442	Moolarben	Phillip	46
Ulan Coal Mines Ltd.	Lot 3 DP 722882	Lennox	Phillip	46
Ulan Coal Mines Ltd.	Lot 45 DP 736630	Lennox	Phillip	46
Ulan Coal Mines Ltd.	Lot 18 DP 1140073	Lennox	Phillip	46
Ulan Coal Mines Ltd.	Pt. Lot 1 DP 1089166	Moolarben	Phillip	46
Ulan Coal Mines Ltd.	Pt. Lot 1 DP 1099037	Moolarben	Phillip	46
Ulan Coal Mines Ltd.	Pt. Lot 1 DP 720332	Ulan	Phillip	46
Ulan Coal Mines Ltd.	Pt. Lot 14 DP 755442	Moolarben	Phillip	46
Ulan Coal Mines Ltd.	Pt. Lot 20 DP 755439	Lennox	Phillip	46
Ulan Coal Mines Ltd.	Pt. Lot 242 DP 755442	Moolarben	Phillip	46
Ulan Coal Mines Ltd.	Pt. Lot 253 DP 755442	Moolarben	Phillip	46
Ulan Coal Mines Ltd.	Pt. Lot 44 DP 736630	Lennox/Ulan	Phillip	46
Ulan Coal Mines Ltd.	Pt. Lot 46 DP 736630	Lennox	Phillip	46
Ulan Coal Mines Ltd.	Pt. Lot 47 DP 736630	Lennox	Phillip	46
Ulan Coal Mines Ltd.	Pt. Lot 48 DP 736630	Lennox	Phillip	46
Ulan Coal Mines Ltd.	Pt. Lot 50 DP 736630	Lennox	Phillip	46
Ulan Coal Mines Ltd.	Pt. Lot 75 DP 750773	Ulan	Phillip	46
Ulan Coal Mines Ltd.	Pt. Lot 91 DP 755442	Moolarben	Phillip	46
Ulan Coal Mines Ltd.	Pt. Lot 92 DP 755442	Moolarben	Phillip	46
Ulan Coal Mines Ltd.	Pt. Lot 13 DP 1152406	Lennox	Phillip	46
Ulan Coal Mines Ltd.	Pt. Lot 14 DP 1152046	Lennox	Phillip	46
Mid-Western Regional Council	Lot 16 DP 1140073	Lennox	Phillip	-
Mid-Western Regional Council	Lot 17 DP 1140073	Lennox	Phillip	-
Mid-Western Regional Council	Lot 20 DP 1140073	Lennox	Phillip	-
Crown	Carrs Gap Road	Moolarben	Phillip	-
Crown	Moolarben Road	Moolarben	Phillip	-
Crown	Saddlers Creek Road			-
Crown	Ulan Road			-
Crown	Ulan-Wollar Road			-
Crown	Lot 152 DP 755442 Reserve for Public School	Moolarben	Phillip	-
Crown	Lot 176 DP 755442 Reserve for future public requirements R65457	Moolarben	Phillip	-

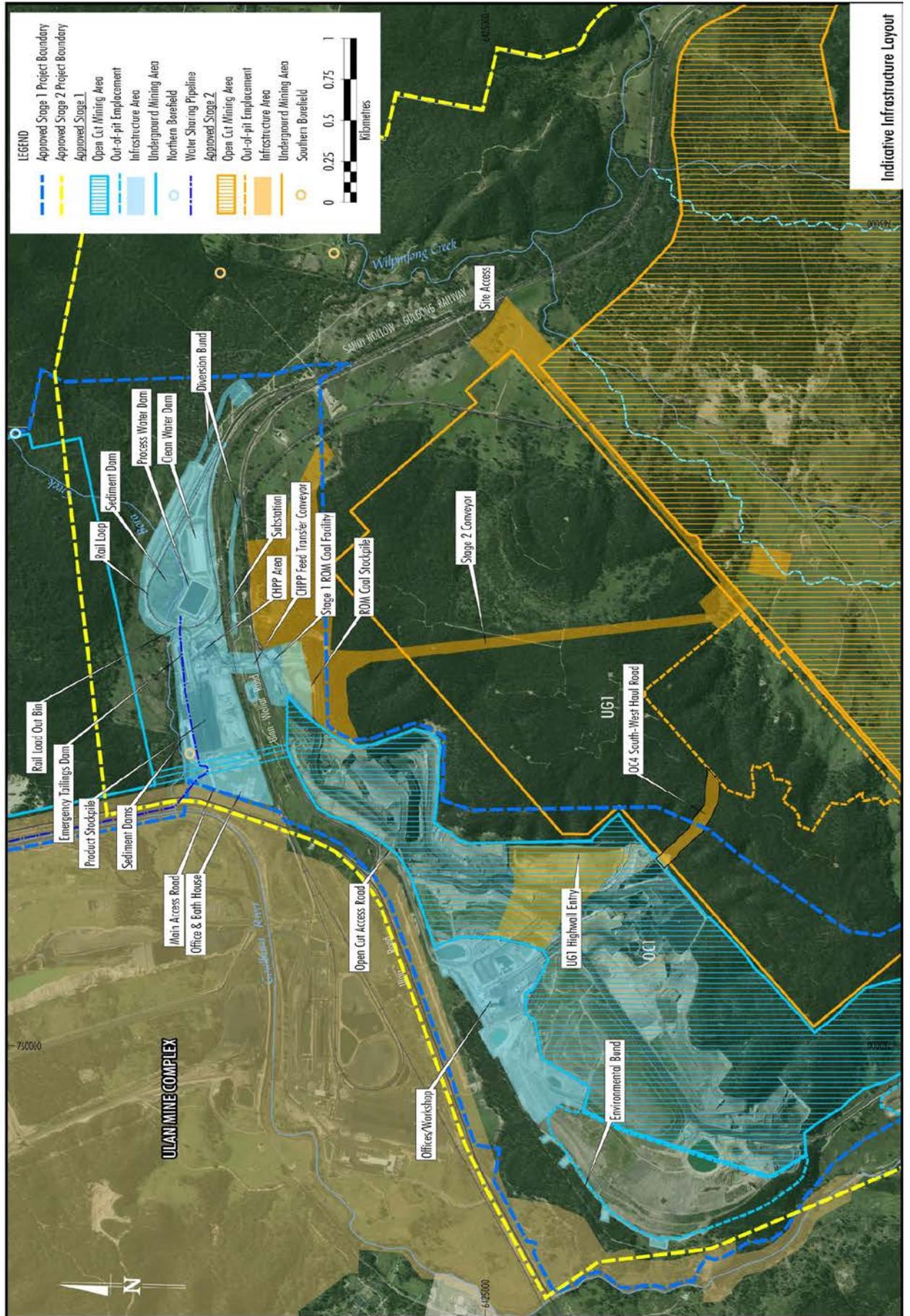
Owner	Description	Parish	County	EA ID
Crown	Pt. Lot 204 DP 755442 Reserve for future public requirements R65457	Moolarben	Phillip	-
Crown	Pt. Lot 290 DP 704098 Reserve for Access	Moolarben	Phillip	-
Crown	Pt. Lot 7009 DP 1025321 Vacant Crown Land	Moolarben	Phillip	-
Crown	Pt. Lot 31 DP 755439 Vacant Crown Land	Lennox	Phillip	-
Crown	Pt. Lot 7010 DP 1025345 Vacant Crown Land	Moolarben	Phillip	-
Crown	Pt. Lot 7302 DP 1143562 Reserve for Resting Place R.82539	Lennox	Phillip	-
Crown	Lot 33 DP 755439	Lennox	Phillip	-
Crown	Lot 34 DP 755439	Lennox	Phillip	-
Crown	Lot 55 DP 722794	Lennox	Phillip	-
Crown	Lot 56 DP 722795	Lennox	Phillip	-
Crown	Pt. Lot 43 DP 736630	Lennox/Ulan	Phillip	-
Crown	Unidentified Crown Road - No 10 (Refer 0857C) Plan	Moolarben	Phillip	-
Crown	Unidentified Crown Road - No 11 (Refer 0857C) Plan	Wilpinjong	Phillip	-
Crown	Unidentified Crown Road - No 12 (Refer 0857C) Plan	Moolarben	Phillip	-
Crown	Unidentified Crown Road - No 13 (Refer 0857C) Plan	Wilpinjong	Phillip	-
Crown	Unidentified Crown Road - No 14 (Refer 0857C) Plan	Moolarben	Phillip	-
Crown	Unidentified Crown Road - No 15 (Refer 0857C) Plan	Moolarben	Phillip	-
Crown	Unidentified Crown Road - No 16 (Refer 0857C) Plan	Moolarben	Phillip	-
Crown	Unidentified Crown Road - No 17 (Refer 0857C) Plan	Moolarben	Phillip	-
Crown	Unidentified Crown Road - No 18 (Refer 0857C) Plan	Moolarben	Phillip	-
Crown	Unidentified Crown Road - No 19 (Refer 0857C) Plan	Moolarben	Phillip	-
Crown	Unidentified Crown Road - No 20 (Refer 0857C) Plan	Moolarben	Phillip	-
Crown	Unidentified Crown Road - No 21 (Refer 0857C) Plan	Moolarben	Phillip	-
Crown	Unidentified Crown Road - No 22 (Refer 0857C) Plan	Moolarben	Phillip	-
Crown	Unidentified Crown Road - No 6 (Refer 0857C) Plan	Lennox	Phillip	-
Crown	Unidentified Crown Road - No 7 (Refer 0857C) Plan	Lennox	Phillip	-
Crown	Unidentified (Refer Plan	Lennox	Phillip	-

Owner	Description	Parish	County	EA ID
	Crown Road - No 8 (0857C)			
Crown	Unidentified Crown Road - No 9 (Refer 0857C) Plan	Moolarben	Phillip	-
Crown	Lot 7303 Vacant Crown Land DP 1143562	Lennox	Phillip	-
Crown	Lot 7005 Vacant Crown Land DP 1096180	Lennox	Phillip	-
Crown	Vacant Crown Land - No 5 (Refer 0857C) Plan	Lennox	Phillip	-
State Rail Authority	Sandy Hollow–Gulgong Railway			-

APPENDIX 2:
GENERAL LAYOUT OF PROJECT







**APPENDIX 3:
STATEMENT OF COMMITMENTS**

- (1) Protect The Drip and Goulburn River Corner Gorge**
The Drip and the Goulburn River Corner Gorge are shown on the plan titled “Moolarben Coal Mine – Preferred Mine Plan General Layout” contained in Appendix A9 to the “Moolarben Coal Project Response to Submissions”.
Moolarben will conduct its underground mining operations consistent with the Preferred Project Underground No. 4 layout to protect the Goulburn River features known as the Drip, the Goulburn River Corner Gorge and associated cliffs so that there is no damage whilst seeking to maximise recovery of coal resources and as may be required by any conditions of project approval for the Moolarben Coal Project.
- (2) Shift Change**
Moolarben undertakes to schedule its major employee shift changes to times outside the hours of 8.15 to 9.00 am and 3.15 to 4.00 pm Monday to Friday to seek to reduce overlap of employee traffic and school transport and as may be required by any conditions of project approval for the Moolarben Coal Project.
- (3) Replace Water**
Moolarben will compensate or replace waters (similar quality and quantity) lost by a private landholder as a consequence of the Moolarben Coal Project in accordance with the adopted protocols and procedures contained in the Moolarben Coal Project Environmental Management System and as may be required by any conditions of project approval for the Moolarben Coal Project.
- (4) Environmental Management System**
Moolarben will prepare and implement an Environmental Management System containing Environmental Management Plans, and Mine Operating Plan for the life of the Moolarben Coal Project consistent with the Environmental Assessment Report, the Response to Submissions Report, the Preferred Project Report, subsequent modification applications and as may be required by any conditions of project approval for the Moolarben Coal Project.
- (5) Noise in School Rooms**
Moolarben in consultation with the Ulan Public School and the Department of Education will undertake agreed works to ameliorate potential noise and dust impacts associated with the Moolarben Coal Project upon classrooms and general school operations.
OR
Moolarben will, should the Department of Education request, on a reasonable basis relating to the effect of noise and dust from the Moolarben Coal Project, negotiate to contribute to or meet reasonable costs toward relocating the school.
- (6) Land Purchase Commitment**
Moolarben will accept an obligation to purchase (if so required by any affected private landholder) any land affected by operations of the Moolarben Coal Project in accordance with any requirement to do so as provided in any project approval for the Moolarben Coal Project.
- (7) Mine Water Sharing Plan**
Moolarben will seek to enter into a mine water sharing plan in respect of mining operations of the Ulan Coal Mine and Wilpinjong Coal Mine under the auspices of the Director General of the Department of Planning and as may be required by any conditions of project approval for the Moolarben Coal Project.
- (8) Voluntary Planning Agreement**
Moolarben will enter into a Voluntary Planning Agreement with Mid Western Regional Council and the Minister for Planning incorporating the principles contained in the offer by Moolarben to the Minister for Planning on 4 September 2007 to enter into the Voluntary Planning Agreement.
- (9) Employ Local People**

Moolarben will, wherever possible and feasible, employ appropriately qualified persons residing within the local area.

(10) Traineeships

Moolarben will provide traineeships for the youth of the local community.

(11) Dronvisa Quarry

Moolarben will seek to enter into an operational agreement with Dronvisa Quarry with regard to the safe continuation of its operations in conjunction with underground mining.

(12) Ecology

Moolarben will enter into such arrangements as may be required by the Secretary to provide for ecological offsets as proposed in the Environmental Assessment, Preferred Project Report, subsequent modification applications and as may be required by any conditions of project approval for the Moolarben Coal Project.

(13) Flows in the Goulburn River – Co-operative Monitoring Program

Moolarben will use its reasonable endeavours to agree and implement a monitoring program in cooperation with the Ulan and Wilpinjong mines (and to the reasonable requirement of the Director General who will consult with the NOW) to identify any potential for any change in the water flows in the Goulburn River due to mining at the Moolarben, Ulan and Wilpinjong mines and as may be required by any conditions of project approval for the Moolarben Coal Project.

(14) Mine Water Management and Salinity – Sharing with Ulan and Wilpinjong

Moolarben will use its reasonable endeavours to agree and implement a co-operative arrangement with and enter into a life of mine agreement between the Ulan and Wilpinjong mines (the “Mines”) to establish, implement and operate water sharing and use plans and procedures with the objective of minimising the removal by the Mines of water from the environment and the discharge of minewaters by the Mines to the environment and which shall address the ability of the Mines to utilise mine water produced by the Mines between the Mines and as may be required by any conditions of project approval for the Moolarben Coal Project.

(15) Salinity Off Sets

– Bobadeen Irrigation Scheme (“BIS”) - Salinity Offset Management Plan (“SOMP”)

In the event that the Moolarben Coal Project reduces the capacity for the removal of salt from the Salinity Offset Management Plan area operated by Ulan Mine in conjunction with the Bobadeen Irrigation Scheme under Environment Protection Licence 394, then Moolarben will, at its election, either:

- take from Ulan that volume of water that would otherwise have been used in the BIS; OR*
- provide an area of land with equivalent salt removal capacity; AND*
- any disputed issue will be determined by an appropriately qualified expert agreed between Moolarben and Ulan and in default appointed by the Director General of Planning.*

(16) Haulage of Coal to the West by Rail

Prior to the haulage of coal by rail to the west of the Moolarben Coal Project, Moolarben shall notify the Secretary with details of expected tonnages, train size and rail scheduling and where practicable schedule rail haulage during daylight hours only through the town of Mudgee as may otherwise be required by any conditions of project approval for the Moolarben Coal Project.

(17) Traffic Management – Mid Western Regional Council

Moolarben acknowledges the need for it to contribute to the upgrade and maintenance of aspects of the local road system affected by the operation of the Moolarben Coal Project and commits to implement the Voluntary Planning Agreement in satisfaction of the principles of that agreement.

**(18) Additional Management and Mitigation
– Modification of Stage 1**

Moolarben commits to implementing the following management and mitigation measures to ensure that impacts associated with modifications to the Moolarben Coal Project are minimised.

<i>Environmental Aspect</i>	<i>Management and Mitigation Commitments</i>
<i>Air quality</i>	<ul style="list-style-type: none"> • <i>Management and monitoring of air quality will continue to be undertaken in accordance with the best management practices set out in an approved Air Quality Management Plan.</i> • <i>Dust control measures will be used on internal haul roads.</i> • <i>Raw coal transfer and rejects conveyors will be partially enclosed.</i> • <i>Dust sprays will be fitted to the dump hopper.</i> • <i>Water carts will be used to minimise dust generation from unsealed access tracks and construction areas, where required.</i> • <i>A TEOM will be located to the southwest of the project to enable pro-active dust management and compliance monitoring for private residences to the south of the project prior to mining in Open Cut 2.</i> • <i>Use of a TEOM located to the northeast of the project for measuring background dust levels.</i> • <i>MCO will continue to report annually in the AEMR, the total amount of greenhouse gas emissions from the MCP and the effectiveness of measures implemented to achieve energy savings.</i>
<i>Noise</i>	<ul style="list-style-type: none"> • <i>Management and monitoring of noise will continue to be undertaken in accordance with an approved Noise Management Plan, including proactive and reactive management.</i> • <i>MCO further commits to:</i> <ul style="list-style-type: none"> - <i>Limiting northern borefield construction hours from 7am to 6pm Monday to Friday (inclusive).</i> - <i>Limiting surface water management infrastructure upgrade construction hours from 7:00am to 5:00pm Monday to Saturday (inclusive).</i> - <i>Fitting haul trucks with noise attenuation equipment to meet sound power levels assumed in the Stage 1 EA and subsequent noise Impact assessments</i> - <i>Specifying sound power levels in supply contracts for mobile plant and equipment , where appropriate.</i> - <i>Fitting northern borefield water supply/dewatering bores with submersible pumps.</i> - <i>Use of a temporary power supply generator located near the borefield pipeline outlet, at least 4km from the nearest private residence, unless power is provided from the electricity network.</i> - <i>Maintaining awareness of best practice noise mitigation technologies and alternative operating methodologies, and continuing to investigate the potential for further noise reductions to the haul truck fleet through potential additional noise attenuation and mitigation opportunities (such as Duratray).</i> - <i>Designing and locating the haul roads behind earthen bunds as far as practically possible.</i>

Environmental Aspect	Management and Mitigation Commitments
Biodiversity	<ul style="list-style-type: none"> • <i>Management and monitoring of ecology will continue to be undertaken in accordance with an approved Landscape Management Plan (or equivalent), which will be reviewed and updated as required to incorporate the Open Cut 1 and Open Cut 2 extension areas.</i> • <i>Where possible, construction works in areas of known and potential threatened woodland species habitat will be avoided during their breeding cycle.</i> • <i>Pre-clearing fauna surveys will be undertaken prior to ground clearing disturbance.</i> • <i>One of two hollow bearing trees within the rail loop alignment will be retained (where possible).</i> • <i>Tree hollows and other habitat features will be salvaged for use as compensatory habitat, in rehabilitation areas.</i> • <i>The cleared area along the mining lease boundary will be rehabilitated and revegetated to enable cleared EEC to re-establish.</i> • <i>Disturbed areas not required for ongoing access and maintenance will be rehabilitated. Endemic species will be used to supplement natural vegetation regeneration, where required.</i> • <i>Groundcover will be maintained to minimise the risk of soil erosion, wherever practicable. Feral animals, weeds and pests will be controlled.</i> • <i>MCO further commits to:</i> <ul style="list-style-type: none"> - <i>Undertake a detailed flora and fauna inventory and mapping of the vegetation types and threatened species for properties proposed to offset the clearing impacts of the Open Cut 1 and Open Cut 2 extension areas.</i> - <i>Manage offset and rehabilitation areas in accordance with a Rehabilitation and Offset Management Plan (ROMP or equivalent plan) to improve biodiversity outcomes.</i> - <i>Provide adequate funds to implement the management measures described in the ROMP.</i> - <i>Implement the management actions specific to each property and report annually on the implementation of the plan to relevant stakeholders.</i> - <i>Arrange for the independent review of the adequacy and implementation of the ROMP every three years.</i> - <i>Provide long-term security of offset areas through an appropriate mechanism (such as a conservation covenant) agreed to with relevant stakeholders.</i> - <i>Provide an alternative secure offset property of at least equivalent biodiversity value where long-term security of a nominated offset property is not achievable.</i> - <i>Investigate potential roosting sites for bat activity on properties proposed to offset the impacts of Open Cut 1 and Open Cut 2 extension areas.</i> - <i>Investigate use of artificial roosting sites for microbat habitat augmentation where offset areas are determined not to have sufficient roosting habitat.</i> - <i>Carry out targeted spring surveys for Diuris Tricolor in potential habitat areas within Open Cut 1 and Open Cut 2 extension areas. Where Diuris Tricolor plants are identified in disturbance areas, these will be translocated to suitable offset property habitat areas consistent with the monitoring and reporting requirements of the Australian Network for Plant Conservation translocation guidelines (ANPC, 2004).</i> - <i>Review land use history of Derived Native Grassland offset areas (including, where possible, cultivation, fertiliser application, soil nutrient levels and ground cover species) to inform appropriate management and performance and completion criteria. Where monitoring indicates these areas are not recovering as expected within the first five years of management alternative management measures will be investigated.</i> - <i>Maintain existing third party access arrangements on offset properties, where required.</i> - <i>Progressive rehabilitation of disturbed areas and re-use of habitat features (e.g. hollow logs, rocks) in rehabilitation areas to minimise the habitat resource competition in adjoining conservation reserves.</i>

Environmental Aspect	Management and Mitigation Commitments
Cultural heritage	<ul style="list-style-type: none"> • Cultural heritage sites will be monitored and managed according to the measures described in an approved Aboriginal Cultural Heritage Management Plan. • Cultural heritage sites adjacent to and outside construction, mining and general disturbance areas will have appropriate controls in place to prevent potential disturbance. • • Cultural heritage monitoring and salvage will be undertaken by a qualified archaeologist and members of the Aboriginal Stakeholder community groups (Mudgee Local Aboriginal Land Council based in Mudgee; North-East Wiradjuri Pty Ltd, based in Ulan; Murong Gialinga Aboriginal and Torres Strait Islander Corporation, based in Mudgee; and Warrabinga Native Title Claimants Aboriginal Corporation, based in Kandos). • Where additional cultural heritage sites are identified, these sites will be managed in accordance with the measures described in the Aboriginal Cultural Heritage Management Plan. • Local Aboriginal community representatives will be involved in the recording, salvaging and storing of cultural heritage objects impacted by site works. • The Aboriginal Cultural Heritage Management Plan will be updated to include: <ul style="list-style-type: none"> - Additional registered parties as necessary. - Sub-surface testing and potential salvage of S1MC343-345 and S1MC352 where blasting is assessed to adversely impact these sites. - Test excavation and potential salvage of S1MC331 and S1MC334.
Water	<ul style="list-style-type: none"> • Erosion and sediment control measures detailed in an approved Erosion and Sediment Control Plan (or equivalent) will be implemented. • Water pressure will be monitored at the inlet and outlet of the water sharing and borefield pipeline network, and the entire length of pipeline will be inspected regularly. • In the event that a leak or loss of pressure is detected in the water sharing or borefield pipeline network, pumping in that portion of the pipeline network will cease and the resultant cause investigated and remediated. • Management and monitoring of surface water and groundwater will be undertaken in accordance with an approved Water Management Plan, which will be reviewed and updated, as necessary, to include the Open Cut 1 and Open Cut 2 extension areas and additional surface water management infrastructure. As part of this review, MCO will liaise with the NOW on the water licensing requirements for the open cut extension areas. • MCO is committed to the effective management of water in the modified landform and where required will develop strategies to this effect, including returning rehabilitated areas to clean water catchments as promptly as practically possible. • MCO will abide by the rules of any relevant water sharing plan and return water where required.
Rehabilitation	<ul style="list-style-type: none"> • Soils will be stockpiled and used to rehabilitate areas not required for ongoing operations. • MCO is committed to progressively rehabilitating mined areas as soon as practical following disturbance, in accordance with an approved Landscape Management Plan (or equivalent Rehabilitation Plan), including returning areas disturbed by mining to their pre-mining land use (unless otherwise agreed with relevant stakeholders). The plan will be updated, as required, to include the Open Cut 1 and Open Cut 2 extension areas. The plan will consider use of terrestrial riparian buffers. • The majority of the Open Cut 1 and Open Cut 2 extension areas will be rehabilitated for biodiversity outcomes. • The 15.7 ha area of Class 3 agricultural land directly impacted by the Open Cut 1 and Open Cut 2 extension areas will be reinstated for agricultural purposes post mining.
Traffic	<ul style="list-style-type: none"> • Appropriate traffic management will be implemented for Ulan Road for construction vehicles entering and leaving the site to Ulan Road and along Saddlers Creek Road, where required. • MCO is committed to participate in the Ulan Road Strategy and will continue to consult with MWRC in relation to local road strategies.

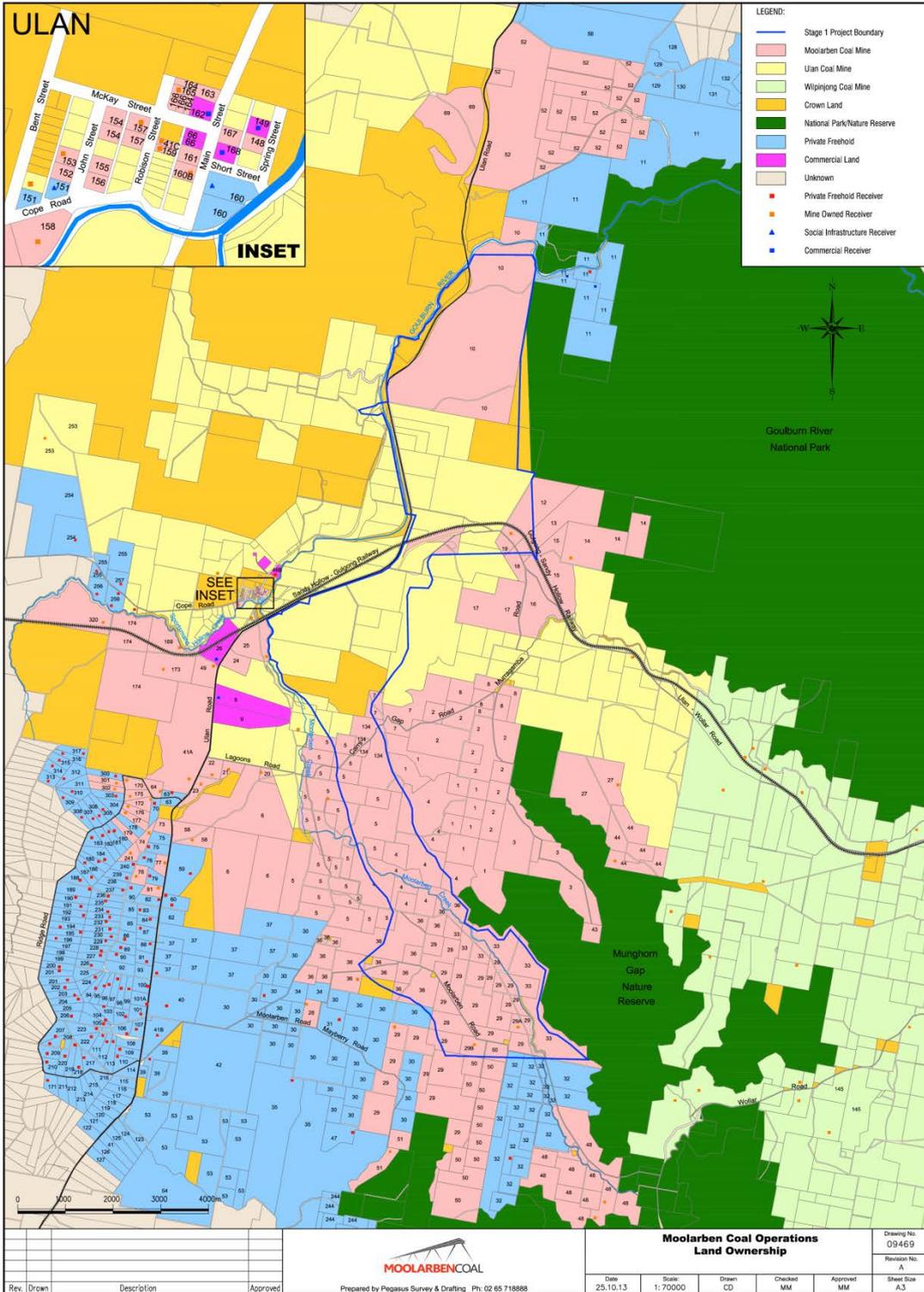
<i>Environmental Aspect</i>	<i>Management and Mitigation Commitments</i>
<i>Visual</i>	<ul style="list-style-type: none"> • <i>Trees and shrubs will be planted to provide a visual screen:</i> <ul style="list-style-type: none"> - <i>To the switch and bore pads located adjacent to Saddlers Creek Road, where required.</i> - <i>Along the southern edge of Cope Road, where views of Open Cut 1 extension areas will be possible, subject to landowner consent.</i> • <i>The Landscape Management Plan (or equivalent) will be reviewed and updated to describe the measures that will be implemented to manage visual impacts associated with the Open Cut 1 and Open Cut 2 extension areas, such as:</i> <ul style="list-style-type: none"> - <i>Vegetation screen planting, subject to land owner's consent, along the southern edge of Cope Road, in areas visually affected by direct views of the Open Cut 1 extension area.</i> - <i>Investigating the feasibility of targeted vegetation screen planting for affected properties along Ridge Road (with direct views from the residence to both Open Cut 1 and Open Cut 2 extension areas), to mitigate the visual and lighting impacts of Open Cut 1 and Open Cut 2 extension areas, subject to landowner consent.</i> - <i>Building-up out-of-pit embankments first so that continued operations are obscured by the embankment. Wherever possible out-of-pit emplacements around the perimeter will be established first, providing a visual screen while work is undertaken in the central part of the emplacement.</i> - <i>Seeding and grassing embankment outer faces visually exposed to private residents as soon as practically possible to soften the view.</i> - <i>Where possible, maintaining a strip of vegetation along the leading face of the ridgeline associated with the Open Cut 1 extension area to provide a visual screen to workings for as long as practical.</i> - <i>Use of operational screening measures such as landform re-establishment sequencing and lighting management.</i> - <i>Progressive rehabilitation.</i> • <i>As far as practically possible, and where mine safety allows, management protocols will be established and implemented to:</i> <ul style="list-style-type: none"> - <i>Locate mobile lighting plant to be directed away from private residences.</i> - <i>Direct stationary lighting sources below the horizontal to minimise potential light spill.</i> - <i>Design lighting systems that minimise light spillage.</i> - <i>Avoid lighting of light coloured surfaces that have greater reflectivity.</i>
<i>Social</i>	<ul style="list-style-type: none"> • <i>MCO is committed to prevent or minimise negative social impacts resulting from the MCP and will use its best endeavours to enhance the social benefits of the Project in accordance with its Environment and Community Policy.</i>

**APPENDIX 4:
VOLUNTARY PLANNING AGREEMENT**

Funding Area	Minimum Proponent Contribution	Funding Time Frame
Monetary Contribution – open cut product coal	\$1,000,000	Three equal instalments to be paid over a three year period, with the first annual instalment to be paid within seven days of the first loading and dispatch of coal produced from the open cut operations from the Project.
Monetary Contribution – underground product coal	\$300,000	One instalment to be paid within seven days of the first loading and dispatch of coal produced from the underground operations of the Project.
Road Maintenance Contribution – Cope Road and Ulan Road	\$1,000,000	Three equal instalments to be paid over a three year period, with the first instalment to be paid within seven days of the commencement of construction
Road Maintenance Contribution – General	\$1,250,000	\$62,500 each year for a period of 20 years with the first instalment to be paid on the first anniversary of the first loading and dispatch of coal produced from the operations of the Project.
Community Infrastructure Contribution	\$1,000,000	\$100,000 each year for a period of 10 years with the first instalment to be paid on the first anniversary of the first loading and dispatch of coal produced from the operations of the Project.

Note: The “Road Maintenance Contribution – General” and “Community Infrastructure Contribution” must be reviewed and adjusted to take into account any increase in the CPI over time.

APPENDIX 5: PROPERTY NUMBERS AND LAND OWNERSHIP



No.	NAME	No.	NAME	No.	NAME
1	Moolarben Coal Mine Owned/Controlled Land	82	S.C. Hungerford & M.C. Clemens	164	Moolarben Coal Mine Owned/Controlled Land
2	Moolarben Coal Mine Owned/Controlled Land	83	C.F. & C.R. Wall	165	Moolarben Coal Mine Owned/Controlled Land
3	Moolarben Coal Mine Owned/Controlled Land	84	D.S. Sebelic	166	Moolarben Coal Mine Owned/Controlled Land
4	Moolarben Coal Mine Owned/Controlled Land	85	J. & Z. Nikolovski	167	Moolarben Coal Mine Owned/Controlled Land
5	Moolarben Coal Mine Owned/Controlled Land	86	N.W. Harris	168	PJL Construction Complete Mining Services & Solutions P/L
6	Moolarben Coal Mine Owned/Controlled Land	87	B.J. & K. Howe	169	Moolarben Coal Mine Owned/Controlled Land
7	Moolarben Coal Mine Owned/Controlled Land	88	B.C. Meyers	170	Moolarben Coal Mine Owned/Controlled Land
8	Moolarben Coal Mine Owned/Controlled Land	89	M.V. & H.M. Glover & E. & B.J. Tomlinson	171	J.M. McGregor
9	I.C.I. Australia Operations	90	S.A. Powell	172	Moolarben Coal Mine Owned/Controlled Land
10a,b	Moolarben Coal Mine Owned/Controlled Land	91	H.M. Graham	173	Moolarben Coal Mine Owned/Controlled Land
11	J. Mullins & C. Imrie	92	V.A. Pulicino, J. Bonnici, S. Bonnici & G. Bonnici	174	Moolarben Coal Mine Owned/Controlled Land
12	Moolarben Coal Mine Owned/Controlled Land	93	F. & M. Fenech	175	Moolarben Coal Mine Owned/Controlled Land
13	Moolarben Coal Mine Owned/Controlled Land	94	L.K. Mittermayer	176	Moolarben Coal Mine Owned/Controlled Land
14a	Moolarben Coal Mine Owned/Controlled Land	95	B.J. Wittington	177	Moolarben Coal Mine Owned/Controlled Land
14b	The Minister for National Parks	96	D. Lazicic	178	P. Stone
15	Moolarben Coal Mine Owned/Controlled Land	97	D.J. & M.D. Smith	179	Moolarben Coal Mine Owned/Controlled Land
16	Moolarben Coal Mine Owned/Controlled Land	98	J.P. & M.E. Piper	180	C. & L. Barrett
17	Moolarben Coal Mine Owned/Controlled Land	99	D.E. Jenner & W.B. Jensen	181	S. Forster
18	Moolarben Coal Mine Owned/Controlled Land	100	O. & A. Kapista	182	J. Dutoitcook
19	Moolarben Coal Mine Owned/Controlled Land	101	R.D. & D.M.Z. Hull	183	R. & E. Steines
20	Moolarben Coal Mine Owned/Controlled Land	101a	P.J. Kearns	184	L. Stevenson
21	Moolarben Coal Mine Owned/Controlled Land	102	K.A. Roberts	185	L. Stevenson
22	Moolarben Coal Mine Owned/Controlled Land	103	S.B. Burnett & S.L. Grant	186	R. & I. Adamson
23	Moolarben Coal Mine Owned/Controlled Land	104	R.A. & L.A. Deeben	187	B. & K. Feeney
24	Moolarben Coal Mine Owned/Controlled Land	105	D.J. & N. Katsikaris	188	K. & T. Fielding
25	Moolarben Coal Mine Owned/Controlled Land	106	T.B. & J.H. Reid	189	M,M,D & A Goggin & J.A,P & R Hyde
26	Forty North Pty Limited	107	Z.J. & M. & A.A. Raso, B. Poplasen	190	T. & L. Sahyoun
27	Moolarben Coal Mine Owned/Controlled Land	108	R. Varga	191	B. & T. Lasham
28	Moolarben Coal Mine Owned/Controlled Land	109	D.A. & V.M. Evans	192	R. & J. Williams
29a,b	Moolarben Coal Mine Owned/Controlled Land	110	J.T. Thompson & H.T. Evans	193	D.J. Moloney
30	R. Cox	111	G.J. & N.J. McEwan	194	P. & K. Potts
31	M. Cox	112	M.J. & L.M. Croft	195	R. Cottam
32	D. & J. Stokes	113	C.P.G. Ratcliff	196	F. Saxberg & F. Weir

No.	NAME	No.	NAME	No.	NAME
33	Moolarben Coal Mine Owned/Controlled Land	114	T.F. & K. Holland	197	P. Gorm & I. Neilsen
34	J. Asztalos	115	A.K. & B.H. Ouinn	198	G.R. & M.E. Metcalfe
35	P. Johnson, M. & G. Thompson, P. & F. Debreczeny	116	D.J. & S.M. Reid	199	P. Gorm & I. Neilsen
36	Moolarben Coal Mine Owned/Controlled Land	117	J.M. Dick	200	V.K. Grimshaw
37	J. Szymkarczuk	118	A. Scott	201	K. & G. Towerton
38	State of NSW	119	P.J. Kearns	202	H. & V. Butler
39	R. & D. Sprigg	120	P.S. & D.R. Ord	203	D. Miller
40	J. Devenish	121	E.J. Cullen	204	R. & J. Donnan
41a,c	Moolarben Coal Mine Owned/Controlled Land	122	W.F. Wirth	205	D. Sparrow
41b	P. Libertis	123	N.D. Sullivan	206	C. Marshall & R.Vella
42	C. & L. Schmidt	124	W.J. & H.E. Bailey	207	A. & D. Smith
43	Moolarben Coal Mine Owned/Controlled Land	125	D.B. McBride	208	S. & C. Hasaart
44	Moolarben Coal Mine Owned/Controlled Land	126	M.P. Julian	209	F. Mawson
45	NSW Elec. Trans. Auth	127	B.K.T. & S.A. Bracken	210	J. & A. Tebbutt
46a,c,d,f,g	Ulan Coal Mines Ltd.	128	A. Sims	211	S. McGregor & W. Gray
46b	North Eastern Wiradjuri Wilpinjong Community Fund Limited	129	M. Yelds	212	E. & M. Lepik
47	S.F. & M.R. Andrews	130	G. McEwen	213	D. & J.Parsonage
48	Moolarben Coal Mine Owned/Controlled Land	131	G.R. & R.A. King	214	R. & E. O'Neil
49	Moolarben Coal Mine Owned/Controlled Land	132	N. Atkins	215	S. & P. Green
50	Moolarben Coal Mine Owned/Controlled Land	133	J.M. & T.E. Tynan	216	G. Holland & F. Handicott
51	Moolarben Coal Mine Owned/Controlled Land	134	Moolarben Coal Mine Owned/Controlled Land	217	R.P. & J.L. Patterson
52	Moolarben Coal Mine Owned/Controlled Land	136	Cumbo Land Pty Ltd	218	G. & G. Soady
53	W.D. & M.S. Bryant	137	Cumbo Land Pty Ltd	219	T. & S. Riger
54	M. A. & C. Harris	138	Cumbo Land Pty Ltd	220	S. Rusten & N. Smith
55	M.J. Cundy	139	Ulan Coal Mines Ltd.	221	State of NSW
56	M.J.& V Cundy	140	Cumbo Land Pty Ltd	222	B. Purtell
57	M.J. Cundy	141	Wilpinjong Coal Pty. Limited ¹⁴¹	223	E. Palmer & J. Stewart
58	Moolarben Coal Mine Owned/Controlled Land	142	Cumbo Land Pty Ltd	224	R. & P. Dupond
59	G. & G. M. Szymkarczuk	143	Cumbo Land Pty Ltd	225	G. & R.F. Doulates
60	C.L. Rayner & D.M. Munday	144	J.T. & Y.R Jones	226	L. & F. Muscat
61	M.A. Miller	145	Cumbo Land Pty Ltd	227	W. & J. Hughes
62	R. C. Menchin	146	Cumbo Land Pty Ltd	228	P. Libertis
63	B. F. & B. Whiticker	147	Cumbo Land Pty Ltd	229	J. & B. Lowe
64	Moolarben Coal Mine Owned/Controlled Land	148	Moolarben Coal Mine Owned/Controlled Land	230	D. Rawlinson & D. Hoole
65	Cumbo Land Pty Ltd	149	Mid Western Regional Council	231	T. Morrison & S. Benny
66	Rostherne Pty Ltd	150	Ulan Coal Mines Ltd	232	L. & J. Haaring
68	Cumbo Land Pty Ltd	151	A.I. Cunningham (Land entrusted to Catholic Church)	233	K. & D. Boal
69	Moolarben Coal Mine Owned/Controlled Land	152	Moolarben Coal Mine Owned/Controlled Land	234	D. & L. Gaw
70	D.J. & A. Coventry	153	Moolarben Coal Mine Owned/Controlled Land	235	L. & R. Wilson
71	Council of the Shire of Mudgee	154	Moolarben Coal Mine Owned/Controlled Land	236	R. & C. Donovan

No.	NAME	No.	NAME	No.	NAME
72	Ulan Electricity	155	Moolarben Coal Mine Owned/Controlled Land	237	A. Puskaric
73	Moolarben Coal Mine Owned/Controlled Land	156	Moolarben Coal Mine Owned/Controlled Land	238	B. Powell
74	Moolarben Coal Mine Owned/Controlled Land	157	Moolarben Coal Mine Owned/Controlled Land	239	J. Delarue
75	P. Ban	158	Moolarben Coal Mine Owned/Controlled Land	240	G.J. & D.M. Hartley
76	S.R & P.C Carbone	159	Moolarben Coal Mine Owned/Controlled Land	241	Moolarben Coal Mine Owned/Controlled Land
77	Moolarben Coal Mine Owned/Controlled Land	160	Minister for Education & Training	242	Mid Western Regional Council
78	Moolarben Coal Mine Owned/Controlled Land	160b	Moolarben Coal Mine Owned/Controlled Land	243	R.J. Hopper & T.H. Thompson
79	P. T.J. & S.E. Nagle	161	Moolarben Coal Mine Owned/Controlled Land	244	Y.R. Jones
80	W. & D.I. Sebelic	162	D.M. Harrison	245	M.P. & K.L.E. Cresham
81	Moolarben Coal Mine Owned/Controlled Land	163	Moolarben Coal Mine Owned/Controlled Land	246	A.W. & L.M. Murray
247	J. & H. & K. Batshon	258	P.M. & C.D. Elias	308	N.A. Dower
248	G. Boustani	259	State Rail Authority of NSW	309	G.S. Maher
249	C.J. & J.I. Eldridge	299	Country Energy	310	K.I. Death
250	G.C. Eldridge	300	C.M. Collins & C.Y. Marshall	311	B.J. & L.C. Williamson
251	N.F. Potter & C.E. Selley	301	Moolarben Coal Mine Owned/Controlled Land	312	M.S. & J.J. Ioannou
252	G.A. & R.M. Johnston	302	Moolarben Coal Mine Owned/Controlled Land	313	N.J. & B.D.E. Pracy
253	Ulan Coal Mines Ltd	303	H.J. Ungaro	314	S.L. Ford
254	Ulan Coal Mines Ltd	304	G. Balajan	315	W.J. Richards & B.J. Uzelac
255	H.J. & H. Schmitz	305	L. Barisic & M. Aul	316	C.R. Vassel & C.M. Williams
256	R.C. Campbell	306	E. Armstrong	317	R.J. Hore & V. Bingham
257	Ulan Coal Mines Ltd	307	M. Chant & N.K. Young	320	Moolarben Coal Mine Owned/Controlled Land

APPENDIX 6: NOISE COMPLIANCE ASSESSMENT

~~Applicable Meteorological Conditions~~

- ~~1. The noise criteria in Table 2 of the conditions are to apply under all meteorological conditions except the following:
 - ~~(a) during periods of rain or hail;~~
 - ~~(b) average wind speed at microphone height exceeds 5 m/s;~~
 - ~~(c) wind speeds greater than 3 m/s measured at 10 m above ground level; or~~
 - ~~(d) temperature inversion conditions greater than 3°C/100 m.~~~~

Applicable Meteorological Conditions

1. The noise criteria in Table 2 of the conditions are to apply under all meteorological conditions except the following:
 - (a) wind speeds greater than 3 m/s at 10 metres 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.

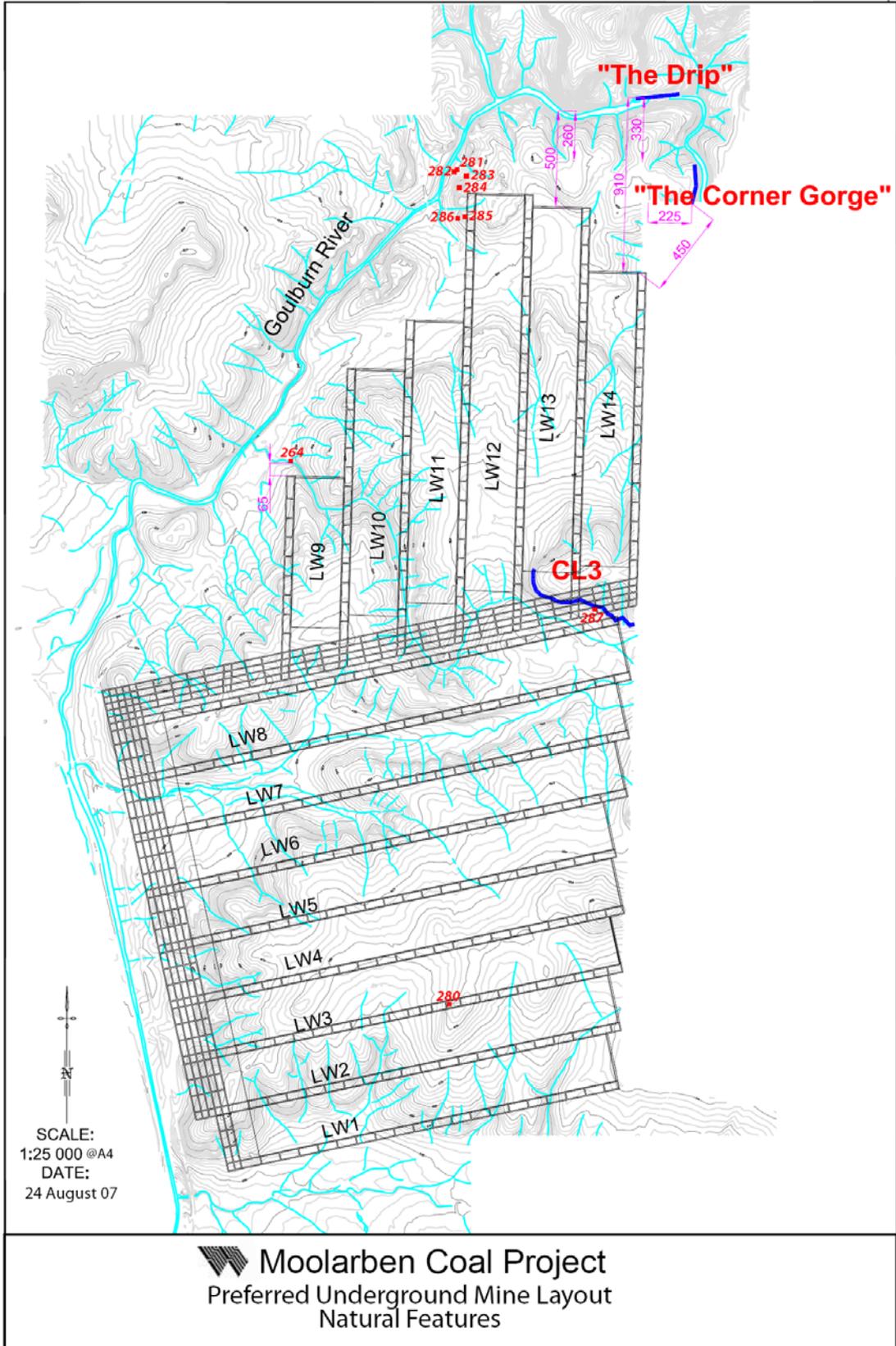
Determination of Meteorological Conditions

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 located on the site.

Compliance Monitoring

3. Attended monitoring is to be used to evaluate compliance with the relevant conditions of this approval.
4. This monitoring must be carried out at least 12 times a year, unless the Secretary directs otherwise.
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 NSW Industrial Noise Policy (as amended from time to time), in particular the requirements relating to:
 - (a) monitoring locations for the collection of representative noise data;
 - (b) meteorological conditions during which collection of noise data is not appropriate;
 - (c) equipment used to collect noise data, and conformity with Australian Standards relevant to such equipment; and
 - (d) modifications to noise data collected, including for the exclusion of extraneous noise and/or penalties for modifying factors apart from adjustments for duration.

APPENDIX 7:
UNDERGROUND MINE LAYOUT AND LOCATION OF SENSITIVE FEATURES



 Moolarben Coal Project
Preferred Underground Mine Layout
Natural Features

Site Name	Site Type	X Centre	Y Centre	Artefact Density	Management Recommendation
S1MC1	Scarred Tree	760670	6424444	1	Intensive scientific recording prior to disturbance.
S1MC2	Artefact Scatter	760840	6424339	14	Surface Collection
S1MC3	Isolated Find	760846	6424309	1	Surface Collection
S1MC4	Isolated Find	760866	6424307	1	Surface Collection
S1MC5	Artefact Scatter	760867	6424306	3	Surface Collection
S1MC6	Isolated Find	760890	6424301	1	Surface Collection
S1MC7	Isolated Find	760867	6424294	1	Surface Collection
S1MC8	Isolated Find	760548	6424002	1	Surface Collection
S1MC9	Isolated Find	760508	6424018	1	Surface Collection
S1MC10	Isolated Find	760645	6424004	1	Surface Collection
S1MC11	Artefact Scatter	760924	6423968	3	Surface Collection
S1MC12	Isolated Find	760933	6423948	1	Surface Collection
S1MC13	Isolated Find	761054	6423910	1	Surface Collection
S1MC14	Isolated Find	761050	6423907	1	Surface Collection
S1MC15	Isolated Find	761252	6425269	1	Surface Collection
S1MC16	Isolated Find	761168	6425107	1	Surface Collection
S1MC17	Isolated Find	760997	6425271	1	Surface Collection
S1MC18	Isolated Find	759777	6425026	1	Conservation
S1MC19	Isolated Find	759786	6425012	1	Conservation
S1MC20	Isolated Find	759816	6425028	1	Conservation
S1MC21	Isolated Find	760296	6425214	1	Conservation
S1MC 22	Isolated Find	760297	6425216	1	Conservation
S1MC 23	Isolated Find	760269	6425239	1	Conservation
S1MC24	Isolated Find	760514	6425250	1	Surface Collection
S1MC25	Isolated Find	761802	6425783	1	Surface Collection
S1MC26	Isolated Find	761766	6425183	1	Conservation
S1MC27	Isolated Find	761828	6425100	1	Conservation
S1MC28	Isolated Find	761627	6425002	1	Conservation
S1MC29	Isolated Find	761619	6424707	1	Conservation
S1MC30	Isolated Find	761135	6424559	1	Surface Collection
S1MC31	Isolated Find	761132	6424567	1	Surface Collection
S1MC32	Isolated Find	761124	6424585	1	Surface Collection
S1MC33	Isolated Find	761125	6424584	1	Surface Collection
S1MC34	Isolated Find	761128	6424583	1	Surface Collection
S1MC35	Isolated Find	761125	6424584	1	Surface Collection
S1MC36	Isolated Find	761255	6424616	1	Surface Collection
S1MC37	Isolated Find	761255	6424616	1	Surface Collection
S1MC38	Isolated Find	761279	6424617	1	Surface Collection
S1MC39	Isolated Find	761279	6424617	1	Surface Collection
PAD 1	Pad 1	761452	6424581	N/A	Conservation
PAD 2	Pad 2	761265	6423464	N/A	Conservation
PAD 3	Pad 3	761265	6423392	N/A	Conservation
S1MC40	Artefact Scatter	760441	6421958	12	Test Excavations and Salvage
S1MC41	Isolated Find	760384	6421732	1	Test Excavations and Salvage
S1MC42	Isolated Find	760408	6421838	1	Test Excavations and Salvage
S1MC43	Artefact Scatter	760558	6421874	9	Test Excavations and Salvage
S1MC44	Isolated Find	760550	6421657	1	Test Excavations and Salvage
S1MC45	Isolated Find	760582	6421721	1	Test Excavations and Salvage
S1MC46	Isolated Find	760547	6421941	1	Test Excavations and Salvage
S1MC47	Isolated Find	760637	6422033	1	Test Excavations and Salvage

Site Name	Site Type	X Centre	Y Centre	Artefact Density	Management Recommendation
S1MC48	Isolated Find	760569	6421916	1	Test Excavations and Salvage
S1MC49	Isolated Find	760543	6422069	1	Test Excavations and Salvage
S1MC50	Isolated Find	760340	6422126	1	Test Excavations and Salvage
S1MC51	Isolated Find	760434	6422195	1	Test Excavations and Salvage
S1MC52	Isolated Find	760422	6422175	1	Test Excavations and Salvage
S1MC53	Artefact Scatter	759942	6422062	39	Test Excavations and Salvage
S1MC54	Artefact Scatter	760966	6421764	3	Conservation
S1MC55	Rockshelter & Artefacts	760964	6421902	8	Conservation
S1MC56	Rockshelter & Artefacts	760936	6421882	1	Conservation
S1MC57	Artefact Scatter	760906	6421882	16	Conservation
S1MC58	Artefact Scatter	761241	6419040	10	Conservation
S1MC59	Artefact Scatter	761274	6419089	8	Conservation
S1MC60	Artefact Scatter	761555	6418906	12	Conservation
S1MC61	Isolated Find	761650	6418891	1	Conservation
S1MC62	Isolated Find	761503	6418958	1	Conservation
S1MC63	Isolated Find	761502	6418979	1	Conservation
S1MC64	Isolated Find	761502	6418979	1	Conservation
S1MC65	Isolated Find	761382	6418984	1	Conservation
S1MC66	Artefact Scatter	761345	6418974	24	Conservation
S1MC67	Artefact Scatter	761298	6418996	52	Conservation
S1MC68	Isolated Find	761300	6419026	1	Conservation
S1MC69	Isolated Find	761300	6419031	1	Conservation
S1MC70	Isolated Find	761427	6419023	1	Conservation
S1MC71	Isolated Find	761427	6419023	1	Conservation
S1MC72	Isolated Find	761421	6419023	1	Conservation
S1MC73	Isolated Find	761429	6419089	1	Conservation
S1MC74	Isolated Find	761687	6419730	1	Conservation
S1MC75	Isolated Find	761683	6419722	1	Conservation
S1MC76	Isolated Find	761683	6419722	1	Conservation
S1MC77	Isolated Find	761597	6419653	1	Unmitigated impact
PAD 4	Pad 4	761685	6419735	N/A	Conservation
PAD 5	Pad 5	761685	6419735	N/A	Conservation
PAD 6	Pad 6	761341	6420748	N/A	Conservation
36-3-0222	Artefact Scatter	760420	6420820	6	Intensive Recording and Salvage
36-3-0223	Isolated Find	760420	6420880	1	Intensive Recording and Salvage
S1MC78	Artefact Scatter	761628	6417183	12	Test Excavations and Salvage
S1MC79	Isolated Find	761592	6417154	1	Test Excavations and Salvage
S1MC80	Isolated Find	761535	6417281	1	Surface Collection
S1MC81	Isolated Find	761547	6417308	1	Surface Collection
S1MC82	Isolated Find	761563	6417309	1	Surface Collection
S1MC83	Isolated Find	761557	6417330	1	Surface Collection
S1MC84	Artefact Scatter	761580	6417360	6	Surface Collection
S1MC85	Isolated Find	761613	6417323	1	Surface Collection
S1MC86	Isolated Find	761612	6417508	1	Surface Collection
S1MC87	Isolated Find	761615	6417500	1	Surface Collection
S1MC88	Isolated Find	761608	6417465	1	Surface Collection
S1MC89	Isolated Find	761591	6417421	1	Surface Collection
S1MC90	Isolated Find	761579	6417403	1	Surface Collection

Site Name	Site Type	X Centre	Y Centre	Artefact Density	Management Recommendation
S1MC91	Isolated Find	761631	6417624	1	Surface Collection
S1MC92	Isolated Find	761659	6417596	1	Surface Collection
S1MC93	Isolated Find	761659	6417588	1	Surface Collection
S1MC94	Artefact Scatter	761638	6417728	3	Surface Collection
S1MC95	Isolated Find	762537	6415994	1	Surface Collection
S1MC96	Isolated Find	762530	6416009	1	Surface Collection
S1MC97	Isolated Find	762523	6416029	1	Surface Collection
S1MC98	Isolated Find	762475	6416038	1	Surface Collection
S1MC99	Isolated Find	762553	6416059	1	Surface Collection
S1MC100	Isolated Find	762414	6416282	1	Surface Collection
S1MC101	Isolated Find	762415	6416282	1	Surface Collection
S1MC102	Artefact Scatter	762379	6416477	3	Surface Collection
S1MC103a	Artefact Scatter	762693	6416081	2	Surface Collection
S1MC103	Artefact Scatter	763978	6415601	184	Conservation
S1MC104	Artefact Scatter	764042	6415564	4	Conservation
S1MC105	Isolated Find	763996	6415683	1	Conservation
S1MC106	Isolated Find	764013	6415735	1	Conservation
S1MC107	Isolated Find	766017	6415739	1	Conservation
S1MC108	Isolated Find	764026	6415756	1	Conservation
S1MC109	Isolated Find	764023	6416068	1	Conservation
S1MC110	Isolated Find	764118	6416246	1	Conservation
S1MC111	Isolated Find	764135	6416310	1	Conservation
S1MC112	Isolated Find	764136	6416312	1	Conservation
S1MC113	Isolated Find	764140	6416326	1	Conservation
S1MC114	Isolated Find	764148	6416337	1	Conservation
S1MC115	Isolated Find	764124	6416425	1	Conservation
S1MC116	Isolated Find	764114	6416357	1	Conservation
S1MC117	Isolated Find	764095	6416462	1	Conservation
S1MC118	Isolated Find	764026	6416575	1	Conservation
S1MC119	Isolated Find	764027	6416566	1	Conservation
S1MC120	Isolated Find	764095	6416601	1	Conservation
S1MC121	Isolated Find	764111	6416632	1	Conservation
S1MC122	Isolated Find	764066	6416619	1	Conservation
S1MC123	Isolated Find	764064	6416622	1	Conservation
S1MC124	Isolated Find	764070	6416630	1	Conservation
S1MC125	Isolated Find	764058	6416612	1	Conservation
S1MC126	Isolated Find	764056	6416612	1	Conservation
S1MC127	Isolated Find	764121	6416573	1	Conservation
S1MC128	Isolated Find	764161	6416333	1	Conservation
S1MC129	Isolated Find	764118	6416557	1	Conservation
S1MC130	Artefact Scatter	762600	6418163	23	Conservation
S1MC131	Isolated Find	762763	6418104	1	Conservation
S1MC132	Artefact Scatter	763451	6417107	33	Conservation
S1MC133	Artefact Scatter	763477	6417119	7	Conservation
S1MC134	Isolated Find	763507	6417086	1	Conservation
S1MC135	Artefact Scatter	763535	6417042	32	Conservation
S1MC136	Artefact Scatter	762737	6417948	5	Conservation
S1MC137	Isolated Find	762338	6418398	1	Conservation
S1MC138	Isolated Find	762315	6418451	1	Conservation
S1MC139	Artefact Scatter	762549	6417807	23	Test Excavations and Salvage
S1MC140	Artefact Scatter	761278	6416654	4	Conservation

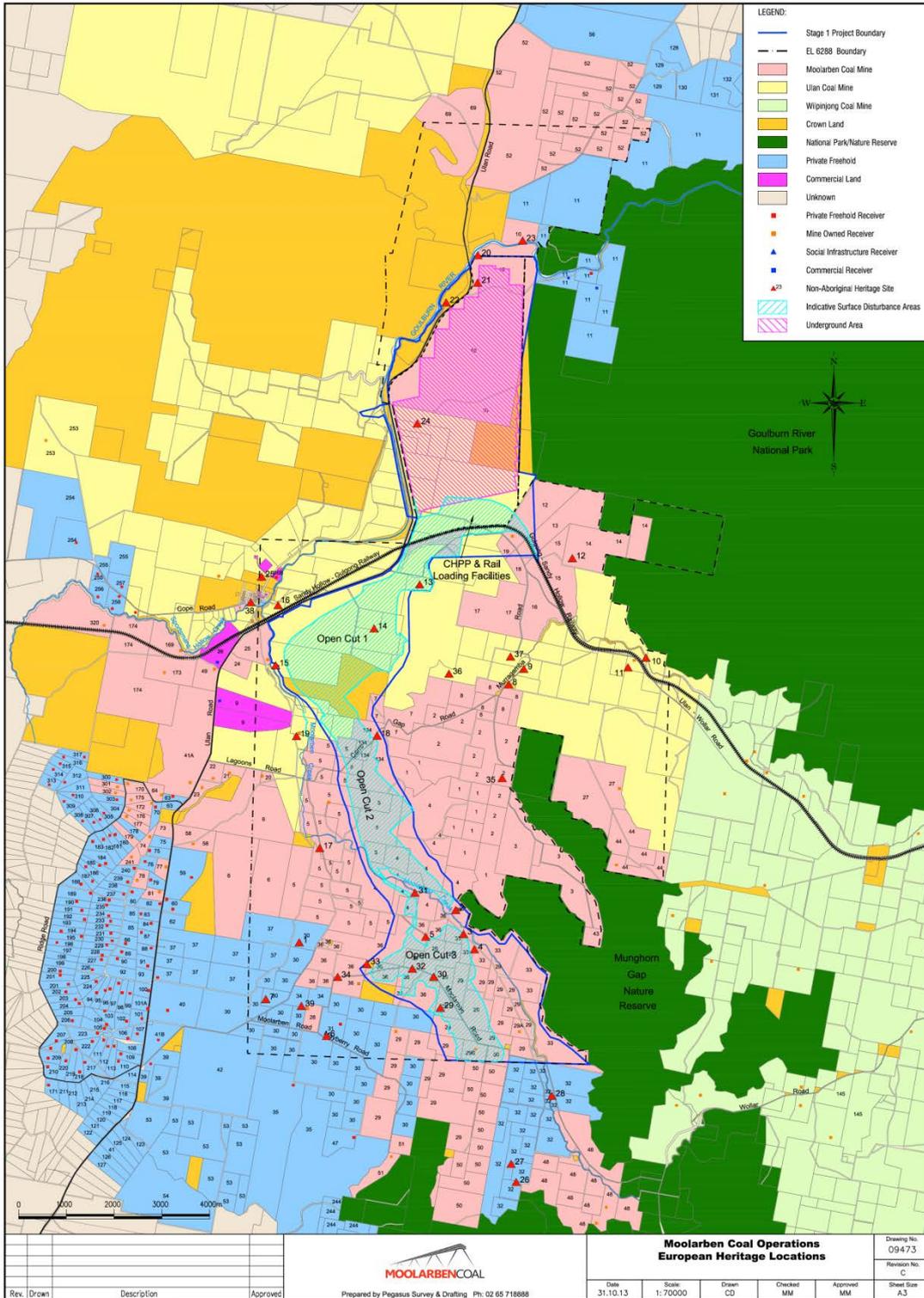
Site Name	Site Type	X Centre	Y Centre	Artefact Density	Management Recommendation
S1MC141	Isolated Find	761409	6416796	1	Test Excavations and Salvage
S1MC142	Isolated Find	761479	6417036	2	Test Excavations and Salvage
S1MC143	Artefact Scatter	761535	6417066	3	Test Excavations and Salvage
S1MC144	Isolated Find	761519	6417142	1	Test Excavations and Salvage
PAD 8	Pad 8	761478	6421053	0	Conservation
PAD 9	Pad 9	761552	6421040	0	Conservation
PAD 10	Pad 10	761551	6421051	0	Conservation
PAD 11	Pad 11	761426	6420964	0	Conservation
PAD 12	Pad 12	761318	6420832	0	Unmitigated impact
S1MC213	Isolated Find	764196	6415322	1	Conservation
S1MC225	Isolated Find	761752	6425887	1	Test Excavations and Salvage
S1MC226	Isolated Find	761726	6426232	1	Test Excavations and Salvage
S1MC227	Isolated Find	761825	6426206	1	Test Excavations and Salvage
S1MC228	Artefact Scatter	762428	6426370	13	Test Excavations and Salvage
S1MC229	Isolated Find	762430	6426375	1	Test Excavations and Salvage
S1MC230	Artefact Scatter	761640	6426786	69	Test Excavations and Salvage
S1MC231	Isolated Find	761907	6426804	1	Test Excavations and Salvage
S1MC232	Isolated Find	761926	6426825	1	Test Excavations and Salvage
S1MC233	Artefact Scatter	761954	6426840	2	Test Excavations and Salvage
S1MC234	Isolated Find	761990	6426858	1	Test Excavations and Salvage
S1MC235	Isolated Find	762126	6426823	1	Test Excavations and Salvage
S1MC236	Artefact Scatter	762199	6426811	14	Test Excavations and Salvage
S1MC237	Isolated Find	762202	6426805	1	Test Excavations and Salvage
S1MC238	Isolated Find	762211	6426803	1	Test Excavations and Salvage
S1MC239	Isolated Find	762220	6426805	1	Test Excavations and Salvage
S1MC240	Artefact Scatter	762231	6426802	7	Test Excavations and Salvage
S1MC241	Artefact Scatter	762272	6426800	10	Test Excavations and Salvage
S1MC242	Isolated Find	762291	6426800	1	Test Excavations and Salvage
S1MC243	Isolated Find	762310	6426800	1	Test Excavations and Salvage
S1MC244	Artefact Scatter	762395	6426732	1	Test Excavations and Salvage
S1MC244a	Artefact Scatter	761552	6426828	30	Test Excavations and Salvage
S1MC245	Isolated Find	761747	6426767	1	Test Excavations and Salvage
S1MC246	Isolated Find	761820	6426775	1	Test Excavations and Salvage
S1MC247	Isolated Find	761831	6426745	1	Test Excavations and Salvage
S1MC248	Isolated Find	761863	6426758	1	Test Excavations and Salvage
S1MC249	Isolated Find	761863	6426771	1	Test Excavations and Salvage
S1MC250	Isolated Find	761860	6426773	1	Test Excavations and Salvage
S1MC252	Isolated Find	761867	6426779	1	Test Excavations and Salvage
S1MC253	Isolated Find	761870	6426772	1	Test Excavations and Salvage
S1MC254	Artefact Scatter	763332	6431357	2	Conservation
S1MC255	Isolated Find	763332	6431357	1	Test Excavations and Salvage
S1MC256	Artefact Scatter	762878	6429620	23	Monitor subsidence
S1MC257	Artefact Scatter	762850	6429600	4	Conservation
S1MC258	Artefact Scatter	762865	6429652	2	Conservation
S1MC259	Isolated Find	762889	6429671	1	Conservation
S1MC260	Isolated Find	762849	6429605	1	Conservation
S1MC261	Rockshelter & Artefact	762876	6429660	2	Conservation
S1MC262	Isolated Find	762876	6429676	1	Conservation
S1MC263	Isolated Find	762177	6430458	1	Conservation
S1MC264	Grinding Grooves & Artefacts	762010	6430705	78	Monitor subsidence: Intensive recording.

Site Name	Site Type	X Centre	Y Centre	Artefact Density	Management Recommendation
S1MC265	Artefact Scatter	762224	6430592	3	Conservation
S1MC266	Isolated Find	763000	6431393	1	Conservation
S1MC267	Rockshelter & Artefact	761945	6430063	10	Monitor subsidence
S1MC268	Isolated Find	761875	6430102	1	Conservation
S1MC269	Isolated Find	761882	6430110	1	Conservation
S1MC270	Isolated Find	762024	6430287	1	Monitor subsidence
S1MC271	Rockshelter & Artefacts	763749	6428829	8	Monitor subsidence
S1MC272	Artefact Scatter	763827	6428747	2	Conservation
S1MC273	Isolated Find	762660	642864	1	Conservation
S1MC274	Isolated Find	761580	6426932	1	Conservation
S1MC275	Isolated Find	761878	6426869	1	Conservation
S1MC276	Isolated Find	761877	6426917	1	Conservation
S1MC277	Isolated Find	761862	6426931	1	Conservation
S1MC278	Isolated Find	761688	6426940	1	Conservation
S1MC279	Isolated Find	761551	6426963	1	Conservation
S1MC280	Rockshelter & Artefacts	762822	6427883	45	Monitor subsidence: Intensive recording.
S1MC281	Artefact Scatter	762865	6432219	11	Monitor subsidence
S1MC282	Artefact Scatter	762851	6432207	65	Monitor subsidence
S1MC283	Rockshelter & Artefacts	762912	6432185	6	Monitor subsidence
S1MC284	Rockshelter & Artefacts	762877	6432127	8	Monitor subsidence
S1MC285	Rockshelter & Artefacts	762905	6431976	2	Monitor subsidence
S1MC286	Rockshelter & Artefacts	762868	6431969	28	Monitor subsidence
S1MC287	Rockshelter & Artefacts	763240	6430143	28	Monitor subsidence: Intensive recording.
S1MC288	Rockshelter & Artefacts	763336	6430223	1	Monitor subsidence: Intensive recording.
S1MC289	Rockshelter & Artefacts	763795	6429838	9	Monitor subsidence: Intensive recording.
S1MC290	Rockshelter & Artefacts	763739	6429835	5	Monitor subsidence: Intensive recording.
S1MC291	Isolated Find	763726	6429853	1	Monitor subsidence: Intensive recording.
S1MC292	Isolated Find	763406	6429904	1	Monitor subsidence: Intensive recording.
S1MC293	Isolated Find	763385	6429901	1	Monitor subsidence: Intensive recording.
S1MC294	Rockshelter & Artefacts	763673	6429849	2	Monitor subsidence: Intensive recording.
S1MC295	Isolated Find	763273	6429928	1	Monitor subsidence: Intensive recording.
S1MC296	Rockshelter & Artefacts	763503	6429961	12	Monitor subsidence: Intensive recording.
S1MC297	Rockshelter & Artefacts	763420	6430329	5	Monitor subsidence: Intensive recording.
PAD 7	Pad 7	763846	6428750	0	Conservation
S1MC298	Artefact Scatter	759258	6423654	75	Test Excavation & Salvage
S1MC299	Isolated Find	759331	6423850	1	Surface Collection
S1MC300	Artefact Scatter	759071	6423798	41	Intensive Recording & Surface Collection
S1MC301	Artefact Scatter	758997	6424100	10	Surface Collection

Site Name	Site Type	X Centre	Y Centre	Artefact Density	Management Recommendation
S1MC302	Artefact Scatter	758881	6423779	20	Surface Collection
S1MC303	Artefact Scatter and PAD	762029	6426950	249	Conservation
S1MC304	Artefact Scatter and PAD	762216	6426991	63	Conservation
S1MC305	Artefact Scatter and PAD	762474	6426945	143	Conservation
S1MC306	Isolated Find	763630	6426632	1	Surface Collection
S1MC307	Isolated Find	763714	6426587	1	Surface Collection
S1MC308	Artefact Scatter	763945	6426408	2 + PAD	Test Excavation & Salvage
S1MC309	Isolated Find	763991	6426357	1	Surface Collection
S1MC310	Isolated Find	761014	6428930	1	Surface Collection
S1MC311	Isolated Find	761232	6428099	1	Surface Collection
S1MC312	Isolated Find	761279	6427873	1	Surface Collection
S1MC313	Artefact Scatter	762188	6429182	2	Surface Collection
S1MC314	Artefact Scatter and PAD	761819	6429071	2	Test Excavation & Salvage
S1MC315	Isolated Find	761959	6429047	1	Surface Collection
S1MC316	Artefact Scatter	762039	6429072	2	Surface Collection
S1MC317	Isolated Find	762078	6429120	1	Surface Collection
S1MC318	Isolated Find	762107	6429141	1	Surface Collection
S1MC319	Isolated Find	761634	6429082	1	Surface Collection
S1MC320	Isolated Find	761047	6429251	1	Surface Collection
S1MC321	Isolated Find	763728	6427662	1	Surface Collection
S1MC322	Artefact Scatter and PAD	763693	6428813	3	Conservation
S1MC323	Isolated Find	763211	6432118	1	Surface Collection
S1MC324	Isolated Find	763245	6432104	1	Surface Collection
S1MC325	Isolated Find	760137	6423587	1	Unmitigated impact
S1MC326	Rock Shelter & PAD	759832	6422848	N/A	Unmitigated impact
S1MC327	Rock Shelter & PAD	759841	6422853	N/A	Unmitigated impact
S1MC328	Isolated Find	759847	6422847	1	Unmitigated impact
S1MC329	Rock Shelter & PAD	760119	6422761	N/A	Unmitigated impact
S1MC330	Rock Shelter & PAD	760097	6422739	N/A	Unmitigated impact
S1MC331	Rock Shelter & Artefacts	760843	6421283	10	Test excavation & salvage
S1MC332	Rock Shelter & PAD	762299	6418767	N/A	Unmitigated impact
S1MC333	Rock Shelter & PAD	762086	6418954	N/A	Unmitigated impact
S1MC334	Rock Shelter & PAD	761975	6418915	N/A	Unmitigated impact
S1MC335	Rock Shelter & PAD	761874	6419277	N/A	Unmitigated impact
S1MC336	Rock Shelter & PAD	761725	6418961	N/A	Unmitigated impact
S1MC337	Rock Shelter & PAD	761575	6419390	N/A	Unmitigated impact
S1MC338	Rock Shelter & PAD	761564	6419379	N/A	Unmitigated impact
S1MC339	Rock Shelter & PAD	761544	6419370	N/A	Unmitigated impact

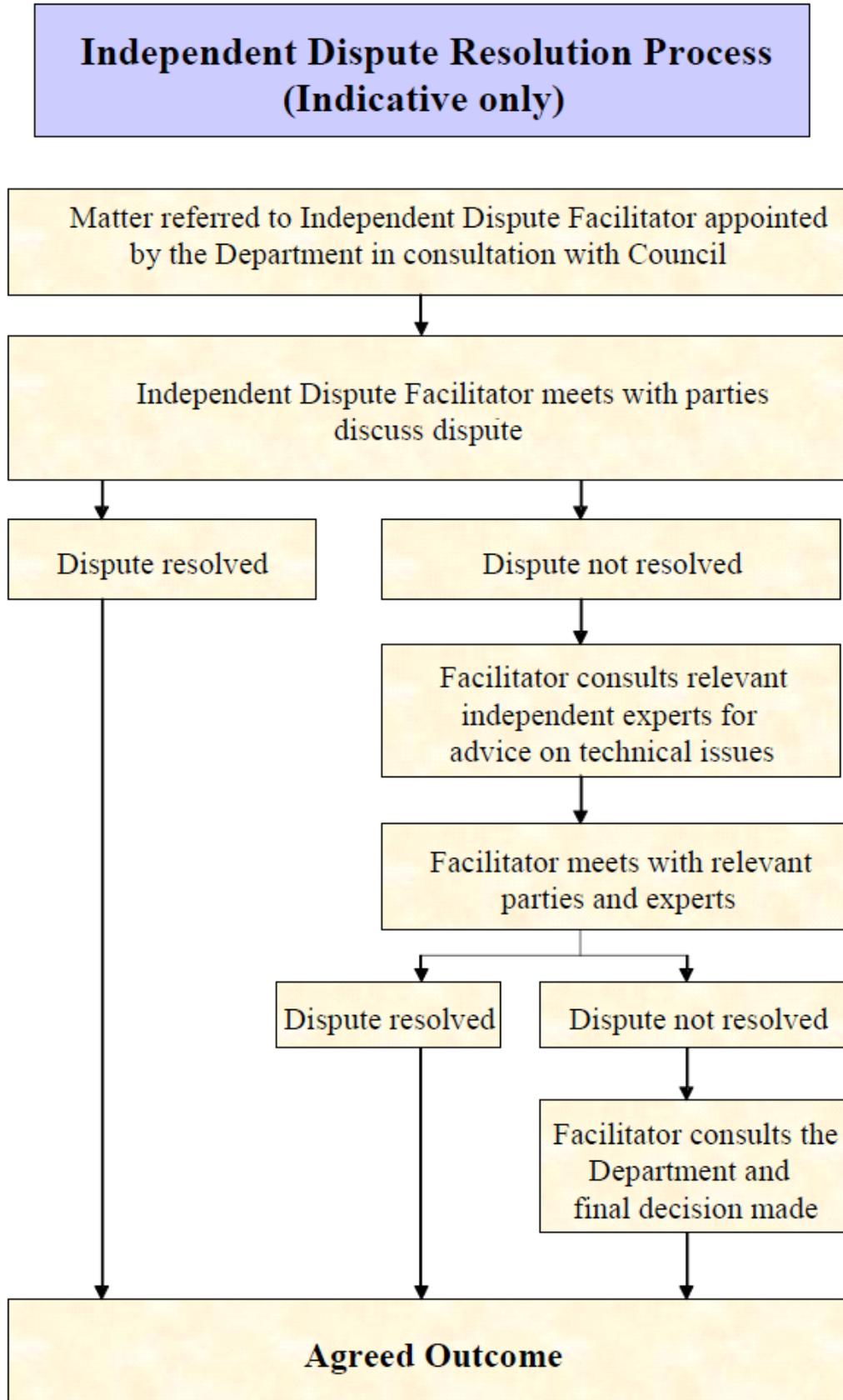
Site Name	Site Type	X Centre	Y Centre	Artefact Density	Management Recommendation
S1MC340	Rock Shelter & PAD	761472	6419251	N/A	Unmitigated impact
S1MC341	Rock Shelter & PAD	761009	6420337	N/A	Unmitigated impact
S1MC342	Rock Shelter & PAD	761252	6420370	N/A	Unmitigated impact
S1MC343	Rock Shelter & PAD	761430	6420424	N/A	Monitor blasting: test excavation & salvage
S1MC344	Rock Shelter & Artefacts	761434	6420500	6	Monitor blasting: test excavation & salvage
S1MC345	Rock Shelter & PAD	761438	6420476	N/A	Unmitigated impact
S1MC346	Rock Shelter & PAD	761423	6420537	N/A	Unmitigated impact
S1MC347	Rock Shelter & PAD	760928	6420913	N/A	Unmitigated impact
S1MC348	Rock Shelter & PAD	760901	6420914	N/A	Unmitigated impact
S1MC349	Rock Shelter & PAD	760793	6420933	N/A	Unmitigated impact
S1MC350	Rock Shelter & PAD	760746	6420946	N/A	Unmitigated impact
S1MC351	Rock Shelter & PAD	761070	6421070	N/A	Unmitigated impact
S1MC352	Rock Shelter & PAD	761168	6421080	N/A	Unmitigated impact
S1MC353	Rock Shelter & PAD	761421	6420743	N/A	Unmitigated impact
S1MC354	Rock Shelter & PAD	761448	6420591	N/A	Unmitigated impact
S1MC355	Artefact Scatter	760344	6422239	2	Unmitigated impact
S1MC356	Artefact Scatter	763124	6426882	1	Salvage
S1MC357	Artefact Scatter	762882	6426983	1	Salvage
S2MC1	Isolated Find	763454	6426266	1	Surface collection
S2MC256	Artefact Scatter	763698	6426910	2	Conservation
S2MC257	Isolated Find	763567	6426991	1	Conservation
S2MC258	Artefact Scatter & PAD	763414	6427000	9	Conservation
S2MC259	Isolated Find	763374	6427039	1	Conservation
S2MC260	Isolated Find	765318	6426505	1	Surface collection

APPENDIX 10: NON-ABORIGINAL HERITAGE



No	Place Name	Impact Status	Significance	Summary Recommendation
2	Farm site. Portion 218. Ph Moolarben	No impact	Local – moderate	No further action required In situ conservation.
3	Burial site, Roberts family. Portion 146, Ph Moolarben	Impact by Open Cut 3 development	Local – high	Exhumation. Discussion to be held with related families.
4	House & burial site. Portion 63, Ph Moolarben	Impact by Open Cut 3 development	Local – moderate	Exhumation. Discussion to be held with related families.
14	House site. Portion 178 Ph Moolarben	Impact by Open Cut 1 development	Local – moderate	Archival recording
15	Moolarben Dam	No impact	Local – moderate	In situ conservation
18	Carr's Gap Road. Portion 30. Ph Moolarben	Impact by Open Cut 2 development likely	Local – moderate	Archival recording In situ conservation. If impacted recovery works to be recommended
19	Farm site. 'Glen Moor', Portion 203 Ph Moolarben	No impact	Local – exceptional	Archival recording. In situ conservation.
20	Grave & memorial garden. Portion 30 Ph Lennox	No impact	Local - high	Area to be maintained.
22	Stock yards. Portion 34 Ph Lennox	No impact	Local – moderate	Archival recording. In situ conservation.
23	Natural environment. 'The Drip'	No impact	Local – high	Ensure public access is maintained
29	House site. Portion 45 Ph Moolarben	Impact by Open Cut 3 development	Local – moderate	Archival recording.
30	School site. Portion 176 Ph Moolarben	Impact by Open Cut 3 development	Local – moderate	Archival recording.
31	House site, Portion 228, Ph Moolarben	No impact	Local – moderate	Archival recording. In situ conservation.
32	House site. Portion 89 Ph Moolarben	Impact by Open Cut 3 development	Local – moderate	Archival recording.
33	Recreation Ground. Portion 204. Ph Moolarben	No impact	Local – moderate	Archival recording. In situ conservation.

APPENDIX 11:
INDEPENDENT DISPUTE RESOLUTION PROCESS



**APPENDIX F: STAGE 2 - PROJECT APPROVAL AS PROPOSED TO BE
MODIFIED**

Project Approval

Section 75J of the *Environmental Planning & Assessment Act 1979*

As delegate of the Minister for Planning, the Planning Assessment Commission of NSW approves the project 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 project.

Red type represents the July 2015 modification (MOD1)

Brian Gilligan
Member of the Commission

Lynelle Briggs AO
Member of the Commission

Annabelle Pegrum AM
Member of the Commission

Sydney

30 January 2015

SCHEDULE 1

Application Number: 08_0135
Proponent: Moolarben Coal Mines Pty Ltd
Approval Authority: Minister for Planning
Land: See Appendix 1
Project: Moolarben Coal Project Stage 2

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DEFINITIONS

Annual review	The review required by condition 4 of Schedule 6
ARI	Average Recurrence Interval
ARTC	Australian Rail Track Corporation Ltd
BCA	Building Code of Australia
Biodiversity offset strategy	The conservation and enhancement strategy described in EA, and depicted conceptually in the figure in Appendix 7
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
Blast misfire	The failure of one or more holes in a blast pattern to initiate
CCC	Community Consultative Committee
Cliff	A continuous rock face, including overhangs, having a minimum length of 20 metres, a minimum height of 10 metres and a minimum slope of 2 in 1 (>63.4°)
Conditions of this approval	Conditions contained in Schedules 2 to 6 inclusive
Council	Mid-Western Regional Council
CLD	Crown Lands Division within the Department of Trade and Investment, Regional Infrastructure and Services
CPI	Australian Bureau of Statistics Consumer Price Index
CCI	Construction Cost Index
Day	The period from 7am to 6pm on Monday to Saturday, and 8am to 6pm on Sundays and Public Holidays
DEC	NSW Department of Education and Communities
Department	Department of Planning & Environment
DPI	Department of Primary industries
DRE	Division of Resources and Energy within the Department of Trade and Investment, Regional Infrastructure and Services
DSC	Dams Safety Committee
EA	<p style="color: red;">The Moolarben Coal Project Stage 2 Environmental Assessment Report (6 volumes), dated March 2009 as modified by the:</p> <ul style="list-style-type: none"> • preferred project report, dated January 2012; • response to submissions, dated June 2012; • residual matters report, dated August 2012; • Groundwater Accounting and Water Sharing Plan prepared by RPS Aquaterra Pty Ltd, dated 13 June 2012; • Surface water information prepared by Worley Parsons Services Pty Ltd, dated 28 September 2012, 15 October 2012 and 9 November 2012; • Biodiversity Offset Strategy prepared by Cumberland Ecology Pty Ltd, dated December 2012; • Water Licensing Report – Wollar Creek Water Source prepared by Dundon Consulting Pty Ltd, dated 11 June 2013; • <i>OC4 South-West Modification Environmental Assessment</i>, dated April 2015 and associated response to submissions, dated June 2015.
EEC	Endangered ecological community, as defined under the <i>Threatened Species Conservation Act 1995</i>
Environmental consequences	The environmental consequences of subsidence impacts, including: damage to built features; loss of surface flows to the subsurface; loss of standing pools; adverse water quality impacts; cliff falls; rock falls; damage to Aboriginal heritage sites; impacts on aquatic ecology; and ponding.
EPA	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>
EPBC Act	<i>Commonwealth Environment Protection and Biodiversity Conservation Act 1999</i>
EPL	Environment Protection Licence issued under the POEO Act
Evening	The period from 6pm to 10pm
Executive Director Mineral Resources	Executive Director of Mineral Resources within DRE, or equivalent position
Feasible	Feasible relates to engineering considerations and what is practical to build or implement
Heritage item	An item as defined under the <i>Heritage Act 1977</i> and/or an Aboriginal Object or Aboriginal Place as defined under the <i>National Parks and Wildlife Act 1974</i>
Incident	<p>A set of circumstances that:</p> <ul style="list-style-type: none"> • causes or threatens to cause material harm to the environment; and/or

	<ul style="list-style-type: none"> breaches or exceeds the limits or performance measures/criteria in this approval
Land	As defined in the EP&A Act, except for where the term is used in the noise and air quality conditions in Schedules 3 and 5 of this approval where it is defined to mean the whole of a lot, or contiguous lots owned by the same landowner, in a current plan registered at the Land Titles Office at the date of this approval
Material harm to the environment	Actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial
Mine water	Water that accumulates within, or drains from, active mining and infrastructure areas (synonymous with 'dirty water')
Mining operations	Includes the removal and emplacement of overburden and extraction, processing, handling, storage and transport 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, which has a: <ul style="list-style-type: none"> minimum length of 20 metres and a height between 5 metres and 10 metres, or maximum length of 20 metres and a minimum height of 10 metres; and minimum slope of 2 to 1 (>63.4°).
Mitigation	Activities associated with reducing the impacts of the project
Moolarben mine complex	The combined operations of the Moolarben Stage 1 and Stage 2 mines
Moolarben Stage 1 mine	The approved mining operations and associated development within the area marked in blue dashed line on the figures in Appendix 2
Moolarben Stage 1 mine surface infrastructure area	The approved surface infrastructure area, including the coal handling and preparation plant and the rail loop, as shown on the figures in Appendix 2
Moolarben Stage 2 mine	The approved mining operations and associated development enclosed within the yellow dashed line on the figure in Appendix 2
NP&W Act	National Parks & Wildlife Act 1974
Negligible	Small and unimportant, such as to be not worth considering
Night	The period from 10pm to 7am on Monday to Saturday, and 10pm to 8am on Sundays and Public Holidays
NOW	NSW Office of Water within DPI
OEH	Office of Environment and Heritage
POEO Act	Protection of the Environment Operations Act 1997
Privately-owned land	Land that is not owned by a public agency or a mining company (or its subsidiary)
Project	The development as described in the EA
Proponent	Moolarben Coal Mines Pty Limited, or any other person or persons who rely on this approval to carry out the development that is subject to this approval.
Public infrastructure	Linear and related infrastructure 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 Proponent for obtaining independent experts to review the adequacy of any aspects of the extraction plan, or where such costs cannot be agreed, the costs determined by a dispute resolution process
Rehabilitation	The restoration of land disturbed by the project to a good condition, to ensure it is safe, stable and non-polluting
RFS	Rural Fire Service
RMS	Roads and Maritime Services
Rock face feature	A continuous rock face, including overhangs, which has a: <ul style="list-style-type: none"> minimum length of 20 metres and a height between 3 metres and 5 metres, or maximum length of 20 metres and a minimum height of 5 metres; and minimum slope of 2 to 1 (>63.4°).
ROM	Run-of-mine
Secretary	Secretary of the Department, or nominee
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
Site	The land referred to in Appendix 1
Statement of commitments	The Proponent's commitments in Appendix 3

Steep slope	An area of land having a gradient between 1 in 3 (33% or 18.3°) and 2 in 1 (200% or 63.4°)
Subsidence	The totality of subsidence effects, subsidence impacts and environmental consequences of subsidence impacts
Subsidence effects	Deformation of the ground mass due to mining, including all mining induced ground movements, such as vertical and horizontal displacement, tilt, strain and curvature
Subsidence impacts	Physical changes to the ground and its surface caused by subsidence effects, including tensile and shear cracking of the rock mass, localised buckling of strata caused by valley closure and upsidence and surface depressions or troughs
UCML	Ulan Coal Mines Limited
TSC Act	<i>Threatened Species Conservation Act 1995</i>
Ulan Road Strategy	The strategy prepared by the Arrb Group Limited, dated December 2011 as amended by the Secretary's letter dated 25 May 2013

SCHEDULE 2 ADMINISTRATIVE CONDITIONS

OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT

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

TERMS OF APPROVAL

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

Notes:

- *The general layout of the project is shown in Appendix 2; and*
- *The statement of commitments is shown in Appendix 3.*

3. If there is any inconsistency between the above documents, the most recent document shall prevail to the extent of the inconsistency. However, the conditions of this approval shall prevail to the extent of any inconsistency.
4. The Proponent shall comply with any reasonable requirement/s of the 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 approval; and
 - (b) the implementation of any actions or measures contained in these documents.

LAPSING OF APPROVAL

5. If the project has not been physically commenced within 5 years of the date of this approval, then this project approval shall lapse.

LIMITS ON APPROVAL

Mining Operations

6. The Proponent may carry out mining operations on site until 31 December 2038.

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

Coal Extraction

7. The Proponent shall not extract more than:
 - (a) 12 million tonnes of ROM coal from the open cut mining operations of the project in any calendar year; and
 - (b) 4 million tonnes of ROM coal from the underground mining operations of the Moolarben mine complex in any calendar year.

Coal Processing and Transport

8. The Proponent shall ensure that all coal extracted from the project is sent to the Moolarben Stage 1 mine surface infrastructure area for processing and/or transport to market.

STRUCTURAL ADEQUACY

9. The Proponent shall ensure that all new buildings and structures, and any alterations or additions to existing buildings and structures, are constructed in accordance with the relevant requirements of the BCA.

Notes:

- *Under Part 4A of the EP&A Act, the Proponent is required to obtain construction and occupation certificates (where applicable) for the proposed building works; and*
- *Part 8 of the EP&A Regulation sets out the requirements for the certification of the project.*

DEMOLITION

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

PROTECTION OF PUBLIC INFRASTRUCTURE

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

Note: This condition does not apply to any damage to public infrastructure subject to compensation payable under the Mine Subsidence Compensation Act 1961, or to damage to roads caused as a result of general road usage.

OPERATION OF PLANT AND EQUIPMENT

12. The Proponent shall ensure that all plant and equipment used on site, or in connection with the project, is:
 - (a) maintained in a proper and efficient condition; and
 - (b) operated in a proper and efficient manner.

STAGED SUBMISSION OF STRATEGIES, PLANS OR PROGRAMS

13. With the approval of the Secretary, the Proponent may:
 - (a) submit any strategy, plan or program required by this approval on a progressive basis; and
 - (b) combine any strategy, plan, program, review, audit or report required by this approval with any similar strategy, plan, program, review, audit or report required under Project Approval 05_0117 for the Moolarben Coal Project Stage 1.

Notes:

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

COMMUNITY ENHANCEMENT

14. From the commencement of construction until mining operations under this approval cease, the Proponent shall pay to Council a total of \$515 a year for each full-time equivalent employee/contractor at the Moolarben mine complex in excess of 320. This payment is for the provision of infrastructure and services generated by the project. It is also to be indexed in accordance with the CPI for the previous quarter.

SCHEDULE 3 ENVIRONMENTAL CONDITIONS - GENERAL

NOISE

Acquisition Upon Request

1. Upon receiving a written request for acquisition from the owner of the land listed in Table 1, the Applicant shall acquire the land in accordance with the procedures in conditions 5 and 6 of Schedule 5.

Table 1: Land subject to acquisition upon request

Receiver ID
32

Note: To interpret the land referred to in Table 1, see the applicable figures in Appendix 5.

Mitigation Upon Request

2. Upon receiving a written request from the owner of any residence on the land listed in Table 2, the Proponent shall implement additional noise mitigation measures (such as double-glazing, insulation and/or air conditioning) at the residence in consultation with the landowner. These measures must be reasonable and feasible, and directed towards reducing the noise impacts of the project on the residence.

If within 3 months of receiving this request from the owner, the Proponent 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 2: Residence subject to additional noise mitigation upon request

Receiver ID
30

Note: To interpret the land referred to in Table 2, see the applicable figures in Appendix 5.

Noise Criteria

3. The Proponent shall ensure that the noise generated by the Moolarben mine complex does not exceed the criteria in Table 3 at any residence on privately-owned land or the other specified locations.

Table 3: Noise criteria dB(A)

Receiver ID	Day	Evening	Night	
	$L_{Aeq(15min)}$	$L_{Aeq(15min)}$	$L_{Aeq(15min)}$	$L_{A1(1min)}$
30, 63	39	39	39	45
70	37	37	37	45
75	36	36	36	45
31	36	35	35	45
All other privately-owned residences	35	35	35	45
Ulan Primary School		35 (internal) when in use		-
Ulan Anglican Church Ulan Catholic Church		35 (internal) when in use		-
Goulburn River National Park Munghorn Gap Nature Reserve		50		-

Note: To interpret the land referred to in Table 3, see the applicable figures in Appendix 5.

Noise generated by the Moolarben mine complex is to be measured in accordance with the relevant requirements of the *NSW Industrial Noise Policy*. Appendix 6 sets out the meteorological conditions under which these criteria apply, and the requirements for evaluating compliance with these criteria.

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

Land Acquisition Criteria

4. If the noise generated by the Moolarben mine complex exceeds the criteria in Table 4 at any residence on privately-owned land, then upon receiving a written request for acquisition from an owner of the land listed in Table 4, the Proponent shall acquire the land in accordance with the procedures in conditions 5 and 6 of Schedule 5.

Table 4: Acquisition criteria dB(A) L_{Aeq} (15min)

Receiver ID	Day (L_{Aeq} (15min))	Evening (L_{Aeq} (15min))	Night (L_{Aeq} (15min))
63	43	43	42
All other privately-owned residences	40	40	40

Note: To interpret the land referred to Table 4, see the applicable figures in Appendix 5.

5. If the noise generated by the Moolarben mine complex contributes to exceedances of the relevant criteria in Table 5 on more than 25% of any privately-owned land (and a dwelling could be built on that land under existing planning controls), the Proponent shall, upon receiving a written request for acquisition from the landowner, acquire the land in accordance with the procedures in conditions 5 and 6 of Schedule 5.

Table 5: Land acquisition criteria

Day/Evening/Night L_{Aeq} (period)	Receiver
55/50/45	All privately-owned land

Note: Noise generated by the project is to be measured in accordance with the relevant requirements of the NSW Industrial Noise Policy. Appendix 6 sets out the meteorological conditions under which these criteria apply, and the requirements for evaluating compliance with these criteria.

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

Noise Mitigation Criteria

6. If the noise generated by the Moolarben mine complex exceeds the criteria in Table 6 at any privately owned residence, then upon receiving a written request the Proponent shall implement additional noise mitigation measures (such as double-glazing, insulation and/or air conditioning) at the residence in consultation with the landowner. These measures must be reasonable and feasible, and directed towards reducing the noise impacts of the project on the residence.

If within 3 months of receiving this request from the owner, the Proponent 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 6: Mitigation criteria dB(A) L_{Aeq} (15min)

Receiver ID	Day (L_{Aeq} (15min))	Evening (L_{Aeq} (15min))	Night (L_{Aeq} (15min))
63	40	40	39
All other privately owned residences	37	37	37

Note: To interpret the land referred to Table 6, see the applicable figures in Appendix 5.

Operating Conditions

7. The Proponent shall:
- implement best management practice to minimise the operational and road noise of the project;
 - operate a comprehensive noise management system that uses a combination of predictive meteorological forecasting and real-time noise monitoring data to guide the day to day planning of mining operations, and the implementation of both proactive and reactive noise mitigation measures to ensure compliance with the relevant conditions of this approval;
 - minimise the noise impacts of the project during meteorological conditions when the noise limits in this approval do not apply (see Appendix 6);
 - only use locomotives and rolling stock that are approved to operate on the NSW rail network in accordance with the noise limits in ARTC's EPL;
 - co-ordinate noise management at the Moolarben mine complex with the noise management at Ulan and Wilpinjong mines to minimise cumulative noise impacts; and

- (f) carry out regular monitoring to determine whether the Moolarben mine complex is complying with the relevant conditions of this approval, to the satisfaction of the Secretary.

Noise Management Plan

8. The Proponent shall prepare and implement a Noise Management Plan for the project to the satisfaction of the Secretary. This plan must:
- be prepared in consultation with the EPA, and submitted to and approved by the Secretary prior to the commencement of any development on site under this approval;
 - describe the measures that would be implemented to ensure compliance with the noise criteria and operating conditions in this approval;
 - describe the proposed noise management system in detail; and
 - include a monitoring program that:
 - evaluates and reports on:
 - the effectiveness of the noise management system;
 - compliance against the noise criteria in this approval; and
 - compliance against the noise operating conditions;
 - includes a program to calibrate and validate the real-time noise monitoring results with the attended monitoring results over time (so the real-time noise monitoring program can be used as a better indicator of compliance with the noise criteria in this approval and trigger for further attended monitoring); and
 - defines what constitutes a noise incident, and includes a protocol for identifying and notifying the Department and relevant stakeholders of any noise incidents.

BLASTING

Blasting Criteria

9. The Proponent shall ensure that blasting on the Moolarben mine complex does not cause exceedances of the criteria in Table 7.

Table 7: Blasting criteria

Location	Airblast overpressure (dB(Lin Peak))	Ground vibration (mm/s)	Allowable exceedance
Residence on privately owned land	120	10	0%
	115	5	5% of the total number of blasts over a period of 12 months
All public infrastructure	-	50 <i>(or a limit determined by the structural design methodology in AS 2187.2-2006, or its latest version, or other alternative limit for public infrastructure, to the satisfaction of the Secretary)</i>	0%

However, these criteria do not apply if the Proponent has a written agreement with the relevant owner to exceed these criteria, and has advised the Department in writing of the terms of this agreement.

Blasting Hours

10. The Proponent shall only carry out blasting on site between 9 am and 5 pm Monday to Saturday inclusive. No blasting is allowed on Sundays, public holidays, or at any other time without the written approval of the Secretary.

Blasting Frequency

11. The Proponent may carry out a maximum of:
- 2 blasts a day; and
 - 9 blasts a week, averaged over a calendar year, at the Moolarben mine complex.

This condition does not apply to blasts that generate ground vibration of 0.5 mm/s or less at any residence on privately-owned land, blast misfires or blasts required to ensure the safety of the mine or its workers.

Note: For the purposes of this condition, a blast refers to a single blast event, which may involve a number of individual blasts fired in quick succession in a discrete area of the mine.

Property Inspections

12. If the Proponent receives a written request from the owner of any privately-owned land within 2 kilometres of any approved open cut mining pit on site for a property inspection to establish the baseline condition of any buildings and/or structures on his/her land, or to have a previous property inspection updated, then within 2 months of receiving this request the Proponent shall:
- (a) commission a suitably qualified, experienced and independent person, whose appointment is acceptable to both parties to:
 - establish the baseline condition of any buildings and other structures on the land, or update the previous property inspection report; and
 - identify measures that should be implemented to minimise the potential blasting impacts of the project on these buildings and/or structures; and
 - (b) give the landowner a copy of the new or updated property inspection report.

If there is a dispute over the selection of the suitably qualified, experienced and independent person, or the Proponent or the landowner disagrees with the findings of the property inspection report, either party may refer the matter to the Secretary for resolution.

Property Investigations

13. If the owner of any privately-owned land claims that buildings and/or structures on his/her land have been damaged as a result of blasting on the site, then within 2 months of receiving this claim the Proponent shall:
- (a) commission a suitably qualified, experienced and independent person, whose appointment is acceptable to both parties to investigate the claim; and
 - (b) give the landowner a copy of the property investigation report.

If this independent property investigation confirms the landowner's claim, and both parties agree with these findings, then the Proponent shall repair the damage to the satisfaction of the Secretary.

If there is a dispute over the selection of the suitably qualified, experienced and independent person, or the Proponent or the landowner disagrees with the findings of the independent property investigation, then either party may refer the matter to the Secretary for resolution.

Operating Conditions

14. The Proponent shall:
- (a) implement best management practice to:
 - protect the safety of people and livestock in the surrounding area;
 - protect public or private infrastructure/property in the surrounding area from any damage; and
 - minimise the dust and fume emissions of any blasting;
 - (b) ensure that blasting on the site does not damage Aboriginal rock shelter sites S2MC229 (AHIMS No. 36-3-1376), S2MC232 (AHIMS No. 36-3-1379) or S2MC233 (AHIMS No. 36-3-1380);
 - (c) operate a suitable system to enable the public to get up-to-date information on the proposed blasting Schedule on site; and
 - (d) co-ordinate the timing of blasting on site with the timing of blasting at the Ulan and Wilpinjong mines to minimise cumulative blasting impacts, to the satisfaction of the Secretary.

Note: To identify the Aboriginal rock shelter sites, see the applicable figure in Appendix 8.

15. The Proponent shall not undertake blasting on site within 500 metres of:
- (a) any public road;
 - (b) the Gulgong to Sandy Hollow Railway Line;
 - (c) the Wollar-Wellington 330kV Transmission Line; or
 - (d) any land outside the site not owned by the Proponent,

unless the Proponent has:

- demonstrated to the satisfaction of the Secretary that the blasting can be carried out closer to the infrastructure or land without compromising the safety of people or livestock or damaging the infrastructure and/or other buildings and structures; and
- updated the Blast Management Plan to include the specific measures that would be implemented while blasting is being carried out within 500 metres of the infrastructure or land; or
- a written agreement with the relevant infrastructure owner or landowner to allow blasting to be carried out closer to the infrastructure or land, and the Proponent has advised the Department in writing of the terms of this agreement.

Blast Management Plan

16. The Proponent shall prepare and implement a Blast Management Plan for the project to the satisfaction of the Secretary. This plan must:
- be prepared in consultation with the EPA, and submitted to and approved by the Secretary prior to conducting any blasting on site;
 - describe the measures that would be implemented to ensure compliance with the blast criteria and operating conditions of this approval;
 - propose and justify any alternative ground vibration limits for public infrastructure in the vicinity of the site (if relevant); and
 - include a monitoring program for evaluating and reporting on compliance with the blasting criteria and operating conditions of this approval.

AIR QUALITY

Odour

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

Air Quality Criteria

18. The Proponent shall ensure that all reasonable and feasible avoidance and mitigation measures are employed so that particulate matter emissions generated by the Moolarben mine complex do not cause exceedances of the criteria listed in Tables 8, 9 and 10 at any residence on privately-owned land.

Table 8: Long term impact assessment criteria for particulate matter

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

Table 9: Short term impact assessment criterion for particulate matter

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

Table 10: Long term impact assessment criteria for deposited dust

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

Notes to Tables 8-10:

^a Total impact (i.e. incremental increase in concentrations due to the complex plus background concentrations due to all other sources);

^b Incremental impact (i.e. incremental increase in concentrations due to the complex on its own);

^c Deposited dust is to be assessed as insoluble solids as defined by Standards Australia, AS/NZS 3580.10.1:2003: Methods for Sampling and Analysis of Ambient Air - Determination of Particulate Matter - Deposited Matter - Gravimetric Method; and

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

Mine-owned Land

19. The Proponent shall ensure that all reasonable and feasible avoidance and mitigation measures are employed so that particulate matter emissions generated by the Moolarben mine complex do not cause exceedances of the criteria listed in Tables 11, 12 and 13 at any occupied residence on mine-owned land (including land owned by another mining company) unless:
- the tenant and landowner (if the residence is owned by another mining company) have been notified of any health risks associated with such exceedances in accordance with the notification requirements under Schedule 5 of this approval;
 - the tenant of any land owned by the Proponent can terminate their tenancy agreement without penalty at any time, subject to giving reasonable notice;
 - air mitigation measures such as air filters, a first flush roof water drainage system and/or air conditioning) are installed at the residence, if requested by the tenant or landowner (if the residence is owned by another mining company);

- (d) air quality monitoring is regularly undertaken to inform the tenant or landowner (if the residence is owned by another mining company) of the actual particulate emissions at the residence; and
- (e) data from this monitoring is presented to the tenant and landowner in an appropriate format for a medical practitioner to assist the tenant and landowner in making informed decisions on the health risks associated with occupying the property, to the satisfaction of the Secretary.

Air Quality Acquisition Criteria

20. If particulate matter emissions generated by the Moolarben mine complex exceed the incremental criteria, or contribute an exceedance of the relevant cumulative criteria, in Tables 11, 12 and 13 at any residence on privately-owned land or on more than 25% of any privately-owned land (and a dwelling could be built on that land under existing planning controls), then upon receiving a written request for acquisition from the landowner, the Proponent shall acquire the land in accordance with the procedures in conditions 5 and 6 of Schedule 5.

Table 11: Long term land acquisition criteria for particulate matter

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

Table 12: Short term land acquisition criteria for particulate matter

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

Table 13: Long term land acquisition criteria for deposited dust

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

Notes to Tables 11-13:

^a Cumulative impact (i.e. incremental increase in concentrations due to the complex plus background concentrations due to all other sources);

^b Incremental impact (i.e. incremental increase in concentrations due to the complex on its own);

^c Deposited dust is to be assessed as insoluble solids as defined by Standards Australia, AS/NZS 3580.10.1:2003: Methods for Sampling and Analysis of Ambient Air - Determination of Particulate Matter - Deposited Matter - Gravimetric Method;

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

Operating Conditions

21. The Proponent shall:
- (a) implement best management practice to minimise the off-site odour, fume and dust emissions of the project;
 - (b) implement all reasonable and feasible measures to minimise the release of greenhouse gas emissions from the site;
 - (c) minimise any visible off-site air pollution generated by the project;
 - (d) minimise the surface disturbance of the site;
 - (e) 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 approval;
 - (f) minimise the air quality impacts of the project during adverse meteorological conditions and extraordinary events (see Note d above under Table 13); and
 - (g) co-ordinate the air quality management at the Moolarben mine complex with the air quality management at the Ulan and Wilpinjong mines to minimise cumulative air quality impacts, to the satisfaction of the Secretary.

Air Quality Management Plan

22. The Proponent shall prepare and implement an Air Quality Management Plan for the project to the satisfaction of the Secretary. This plan must:
- (a) be prepared in consultation with the EPA, and submitted to and approved by the Secretary prior to the commencement of any development on site;

- (b) describe the measures that would be implemented to ensure compliance with the relevant air quality criteria and operating conditions of this approval;
- (c) describe the air quality management system;
- (d) include an air quality monitoring program that:
 - uses a combination of real-time and supplementary monitors to evaluate the performance of the project against the air quality criteria in this approval;
 - adequately supports the air quality management system;
 - evaluates and reports on the:
 - the effectiveness of the air quality management system;
 - compliance with the air quality criteria;
 - compliance with the air quality operating conditions; and
 - defines what constitutes an air quality incident, and includes a protocol for identifying and notifying the Department and relevant stakeholders of any air quality incidents.

ULAN PUBLIC SCHOOL

23. The Proponent shall consult with DEC and, if requested:
- a) implement agreed reasonable and feasible measures to ameliorate potential noise and/or dust impacts to Ulan Public School; or
 - b) on a reasonable basis relating to the adverse effect of noise and/or dust from the project, contribute to or meet reasonable costs toward relocating the school.

METEOROLOGICAL MONITORING

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

WATER

Water Supply

25. The Proponent shall ensure that:
- (a) it has sufficient water for all stages of the project, and if necessary, adjust the scale of operations on site to match its available water supply; and
 - (b) any water supply constraints do not compromise any aspect of the environmental performance of the mine.

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

Compensatory Water Supply

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

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

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

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

Water Pollution

27. Unless an EPL authorises otherwise, the Proponent shall comply with section 120 of the POEO Act.

Water Management Performance Measures

28. The Proponent shall comply with the performance measures in Table 14 to the satisfaction of the Secretary.

Table 14: Water Management Performance Measures

Feature	Performance Measure
Water Management – General	<ul style="list-style-type: none"> • Minimise cumulative water impacts with the other mines in the region • Maximise water sharing with the other mines in the region • Minimise the use of clean water on site
The Drip	<ul style="list-style-type: none"> • Nil impact on the water supply to the Drip
Construction and operation of linear infrastructure	<ul style="list-style-type: none"> • Design, install and maintain erosion and sediment controls generally in accordance with the series <i>Managing Urban Stormwater: Soils and Construction</i> including <i>Volume 1</i>, <i>Volume 2A – Installation of Services</i> and <i>Volume 2C – Unsealed Roads</i> • Design, install and maintain the infrastructure within 40 m of watercourses generally in accordance with the <i>Guidelines for Controlled Activities on Waterfront Land (DPI 2007)</i>, or its latest version • Design, install and maintain creek crossings generally in accordance with the <i>Policy and Guidelines for Fish Friendly Waterway Crossings</i> (NSW Fisheries, 2003) and <i>Why Do Fish Need To Cross The Road? Fish Passage Requirements for Waterway Crossings</i> (NSW Fisheries 2003), or their latest versions
Mine Sediment Dams	<ul style="list-style-type: none"> • 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>
Clean water diversion & storage infrastructure	<ul style="list-style-type: none"> • Design, install and maintain the clean water system to capture and convey the 100 year ARI flood • Maximise as far as reasonable and feasible the diversion of clean water around disturbed areas on site
Mine water storages	<ul style="list-style-type: none"> • Mine water storage infrastructure is designed to store a 100 year ARI 72 hour storm event • On-site storages (including tailings dams, mine infrastructure dams, groundwater storage and treatment dams) are suitably lined to comply with a permeability standard of $< 1 \times 10^{-9}$ m/s
Tailings, acid forming and potentially acid forming materials	<ul style="list-style-type: none"> • In-pit emplacement, encapsulation or capping to prevent the migration of pollutants beyond the pit shell • Adequate freeboard within the pit void to minimise the risk of discharge to surface waters
Chemical and hydrocarbon storage	<ul style="list-style-type: none"> • Chemical and hydrocarbon products to be stored in bunded areas in accordance with the relevant Australian Standards
Murragamba and Eastern Creek realignments	<ul style="list-style-type: none"> • Increase the overall length of the creek diversions and reduce the overall average bed slope compared to the existing creek alignments • Mimic the existing meandering plan form of the low flow channel • Include creek corridors which are designed to contain flood flows up to the 1 in 100 year ARI • Include low flow channels which are designed to contain a rainfall event of a 1 in 1 year ARI • Include riffle/drop structures that are designed for a 1 in 20 year ARI peak flow • Incorporate erosion control measures based on vegetation and engineering revetments • Incorporate persistent/permanent pools for aquatic habitat • Incorporate seepage control/flow loss measures

	<p>through sections of the creek lines to be constructed over mine waste backfill</p> <ul style="list-style-type: none"> • Revegetate with suitable native riparian vegetation species to restore aquatic biodiversity throughout the realignments
Aquatic and riparian ecosystem, including the relevant sections of Murragamaba Creek, Eastern Creek and Wilpinjong Creek	<ul style="list-style-type: none"> • Maintain or improve baseline channel stability • 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

Water Management Plan

29. The Proponent shall prepare and implement a Water Management Plan for the project to the satisfaction of the Secretary. This plan must:
- (a) be prepared in consultation with NOW and the EPA, by suitably qualified and experienced persons whose appointment has been approved by the Secretary;
 - (b) be submitted to the Secretary for approval prior to the commencement of any development on site;
 - (c) include reference to the National Water Quality Management Strategy;
 - (d) include detailed performance criteria and describe measure to ensure that the Proponent complies with the Water Management Performance Measures (see Table 14);
 - (e) in addition to the standard requirements for management plans (see condition 3 of Schedule 6), this plan must include a:
 - (i) Site Water Balance that:
 - includes details of:
 - sources and security of water supply, including contingency planning for future reporting periods;
 - water use and management on site, including details of water sharing between neighbouring mining operations;
 - reporting procedures, including the preparation of a site water balance for each calendar year;
 - describes the measures that would be implemented to:
 - minimise clean water use on site;
 - maximise water sharing with the other mines in the region;
 - (ii) Surface Water Management Plan, that includes:
 - detailed baseline data on water flows and quality in the waterbodies that could be affected by the project;
 - a detailed description of the water management system on site;
 - detailed plans, including design objectives and performance criteria, for the:
 - Murragamba and Eastern Creek realignments;
 - in-pit emplacement areas for tailings, acid forming and potentially acid forming materials;
 - final voids (see the Rehabilitation Objectives in Table 14);
 - detailed performance criteria for the following, including trigger levels for investigating any potentially adverse impacts associated with the project:
 - the water management system;
 - downstream surface water quality;
 - downstream flooding impacts and
 - stream and riparian vegetation health for Moolarben Creek, Bora Creek, Murragamba Creek, Eastern Creek, Wilpinjong Creek and the Goulburn River;
 - a program to monitor and report on:
 - the effectiveness of the water management system; and
 - surface water flows and quality, stream and riparian vegetation health in the watercourses that could be affected by the project; and
 - downstream flooding impacts;
 - reporting procedures for the results of the monitoring program; and
 - a plan to respond to any exceedances of the performance criteria, and mitigate any adverse surface water impacts of the project;
 - (iii) Groundwater Management Plan, that includes:
 - detailed baseline data on groundwater levels, yield and quality in the region and privately-owned groundwater bores that could be affected by the project;
 - groundwater assessment criteria, including trigger levels for investigating any potentially adverse groundwater impacts;
 - a program to monitor and report on:
 - groundwater inflows to the underground and open cut mining operations;
 - the seepage/leachate from water storages, emplacements, backfilled voids and final voids;

- background changes in groundwater yield/quality against mine-induced changes;
 - the permeability, hydraulic gradient, flow direction and connectivity of the palaeochannel and flows within Wilpinjong Creek (requires 3 additional monitoring piezometers within the main trunk of the paleochannel between the open cut 4 boundary and Wilpinjong Creek);
 - impacts of the project on:
 - regional and local (including alluvial) aquifers;
 - groundwater supply of potentially affected landowners; and
 - groundwater dependent ecosystems (including the Drip) and riparian vegetation;
 - a program to validate the groundwater model for the project, and compare against monitoring results with modelled predictions; and
- (iv) a plan to respond to any exceedances of the groundwater assessment criteria. a protocol that has been prepared in consultation with the owners of the Ulan and Wilpinjong mines to:
- minimise cumulative water quality impacts;
 - review opportunities of increased water sharing between these projects;
 - co-ordinate water quality monitoring programs as far as practicable;
 - undertake joint investigations/studies in relation to complaints/exceedances of trigger levels where cumulative impacts are considered likely; and
 - co-ordinate modelling programs for validation, re-calibration and re-running of groundwater models.

BIODIVERSITY

Biodiversity Offset Strategy

30. The Proponent shall implement the biodiversity offset strategy for the project summarised in Table 15 and shown conceptually in Appendix 7 to the satisfaction of the Secretary.

Table 15: Summary of the Biodiversity Offset Strategy

Area	Offset Type	Minimum Size hectares (ha)
Dun Dun East	Enhance existing vegetation: <ul style="list-style-type: none"> • 1368 ha of native vegetation • 408 ha of EEC Regenerate: <ul style="list-style-type: none"> • 380 ha of existing grassland to forest/woodland 	1776
Dun Dun West	Enhance existing vegetation: <ul style="list-style-type: none"> • 837 ha of native vegetation • 122 ha of EEC Regenerate: <ul style="list-style-type: none"> • 307 ha of existing grassland to forest/woodland 	959
Avisford 1	Enhance existing vegetation: <ul style="list-style-type: none"> • 300 ha of native vegetation • 102 ha of EEC Regenerate: <ul style="list-style-type: none"> • 7 ha of existing grassland to forest/woodland 	402
Avisford 2	Enhance existing vegetation: <ul style="list-style-type: none"> • 203 ha of native vegetation • 5 ha of EEC 	208
Ulan 18	Enhance existing vegetation: <ul style="list-style-type: none"> • 291 ha of native vegetation • 48 ha of EEC Regenerate: <ul style="list-style-type: none"> • 178 ha of existing grassland to forest/woodland 	339
Onsite Offset	Enhance existing vegetation: <ul style="list-style-type: none"> • 420 ha of native vegetation • 51 ha of EEC Regenerate: <ul style="list-style-type: none"> • 199 ha of existing grassland to forest/woodland 	471
Old Bobadeen	Enhance existing vegetation: <ul style="list-style-type: none"> • 90 ha of native vegetation • 400 ha of EEC Regenerate: <ul style="list-style-type: none"> • 409 ha of existing grassland to forest/woodland 	490
Libertus	Enhance existing vegetation: <ul style="list-style-type: none"> • 160 ha of native vegetation • 18 ha of EEC 	178

	Regenerate: <ul style="list-style-type: none"> • 22 ha of existing grassland to forest/woodland 	
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Notes:

- *To identify the areas referred to in Table 15, see the applicable figures in Appendix 7;*
- *The amount of native vegetation includes forest/woodland and grassland but excludes woodland and grassland EECs. The combined total of native vegetation and EEC on each property equates to the minimum size available as an offset;*
- *The amount of grassland available for regeneration includes sparsely vegetated woodland; and*
- *The strategy includes the regeneration of existing grassland areas within each offset to woodland communities.*

Regeneration Areas

31. The Proponent shall ensure that the regeneration of vegetation within the specified areas of the biodiversity offset strategy is focused on the re-establishment of flora species typical of the White Box Yellow Box Blakely's Red Gum Woodland as defined under the TSC Act and White Box Yellow Box Blakely's Red Gum Grassy Woodland as defined under the EPBC Act.
32. The Proponent shall use its best endeavours to work with the CLD to identify and implement any reasonable and feasible regeneration of vegetation on Crown lands in the vicinity of Pyramul Creek immediately to the south of the 'Dun Dun East' biodiversity offset area.

Munghorn Gap Nature Reserve

33. The Proponent shall ensure that:
 - (a) the boundary of the project with the Munghorn Gap Nature Reserve is identified and surveyed prior to the commencement of open cut mining; and
 - (b) a 50 meter buffer zone is maintained between the open cut mining and the Munghorn Gap Nature Reserve during the life of the project.

Habitat for Threatened Fauna Species

34. The Proponent shall ensure that the biodiversity offset strategy provides suitable habitat for all the threatened fauna species confirmed and identified as being potentially present in the disturbance areas.

Note: The threatened fauna species confirmed and identified as being potentially present in the disturbance areas are listed in Appendix 7.

Regent Honeyeater Study

35. Within 6 months of the date of this approval, the Proponent shall calculate:
 - (a) the impacts generated by the project on the Regent Honeyeater in species credits; and
 - (b) the species credits that would be generated for the Regent Honeyeater from implementation of the offset strategy described in condition 30 above,
 in accordance with the *NSW Biodiversity Offset Policy for Major Projects*, and to the satisfaction of OEH.
36. If the calculations carried out in condition 35 above identify a shortfall of species credits to offset the impacts of the project, then within 24 months of the date of this approval, the Proponent shall satisfy the outstanding offset requirements to the satisfaction of OEH. This can be achieved by one or more of the following:
 - (a) acquiring or retiring credits under the Biobanking Scheme in the TSC Act;
 - (b) making payments into an offset fund that has been developed by the NSW Government; and/or
 - (c) providing supplementary measures.

Vegetation Information System Mapping Data

37. At the request of OEH, the Proponent shall provide OEH with detailed vegetation mapping and survey data associated with its lands to be conserved in perpetuity in accordance with this approval. This information is to be provided free of charge.

Long Term Security of Biodiversity Offsets

38. By 31 December 2015, unless the Secretary agrees otherwise, the Proponent shall make suitable arrangements to protect the offset areas in Table 15 in perpetuity, in consultation with OEH and to the satisfaction of the Secretary.

Note: The preferred mechanisms for the provision of long-term conservation security are via Biobanking Arrangements and additions to the OEH Estate.

Biodiversity Management Plan

39. The Proponent shall prepare and implement a Biodiversity Management Plan for the project to the satisfaction of the Secretary. This plan must:
- (a) be prepared in consultation with OEH, and submitted to and approved by the Secretary prior to the commencement of any development on site;
 - (b) describe the short, medium, and long term measures that would be implemented to:
 - manage the remnant vegetation and fauna habitat on the site; and
 - implement the biodiversity offset strategy;
 - integrate the implementation of the biodiversity offset strategy to the greatest extent practicable with the rehabilitation of the site;
 - (c) include detailed performance and completion criteria for evaluating the performance of the biodiversity offset strategy, and triggering remedial action (if necessary);
 - (d) include a detailed description of the measures that would be implemented over the next 3 years for:
 - enhancing the quality of existing vegetation and fauna habitat in the biodiversity offset areas;
 - creating native vegetation and fauna habitat in the biodiversity offset areas and rehabilitation area through focusing on assisted natural regeneration, targeted vegetation establishment and the introduction of naturally scarce fauna habitat features (where necessary);
 - maximising the salvage of resources within the approved disturbance area - including vegetative and soil resources – for beneficial reuse in the enhancement of the biodiversity offset areas or rehabilitation area;
 - collecting and propagating seed;
 - protecting vegetation and fauna habitat outside the approved disturbance area on-site;
 - minimising the impacts on fauna on site, including undertaking pre-clearance surveys;
 - managing any potential conflicts between the proposed enhancement works in the biodiversity offset strategy areas and any Aboriginal heritage values (both cultural and archaeological) in these areas;
 - managing salinity;
 - controlling weeds and feral pests;
 - controlling erosion;
 - managing grazing and agriculture on site;
 - controlling access; and
 - bushfire management;
 - (e) include a seasonally-based program to monitor and report on the effectiveness of these measures, and progress against the detailed performance and completion criteria;
 - (f) 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 against these risks; and
 - (g) include details of who would be responsible for monitoring, reviewing, and implementing the plan.

Conservation Bond

40. By 31 December 2015, the Proponent shall lodge a Conservation Bond with the Department to ensure that the biodiversity offset strategy is implemented in accordance with the performance and completion criteria of the Biodiversity Management Plan. The sum of the bond shall 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, to the satisfaction of the Secretary.

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.

If the 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.

Notes:

- *Alternative funding arrangements for long-term management of the Biodiversity Offset Strategy, such as provision of capital and management funding as agreed by OEH as part of a Biobanking Agreement or transfer to conservation reserve estate can be used to reduce the liability of the conservation and biodiversity bond, and*
- *The sum of the bond may be reviewed in conjunction with any revision to the biodiversity offset strategy.*

HERITAGE

Protection of Aboriginal Heritage Items

41. Unless otherwise authorised under the NP&W Act, the Proponent shall ensure that the project does not cause any direct or indirect impact on the identified Aboriginal heritage items located outside the approved disturbance area of the project.

Note: Identified Aboriginal heritage items are listed in Appendix 8.

Additional Survey

42. Prior to carrying out any development on site, unless the Secretary agrees otherwise, the Proponent shall:
- carry out additional archaeological survey work in the vicinity of the proposed Stage 2 ROM Coal Facilities in consultation with OEH and Aboriginal stakeholders;
 - undertake a detailed analysis of the significance of the heritage items that are identified during the survey; and
 - recommend measures to avoid and/or mitigate the impacts of the project on these heritage items,
- to the satisfaction of the Secretary.
43. Within 12 months of the date of this approval, unless the Secretary agrees otherwise, the Proponent shall carry out a detailed investigation into the Aboriginal cultural heritage values of the southern portion of the Dun Dun East biodiversity offset area (Lot 79, DP 704159), in the vicinity of Pyramul Creek, in consultation with OEH and Aboriginal stakeholders, and to the satisfaction of the Secretary.

Heritage Conservation Areas

44. The Proponent shall implement the heritage conservation strategy described in the EA, summarised in Table 16 and shown conceptually in Appendix 8, to the satisfaction of the Secretary.

Table 16: Summary of the Heritage Conservation Strategy

Area	Sites	Minimum Size hectares (ha)
Murragamba Creek Management Area	40 sites - 5 of high significance, 6 of medium and 29 of low	154
Powers Conservation Area	10 sites – 1 of high significance, 2 of medium and 7 of low significance	63
Red Hills Conservation Area	42 sites – 2 of high significance, 9 of medium and 31 of low significance	107

Note: To identify the areas referred to in Table 16, see the applicable figures in Appendix 8.

Long Term Security of Heritage Conservation Areas

45. Within 18 months of approval of the Heritage Management Plan, unless the Secretary agrees otherwise, the Proponent shall make suitable arrangements to protect the heritage conservation areas in Table 16 in perpetuity to the satisfaction of the Secretary.

Notes:

- *The location of the conservation areas are shown in the figure in Appendix 8.*
- *The protection of the Aboriginal heritage conservation area/s may be combined with the protection of the biodiversity offset areas required under condition 30 of this approval.*

Heritage Management Plan

46. The Proponent shall prepare and implement a Heritage Management Plan for the project to the satisfaction of the Secretary. This plan must:
- be prepared by suitably qualified and experienced persons whose appointment has been endorsed by the Secretary;
 - be prepared in consultation with OEH and the Aboriginal stakeholders (in relation to the management of Aboriginal heritage values);
 - be submitted to and approved by the Secretary prior to construction, unless the Secretary agrees otherwise;
 - include a description of the measures that would be implemented for:
 - managing the discovery of human remains or previously unidentified heritage items on site; and

- ensuring any workers on site receive suitable heritage inductions prior to carrying out any development on site, and that suitable records are kept of these inductions;
- (e) include the following for the management of Aboriginal Heritage:
- a detailed plan of management for the Murrumbidgee Creek, Red Hills and Powers conservation areas;
 - a description of the measures that would be implemented for:
 - protecting, monitoring and/or managing (including any proposed archaeological investigations and/or salvage measures) the heritage items identified in the tables in Appendix 8;
 - managing the discovery of previously unidentified Aboriginal items on site;
 - conserving the sites outside the surface disturbance area (see Appendix 8), including measures that would be implemented to secure, analyse and record the sites at risk of subsidence;
 - maintaining and managing reasonable access for Aboriginal stakeholders to heritage items on site and within any Aboriginal heritage conservation areas;
 - ongoing consultation with the Aboriginal stakeholders in the conservation and management of Aboriginal cultural heritage both on site and within any Aboriginal heritage conservation areas; and
 - a strategy for the storage of any heritage items salvaged on site, both during the project and in the long term;
- (f) include a detailed plan for the implementation of the mitigation and management measures outlined for the specified heritage items in Appendix 9, including archival recording, historical research and archaeological assessment prior to any disturbance.

TRANSPORT

Ulan Road Strategy

47. The Proponent shall:
- (a) work with Council and the owners of the Ulan and Wilpinjong mines to develop to a detailed plan for the implementation of the Ulan Road Strategy; and
 - (b) make financial contributions towards the implementation of this detailed plan, in accordance with the requirements in the plan, with its share of the mining companies' contribution for implementation of the strategy to be proportionate to its share of mining-related traffic to be generated on the road during the life of the strategy.

If there is any dispute between the various parties involved in either the development of the detailed plan or the implementation of the strategy, then any of the parties may refer the matter to the Secretary for resolution.

Ulan-Wollar Road Site Access

48. The Proponent shall design, construct, and maintain the site access intersection off Ulan-Wollar Road to the satisfaction of Council.

Cope Road Maintenance

49. The Proponent shall pay Council \$480,000 (in 2013 dollar value) for the maintenance of Cope Road. This payment must be:
- (a) made in 4 instalments of \$120,000 over the first four years of mining operations, with the first payment to be made on the commencement of mining operations on site;
 - (b) indexed in accordance with the CPI for the previous quarter.

VISUAL

50. The Proponent shall:
- (a) implement all reasonable and feasible measures to minimise the visual and off-site lighting impacts of the project;
 - (b) ensure no fixed outdoor lights shine above the horizontal or above the building line or any illuminated structure;
 - (c) ensure no in-pit mobile lighting rigs shine above the pit wall and other mobile lighting rigs do not shine above the horizontal;
 - (d) ensure that all external lighting associated with the project complies with *Australian Standard AS4282 (INT) 1997 – Control of Obtrusive Effects of Outdoor Lighting*, or its latest version;
 - (e) provide for the establishment of trees and shrubs and/or the construction of mounding or bunding to minimise visual and lighting impacts on the Proponent's land adjoining public roads with views of the site;
 - (f) 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,
- to the satisfaction of the Secretary.

BUSHFIRE MANAGEMENT

51. The Proponent shall:
- ensure that the project is suitably equipped to respond to any fires on site; and
 - assist the RFS and emergency services as much as practicable if there is a fire in the vicinity of the site.

WASTE

52. The Proponent shall:
- implement all reasonable and feasible measures to minimise the waste (including coal reject) generated by the project;
 - ensure that the waste generated by the project is appropriately stored, handled and disposed of; and
 - monitor and report on effectiveness of the waste minimisation and management measures in the Annual Review.

REHABILITATION

Rehabilitation Objectives

53. The Proponent shall rehabilitate the site to the satisfaction of the Executive Director Mineral Resources. This rehabilitation must be generally consistent with the proposed rehabilitation strategy described in the EA (and depicted conceptually in the figures in Appendix 10), and comply with the objectives in Table 17.

Table 17: Rehabilitation Objectives

Feature	Objective
Mine site (as a whole)	<ul style="list-style-type: none"> Safe, stable and non-polluting; Constructed landforms drain to the natural environment (excluding final voids); and Minimise visual impact of final landforms as far as is reasonable and feasible. Restore ecosystem function, including maintaining or establishing self-sustaining ecosystems that is compatible with the conservation values of the adjacent Munghorn Gap Nature Reserve and Goulburn River National Park, that is comprised of: <ul style="list-style-type: none"> 1502 ha of open woodland including Grey Box – Narrow-leaved Ironbark shrubby woodland on hills of the Hunter Valley, North Coast and Sydney Basin; Scribbly Gum – Brown Bloodwood woodland of the southern Brigalow Belt South; Rough-barked Apple – Coast Banksia shrubby woodland on Warkworth Sands of the central Hunter Valley, Sydney Basin; and White Box Yellow Box Blakely's Red Gum Woodland (EEC); aquatic habitat areas (within the diverted creek lines and retained water features); habitat for threatened fauna species; and wildlife corridors.
Final Voids	<ul style="list-style-type: none"> Minimise the size and depth of final voids so far as is reasonable and feasible, subject to meeting the objectives below Minimise the drainage catchment of the final void so far as is reasonable and feasible; Negligible high wall instability risk; The size and depth of the final voids must be designed having regard to their function as long-term groundwater sinks, to ensure that groundwater flows across the back-filled pit towards the final void; and Minimise risk of flood interaction for all flood events up to and including the Probable Maximum Flood level.
Surface infrastructure	<ul style="list-style-type: none"> To be decommissioned and removed, unless the Executive Director, Mineral Resources agrees otherwise.
Degraded riparian areas along Wilpinjong Creek and along Murragamba and Eastern Creeks downstream of the mined areas to the boundary of the Wilpinjong mine.	<ul style="list-style-type: none"> Restore channel stability; Restore riparian and aquatic ecosystem function; and Include compensatory aquatic habitat areas.

Community	<ul style="list-style-type: none"> • Ensure public safety; and • Minimise adverse socio-economic effects associated with mine closure.
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Progressive Rehabilitation

54. The Proponent shall rehabilitate the site progressively 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. Interim rehabilitation strategies shall be employed when areas prone to dust generation cannot be permanently rehabilitated.

Note: It is accepted that some parts of the site that are progressively rehabilitated may be subject to further disturbance at some later stage of the project.

Long Term Security of Rehabilitated Areas

55. Prior to relinquishing the mining lease that covers the site, unless the Secretary agrees otherwise, the Proponent shall make suitable arrangements to protect the rehabilitation areas with conservation value in perpetuity, in consultation with OEH and to the satisfaction of the Secretary.

Rehabilitation Management Plan

56. The Proponent shall prepare and implement a Rehabilitation Management Plan for the project to the satisfaction of the Executive Director, Mineral Resources. This plan must:
- (a) be prepared in consultation with the Department, NOW, OEH, Council and the CCC;
 - (b) be submitted to and approved by the Executive Director, Mineral Resources prior to the commencement of any development on site under this approval, unless the Secretary agrees otherwise;
 - (c) be prepared in accordance with any relevant DRE guideline;
 - (d) provide for periodic review and updating of the rehabilitation plans and management strategies to ensure best practice landform design and establishment strategies are employed;
 - (e) describe how the rehabilitation of the site would be integrated with the implementation the biodiversity offset strategy;
 - (f) include detailed performance and completion criteria for evaluating the performance of the rehabilitation of the site, and triggering remedial action (if necessary);
 - (g) describe the measures that would be implemented to ensure compliance with the relevant conditions of this approval, and address all aspects of rehabilitation including mine closure, final landform, and final land use;
 - (h) include interim rehabilitation where necessary to minimise the area exposed for dust generation;
 - (i) include a program to monitor, independently audit and report on the effectiveness of the measures, and progress against the detailed performance and completion criteria; and
 - (j) build to the maximum extent practicable on the other management plans required under this approval.
-

**SCHEDULE 4
ENVIRONMENTAL CONDITIONS – UNDERGROUND MINING**

SUBSIDENCE

Performance Measures – Natural and Heritage Features

1. The Proponent shall ensure that the project does not cause any exceedances of the performance measures in Table 18, to the satisfaction of the Secretary.

Table 18: Subsidence Impact Performance Measures

Water Resources	
Drainage Lines (DL1 – DL7)	No greater subsidence impacts or environmental consequences than predicted in the EA
Land	
Cliffs C7, C9 and C10	Negligible environmental consequences (that is occasional rockfalls, displacement or dislodgement of boulders or slabs or fracturing, that in total do not impact more than 0.5% of the total face of such cliffs within any longwall mining domain)
Other cliffs	No greater subsidence impacts or environmental consequences than predicted in the EA
Minor cliffs Rock face features Steep slopes	Minor environmental consequences (that is, occasional rockfalls, displacement of or dislodgment of boulders or slabs, or fracturing, that in total do not impact more than 5% of the total face area of each such type of feature within any longwall mining domain)
Biodiversity	
Threatened species, threatened populations, or endangered ecological communities	Negligible subsidence impacts or environmental consequences
Heritage Sites	
Aboriginal heritage site S2MC 236 (AHIMS No.s 36-3-0016 and 36-3-0134)	Negligible subsidence impacts or environmental consequences
Historic heritage sites	No greater subsidence impact or environmental consequences than predicted in the EA
Mine workings	
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 long-term stable and non-subsiding
Second workings	To be carried out only in accordance with an approved Extraction Plan

Notes:

- *The locations of the features referred to in Table 18 are shown in Appendix 4.*
- *The Proponent will be required to define more detailed performance indicators (including impact assessment criteria) for each of these performance measures in the various management plans that are required under this approval.*
- *Measurement and/or monitoring of compliance with performance measures and performance indicators is to be undertaken using generally accepted methods that are appropriate to the environment and circumstances in which the feature or characteristic is located. These methods are to be fully described in the relevant management plans. In the event of a dispute over the appropriateness of proposed methods, the Secretary will be the final arbiter.*
- *The requirements of this condition only apply to the impacts and consequences of mining operations, construction or demolition undertaken following the date of this approval.*

Offsets

2. If the Proponent exceeds the performance measures in Table 18 and the Secretary determines that:
 - (a) it is not reasonable or feasible to remediate the impact or environmental consequence; or
 - (b) remediation measures implemented by the Proponent have failed to satisfactorily remediate the impact or environmental consequence;
 then the Proponent shall provide a suitable offset to compensate for the impact or environmental consequence, to the satisfaction of the Secretary.

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

Performance Measures – Built Features

3. The Proponent shall ensure that the project does not cause any exceedances of the performance measures in Table 19, to the satisfaction of the Secretary.

Table 19: Subsidence Impact Performance Measures – Built Features

Key public infrastructure:	
Gulgong-Sandy Hollow Railway Line	Always safe and serviceable. Damage that does not affect safety or serviceability must be fully repairable, and must be fully repaired.
Other infrastructure:	
Murragamba Road Low voltage electricity power line	Always safe. Serviceability should be maintained wherever practicable. Loss of serviceability must be fully compensated. Damage must be fully repairable, and must be fully repaired or else replaced or fully compensated.
Telecommunication cable Fibre-optic cable Murragamba Trig Station	Serviceability should be maintained wherever practicable. Loss of serviceability must be fully compensated. Damage must be fully repairable, and must be fully repaired or else replaced or fully compensated.
Other built features and improvements, including fences	Serviceability should be maintained wherever practicable. Loss of serviceability must be fully compensated. Damage must be fully repairable, and must be fully repaired or else replaced or fully compensated.
Public Safety	
Public safety	Negligible additional risk

Notes:

- *The locations of the features referred to in Table 19 are shown in Appendix 4.*
 - *The Proponent will be required to define more detailed performance indicators for each of these performance measures in Built Features Management Plans or Public Safety Management Plan (see condition 5 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.*
 - *The requirements of this condition only apply to the impacts and consequences of mining operations undertaken following the date of this approval.*
 - *Requirements under this condition may be met by measures undertaken in accordance with the Mine Subsidence Compensation Act 1961.*
 - *Requirements regarding safety or serviceability do not prevent preventative or mitigatory actions being taken prior to or during mining in order to achieve or maintain these outcomes.*
4. Any dispute between the Proponent and the owner of any built feature over the interpretation, application or implementation of the performance measures in Table 19 is to be settled by the Secretary, following consultation with the Executive Director Mineral Resources. Any decision by the Secretary shall be final and not subject to further dispute resolution under this approval.

Extraction Plan

5. The Proponent shall prepare and implement an Extraction Plan for all second workings on site to the satisfaction of the Secretary. Each extraction plan must:
- (a) be prepared by suitably qualified and experienced persons whose appointment has been endorsed by the Secretary;
 - (b) be approved by the Secretary before the Proponent carries out any of the second workings covered by the plan;
 - (c) include detailed plans of existing and proposed first and second workings and any associated surface development;
 - (d) include detailed performance indicators for each of the performance measures in Tables 18 and 19;
 - (e) provide revised predictions of the potential subsidence effects, subsidence impacts and environmental consequences of the proposed second workings, incorporating any relevant information obtained since this approval;

- (f) describe the measures that would be implemented to ensure compliance with the performance measures in Tables 18 and 19, and manage or remediate any impacts and/or environmental consequences;
- (g) include a Built Features Management Plan, which has been prepared in consultation with DRE and the owners of affected public infrastructure, to manage the potential subsidence impacts and/or environmental consequences of the proposed second workings, and which:
 - addresses in appropriate detail all items of key public infrastructure and other public infrastructure and all classes of other built features;
 - has been prepared following appropriate consultation with the owner/s of potentially affected feature/s;
 - recommends appropriate remedial measures and includes commitments to mitigate, repair, replace or compensate all predicted impacts on potentially affected built features in a timely manner; and
 - in the case of all key public infrastructure, and other public infrastructure except roads, trails and associated structures, reports external auditing for compliance with ISO 31000 (or alternative standard agreed with the infrastructure owner) and provides for annual auditing of compliance and effectiveness during extraction of longwalls which may impact the infrastructure;
- (h) include a Water Management Plan, which has been prepared in consultation with EPA and NOW, which provides for the management of the potential impacts and/or environmental consequences of the proposed second workings on watercourses and aquifers, including:
 - surface and groundwater impact assessment criteria, including trigger levels for investigating any potentially adverse impacts on water resources or water quality;
 - a program to monitor and report stream flows, assess any changes resulting from subsidence impacts and remediate and improve stream stability;
 - a program to monitor and report groundwater inflows to underground workings;
 - a program to predict, manage and monitor impacts on groundwater bores on privately-owned land; and
- (i) include a Biodiversity Management Plan, which has been prepared in consultation with OEH, which provides for the management of the potential impacts and/or environmental consequences of the proposed second workings on aquatic and terrestrial flora and fauna, with a specific focus on threatened species, populations and their habitats; endangered ecological communities; and water dependent ecosystems;
- (j) include a Land Management Plan, which has been prepared in consultation with any affected public authorities, to manage the potential impacts and/or environmental consequences of the proposed second workings on land in general;
- (k) include a Heritage Management Plan, which has been prepared in consultation with OEH and relevant stakeholders for both Aboriginal and historic heritage, to manage the potential environmental consequences of the proposed second workings on both Aboriginal and non-Aboriginal heritage items, and reflects all requirements under conditions 41-46 of Schedule 3;
- (l) include a Public Safety Management Plan, which has been prepared in consultation with DRE, to ensure public safety in the mining area;
- (m) include a Subsidence Monitoring Program, which has been prepared in consultation with DRE, to:
 - describe the on-going subsidence monitoring program;
 - provide data to assist with the management of the risks associated with subsidence;
 - validate the subsidence predictions;
 - analyse the relationship between the predicted and resulting subsidence effects and predicted and resulting impacts under the plan and any ensuing environmental consequences; and
 - inform the contingency plan and adaptive management process;
- (n) include a contingency plan that expressly provides for adaptive management where monitoring indicates that there has been an exceedance of any performance measure in Tables 18 and 19, or where any such exceedance appears likely;
- (o) proposes appropriate revisions to the Rehabilitation Management Plan required under condition 56 of Schedule 3; and
- (p) include a program to collect sufficient baseline data for future Extraction Plans.

Note: To identify the longwall mining domains referred to in this condition, see Appendix 2.

6. The Proponent shall ensure that the management plans required under conditions 5(g)-(l) above include:
 - (a) an assessment of the potential environmental consequences of the Extraction Plan, incorporating any relevant information that has been obtained since this approval; and
 - (b) a detailed description of the measures that would be implemented to remediate predicted impacts.

First Workings

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

Payment of Reasonable Costs

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

Gas Drainage

9. The Proponent shall implement all reasonable and feasible measures to minimise the greenhouse gas emissions from the underground mining operations to the satisfaction of the Secretary.
10. Prior to carrying out underground mining operations, the Proponent shall submit an updated Greenhouse Gas Minimisation Plan to the Secretary. This plan must:
 - (a) identify options for minimising greenhouse gas emissions from underground mining operations, with a particular focus on capturing and/or using these emissions;
 - (b) investigate the feasibility of implementing each option;
 - (c) propose the measures that would be implemented in the short to medium term on site; and
 - (d) include a research program to inform the continuous improvement of the greenhouse gas minimisation measures on site.

SCHEDULE 5 ADDITIONAL PROCEDURES

NOTIFICATION OF LANDOWNERS/TENANTS

1. Within 1 month of the date of this approval, the Proponent shall:
 - (a) notify in writing the owners of:
 - any land listed in Table 1 and any residence or land exceeding the criteria in Tables 4 or 5 (respectively) of Schedule 3 that they have the right to require the Proponent to acquire their land at any stage during the project;
 - any residence on the land listed in Table 2 and any residence exceeding the criteria in Table 6 of Schedule 3 that they have the right to request the Proponent for additional noise mitigation measures to be installed at their residence at any stage during the project; and
 - any privately-owned land within 2 kilometres of the approved open cut mining pit/s that they are entitled to ask for an inspection to establish the baseline condition of any buildings or structures on their land, or to have a previous property inspection report updated;
 - (b) notify the tenants of any mine-owned land of their rights under this approval; and
 - (c) send a copy of the NSW Health fact sheet entitled "Mine Dust and You" (as may be updated from time to time) to the owners and/or existing tenants of any land (including mine-owned land) where the predictions in the EA identify that dust emissions generated by the project are likely to be greater than the relevant air quality criteria in Schedule 3 at any time during the life of the project.
2. Prior to entering into any tenancy agreement for any land owned by the Proponent that is predicted to experience exceedances of the recommended dust and/or noise criteria, or for any of the land listed in Table 3 that is subsequently purchased by the Proponent, the Proponent shall:
 - (a) advise the prospective tenants of the potential health and amenity impacts associated with living on the land, and give them a copy of the NSW Health fact sheet entitled "Mine Dust and You" (as may be updated from time to time); and
 - (b) advise the prospective tenants of the rights they would have under this approval, to the satisfaction of the Secretary.
3. As soon as practicable after obtaining monitoring results showing:
 - (a) an exceedance of any relevant criteria in Schedule 3, the Proponent shall notify affected landowners in writing of the exceedance, and provide regular monitoring results to each affected landowner until the project is again complying with the relevant criteria; and
 - (b) an exceedance of the relevant air quality criteria in Schedule 3, the Proponent shall send a copy of the NSW Health fact sheet entitled "Mine Dust and You" (as may be updated from time to time) to the affected landowners and/or existing tenants of the land (including the tenants of any mine-owned land).

INDEPENDENT REVIEW

4. If an owner of privately-owned land considers the project to be exceeding the criteria in Schedule 3, then he/she may ask the Secretary in writing for an independent review of the impacts of the project 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 Proponent shall:

- (a) commission a suitably qualified, experienced and independent expert, whose appointment has been approved by the Secretary, to:
 - consult with the landowner to determine his/her concerns;
 - conduct monitoring to determine whether the project is complying with the relevant impact assessment criteria in Schedule 3; and
 - if the project is not complying with these criteria then:
 - determine if more than one mine is responsible for the exceedance, and if so the relative share of each mine regarding the impact on the land;
 - identify the measures that could be implemented to ensure compliance with the relevant criteria; and
- (b) give the Secretary and landowner a copy of the independent review.

LAND ACQUISITION

5. Within 3 months of receiving a written request from a landowner with acquisition rights, the Proponent shall make a binding written offer to the landowner based on:
 - (a) the current market value of the landowner's interest in the land at the date of this written request, as if the land was unaffected by the project, having regard to the:
 - existing and permissible use of the land, in accordance with the applicable planning instruments at the date of the written request; and
 - presence of improvements on the land and/or any approved building or structure which has been physically commenced at the date of the landowner's written request, and is due to be

completed subsequent to that date, but excluding any improvements that have resulted from the implementation of the additional noise mitigation measures in conditions 2 and 6 of Schedule 3;

- (b) the reasonable costs associated with:
- relocating within the Mid-Western Regional Council local government area, or to any other local government area determined by the Secretary; and
 - obtaining legal advice and expert advice for determining the acquisition price of the land, and the terms upon which it is to be acquired; and
- (c) reasonable compensation for any disturbance caused by the land acquisition process.

However, if at the end of this period, the Proponent and landowner cannot agree on the acquisition price of the land and/or the terms upon which the land is to be acquired, then either party may refer the matter to the Secretary for resolution.

Upon receiving such a request, the Secretary will request the President of the NSW Division of the Australian Property Institute to appoint a qualified independent valuer to:

- consider submissions from both parties;
- determine a fair and reasonable acquisition price for the land and/or the terms upon which the land is to be acquired, having regard to the matters referred to in paragraphs (a)-(c) above;
- prepare a detailed report setting out the reasons for any determination; and
- provide a copy of the report to both parties.

Within 14 days of receiving the independent valuer's report, the Proponent shall make a binding written offer to the landowner to purchase the land at a price not less than the independent valuer's determination.

However, if either party disputes the independent valuer's determination, then within 14 days of receiving the independent valuer's report, they may refer the matter to the Secretary for review. Any request for a review must be accompanied by a detailed report setting out the reasons why the party disputes the independent valuer's determination. Following consultation with the independent valuer and both parties, the Secretary will determine a fair and reasonable acquisition price for the land, having regard to the matters referred to in paragraphs (a)-(c) above, the independent valuer's report, the detailed report of the party that disputes the independent valuer's determination and any other relevant submissions.

Within 14 days of this determination, the Proponent shall make a binding written offer to the landowner to purchase the land at a price not less than the Secretary's determination.

If the landowner refuses to accept the Proponent's binding written offer under this condition within 6 months of the offer being made, then the Proponent's obligations to acquire the land shall cease, unless the Secretary determines otherwise.

6. The Proponent shall pay all reasonable costs associated with the land acquisition process described in condition 5 above, including the costs associated with obtaining Council approval for any plan of subdivision (where permissible), and registration of this plan at the Office of the Registrar-General.

SCHEDULE 6 ENVIRONMENTAL MANAGEMENT, REPORTING AND AUDITING

ENVIRONMENTAL MANAGEMENT

Environmental Management Strategy

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

Adaptive Management

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

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

- (a) take all reasonable and feasible steps to ensure that the exceedance ceases and does not recur;
- (b) consider all reasonable and feasible options for remediation (where relevant) and submit a report to the Department describing those options and any preferred remediation measures or other course of action; and
- (c) implement remediation measures as directed by the Secretary, to the satisfaction of the Secretary.

Management Plan Requirements

3. The Proponent shall ensure that the management plans required under this approval are prepared in accordance with any relevant guidelines, and include:
 - (a) detailed baseline data;
 - (b) a description of:
 - the relevant statutory requirements (including any relevant approval, licence or lease conditions);
 - any relevant limits or performance measures/criteria;
 - the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the project or any management measures;
 - (c) a description of the measures that would be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria;
 - (d) a program to monitor and report on the:
 - impacts and environmental performance of the project;
 - effectiveness of any management measures (see c above);
 - (e) a contingency plan to manage any unpredicted impacts and their consequences;
 - (f) a program to investigate and implement ways to improve the environmental performance of the project over time;
 - (g) a protocol for managing and reporting any:
 - 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.

Annual Review

4. By the end of March each year, or as otherwise agreed by the Secretary, the Proponent shall review the environmental performance of the project to the satisfaction of the Secretary. This review must:
- (a) describe the development 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 project over the previous calendar year, which includes a comparison of these results against the:
 - relevant statutory requirements, limits or performance measures/criteria;
 - monitoring results of previous years; and
 - relevant predictions in the EA;
 - (c) identify any non-compliance over the last year, and describe what actions were (or are being) taken to ensure compliance;
 - (d) identify any trends in the monitoring data over the life of the project;
 - (e) identify any discrepancies between the predicted and actual impacts of the project, and analyse the potential cause of any significant discrepancies; and
 - (f) describe what measures will be implemented over the next year to improve the environmental performance of the project.

Revision of Strategies, Plans and Programs

5. Within 3 months of the submission of:
- (a) the submission of annual review under condition 4 above;
 - (b) the submission of an incident report under condition 7 below;
 - (c) the submission of an audit under condition 9 below; or
 - (d) any modification to the conditions of this approval or MP 05_0117 (unless the conditions require otherwise),

the Proponent shall review and, if necessary, revise the strategies, plans, and programs required under this approval to the satisfaction of the Secretary. Where this review leads to revisions in any such document, then within 4 weeks of the review the revised document must be submitted to the Secretary for approval.

Note: This is to ensure the strategies, plans and programs are updated on a regular basis, and incorporate any recommended measures to improve the environmental performance of the project.

Community Consultative Committee

6. The Proponent shall operate a Community Consultative Committee (CCC) for the Moolarben mine complex to the satisfaction of the Secretary. This CCC must be operated in general accordance with the *Guidelines for Establishing and Operating Community Consultative Committees for Mining Projects* (Department of Planning, 2007, or its latest version), and be operating by the end of March 2015.

Notes:

- *The CCC is an advisory committee. The Department and other relevant agencies are responsible for ensuring that the Proponent complies with this approval; and*
- *The CCC should be comprised of an independent chair and appropriate representation from the Proponent, Council, recognised environmental groups and the local community.*

REPORTING

Incident Reporting

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

Regular Reporting

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

AUDITING

9. By 31 December 2015, and every 3 years thereafter, unless the Secretary directs otherwise, the Proponent shall commission and pay the full cost of an Independent Environmental Audit of the project. This audit must:
 - (a) be conducted by a suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary;
 - (b) include consultation with the relevant agencies;
 - (c) assess the environmental performance of the project and assess whether it is complying with the requirements in this approval, and any other relevant approvals, relevant EPL/s and/or Mining Lease (including any assessment, plan or program required under these approvals);
 - (d) review the adequacy of any approved strategy, plan or program required under the abovementioned approvals; and
 - (e) recommend measures or actions to improve the environmental performance of the project, and/or any strategy, plan or program required under these approvals.

Note: This audit team must be led by a suitably qualified auditor, and include experts in noise, air quality, ecology, Aboriginal heritage and any other fields specified by the Secretary.

10. Within 3 months of commissioning this audit, or as otherwise agreed by the Secretary, the Proponent shall submit a copy of the audit report to the Secretary, together with its response to any recommendations contained in the audit report.

ACCESS TO INFORMATION

11. The Proponent shall:
 - (a) make the following information publicly available on its website:
 - the EA;
 - current statutory approvals for the project;
 - approved strategies, plans or programs required under the conditions of this approval;
 - a comprehensive summary of the monitoring results of the project, which have been reported in accordance with the various plans and programs approved under the conditions of this approval;
 - a complaints register, which is to be updated on a monthly basis;
 - minutes of CCC meetings;
 - the last five annual reviews;
 - any independent environmental audit, and the Proponent's response to the recommendations in any audit;
 - any other matter required by the Secretary; and
 - (b) keep this information up to date,
 - (c) investigate and report on reasonable and feasible measures to make predictive meteorological data and real time monitoring data publicly available on its website to the satisfaction of the Secretary.

**APPENDIX 1
SCHEDULE OF LAND**

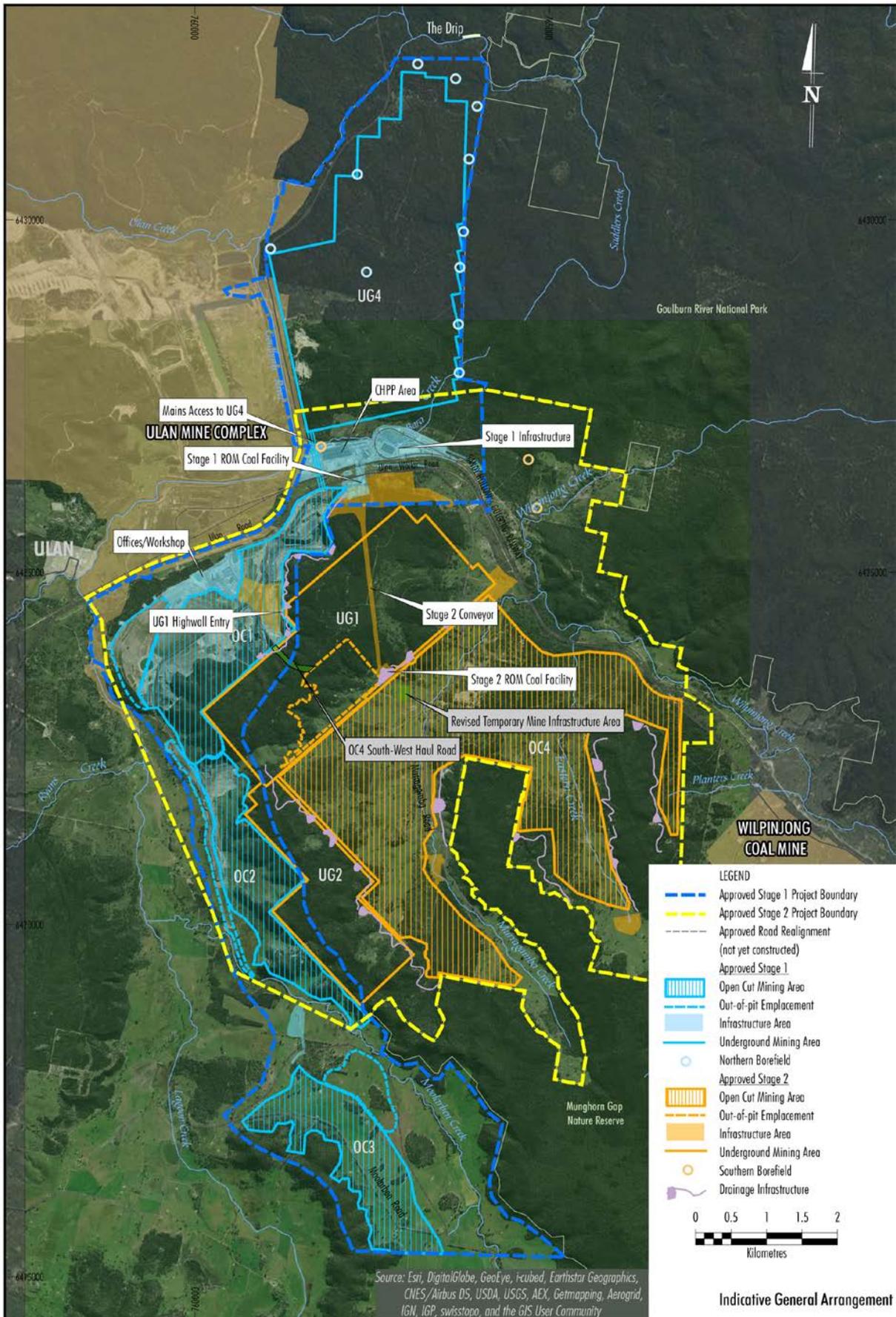
Owner	Description		Parish	County	EA ID
Moolarben Coal Mines Pty. Ltd.	Pt Lot 218	DP 755442	Moolarben	Phillip	36
Moolarben Coal Mines Pty. Ltd.	Pt Lot 238	DP 755442	Moolarben	Phillip	36
Moolarben Coal Mines Pty. Ltd.	Pt Lot 107	DP 755454	Wilpinjong	Phillip	44
Moolarben Coal Mines Pty. Ltd.	Lot 90	DP 755454	Wilpinjong	Phillip	44
Moolarben Coal Mines Pty. Ltd.	Lot 85	DP 755454	Wilpinjong	Phillip	44
Moolarben Coal Mines Pty. Ltd.	Lot 86	DP 755454	Wilpinjong	Phillip	27
Moolarben Coal Mines Pty. Ltd.	Lot 3	DP 878678	Wilpinjong	Phillip	15
Moolarben Coal Mines Pty. Ltd.	Lot 44	DP 755442	Moolarben	Phillip	4
Moolarben Coal Mines Pty. Ltd.	Pt Lot 193	DP 755442	Moolarben	Phillip	5
Moolarben Coal Mines Pty. Ltd.	Lot 119	DP 755442	Moolarben	Phillip	5
Moolarben Coal Mines Pty. Ltd.	Pt Lot 192	DP 755442	Moolarben	Phillip	5
Moolarben Coal Mines Pty. Ltd.	Pt Lot 1	DP 803204	Moolarben	Phillip	5
Moolarben Coal Mines Pty. Ltd.	Pt Lot 61	DP 755442	Moolarben	Phillip	5
Moolarben Coal Mines Pty. Ltd.	Lot 95	DP 755442	Moolarben	Phillip	5
Moolarben Coal Mines Pty. Ltd.	Pt Lot 36	DP 755442	Moolarben	Phillip	5
Moolarben Coal Mines Pty. Ltd.	Pt Lot 37	DP 755442	Moolarben	Phillip	5
Moolarben Coal Mines Pty. Ltd.	Lot 60	DP 755442	Moolarben	Phillip	5
Moolarben Coal Mines Pty. Ltd.	Lot 93	DP 755454	Wilpinjong	Phillip	134
Moolarben Coal Mines Pty. Ltd.	Lot 93	DP 755442	Moolarben	Phillip	134
Moolarben Coal Mines Pty. Ltd.	Pt Lot 229	DP 755442	Moolarben	Phillip	4
Moolarben Coal Mines Pty. Ltd.	Pt Lot 228	DP 755442	Moolarben	Phillip	4
Moolarben Coal Mines Pty. Ltd.	Pt Lot 110	DP 755442	Moolarben	Phillip	4
Moolarben Coal Mines Pty. Ltd.	Lot 223	DP 755442	Moolarben	Phillip	4
Moolarben Coal Mines Pty. Ltd.	Lot 234	DP 755442	Moolarben	Phillip	4
Moolarben Coal Mines Pty. Ltd.	Lot 96	DP 755454	Wilpinjong	Phillip	4
Moolarben Coal Mines Pty. Ltd.	Lot 112	DP 755454	Wilpinjong	Phillip	4
Moolarben Coal Mines Pty. Ltd.	Lot 113	DP 755454	Wilpinjong	Phillip	4
Moolarben Coal Mines Pty. Ltd.	Lot 2	DP 1023568	Wilpinjong	Phillip	3
Moolarben Coal Mines Pty. Ltd.	Lot 1	DP 1023568	Wilpinjong	Phillip	3
Moolarben Coal Mines Pty. Ltd.	Lot 105	DP 755454	Wilpinjong	Phillip	1
Moolarben Coal Mines Pty. Ltd.	Lot 91	DP 755454	Wilpinjong	Phillip	1
Moolarben Coal Mines Pty. Ltd.	Lot 99	DP 755454	Wilpinjong	Phillip	1
Moolarben Coal Mines Pty. Ltd.	Lot 42	DP 755454	Wilpinjong	Phillip	1
Moolarben Coal Mines Pty. Ltd.	Lot 41	DP 755454	Wilpinjong	Phillip	1

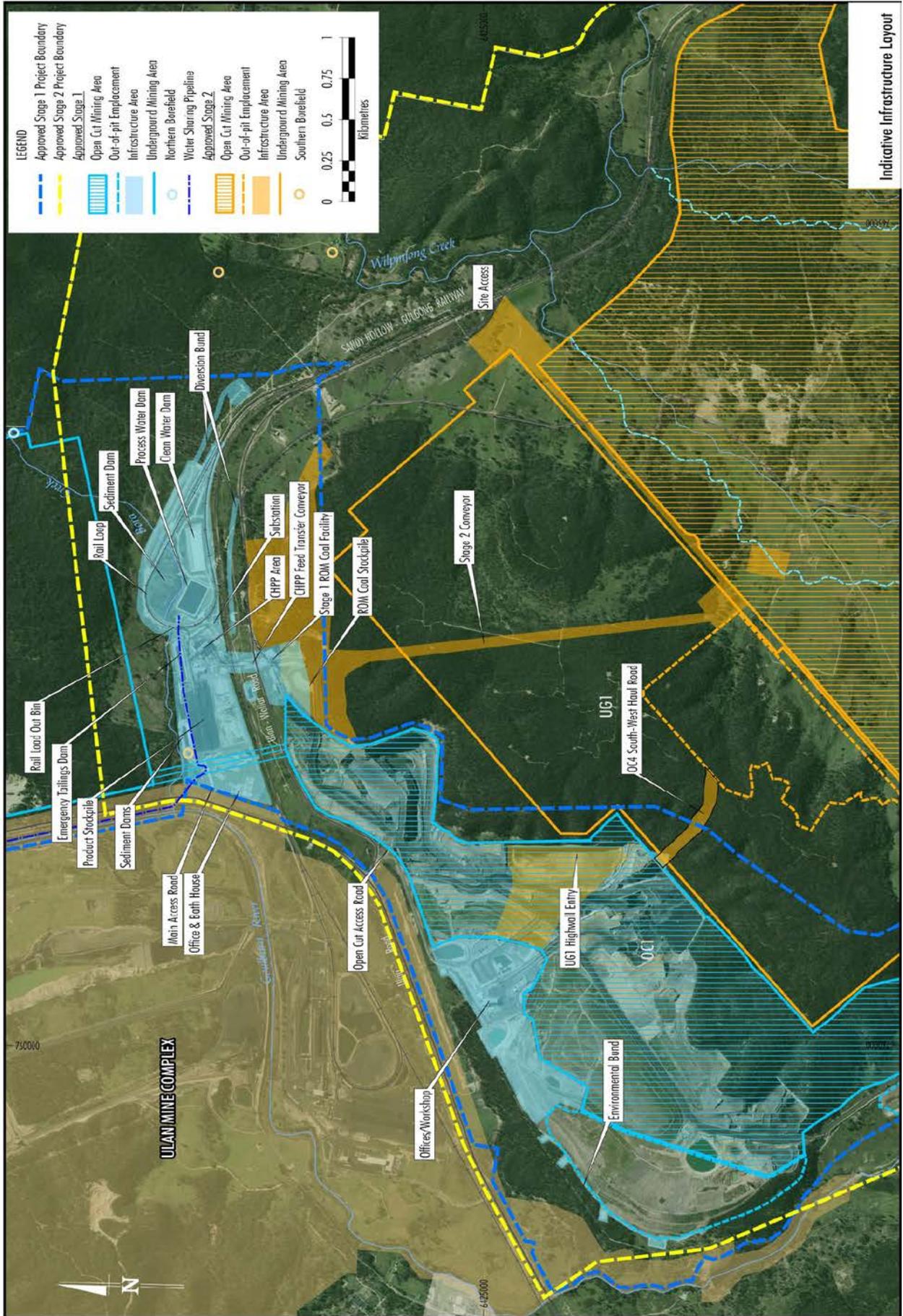
Moolarben Coal Mines Pty. Ltd.	Lot 7	DP 755454	Wilpinjong	Phillip	1
Moolarben Coal Mines Pty. Ltd.	Lot 92	DP 755454	Wilpinjong	Phillip	1
Moolarben Coal Mines Pty. Ltd.	Lot 97	DP 755454	Wilpinjong	Phillip	1
Moolarben Coal Mines Pty. Ltd.	Lot 82	DP 755454	Wilpinjong	Phillip	1
Moolarben Coal Mines Pty. Ltd.	Lot 61	DP 755454	Wilpinjong	Phillip	2
Moolarben Coal Mines Pty. Ltd.	Lot 33	DP 755454	Wilpinjong	Phillip	43
Moolarben Coal Mines Pty. Ltd.	Lot 2	DP 755454	Wilpinjong	Phillip	2
Moolarben Coal Mines Pty. Ltd.	Lot 36	DP 755454	Wilpinjong	Phillip	2
Moolarben Coal Mines Pty. Ltd.	Lot 53	DP 755454	Wilpinjong	Phillip	2
Moolarben Coal Mines Pty. Ltd.	Lot 8	DP 755454	Wilpinjong	Phillip	2
Moolarben Coal Mines Pty. Ltd.	Lot 62	DP 755454	Wilpinjong	Phillip	2
Moolarben Coal Mines Pty. Ltd.	Lot 4	DP 755454	Wilpinjong	Phillip	2
Moolarben Coal Mines Pty. Ltd.	Lot 34	DP 755454	Wilpinjong	Phillip	2
Moolarben Coal Mines Pty. Ltd.	Lot 57	DP 755454	Wilpinjong	Phillip	2
Moolarben Coal Mines Pty. Ltd.	Lot 262	DP 755442	Moolarben	Phillip	7
Moolarben Coal Mines Pty. Ltd.	Lot 32	DP 755454	Wilpinjong	Phillip	7
Moolarben Coal Mines Pty. Ltd.	Lot 1	DP 755454	Wilpinjong	Phillip	8
Moolarben Coal Mines Pty. Ltd.	Lot 58	DP 755454	Wilpinjong	Phillip	8
Moolarben Coal Mines Pty. Ltd.	Lot 21	DP 755454	Wilpinjong	Phillip	8
Moolarben Coal Mines Pty. Ltd.	Lot 76	DP 755454	Wilpinjong	Phillip	8
Moolarben Coal Mines Pty. Ltd.	Pt Lot 2	DP 1143354	Wilpinjong	Phillip	14
Moolarben Coal Mines Pty. Ltd.	Lot 11	DP 1152406	Wilpinjong/ Lennox	Phillip	46
Moolarben Coal Mines Pty. Ltd.	Lot 2	DP 878678	Wilpinjong	Phillip	13
Moolarben Coal Mines Pty. Ltd.	Lot 6	DP 878678	Wilpinjong	Phillip	18
Moolarben Coal Mines Pty. Ltd.	Lot 5	DP 878678	Moolarben/Wilpinjong	Phillip	17
Moolarben Coal Mines Pty. Ltd.	Lot 4	DP 878678	Wilpinjong	Phillip	16
Moolarben Coal Mines Pty. Ltd.	Lot 7	DP 878679	Wilpinjong	Phillip	19
Moolarben Coal Mines Pty. Ltd.	Lot1	DP 817487	Lennox	Phillip	71
Mid-Western Regional Council	Lot 16	DP 1140073	Lennox	Phillip	71
Mid-Western Regional Council	Lot 17	DP 1140073	Lennox	Phillip	71
Mid-Western Regional Council	Lot 20	DP 1140073	Lennox	Phillip	71
Ulan Coal Mines Ltd.	Lot 80	DP 755454	Wilpinjong	Phillip	46
Ulan Coal Mines Ltd.	Lot 28	DP 755454	Wilpinjong	Phillip	46
Ulan Coal Mines Ltd.	Lot 38	DP 755454	Wilpinjong	Phillip	46
Ulan Coal Mines Ltd.	Lot 65	DP 755454	Wilpinjong	Phillip	46
Ulan Coal Mines Ltd.	Lot 79	DP 755454	Wilpinjong	Phillip	46
Ulan Coal Mines Ltd.	Lot 40	DP 755454	Wilpinjong	Phillip	46
Ulan Coal Mines Ltd.	Lot 253	DP 755442	Moolarben	Phillip	46
Ulan Coal Mines Ltd.	Lot 13	DP 1152406	Lennox	Phillip	46
Ulan Coal Mines Ltd.	Pt Lot 18	DP 1140073	Lennox	Phillip	46
Ulan Coal Mines Ltd.	Lot 3	DP 722882	Lennox	Phillip	46
Ulan Coal Mines Ltd.	Lot 2	DP 722882	Lennox	Phillip	46

Ulan Coal Mines Ltd.	Pt Lot 50	DP 736630	Lennox	Phillip	46
Ulan Coal Mines Ltd.	Pt Lot 14	DP 1152406	Lennox	Phillip	46
Ulan Coal Mines Ltd.	Lot 106	DP 755454	Wilpinjong	Phillip	46
Ulan Coal Mines Ltd.	Lot 118	DP 724657	Wilpinjong	Phillip	46
Ulan Coal Mines Ltd.	Lot 120	DP 724656	Wilpinjong	Phillip	46
Ulan Coal Mines Ltd.	Lot 63	DP 755454	Wilpinjong	Phillip	46
Ulan Coal Mines Ltd.	Lot 29	DP 755454	Wilpinjong	Phillip	46
Ulan Coal Mines Ltd.	Pt Lot 69	DP 755454	Wilpinjong	Phillip	46
Ulan Coal Mines Ltd.	Pt Lot 59	DP 755454	Wilpinjong	Phillip	46
Ulan Coal Mines Ltd.	Pt Lot 122	DP 724655	Wilpinjong	Phillip	46
Ulan Coal Mines Ltd.	Pt Lot 67	DP 755454	Wilpinjong	Phillip	46
Ulan Coal Mines Ltd.	Pt Lot 68	DP 755454	Wilpinjong	Phillip	46
Ulan Coal Mines Ltd.	Lot 37	DP 755454	Wilpinjong	Phillip	46
Ulan Coal Mines Ltd.	Pt Lot 52	DP 755454	Wilpinjong	Phillip	46
Ulan Coal Mines Ltd.	Lot 95	DP 755454	Wilpinjong	Phillip	46
Ulan Coal Mines Ltd.	Lot 74	DP 755454	Wilpinjong	Phillip	46
Ulan Coal Mines Ltd.	Lot 75	DP 755454	Wilpinjong	Phillip	46
Ulan Coal Mines Ltd.	Lot 71	DP 755454	Wilpinjong	Phillip	46
Ulan Coal Mines Ltd.	Lot 77	DP 755454	Wilpinjong	Phillip	46
Ulan Coal Mines Ltd.	Lot 78	DP 755454	Wilpinjong	Phillip	46
Ulan Coal Mines Ltd.	Lot 117	DP 705226	Wilpinjong	Phillip	46
Ulan Coal Mines Ltd.	Lot 54	DP 755454	Wilpinjong	Phillip	46
Ulan Coal Mines Ltd.	Lot 30	DP 755454	Wilpinjong	Phillip	46
Ulan Coal Mines Ltd.	Lot 50	DP 755454	Wilpinjong	Phillip	46
Ulan Coal Mines Ltd.	Lot 253	DP 755442	Moolarben	Phillip	46
Ulan Coal Mines Ltd.	Lot 14	DP 755442	Moolarben	Phillip	46
Ulan Coal Mines Ltd.	Lot 178	DP 755442	Moolarben	Phillip	46
Ulan Coal Mines Ltd.	Lot 179	DP 755442	Moolarben	Phillip	46
Ulan Coal Mines Ltd.	Lot 277	DP 755442	Moolarben	Phillip	46
Ulan Coal Mines Ltd.	Lot 242	DP 755442	Moolarben	Phillip	46
Ulan Coal Mines Ltd.	Lot 91	DP 755442	Moolarben	Phillip	46
Ulan Coal Mines Ltd.	Pt Lot 7	DP 755442	Moolarben	Phillip	46
Ulan Coal Mines Ltd.	Lot 272	DP 755442	Moolarben	Phillip	46
Ulan Coal Mines Ltd.	Lot 1	DP 1089166	Moolarben	Phillip	46
Ulan Coal Mines Ltd.	Pt Lot 1	DP 1099037	Moolarben	Phillip	46
Ulan Coal Mines Ltd.	Pt Lot 2	DP 206588	Moolarben	Phillip	46
Ulan Coal Mines Ltd.	Pt Lot 3	DP 206588	Moolarben	Phillip	46
Ulan Coal Mines Ltd.	Pt Lot 4	DP 206588	Moolarben	Phillip	46
Ulan Coal Mines Ltd.	Pt Lot 5	DP 206588	Moolarben	Phillip	46
Ulan Coal Mines Ltd.	Pt Lot 6	DP 206588	Moolarben	Phillip	46
Ulan Coal Mines Ltd.	Pt Lot 8	DP 206588	Moolarben	Phillip	46
Ulan Coal Mines Ltd.	Pt Lot 92	DP 755442	Moolarben	Phillip	46
Ulan Coal Mines Ltd.	Pt Lot 8	DP 755442	Moolarben	Phillip	46
Ulan Coal Mines Ltd.	Pt Lot 27	DP 755439	Lennox	Phillip	46
Ulan Coal Mines Ltd.	Lot 1	DP 722881	Moolarben	Phillip	46
Ulan Coal Mines Ltd.	Pt Lot 3	DP 115031	Moolarben	Phillip	46
Crown	Ulan-Wollar Road				
Crown	Murragamba Road				
Crown	Carrs Gap Road				
Crown	Ulan Road				
Crown	Lot 43	DP 755454	Wilpinjong	Phillip	38
	Vacant Crown Land				
Crown	Lot 44	DP 755454	Wilpinjong	Phillip	38
	Vacant Crown Land				
Crown	Lot 116	DP 705226	Wilpinjong	Phillip	38
	Reserve for Access				
Crown	Lot 119	DP 724657	Wilpinjong	Phillip	38
	Reserve for Access				
Crown	Lot 121	DP 724656	Wilpinjong	Phillip	38
	Reserve for Access				
Crown	Pt Lot 123	DP 724655	Wilpinjong	Phillip	38
	Reserve for Access				
Crown	Pt Lot 7010	DP 1025345	Moolarben	Phillip	38
	Vacant Crown Land				
Crown	Unidentified Crown Road No 7	(Refer Plan 0857C)	Wilpinjong	Phillip	-
Crown	Unidentified Crown Road No 8	(Refer Plan 0857C)	Wilpinjong	Phillip	-
Crown	Unidentified Crown Road No 9	(Refer Plan 0857C)	Wilpinjong	Phillip	-
Crown	Unidentified Crown Road No 10	(Refer Plan 0857C)	Wilpinjong	Phillip	-

Crown	Unidentified Crown Road No 11	(Refer Plan 0857C)	Wilpinjong	Phillip	-
Crown	Unidentified Crown Road No 12	(Refer Plan 0857C)	Wilpinjong	Phillip	-
Crown	Unidentified Crown Road No 13	(Refer Plan 0857C)	Wilpinjong	Phillip	-
State Rail Authority	Sandy Hollow Gulgong Railway				

APPENDIX 2 GENERAL LAYOUT OF PROJECT





**APPENDIX 3
STATEMENT OF COMMITMENTS**

Ref	Commitment
Mining Operations	
1.	MCM will operate the Stage 1 and Stage 2 projects as a combined mining complex (the MCC) to extract up to 17 Mtpa of ROM coal comprising: <ul style="list-style-type: none"> • 13 Mtpa from combined open cut operations (with up to 8 Mtpa derived from Stage 1 OCs and up to 12 Mtpa from Stage 2 OC); and • up to 4 Mtpa from underground operations, for 24 years, generally in accordance with the Stage 2 EA and PPR.
2.	MCM will ensure that open cut plant and equipment meet the sound power levels described in the noise impact assessment for the project, including specifying sound power levels and factory fitting of attenuation kits in relevant plant and equipment purchase contracts.
3.	MCM will obtain all necessary licences and approvals required to operate the Stage 2 project, generally in accordance with the Stage 2 EA and PPR.
Environmental Management	
4.	MCM will revise the Stage 1 Environmental Management System to incorporate the MCC Stage 2 project in consultation with relevant regulators and stakeholders (where appropriate). This may require revision or preparation of monitoring and management plans as prescribed by the Project Approval, such as (where relevant): <ul style="list-style-type: none"> • Environmental Monitoring Program; • Air Quality and Greenhouse Gas Management Plan (including energy savings actions); • Spontaneous Combustion Management Plan; • Noise Management Plan; • Blast Management Plan; • Water Management Plan (including groundwater and surface water); • Creek and Aquatic Rehabilitation Plan; • Rehabilitation Management Plan; • Biodiversity Management Plan; • Subsidence Management Plan; • Aboriginal Cultural Heritage Management Plan; • Non Aboriginal Heritage Management Plan; • Erosion and Sediment Control Plan; • Social Engagement and Issue Response Strategy; • Bushfire Management Plan; and • Waste Management Plan. (Note where applicable or appropriate some of these plans may be combined).
Air Quality	
5.	MCM will use its best endeavours to implement industry best practice air quality management initiatives to minimise the air quality impacts of the MCC.
6.	The revised MCC Air Quality Management Plan (and future variations) will include a validation exercise of the real time response triggers.

Ref	Commitment
7.	MCM will complete a review of particulate emission controls implemented at the MCC against industry best practice on a three yearly basis and report the findings in the relevant Annual Review.
8.	MCM will develop and implement meteorological criteria to help ensure that blasting is not undertaken under unfavourable wind and/or atmospheric conditions which would result in an exceedance of relevant criteria.
9.	Where air quality impacts are predicted to exceed criteria at private residences in the PPR due to MCC operations, MCM will install a first flush system to the rain water tanks upon written request of the landholder.
Greenhouse Gas	
10.	MCM will undertake regular revision of energy efficiency initiatives to ensure that Scope 1 greenhouse gas emissions per tonne of product coal are kept to the minimum practicable level.
Noise and Blasting	
11.	MCM will use its best endeavours to implement industry best practice noise control and management measures to minimise the noise impacts of the MCC.
12.	MCM will proactively manage its operations to ensure noise impacts are within the worst case predicted noise envelope.
13.	MCM will ensure noise monitoring is implemented to determine and manage the contribution to cumulative mine noise from the MCC at Property 258, including implementing at least quarterly attended noise monitoring and installing a directional noise monitor in the vicinity of the property in conjunction with the Ulan Mine, unless monitoring indicates there is no noise impact from the MCC at this property.
14.	MCM will work cooperatively with neighbouring mines to develop a blast monitoring system which is representative of the closest sensitive receivers to ensure compliance with the relevant blast criteria.
15.	The sound power of the conveyor used in the NIA will be provided to equipment manufacturers and suppliers to help ensure that the conveyor is maintained at these levels during operations
16.	MCM will continue to advise neighbours of blasting schedules upon request so that any concerns regarding blasting and impacts to pets and livestock can be managed by neighbours.
Water Resources	
17.	MCM will implement the water management and mitigation measures described in the PPR and subsequent supporting documents.
18.	MCM will continue to monitor groundwater impacts on surrounding privately owned bores. In the event that it is demonstrated that water levels in existing landholder bores decline as a consequence of the MCC, leading to an adverse impact on groundwater supply, MCM will: <ul style="list-style-type: none"> • engage an appropriately qualified and experienced hydrogeologist to investigate the cause of the impact and recommend an appropriate action response plan; and • provide an alternate interim water supply or commensurate compensation as agreed to with the landholder.
19.	MCM will develop a surface water monitoring program to quantify the streamflow and water quality characteristics within Murragamba and Eastern Creeks for existing conditions prior to mining of the creek lines.
20.	MCM will manage rainfall run-off from MCC mine disturbed areas to prevent contamination of downstream water sources from sediment laden water, unless otherwise approved under a relevant Environment Protection Licence.

Ref	Commitment
21.	MCM will develop a six monthly water balance for MCC operations to assist in site water management and monitoring protocols. This will be reviewed on a regular basis to account for changing mine water inflows and water management infrastructure as mining progresses. The frequency of this review will be revised after Year 3 of Stage 2 operations to the approval of relevant regulators.
22.	Collated groundwater monitoring data will be reviewed annually to assess the impacts of the MCC on the groundwater environment and to compare observed impacts with those predicted from groundwater modelling.
23.	The groundwater monitoring program will be revised to include additional piezometers in alluvial areas, including palaeochannel areas, potentially affected by the MCC.
24.	A groundwater modelling post-audit and model re-calibration (where required) will be carried out 2 years (and 5 yearly thereafter) after commencing Stage 2 coal extraction. Should any groundwater review or post-audit indicate a significant variance from the model predictions, an appropriate response will be implemented in consultation with NOW and DP&I.
25.	MCM will acquire relevant licences under the <i>Water Act 1912</i> and <i>Water Management Act 2000</i> as required (or implement other such ameliorative measures as agreed with relevant regulators, such as return flows or other such reasonable and feasible mitigation measures to reduce the total direct and indirect water take of the MCC from alluvial and connected surface water sources).
26.	MCM will endeavour to implement an integrated monitoring program for the MCC, with UCML and Wilpinjong Coal Mine for data-sharing.
27.	MCM commits to realign and reconstruct the mined sections of Murragamba and Eastern creeks to meet geomorphological, hydraulic and ecological performance and completion criteria developed in consultation with relevant regulators.
28.	MCM will develop operational criteria for the realigned sections of Murragamba and Eastern creeks in consultation with relevant regulators and install diversions around the realigned sections of creek until such time as they become operational.
29.	As a part of its revised Water Management Plan, MCM will prioritise UCML surplus water for use within the MCC, to minimise the need for extraction from the Northern Borefield.
Ecology	
30.	MCM will implement the ecological management and mitigation measures described in the PPR and subsequent supporting documents.
31.	<p>MCM will establish the Biodiversity Offset Strategy as described in the PPR and subsequent supporting documents to initially maintain and ultimately improve ecological values.</p> <p>Where ownership or the controlling interest of any proposed offset property is not able to be held by MCM it will either provide an alternate property of equal biodiversity value as a replacement, or make other such alternate arrangements as agreed to with relevant regulators.</p> <p>Management of offset properties for conservation purposes will be described in a Rehabilitation Offset Management Plan (or equivalent).</p>
32.	MCM will implement appropriate security mechanisms to ensure that offset areas and rehabilitated areas (at the completion on mining) are protected in the long-term.
33.	MCM will continue to consult with OEH on the inclusion of relevant Moolarben owned properties into the existing Avisford Nature Reserve.
Aboriginal Archaeology and Cultural Heritage	
34.	The salvage and the protection of all known Aboriginal objects within the Project Boundary will be

Ref	Commitment
	<p>managed in accordance with the measures described in the PPR, subsequent supporting documents and an approved Aboriginal Cultural Heritage Management Plan for the MCC which has been prepared in consultation with local Aboriginal community stakeholders and the OEH.</p> <p>Prior to finalisation and approval of the Aboriginal Cultural Heritage Management Plan, the description of significance, development area, potential impacts, management strategies and current management status for all sites in the Stage 2 area will be reviewed by a suitably experienced and qualified archaeologist.</p>
35.	Site S2MC229 will be described as being a directly impacted site with a management strategy of 'detailed recording and surface collection, including closer inspection of the drip line' in the approved Aboriginal Cultural Heritage Management Plan.
36.	Unsurveyed areas such as the Powers Management Area will be assessed and managed in accordance with the procedures agreed to with local Aboriginal community stakeholders and approved in the Aboriginal Cultural Heritage Management Plan for the MCC.
37.	MCM will manage the Aboriginal conservation zones as outlined in the PPR and subsequent supporting documents in consultation with local Aboriginal community stakeholders.
Rehabilitation	
38.	<p>MCM will rehabilitate the Stage 2 project area to restore forest and woodland across the valley landscape, including rehabilitating 631 ha of currently degraded secondary grasslands.</p> <p>Areas of derived native grassland, secondary grassland and exotic grassland will be rehabilitated to treed landscapes.</p>
39.	MCM will implement best practice environmental management to progressively rehabilitate mined and degraded non-mined areas with a focus on the re-establishment of C/EEC Box Gum Woodland and threatened species habitat.
40.	The gradients of final landform slopes will be generally designed to be no more than 10 to 14 degrees. However, where the out-of-pit (OOP) emplacement area is spatially constrained the final gradients of these slopes will be limited to a maximum of 20 degrees, provided it is agreed to by the relevant regulators.
Traffic and Transport	
41.	Early morning and evening shift changes will be outside school bus service times, and where feasible will be offset from existing Ulan and Wilpinjong mine shift changes over time to minimise peak traffic loads on the road network.
42.	MCM will work with MRWC and Ulan and Wilpinjong coal mines to generally improve road safety and traffic management on the local road network.
Visual	
43.	Rehabilitation will be carried out on disturbed areas as soon as practical after disturbance with emphasis on bunding and the OOP emplacement area.
44.	Infrastructure lighting will be designed to control light spill with directional lighting in elevated and exposed areas and will utilise low intensity lights to the level necessary for operational and safety requirements to minimise adverse night lighting impacts.

Community	
45.	MCM will provide fair and reasonable community enhancement contributions for Stage 2 of the MCC to MWRC, which will augment the existing VPA for Stage 1.
46.	MCM will consult with the community, neighbouring industry and government authorities in relation to the MCC.
47.	MCM will employ appropriately qualified persons residing in the MWRC area where feasible. MCM will also provide traineeships for young people residing in the MWRC area.
Reporting	
48.	MCM will prepare an Annual Review (which summarises monitoring results and reviews performance) and distribute it to the relevant regulatory authorities and the MCM CCC.

**APPENDIX 4
UNDERGROUND MINE LAYOUT AND LOCATION OF
SENSITIVE NATURAL AND MAN MADE FEATURES**

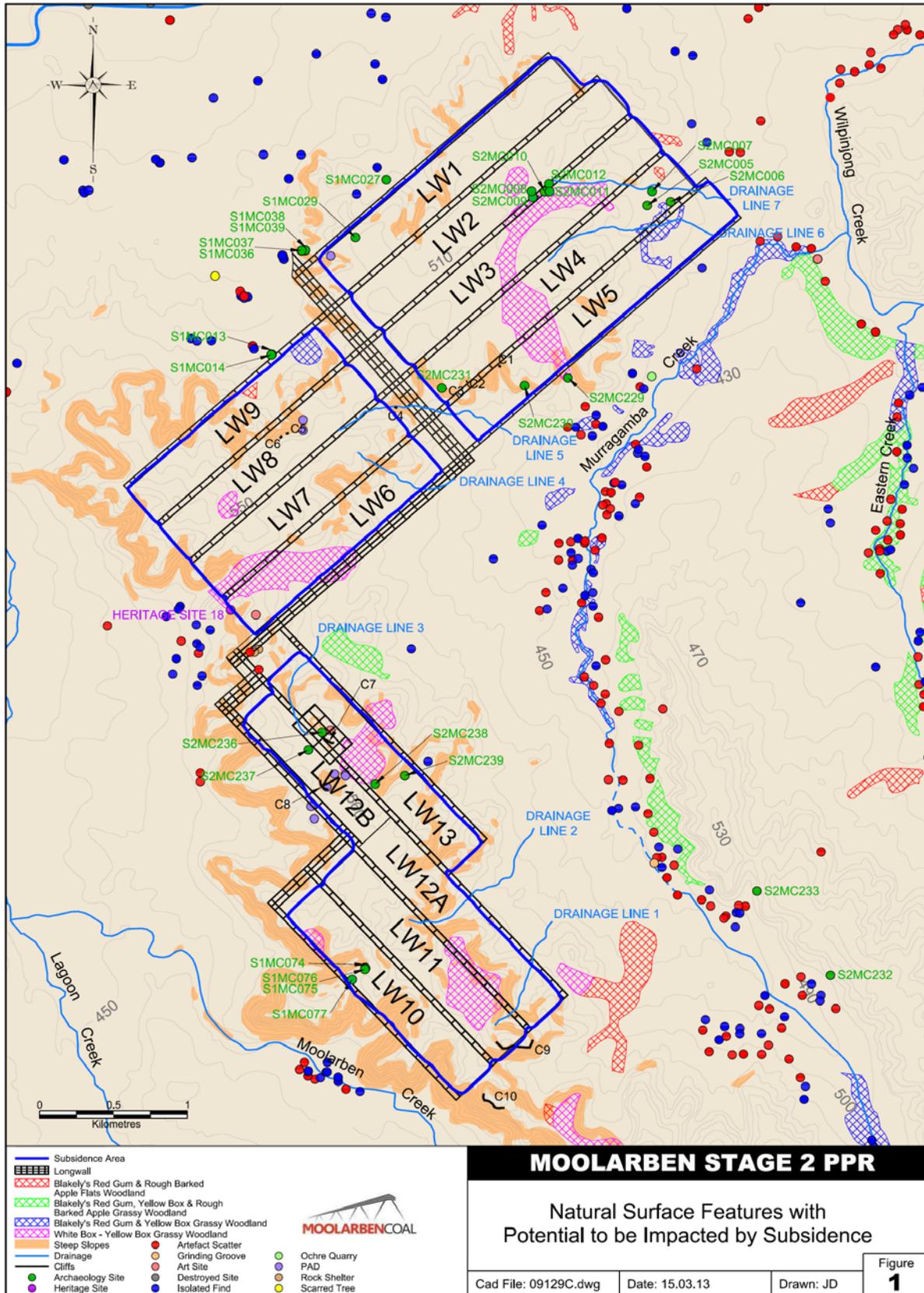


Figure 4.1

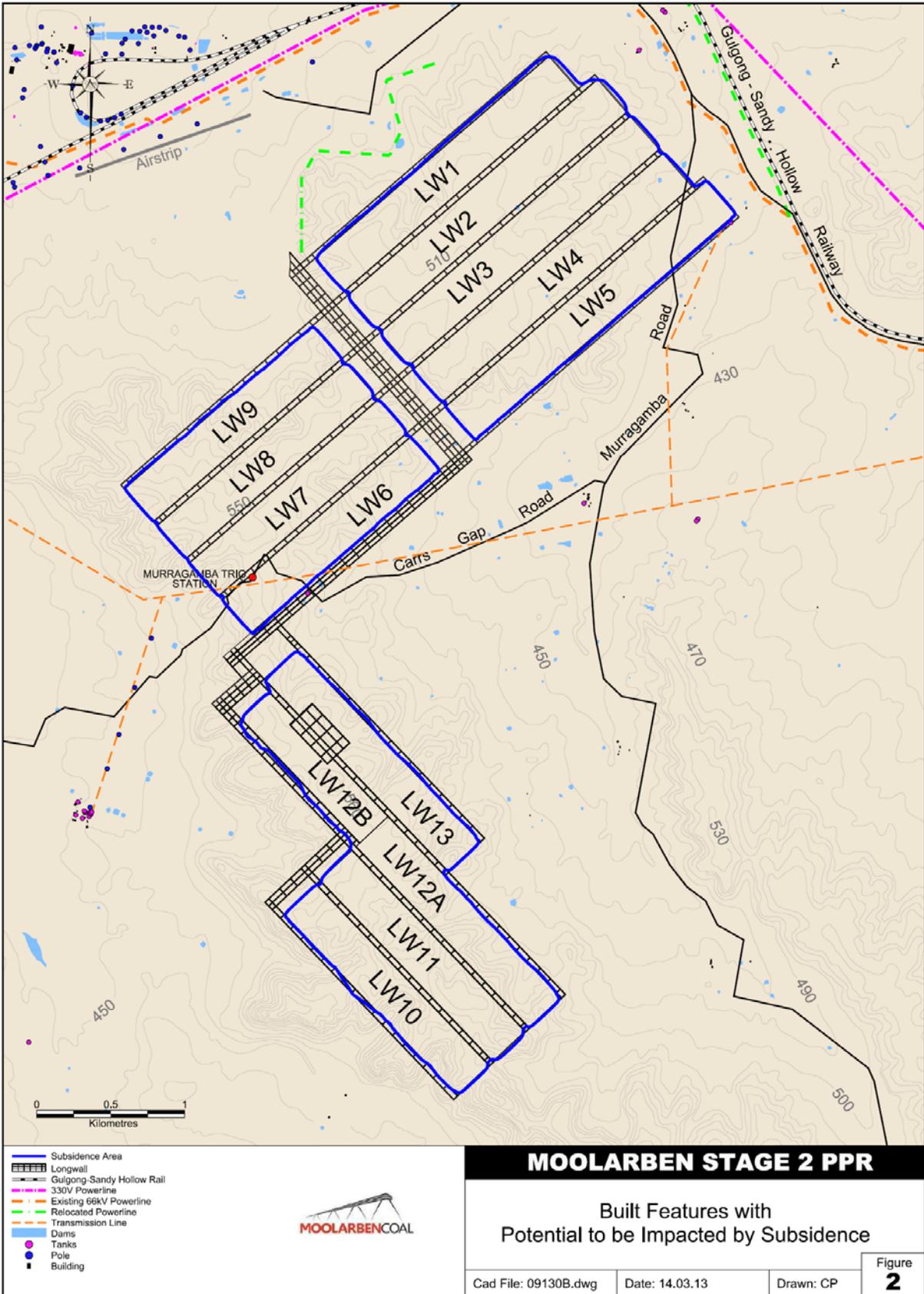


Figure 4.2

APPENDIX 5 PROPERTY NUMBERS AND LAND OWNERSHIP

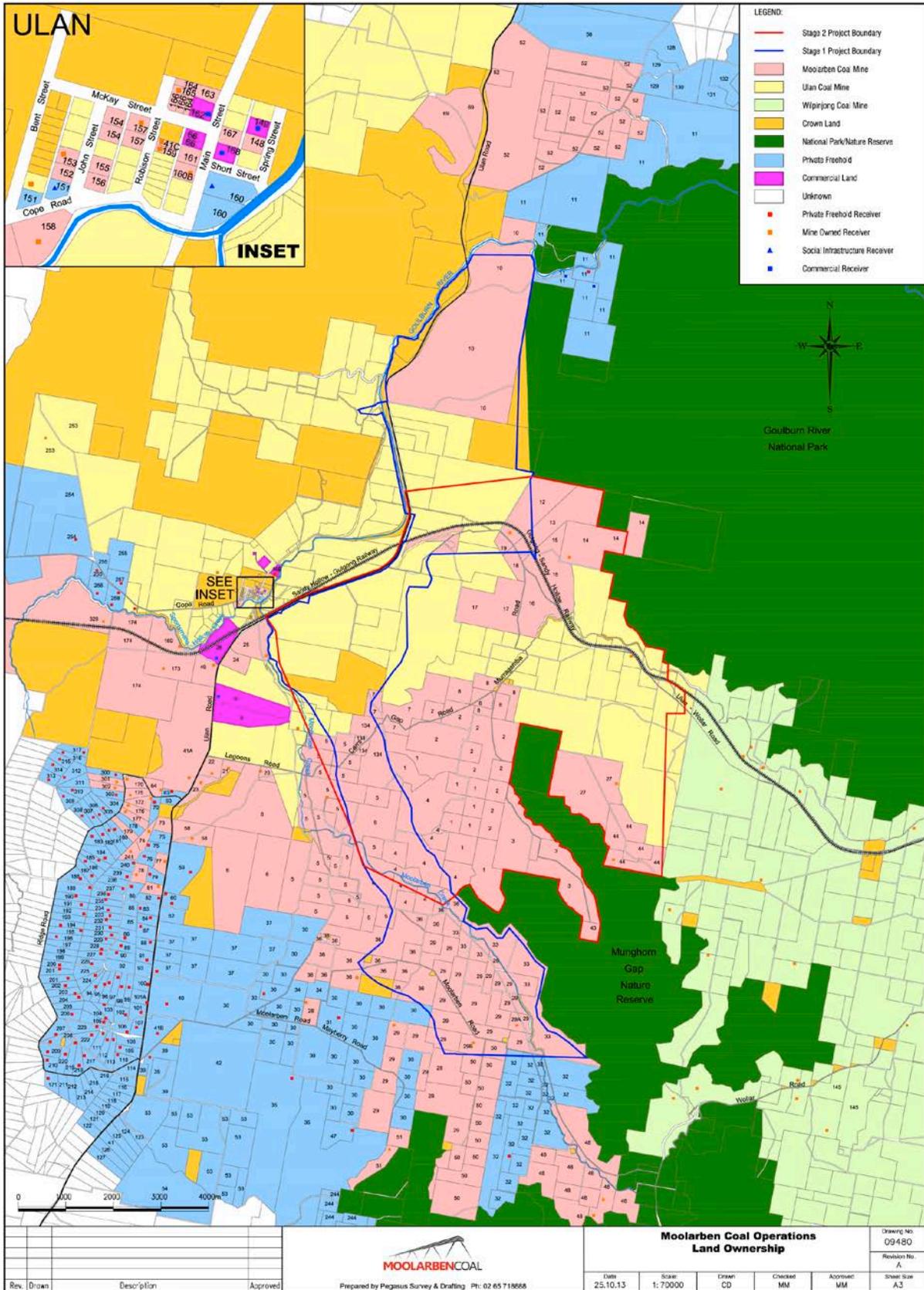


Figure 5.1

Table 5.1 Land Ownership

No.	NAME	No.	NAME	No.	NAME
1	Moolarben Coal Mine Owned/Controlled Land	82	S.C. Hungerford & M.C. Clemens	164	Moolarben Coal Mine Owned/Controlled Land
2	Moolarben Coal Mine Owned/Controlled Land	83	C.F. & C.R. Wall	165	Moolarben Coal Mine Owned/Controlled Land
3	Moolarben Coal Mine Owned/Controlled Land	84	D.S. Sebelic	166	Moolarben Coal Mine Owned/Controlled Land
4	Moolarben Coal Mine Owned/Controlled Land	85	J. & Z. Nikolovski	167	Moolarben Coal Mine Owned/Controlled Land
5	Moolarben Coal Mine Owned/Controlled Land	86	N.W. Harris	168	PJL Construction Complete Mining Services & Solutions P/L
6	Moolarben Coal Mine Owned/Controlled Land	87	B.J. & K. Howe	169	Moolarben Coal Mine Owned/Controlled Land
7	Moolarben Coal Mine Owned/Controlled Land	88	B.C. Meyers	170	Moolarben Coal Mine Owned/Controlled Land
8	Moolarben Coal Mine Owned/Controlled Land	89	M.V. & H.M. Glover & E. & B.J. Tomlinson	171	J.M. McGregor
9	I.C.I. Australia Operations	90	S.A. Powell	172	Moolarben Coal Mine Owned/Controlled Land
10a,b	Moolarben Coal Mine Owned/Controlled Land	91	H.M. Graham	173	Moolarben Coal Mine Owned/Controlled Land
11	J. Mullins & C. Imrie	92	V.A. Pulicino, J. Bonnici, S. Bonnici & G. Bonnici	174	Moolarben Coal Mine Owned/Controlled Land
12	Moolarben Coal Mine Owned/Controlled Land	93	F. & M. Fenech	175	Moolarben Coal Mine Owned/Controlled Land
13	Moolarben Coal Mine Owned/Controlled Land	94	L.K. Mittermayer	176	Moolarben Coal Mine Owned/Controlled Land
14a	Moolarben Coal Mine Owned/Controlled Land	95	B.J. Wittington	177	Moolarben Coal Mine Owned/Controlled Land
14b	The Minister for National Parks	96	D. Lazicic	178	P. Stone
15	Moolarben Coal Mine Owned/Controlled Land	97	D.J. & M.D. Smith	179	Moolarben Coal Mine Owned/Controlled Land
16	Moolarben Coal Mine Owned/Controlled Land	98	J.P. & M.E. Piper	180	C. & L. Barrett
17	Moolarben Coal Mine Owned/Controlled Land	99	D.E. Jenner & W.B. Jensen	181	S. Forster
18	Moolarben Coal Mine Owned/Controlled Land	100	O. & A. Kapista	182	J. Dutoitcook
19	Moolarben Coal Mine Owned/Controlled Land	101	R.D. & D.M.Z. Hull	183	R. & E. Steines
20	Moolarben Coal Mine Owned/Controlled Land	101a	P.J. Kearns	184	L. Stevenson
21	Moolarben Coal Mine Owned/Controlled Land	102	K.A. Roberts	185	L. Stevenson
22	Moolarben Coal Mine Owned/Controlled Land	103	S.B. Burnett & S.L. Grant	186	R. & I. Adamson
23	Moolarben Coal Mine Owned/Controlled Land	104	R.A. & L.A. Deeben	187	B. & K. Feeney
24	Moolarben Coal Mine Owned/Controlled Land	105	D.J. & N. Katsikaris	188	K. & T. Fielding
25	Moolarben Coal Mine Owned/Controlled Land	106	T.B. & J.H. Reid	189	M,M,D & A Goggin & J.A,P & R Hyde
26	Forty North Pty Limited	107	Z.J. & M. & A.A. Raso, B. Poplasen	190	T. & L. Sahyoun
27	Moolarben Coal Mine Owned/Controlled Land	108	R. Varga	191	B. & T. Lasham
28	Moolarben Coal Mine Owned/Controlled Land	109	D.A. & V.M. Evans	192	R. & J. Williams
29a,b	Moolarben Coal Mine Owned/Controlled Land	110	J.T. Thompson & H.T. Evans	193	D.J. Moloney
30	R. Cox	111	G.J. & N.J. McEwan	194	P. & K. Potts

No.	NAME	No.	NAME	No.	NAME
31	M. Cox	112	M.J. & L.M. Croft	195	R. Cottam
32	D. & J. Stokes	113	C.P.G. Ratcliff	196	F. Saxberg & F. Weir
33	Moolarben Coal Mine Owned/Controlled Land	114	T.F. & K. Holland	197	P. Gorm & I. Neilsen
34	J. Asztalos	115	A.K. & B.H. Ouinn	198	G.R. & M.E. Metcalfe
35	P. Johnson, M. & G. Thompson, P. & F. Debreczeny	116	D.J. & S.M. Reid	199	P. Gorm & I. Neilsen
36	Moolarben Coal Mine Owned/Controlled Land	117	J.M. Dick	200	V.K. Grimshaw
37	J. Szymkarczuk	118	A. Scott	201	K. & G. Towerton
38	State of NSW	119	P.J. Kearns	202	H. & V. Butler
39	R. & D. Sprigg	120	P.S. & D.R. Ord	203	D. Miller
40	J. Devenish	121	E.J. Cullen	204	R. & J. Donnan
41a,c	Moolarben Coal Mine Owned/Controlled Land	122	W.F. Wirth	205	D. Sparrow
41b	P. Libertis	123	N.D. Sullivan	206	C. Marshall & R.Vella
42	C. & L. Schmidt	124	W.J. & H.E. Bailey	207	A. & D. Smith
43	Moolarben Coal Mine Owned/Controlled Land	125	D.B. McBride	208	S. & C. Hasaart
44	Moolarben Coal Mine Owned/Controlled Land	126	M.P. Julian	209	F. Mawson
45	NSW Elec. Trans. Auth	127	B.K.T. & S.A. Bracken	210	J. & A. Tebbutt
46a,c,d,f,g	Ulan Coal Mines Ltd.	128	A. Sims	211	S. McGregor & W. Gray
46b	North Eastern Wiradjuri Wilpinjong Community Fund Limited	129	M. Yelds	212	E. & M. Lepik
47	S.F. & M.R. Andrews	130	G. McEwen	213	D. & J.Parsonage
48	Moolarben Coal Mine Owned/Controlled Land	131	G.R. & R.A. King	214	R. & E. O'Neil
49	Moolarben Coal Mine Owned/Controlled Land	132	N. Atkins	215	S. & P. Green
50	Moolarben Coal Mine Owned/Controlled Land	133	J.M. & T.E. Tynan	216	G. Holland & F. Handicott
51	Moolarben Coal Mine Owned/Controlled Land	134	Moolarben Coal Mine Owned/Controlled Land	217	R.P. & J.L. Patterson
52	Moolarben Coal Mine Owned/Controlled Land	136	Cumbo Land Pty Ltd	218	G. & G. Soady
53	W.D. & M.S. Bryant	137	Cumbo Land Pty Ltd	219	T. & S. Riger
54	M. A. & C. Harris	138	Cumbo Land Pty Ltd	220	S. Rusten & N. Smith
55	M.J. Cundy	139	Ulan Coal Mines Ltd.	221	State of NSW
56	M.J. & V Cundy	140	Cumbo Land Pty Ltd	222	B. Purtell
57	M.J. Cundy	141	Wilpinjong Coal Pty. Limited ¹⁴¹	223	E. Palmer & J. Stewart
58	Moolarben Coal Mine Owned/Controlled Land	142	Cumbo Land Pty Ltd	224	R. & P. Dupond
59	G. & G. M. Szymkarczuk	143	Cumbo Land Pty Ltd	225	G. & R.F. Doulates
60	C.L. Rayner & D.M. Munday	144	J.T. & Y.R Jones	226	L. & F. Muscat
61	M.A. Miller	145	Cumbo Land Pty Ltd	227	W. & J. Hughes
62	R. C. Menchin	146	Cumbo Land Pty Ltd	228	P. Libertis
63	B. F. & B. Whiticker	147	Cumbo Land Pty Ltd	229	J. & B. Lowe
64	Moolarben Coal Mine Owned/Controlled Land	148	Moolarben Coal Mine Owned/Controlled Land	230	D. Rawlinson & D. Hoole
65	Cumbo Land Pty Ltd	149	Mid Western Regional Council	231	T. Morrison & S. Benny
66	Rostherne Pty Ltd	150	Ulan Coal Mines Ltd	232	L. & J. Haaring
68	Cumbo Land Pty Ltd	151	A.I. Cunningham (Land entrusted to Catholic Church)	233	K. & D. Boal
69	Moolarben Coal Mine	152	Moolarben Coal Mine	234	D. & L. Gaw

No.	NAME	No.	NAME	No.	NAME
	Owned/Controlled Land		Owned/Controlled Land		
70	D.J. & A. Coventry	153	Moolarben Coal Mine Owned/Controlled Land	235	L. & R. Wilson
71	Council of the Shire of Mudgee	154	Moolarben Coal Mine Owned/Controlled Land	236	R. & C. Donovan
72	Ulan Electricity	155	Moolarben Coal Mine Owned/Controlled Land	237	A. Puskaric
73	Moolarben Coal Mine Owned/Controlled Land	156	Moolarben Coal Mine Owned/Controlled Land	238	B. Powell
74	Moolarben Coal Mine Owned/Controlled Land	157	Moolarben Coal Mine Owned/Controlled Land	239	J. Delarue
75	P. Ban	158	Moolarben Coal Mine Owned/Controlled Land	240	G.J. & D.M. Hartley
76	S.R & P.C Carbone	159	Moolarben Coal Mine Owned/Controlled Land	241	Moolarben Coal Mine Owned/Controlled Land
77	Moolarben Coal Mine Owned/Controlled Land	160	Minister for Education & Training	242	Mid Western Regional Council
78	Moolarben Coal Mine Owned/Controlled Land	160b	Moolarben Coal Mine Owned/Controlled Land	243	R.J. Hopper & T.H. Thompson
79	P. T.J. & S.E. Nagle	161	Moolarben Coal Mine Owned/Controlled Land	244	Y.R. Jones
80	W. & D.I. Sebelic	162	D.M. Harrison	245	M.P. & K.L.E. Cresham
81	Moolarben Coal Mine Owned/Controlled Land	163	Moolarben Coal Mine Owned/Controlled Land	246	A.W. & L.M. Murray
247	J. & H. & K. Batshon	258	P.M. & C.D. Elias	308	N.A. Dower
248	G. Boustani	259	State Rail Authority of NSW	309	G.S. Maher
249	C.J. & J.I. Eldridge	299	Country Energy	310	K.I. Death
250	G.C. Eldridge	300	C.M. Collins & C.Y. Marshall	311	B.J. & L.C. Williamson
251	N.F. Potter & C.E. Selley	301	Moolarben Coal Mine Owned/Controlled Land	312	M.S. & J.J. Ioannou
252	G.A. & R.M. Johnston	302	Moolarben Coal Mine Owned/Controlled Land	313	N.J. & B.D.E. Pracy
253	Ulan Coal Mines Ltd	303	H.J. Ungaro	314	S.L. Ford
254	Ulan Coal Mines Ltd	304	G. Balajan	315	W.J. Richards & B.J. Uzelac
255	H.J. & H. Schmitz	305	L. Barisic & M. Aul	316	C.R. Vassel & C.M. Williams
256	R.C. Campbell	306	E. Armstrong	317	R.J. Hore & V. Bingham
257	Ulan Coal Mines Ltd	307	M. Chant & N.K. Young	320	Moolarben Coal Mine Owned/Controlled Land

APPENDIX 6 NOISE COMPLIANCE ASSESSMENT

Applicable Meteorological Conditions

1. The noise criteria in Table 3 of the conditions are to apply under all meteorological conditions except the following:
 - (a) wind speeds greater than 3 m/s at 10 metres 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 located on the site.

Compliance Monitoring

3. Attended monitoring is to be used to evaluate compliance with the relevant conditions of this consent.
4. This monitoring must be carried out at least 12 times a year, unless the Secretary directs otherwise.
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 *NSW Industrial Noise Policy* (as amended from time to time), in particular the requirements relating to:
 - (d) monitoring locations for the collection of representative noise data;
 - (e) meteorological conditions during which collection of noise data is not appropriate;
 - (f) equipment used to collect noise data, and conformity with Australian Standards relevant to such equipment; and
 - (g) 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 BIODIVERSITY OFFSET STRATEGY

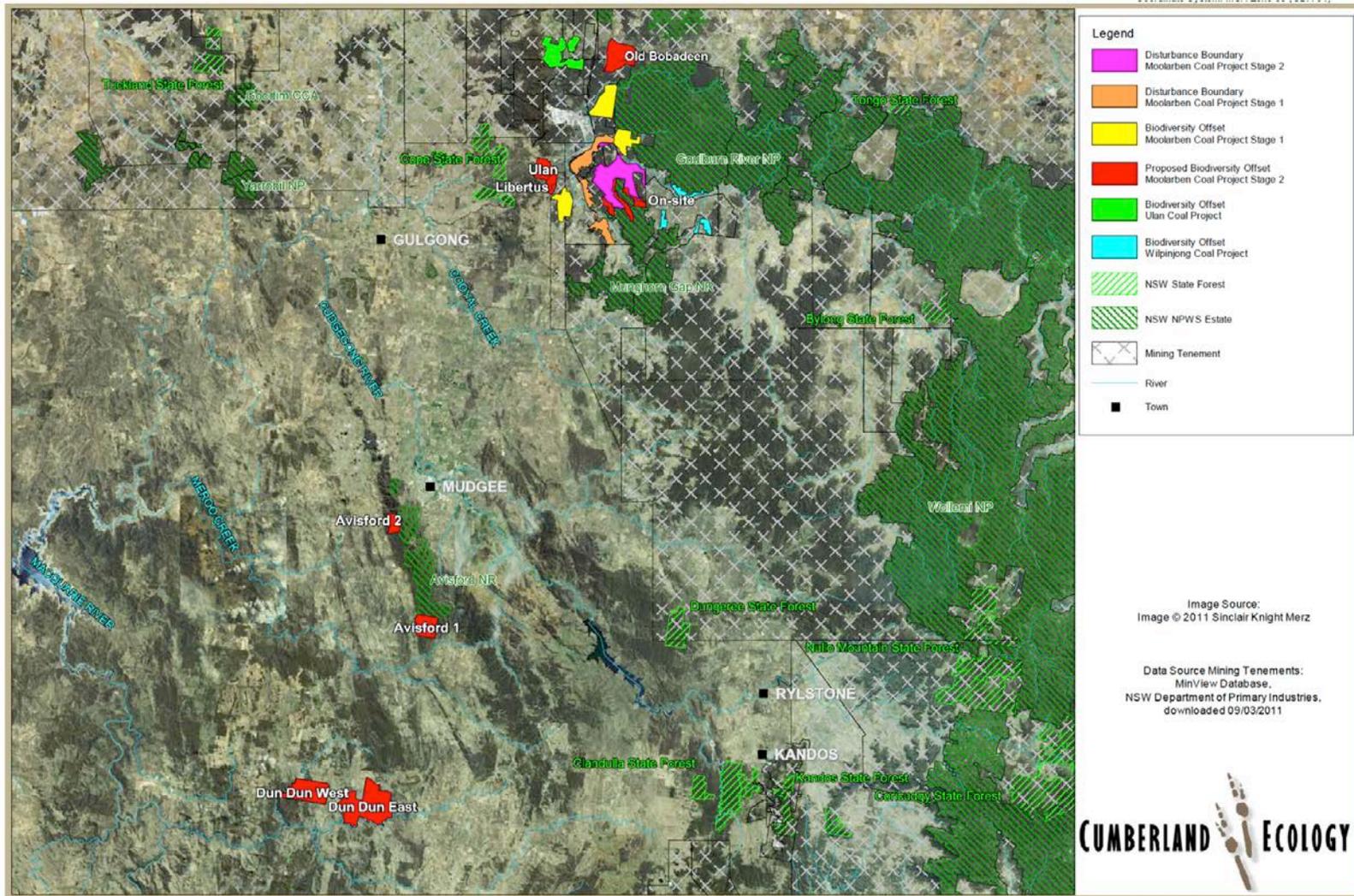


Figure 7.1

Table 7.1

**MOOLARBEN STAGE 2
ACTUAL & POTENTIAL THREATENED FAUNA SPECIES LIST**

#	Common Name	Scientific Name	TSC	EPBC
	MAMMALS			
1	Yellow-bellied Sheath-tail Bat	<i>Scolaimus flaviventris</i>	V	
2	Large-eared Pied Bat	<i>Chalinolobus dwyeri</i>	V	V
3	Little Pied Bat	<i>Chalinolobus picatus</i>	V	
4	Eastern Bent-wing Bat	<i>Miniopterus orinae/schreibersii</i>	V	
5	Greater Long-eared Bat	<i>Nyctophilus timoriensis</i>	V	V
6	Squirrel Glider	<i>Petaurus norfolcensis</i>	V	
7	Eastern Pygmy-possum	<i>Cercartetus nanus</i>	V	
8	Spotted-tailed Quoll	<i>Dasyurus maculatus</i>	E	E
9	Eastern-false Pipistrelle	<i>Falsistrellus tasmaniensis</i>	V	
10	Eastern Freetail Bat	<i>Mormopterus norfolkensis</i>	V	
11	Yellow-bellied Glider	<i>Petaurus australis</i>	V	
12	Koala	<i>Phascolarctos cinereus</i>	V	
13	Grey-headed Flying-fox	<i>Pteropus poliocephalus</i>	V	V
14	Greater Broad-nosed Bat	<i>Scoteanax rueppellii</i>	V	
15	Eastern Cave Bat	<i>Vespadelus trougtoni</i>	V	
	BIRDS			
16	Square-tailed Kite	<i>Lophoicinia isua</i>	V	
17	Glossy Black Cockatoo	<i>Calyptorhynchus lathami</i>	V	
18	Gang Gang Cockatoo	<i>Callocephalon fimbriatum</i>	V	
19	Powerful Owl	<i>Ninox strenua</i>	V	
20	White-throated Needletail	<i>Hirundapus caudacutus</i>		M
21	Rainbow Bee-eater	<i>Merops ornatus</i>		M
22	Brown Treecreeper	<i>Climacteris picumnus</i>	V	
23	Speckled Warbler	<i>Chthynicola sagittata</i>	V	
24	Black-chinned Honeyeater	<i>Melithreptus gularis</i>	V	
25	Painted Honeyeater	<i>Grantiella picta</i>	V	
26	Grey-crowned Babbler	<i>Pomatostomus temporalis</i>	V	
27	Hooded Robin	<i>Melanodryas cucullata</i>	V	
28	Gilbert's Whistler	<i>Pachycephala inornata</i>	V	
29	Rufous Fantail	<i>Rhipidura fuliginosa</i>		M
30	Satin Flycatcher	<i>Myiagra cyanoleuca</i>		M
31	Diamond Firetail	<i>Stagonopleura guttata</i>	V	
32	Swift Parrot	<i>Lathamus discolor</i>	E	E, M
33	Little Eagle	<i>Hieraaetus morphnoides</i>	V	
34	Cattle Egret	<i>Ardea ibis</i>		M
35	Varied Sittella	<i>Daphoenositta chrysoptera</i>	V	
36	Little Lorikeet	<i>Glossopsitta pusilla</i>	V	
37	White-fronted Chat	<i>Epthianura albifrons</i>	V	
38	Scarlet Robin	<i>Petroica boodang</i>	V	
39	Spotted Harrier	<i>Circus assimilis</i>	V	
40	Bush Stone Curlew	<i>Burhinus grallarius</i>	E	
41	Turquoise Parrot	<i>Neophema pulchella</i>	V	
42	Barking Owl	<i>Ninox connivens</i>	V	
43	Masked Owl	<i>Tyto novaehollandiae</i>	V	V
44	Regent Honeyeater	<i>Xanthomyza Phrygia</i>	CE	E, M
45	Superb Parrot	<i>Polytelis swainsonii</i>	V	V
46	Flame Robin	<i>Petroica phoenicea</i>	V	

Figure 8.1
Table 8.1

Site Name	Site Type	Artefact Density	Significance	Impact Status	Previously Proposed Management Measure	Preferred Project Management Measure	Final Management Measure
36-3-0237+*	Artefact Scatter	14	Medium	Not Impacted	Recording and surface collection	No Change	Murragamba Creek Conservation Area
36-3-0238+*	Artefact Scatter	6	Medium	OC4	Recording and surface collection	No Change	No Change
36-3-0239+*	Artefact Scatter	3	Medium	OC4	Recording and surface collection	No Change	No Change
36-3-0240+*	Isolated Find	1	Medium	OC4	Recording and surface collection	No Change	No Change
36-3-0241+*	Artefact Scatter	19	Medium	OC4	Recording and surface collection	No Change	No Change
36-30287^	Artefact Scatter	unknown	Medium	Not Impacted	Nil required	No Change	Removed reference to this site as 36-3-0720 is the same site with correct location
36-30720^	Artefact Scatter	unknown	Medium	Not Impacted	Not identified	In situ conservation – fence site	Murragamba Creek Conservation Area
36-3-0337+*	Artefact Scatter	32	Medium	OC4	Recording and surface collection	No Change	No Change
PAD 1†§	Pad	N/A	Low	UG1	Test excavation where monitoring indicates impacts are likely	No Change	No Change
PAD 10†§	Pad	0	Low	UG2	Test excavation where monitoring indicates impacts are likely	No Change	No Change
PAD 11†§	Pad	0	Low	UG2	Test excavation where monitoring indicates impacts are likely	No Change	No Change
PAD 2†§	Pad	N/A	Low	UG1	Test excavation where monitoring indicates impacts are likely	No Change	No Change
PAD 3†§	Pad	N/A	Low	UG1	Test excavation where monitoring indicates impacts are likely	No Change	No Change
PAD 4†§	Pad	N/A	Low	UG2	Test excavation where monitoring indicates impacts are likely	No Change	No Change
PAD 5†§	Pad	N/A	Low	UG2	Test excavation where monitoring indicates impacts are likely	No Change	No Change
PAD 8†§	Pad	0	Low	UG2	Test excavation where monitoring indicates impacts are likely	No Change	No Change
PAD 9†§	Pad	0	Low	UG2	Test excavation where monitoring indicates impacts are likely	No Change	No Change

Site Name	Site Type	Artefact Density	Significance	Impact Status	Previously Proposed Management Measure	Preferred Project Management Measure	Final Management Measure
S1MC 22	Isolated Find	1	Low	In situ Conservation	In situ Conservation	No Change	No Change
S1MC 23	Isolated Find	1	Low	In situ Conservation	In situ Conservation	No Change	No Change
S1MC027†	Isolated Find	1	Low	UG1	Nil required	No Change	No Change
S1MC029†	Isolated Find	1	Low	UG1	Nil required	No Change	No Change
S1MC040†	Artefact Scatter	12	Low	UG1	Surface collection where monitoring indicates impacts are likely	No Change	No Change
S1MC041†	Isolated Find	1	Low	UG1	Nil required	No Change	No Change
S1MC042†	Isolated Find	1	Low	UG1	Nil required	No Change	No Change
S1MC043†	Artefact Scatter	9	Low	UG1	Surface collection where monitoring indicates impacts are likely	No Change	No Change
S1MC044†	Isolated Find	1	Low	UG1	Nil required	No Change	No Change
S1MC045†	Isolated Find	1	Low	UG1	Nil required	No Change	No Change
S1MC046†	Isolated Find	1	Low	UG1	Nil required	No Change	No Change
S1MC047†	Isolated Find	1	Low	UG1	Nil required	No Change	No Change
S1MC048†	Isolated Find	1	Low	UG1	Nil required	No Change	No Change
S1MC049†	Isolated Find	1	Low	UG1	Nil required	No Change	No Change
S1MC054†	Artefact Scatter	3	Low	UG1	Surface collection where monitoring indicates impacts are likely	No Change	No Change
S1MC055†	Rock Shelter & Artefact Scatter	8	Low	UG1	Surface collection where monitoring indicates impacts are likely	No Change	No Change
S1MC056†	Rock Shelter & Artefact Scatter	1	Low	UG1	Surface collection where monitoring indicates impacts are likely	No Change	No Change
S1MC057†	Artefact Scatter	16	Low	UG1	Surface collection where monitoring indicates impacts are likely	No Change	No Change
S1MC058†	Artefact Scatter	10	Low	UG2	Surface collection where monitoring indicates impacts are likely	No Change	No Change
S1MC059†	Artefact Scatter	8	Low	UG2	Surface collection where monitoring indicates impacts are likely	No Change	No Change
S1MC060†	Artefact Scatter	12	Low	OC4	Recording and surface collection	No Change	No Change
S1MC061†	Isolated Find	1	Low	OC4	Surface collection	No Change	No Change
S1MC062†	Isolated Find	1	Low	OC4	Surface collection	No Change	No Change
S1MC063†	Isolated Find	1	Low	OC4	Surface collection	No Change	No Change
S1MC064†	Isolated Find	1	Low	OC4	Surface collection	No Change	No Change

Site Name	Site Type	Artefact Density	Significance	Impact Status	Previously Proposed Management Measure	Preferred Project Management Measure	Final Management Measure
S1MC065†	Isolated Find	1	Low	UG2	Nil required	No Change	No Change
S1MC066†	Artefact Scatter	24	Low	UG2	Surface collection where monitoring indicates impacts are likely	No Change	No Change
S1MC067†	Artefact Scatter	52	Low	UG2	Surface collection where monitoring indicates impacts are likely	No Change	No Change
S1MC068†	Isolated Find	1	Low	UG2	Nil required	No Change	No Change
S1MC069†	Isolated Find	1	Low	UG2	Nil required	No Change	No Change
S1MC074†	Isolated Find	1	Low	OC4	Surface collection	No Change	No Change
S1MC075†	Isolated Find	1	Low	OC4	Surface collection	No Change	No Change
S1MC076†	Isolated Find	1	Low	OC4	Surface collection	No Change	No Change
S1MC077†	Isolated Find	1	Low	OC4	Surface collection	No Change	No Change
S1MC130†	Artefact Scatter	23	Low	OC4	Recording and surface collection	No Change	No Change
S1MC131†	Isolated Find	1	Low	OC4	Surface collection	No Change	No Change
S1MC136†	Artefact Scatter	5	Low	OC4	Surface collection	No Change	No Change
S1MC137†	Isolated Find	1	Low	OC4	Surface collection	No Change	No Change
S1MC138†	Isolated Find	1	Low	OC4	Surface collection	No Change	No Change
S1MC139†	Artefact Scatter	23	Low	OC4	Recording and surface collection	No Change	No Change
S1MC18	Isolated Find	1	Low	In situ Conservation	In situ Conservation	No Change	No Change
S1MC19	Isolated Find	1	Low	In situ Conservation	In situ Conservation	No Change	No Change
S1MC20	Isolated Find	1	Low	In situ Conservation	In situ Conservation	No Change	No Change
S1MC21	Isolated Find	1	Low	In situ Conservation	In situ Conservation	No Change	No Change
S1MC274	Isolated Find	1	Low	In situ Conservation	Site is currently undisturbed and will be conserved within the Bora Creek Riparian Conservation Area. Restricted access is being maintained by fencing, padlocks, signage and site communication protocols; including inductions.	No Change	No Change

Site Name	Site Type	Artefact Density	Significance	Impact Status	Previously Proposed Management Measure	Preferred Project Management Measure	Final Management Measure
S1MC275	Isolated Find	1	Low	In situ Conservation	Site is currently undisturbed and will be conserved within the Bora Creek Riparian Conservation Area. Restricted access is being maintained by fencing, padlocks, signage and site communication protocols; including inductions.	No Change	No Change
S1MC276	Isolated Find	1	Low	In situ Conservation	Site is currently undisturbed and will be conserved within the Bora Creek Riparian Conservation Area. Restricted access is being maintained by fencing, padlocks, signage and site communication protocols; including inductions.	No Change	No Change
S1MC277	Isolated Find	1	Low	In situ Conservation	Site is currently undisturbed and will be conserved within the Bora Creek Riparian Conservation Area. Restricted access is being maintained by fencing, padlocks, signage and site communication protocols; including inductions.	No Change	No Change
S1MC278	Isolated Find	1	Low	In situ Conservation	Site is currently undisturbed and will be conserved within the Bora Creek Riparian Conservation Area. Restricted access is being maintained by fencing, padlocks, signage and site communication protocols; including inductions.	No Change	No Change
S1MC279	Isolated Find	1	Low	In situ Conservation	Site is currently undisturbed and will be conserved within the Bora Creek Riparian Conservation Area. Restricted access is being maintained by fencing, padlocks, signage and site communication protocols; including inductions.	No Change	No Change
S2MC 228	Artefact Scatter	2	Low	Not Impacted	Nil required	No Change	No Change

Site Name	Site Type	Artefact Density	Significance	Impact Status	Previously Proposed Management Measure	Preferred Project Management Measure	Final Management Measure
S2MC001	Isolated Find	1	Low	Infrastructure	Surface collection	No Change	No Change
S2MC002	Isolated Find	1	Low	Infrastructure	Surface collection	No Change	No impact. No management measure required.
S2MC003	Artefact Scatter	5	Low	Not Impacted	Nil required	No Change	No Change
S2MC004	Isolated Find	1	Low	Not Impacted	Nil required	No Change	No Change
S2MC005	Artefact Scatter & PAD	2	Low	UG1	Surface collection and test excavation where monitoring indicates impacts are likely	No Change	No Change
S2MC006	Artefact Scatter & PAD	25	Medium	UG1	Site to be intensively recorded including test excavation and salvaged in accordance with the methodology to be included in the Aboriginal Heritage Management Plan	No Change	No Change
S2MC006*	Artefact Scatter & PAD	25	Medium	Infrastructure and UG1	Recording, surface collection, test excavation and salvage	No Change	No Change
S2MC007	Isolated Find	1	Low	UG1	Nil required	No Change	No Change
S2MC008	Isolated Find	1	Low	UG1	Nil required	No Change	No Change
S2MC009	Isolated Find	1	Low	UG1	Nil required	No Change	No Change
S2MC010	Artefact Scatter	3	Low	UG1	Surface collection where monitoring indicates impacts are likely	No Change	No Change
S2MC011	Isolated Find	1	Low	UG1	Nil required	No Change	No Change
S2MC012	Isolated Find	1	Low	UG1	Nil required	No Change	No Change
S2MC013	Isolated Find	1	Low	OC4	Nil required	Site to be intensively recorded and salvaged in accordance with the methodology to be included in the Aboriginal Heritage Management Plan	No Change
S2MC014	Artefact Scatter and PAD	16	Medium	Not Impacted	Nil required	No Change	No Change
S2MC015	Artefact Scatter and PAD	28	Medium	Not Impacted	Nil required	No Change	No Change
S2MC016	Artefact Scatter	2	Low	OC4	Nil required	Site to be intensively recorded and salvaged in accordance with the methodology to be included in the Aboriginal Heritage Management Plan	No Change

Site Name	Site Type	Artefact Density	Significance	Impact Status	Previously Proposed Management Measure	Preferred Project Management Measure	Final Management Measure
S2MC017	Artefact Scatter	27	Low	OC4	Recording and surface collection	No Change	No Change
S2MC018	Artefact Scatter and PAD	15	Medium	OC4	Recording, surface collection, test excavation and salvage	No Change	No Change
S2MC019	Isolated Find	1	Low	OC4	Surface collection	No Change	No Change
S2MC020	Artefact Scatter	3	Low	OC4	Surface collection	No Change	No Change
S2MC021	Isolated Find	1	Low	OC4	Surface collection	No Change	No Change
S2MC022	Artefact Scatter	6	Low	OC4	Recording and surface collection	No Change	No Change
S2MC023	Isolated Find	1	Low	OC4	Surface collection	No Change	No Change
S2MC024	Isolated Find	1	Low	OC4	Surface collection	No Change	No Change
S2MC025	Isolated Find	1	Low	OC4	Surface collection	No Change	No Change
S2MC029	Artefact Scatter	12	Low	OC4	Recording and surface collection	No Change	No Change
S2MC030	Artefact Scatter	58	Medium	OC4	Recording and surface collection	No Change	No Change
S2MC031	Isolated Find	1	Low	OC4	Surface collection	No Change	No Change
S2MC032	Artefact Scatter	8	Low	OC4	Recording and surface collection	No Change	No Change
S2MC033	Artefact Scatter	6	Low	OC4	Recording and surface collection	No Change	No Change
S2MC034	Isolated Find	1	Low	OC4	Surface collection	No Change	No Change
S2MC035	Isolated Find	1	Low	OC4	Surface collection	No Change	No Change
S2MC036	Isolated Find	1	Low	OC4	Surface collection	No Change	No Change
S2MC037	Isolated Find	1	Low	OC4	Surface collection	No Change	No Change
S2MC038	Artefact Scatter	2	Low	OC4	Surface collection	No Change	No Change
S2MC039	Artefact Scatter	9	Low	OC4	Surface collection	No Change	No Change
S2MC040	Artefact Scatter	12	Low	OC4	Recording and surface collection	No Change	No Change
S2MC041	Isolated Find	1	Low	OC4	Surface collection	No Change	No Change
S2MC042	Artefact Scatter	47	Low	OC4	Recording and surface collection	No Change	No Change
S2MC043	Artefact Scatter and PAD	152	High	OC4	Recording, surface collection, test excavation and salvage	No Change	No Change
S2MC044	Artefact Scatter	18	Low	OC4	Recording and surface collection	No Change	No Change
S2MC045	Artefact Scatter and PAD	16	Medium	OC4	Recording, surface collection, test excavation and salvage	No Change	No Change
S2MC046	Artefact Scatter and PAD	20	Medium	OC4	Recording, surface collection, test excavation and salvage	No Change	No Change
S2MC047	Artefact Scatter and PAD	5	Low	OC4	Recording, surface collection and test excavation	No Change	No Change

Site Name	Site Type	Artefact Density	Significance	Impact Status	Previously Proposed Management Measure	Preferred Project Management Measure	Final Management Measure
S2MC048	Artefact Scatter	17	Low	OC4	Recording and surface collection	No Change	No Change
S2MC049	Isolated Find	1	Low	Dam	Conservation of the site by protective fencing.	Surface collection	No Change
S2MC050	Artefact Scatter	68	Medium	Not Impacted	Murragamba Creek Conservation Area	No Change	No Change
S2MC051	Artefact Scatter and PAD	17	Medium	No Impact	Recording, surface collection, test excavation and salvage	No impact, no excavation or salvage required. Site to be fenced within 100 m of MCO activities	No Change
S2MC052	Isolated Find	1	Low	Dam	Conservation of the site by protective fencing.	Surface collection	No Change
S2MC053	Artefact Scatter	43	Low	OC4	Recording and surface collection	No Change	No Change
S2MC054	Artefact Scatter and PAD	85	High	Not Impacted	Murragamba Creek Conservation Area	No Change	Murragamba Creek Conservation Area
S2MC055	Artefact Scatter	18	Low	Not Impacted	Murragamba Creek Conservation Area	No Change	Murragamba Creek Conservation Area
S2MC056	Artefact Scatter	110	Medium	Not Impacted	Murragamba Creek Conservation Area	No Change	Murragamba Creek Conservation Area
S2MC057	Artefact Scatter	53	Medium	Not Impacted	Murragamba Creek Conservation Area	No Change	Murragamba Creek Conservation Area
S2MC058	Artefact Scatter	98	Medium	Not Impacted	Murragamba Creek Conservation Area	No Change	Murragamba Creek Conservation Area
S2MC059	Artefact Scatter	25	Low	Not Impacted	Murragamba Creek Conservation Area	No Change	Murragamba Creek Conservation Area
S2MC059a	Artefact Scatter	6	Low	Not Impacted	Murragamba Creek Conservation Area	No Change	Murragamba Creek Conservation Area
S2MC060	Isolated Find	1	Low	Not Impacted	Murragamba Creek Conservation Area	No Change	Murragamba Creek Conservation Area
S2MC061	Artefact Scatter	51	Medium	Not Impacted	Murragamba Creek Conservation Area	No Change	Murragamba Creek Conservation Area
S2MC062	Artefact Scatter and PAD	67	High	Not Impacted	Murragamba Creek Conservation Area	No Change	Murragamba Creek Conservation Area
S2MC063	Artefact Scatter and PAD	28	High	Not Impacted	Murragamba Creek Conservation Area	No Change	Murragamba Creek Conservation Area

Site Name	Site Type	Artefact Density	Significance	Impact Status	Previously Proposed Management Measure	Preferred Project Management Measure	Final Management Measure
S2MC064	Artefact Scatter and PAD	627	High	No Impact	Recording, surface collection, test excavation and salvage	No impact, no excavation or salvage required. Site to be fenced within 100 m of MCO activities	Murragamba Creek Conservation Area
S2MC065	Artefact Scatter	21	Low	Not Impacted	Murragamba Creek Conservation Area	No Change	Murragamba Creek Conservation Area
S2MC066	Isolated Find	1	Low	Not Impacted	Murragamba Creek Conservation Area	No Change	Murragamba Creek Conservation Area
S2MC067	Artefact Scatter	13	Low	Not Impacted	Murragamba Creek Conservation Area	No Change	Murragamba Creek Conservation Area
S2MC068	Isolated Find	1	Low	Not Impacted	Murragamba Creek Conservation Area	No Change	Murragamba Creek Conservation Area
S2MC069	Isolated Find	1	Low	Not Impacted	Murragamba Creek Conservation Area	No Change	Murragamba Creek Conservation Area
S2MC070	Artefact Scatter	3	Low	Not Impacted	Murragamba Creek Conservation Area	No Change	Murragamba Creek Conservation Area
S2MC071	Artefact Scatter	4	Low	Not Impacted	Murragamba Creek Conservation Area	No Change	Murragamba Creek Conservation Area
S2MC072	Artefact Scatter	4	Low	OC4	Surface collection	No Change	No change
S2MC073	Isolated Find	1	Low	No Impact	Surface collection	No impact, no excavation or salvage required. Site to be fenced within 100 m of MCO activities	Murragamba Creek Conservation Area
S2MC074	Artefact Scatter	9	Low	OC4	Surface collection	No Change	No Change
S2MC075	Isolated Find	1	Low	No Impact	Surface collection	No impact, no excavation or salvage required. Site to be fenced within 100 m of MCO activities	Murragamba Creek Conservation Area
S2MC076	Artefact Scatter	60	Medium	No Impact	Recording and surface collection	No impact, no excavation or salvage required. Site to be fenced within 100 m of MCO activities	No Change
S2MC077	Artefact Scatter	4	Low	OC4	Surface collection	No Change	No Change
S2MC078	Artefact Scatter	2	Low	OC4	Surface collection	No Change	No Change
S2MC079	Isolated Find	1	Low	OC4	Surface collection	No Change	No Change
S2MC080	Artefact Scatter	2	Low	OC4	Surface collection	No Change	No Change
S2MC081	Artefact Scatter	52	Medium	OC4	Recording and surface collection	No Change	No Change

Site Name	Site Type	Artefact Density	Significance	Impact Status	Previously Proposed Management Measure	Preferred Project Management Measure	Final Management Measure
S2MC082	Artefact Scatter	3	Low	No Impact	Surface collection	No impact, no collection required	Murragamba Creek Conservation Area
S2MC083	Isolated Find	1	Low	Not Impacted	Nil required	No Change	Murragamba Creek Conservation Area
S2MC084	Isolated Find	1	Low	Not Impacted	Nil required	No Change	Murragamba Creek Conservation Area
S2MC085	Isolated Find	1	Low	Not Impacted	Nil required	No Change	Murragamba Creek Conservation Area
S2MC086	Artefact Scatter and PAD	6	Low	Not Impacted	Nil required	No Change	Murragamba Creek Conservation Area
S2MC087	Artefact Scatter	13	Low	No Impact	Recording and surface collection	No impact, no collection required	Murragamba Creek Conservation Area
S2MC088	Artefact Scatter	4	Low	No Impact	Surface collection	No impact, no collection required	No Change
S2MC089	Artefact Scatter	93	Medium	Not Impacted	Nil required	No Change	No Change
S2MC090	Isolated Find	1	Low	OC4	Surface collection	No Change	No Change
S2MC091	Isolated Find	1	Low	OC4	Surface collection	No Change	No Change
S2MC092	Isolated Find	1	Low	OC4	Surface collection	No Change	No Change
S2MC093	Artefact Scatter	3	Low	OC4	Surface collection	No Change	No Change
S2MC094	Isolated Find	1	Low	OC4	Surface collection	No Change	No Change
S2MC095	Isolated Find	1	Low	OC4	Surface collection	No Change	No Change
S2MC096	Artefact Scatter	3	Low	OC4	Surface collection	No Change	No Change
S2MC097	Artefact Scatter	7	Low	Not Impacted	Nil required	No Change	No Change
S2MC098	Isolated Find	1	Low	No Impact	Surface collection	No impact	Murragamba Creek Conservation Area
S2MC099	Isolated Find	1	Low	No Impact	Surface collection	No impact, no collection required	Murragamba Creek Conservation Area
S2MC100	Artefact Scatter	4	Low	Not Impacted	Nil required	No Change	No Change
S2MC101	Artefact Scatter	9	Low	No Impact	Recording and surface collection	No impact, no collection required	Murragamba Creek Conservation Area
S2MC102	Isolated Find	1	Low	No Impact	Surface collection	No impact, no collection required	Murragamba Creek Conservation Area
S2MC103	Isolated Find	1	Low	No Impact	Surface collection	No impact, no collection required	Murragamba Creek Conservation Area

Site Name	Site Type	Artefact Density	Significance	Impact Status	Previously Proposed Management Measure	Preferred Project Management Measure	Final Management Measure
S2MC104	Artefact Scatter	8	Low	No Impact	Recording and surface collection	No impact, no excavation or salvage required	Murragamba Creek Conservation Area
S2MC105	Isolated Find	1	Low	No Impact	Surface collection	No impact, no collection required	Murragamba Creek Conservation Area
S2MC106	Isolated Find	1	Low	No Impact	Surface collection	No impact, no collection required	Murragamba Creek Conservation Area
S2MC107	Isolated Find	1	Low	OC4	Surface collection	No Change	No Change
S2MC108	Artefact Scatter	2	Low	OC4	Surface collection	No Change	No Change
S2MC109	Artefact Scatter	5	Low	OC4	Surface collection	No Change	No Change
S2MC110	Isolated Find	1	Low	OC4	Surface collection	No Change	No Change
S2MC111	Artefact Scatter	3	Low	OC4	Surface collection	Site to be intensively recorded and salvaged in accordance with the methodology to be included in the Aboriginal Heritage Management Plan	No Change
S2MC112	Artefact Scatter	2	Low	OC4	Surface collection	No Change	No Change
S2MC113	Isolated Find	1	Low	OC4	Surface collection	No Change	No Change
S2MC114	Artefact Scatter	4	Low	OC4	Surface collection	No Change	No Change
S2MC115	Isolated Find	1	Low	Not Impacted	Nil required	No Change	No Change
S2MC116	Artefact Scatter	2	Low	Not Impacted	Nil required	No Change	No Change
S2MC117	Isolated Find	1	Low	OC4	Surface collection	No Change	No Change
S2MC118	Isolated Find	1	Low	OC4	Surface collection	No Change	No Change
S2MC119	Artefact Scatter and PAD	14	Low	OC4	Recording, surface collection and test excavation	No Change	No Change
S2MC120	Isolated Find	1	Low	OC4	Surface collection	No Change	No Change
S2MC121	Isolated Find	1	Low	OC4	Surface collection	No Change	No Change
S2MC122	Artefact Scatter and PAD	33	Low	OC4	Recording, surface collection and test excavation	No Change	No Change
S2MC123	Artefact Scatter and PAD	255	High	OC4	Recording, surface collection, test excavation and salvage	No Change	No Change
S2MC124	Artefact Scatter and PAD	171	High	OC4	Recording, surface collection, test excavation and salvage	No Change	No Change
S2MC125	Artefact Scatter	30	Medium	OC4	Recording and surface collection	No Change	No Change
S2MC126	Artefact Scatter and PAD	7	Low	OC4	Recording, surface collection and test excavation	No Change	No Change

Site Name	Site Type	Artefact Density	Significance	Impact Status	Previously Proposed Management Measure	Preferred Project Management Measure	Final Management Measure
S2MC127	Isolated Find	1	Low	OC4	Surface collection	No Change	No Change
S2MC128	Artefact Scatter	5	Low	OC4	Surface collection	No Change	No Change
S2MC129	Artefact Scatter	2	Low	OC4	Surface collection	No Change	No Change
S2MC130	Artefact Scatter	2	Low	OC4	Surface collection	No Change	No Change
S2MC131	Isolated Find	1	Low	OC4	Surface collection	No Change	No Change
S2MC132	Artefact Scatter	10	Low	OC4	Recording and surface collection	No Change	No Change
S2MC133	Artefact Scatter	2	Low	OC4	Surface collection	No Change	No Change
S2MC134	Artefact Scatter	50	Low	OC4	Recording and surface collection	No Change	No Change
S2MC135	Artefact Scatter	4	Low	OC4	Surface collection	No Change	No Change
S2MC136	Isolated Find	1	Low	OC4	Surface collection	No Change	No Change
S2MC137	Isolated Find	1	Low	OC4	Surface collection	No Change	No Change
S2MC138	Isolated Find	1	Low	OC4	Surface collection	No Change	No Change
S2MC139	Isolated Find	1	Low	OC4	Surface collection	No Change	No Change
S2MC140	Artefact Scatter	3	Low	OC4	Surface collection	No Change	No Change
S2MC141	Artefact Scatter	6	Low	OC4	Recording and surface collection	No Change	No Change
S2MC142	Isolated Find	1	Low	OC4	Surface collection	No Change	No Change
S2MC143	Isolated Find	1	Low	OC4	Surface collection	No Change	No Change
S2MC144	Isolated Find	1	Low	OC4	Surface collection	No Change	No Change
S2MC145	Artefact Scatter	2	Low	OC4	Surface collection	No Change	No Change
S2MC146	Artefact Scatter	2	Low	OC4	Surface collection	No Change	No Change
S2MC147	Isolated Find	1	Low	OC4	Surface collection	No Change	No Change
S2MC148	Artefact Scatter	6	Low	Not Impacted	Powers Conservation Area	No Change	Powers Conservation Area
S2MC149	Isolated Find	1	Low	Not Impacted	Powers Conservation Area	No Change	Powers Conservation Area
S2MC150	Artefact Scatter	64	Medium	Not Impacted	Powers Conservation Area	No Change	Powers Conservation Area
S2MC151	Grind Grooves / Artefact Scatter	17	High	Not Impacted	Powers Conservation Area	No Change	Powers Conservation Area
S2MC152	Artefact Scatter	2	Low	Not Impacted	Powers Conservation Area	No Change	Powers Conservation Area
S2MC153	Artefact Scatter	67	Low	Not Impacted	Powers Conservation Area	No Change	Powers Conservation Area
S2MC154	Artefact Scatter and PAD	49	Medium	Not Impacted	Powers Conservation Area	No Change	Powers Conservation Area

Site Name	Site Type	Artefact Density	Significance	Impact Status	Previously Proposed Management Measure	Preferred Project Management Measure	Final Management Measure
S2MC155	Isolated Find	1	Low	Not Impacted	Nil required	No Change	Powers Conservation Area
S2MC156	Artefact Scatter	12	Low	Not Impacted	Nil required	No Change	Powers Conservation Area
S2MC157	Artefact Scatter	5	Low	Not Impacted	Nil required	No Change	Powers Conservation Area
S2MC158	Isolated Find and PAD	1	Low	OC4	Surface collection and test excavation	No Change	No Change
S2MC159	Isolated Find and PAD	1	Low	OC4	Surface collection and test excavation	No Change	No Change
S2MC160	Isolated Find	1	Low	OC4	Surface collection	No Change	No Change
S2MC161	Artefact Scatter	2	Low	OC4	Surface collection	No Change	No Change
S2MC162	Artefact Scatter	26	Low	OC4	Recording and surface collection	No Change	No Change
S2MC163	Artefact Scatter	2	Low	OC4	Surface collection	No Change	No Change
S2MC164	Isolated Find	1	Low	OC4	Surface collection	No Change	No Change
S2MC165	Artefact Scatter	2	Low	OC4	Surface collection	No Change	No Change
S2MC166	Isolated Find	1	Low	OC4	Surface collection	No Change	No Change
S2MC167	Isolated Find	1	Low	OC4	Surface collection	No Change	No Change
S2MC168	Artefact Scatter	2	Low	OC4	Surface collection	No Change	No Change
S2MC169	Isolated Find	1	Low	OC4	Surface collection	No Change	No Change
S2MC170	Artefact Scatter	2	Low	Dam	Surface collection	No Change	No Change
S2MC171	Artefact Scatter	4	Low	OC4	Surface collection	No Change	No Change
S2MC172	Artefact Scatter	3	Low	OC4	Surface collection	No Change	No Change
S2MC173	Isolated Find	1	Low	OC4	Surface collection	No Change	No Change
S2MC174	Isolated Find	1	Low	OC4	Surface collection	No Change	No Change
S2MC175	Isolated Find	1	Low	OC4	Surface collection	No Change	No Change
S2MC176	Artefact Scatter	3	Low	OC4	Surface collection	No Change	No Change
S2MC177	Artefact Scatter	2	Low	OC4	Surface collection	No Change	No Change
S2MC178	Artefact Scatter	8	Low	OC4	Recording and surface collection	No Change	No Change
S2MC179	Artefact Scatter	8	Low	OC4	Recording and surface collection	No Change	No Change
S2MC180	Artefact Scatter	2	Low	OC4	Surface collection	No Change	No Change
S2MC181	Artefact Scatter	3	Low	OC4	Surface collection	No Change	No Change
S2MC182	Isolated Find	1	Low	OC4	Surface collection	No Change	No Change
S2MC183	Artefact Scatter	5	Low	OC4	Surface collection	No Change	No Change
S2MC184	Isolated Find	1	Low	OC4	Surface collection	No Change	No Change

Site Name	Site Type	Artefact Density	Significance	Impact Status	Previously Proposed Management Measure	Preferred Project Management Measure	Final Management Measure
S2MC185	Isolated Find	1	Low	OC4	Surface collection	No Change	No Change
S2MC186	Artefact Scatter	2	Low	OC4	Surface collection	No Change	No Change
S2MC187	Isolated Find	1	Low	OC4	Surface collection	No Change	No Change
S2MC188	Artefact Scatter	2	Low	OC4	Surface collection	No Change	No Change
S2MC189	Isolated Find	1	Low	OC4	Surface collection	No Change	No Change
S2MC190	Isolated Find	1	Low	OC4	Surface collection	No Change	No Change
S2MC191	Artefact Scatter	2	Low	OC4	Surface collection	No Change	No Change
S2MC192	Isolated Find	1	Low	OC4	Surface collection	No Change	No Change
S2MC193	Artefact Scatter	2	Low	OC4	Surface collection	No Change	No Change
S2MC194	Artefact Scatter	3	Low	OC4	Surface collection	No Change	No Change
S2MC195	Artefact Scatter	3	Low	Not Impacted	Red Hills Conservation Area	No Change	No Change
S2MC196	Artefact Scatter	8	Low	Not Impacted	Red Hills Conservation Area	No Change	No Change
S2MC197	Artefact Scatter and PAD	13	Low	Not Impacted	Red Hills Conservation Area	No Change	No Change
S2MC198	Artefact Scatter	2	Low	Not Impacted	Red Hills Conservation Area	No Change	No Change
S2MC199	Artefact Scatter	7	Low	Not Impacted	Red Hills Conservation Area	No Change	No Change
S2MC200	Artefact Scatter and PAD	260	High	Not Impacted	Red Hills Conservation Area	No Change	No Change
S2MC201	Artefact Scatter	360	Medium	Not Impacted	Red Hills Conservation Area	No Change	No Change
S2MC202	Artefact Scatter	2	Low	Not Impacted	Red Hills Conservation Area	No Change	No Change
S2MC203	Artefact Scatter	20	Low	Not Impacted	Red Hills Conservation Area	No Change	No Change
S2MC204	Artefact Scatter	3	Low	Not Impacted	Red Hills Conservation Area	No Change	No Change
S2MC205	Artefact Scatter	2	Low	Not Impacted	Red Hills Conservation Area	No Change	No Change
S2MC206	Artefact Scatter	53	Low	Not Impacted	Red Hills Conservation Area	No Change	No Change
S2MC207	Artefact Scatter and PAD	112	High	Not Impacted	Red Hills Conservation Area	No Change	No Change
S2MC208	Artefact Scatter and PAD	53	Medium	Not Impacted	Red Hills Conservation Area	No Change	No Change
S2MC209	Artefact Scatter and PAD	89	Medium	Not Impacted	Red Hills Conservation Area	No Change	No Change
S2MC210	Artefact Scatter	8	Low	Not Impacted	Red Hills Conservation Area	No Change	No Change
S2MC211	Isolated Find	1	Low	Not Impacted	Red Hills Conservation Area	No Change	No Change
S2MC212	Artefact Scatter	2	Low	Not Impacted	Red Hills Conservation Area	No Change	Nil required
S2MC213	Isolated Find	1	Low	Not Impacted	Red Hills Conservation Area	No Change	Nil required
S2MC214	Isolated Find	1	Low	Not Impacted	Red Hills Conservation Area	No Change	Nil required

Site Name	Site Type	Artefact Density	Significance	Impact Status	Previously Proposed Management Measure	Preferred Project Management Measure	Final Management Measure
S2MC215	Artefact Scatter	5	Low	Not Impacted	Red Hills Conservation Area	No Change	Nil required
S2MC216	Artefact Scatter	91	Medium	Not Impacted	Red Hills Conservation Area	No Change	Nil required
S2MC217	Artefact Scatter	9	Low	Not Impacted	Red Hills Conservation Area	No Change	Nil required
S2MC218	Artefact Scatter	50	Medium	Not Impacted	Red Hills Conservation Area	No Change	Nil required
S2MC219	Artefact Scatter	7	Low	Not Impacted	Red Hills Conservation Area	No Change	Nil required
S2MC220	Artefact Scatter	15	Low	Not Impacted	Red Hills Conservation Area	No Change	Nil required
S2MC221	Isolated Find	1	Low	Not Impacted	Red Hills Conservation Area	No Change	Nil required
S2MC222	Artefact Scatter	72	Medium	Not Impacted	Red Hills Conservation Area	No Change	Nil required
S2MC223	Isolated Find	1	Low	Not Impacted	Red Hills Conservation Area	No Change	Nil required
S2MC224	Isolated Find	1	Low	Not Impacted	Red Hills Conservation Area	No Change	Nil required
S2MC225	Artefact Scatter	45	Low	Not Impacted	Red Hills Conservation Area	No Change	Nil required
S2MC226	Artefact Scatter and PAD	109	Medium	Not Impacted	Red Hills Conservation Area	No Change	No Change
S2MC227	Artefact Scatter and PAD	62	Medium	Not Impacted	Red Hills Conservation Area	No Change	No Change
S2MC229	Rock-shelter	14	Low	UG1	Surface collection where monitoring indicates impacts are likely	No Change	No Change
S2MC230	Isolated Find	1	Low	Stage 2 ROM Coal Facility	Nil required	No Change	No Change
S2MC231	Artefact Scatter / Sandstone Overhang	31	Low	Northern Out of Pit Emplacement Area	Record, surface collection and test excavation where monitoring indicates impacts are likely	Site to be intensively recorded including test excavation and salvaged in accordance with the methodology to be included in the Aboriginal Heritage Management Plan	No Change
S2MC232	Isolated Find / Rock Shelter	1	Low	Not Impacted	Nil required	No Change	Murragamba Creek Conservation Area
S2MC233	Artefact Scatter / Rock Shelter	3	Low	Not Impacted	Nil required	No Change	No Change
S2MC234	Artefact Scatter	2	Low	Not Impacted	Nil required	No Change	No Change
S2MC236 36-30134*	Shelter / Artefacts / Rock Paintings	5	High	Not Impacted	Underground 2 Conservation Area	No Change	No Change
S2MC237	Isolated Find	1	Low	Not Impacted	Underground 2 Conservation Area	No Change	No Change
S2MC238	Artefact Scatter	104	High	UG2	Recording and surface collection where monitoring indicates impacts are likely	No Change	No Change

Site Name	Site Type	Artefact Density	Significance	Impact Status	Previously Proposed Management Measure	Preferred Project Management Measure	Final Management Measure
S2MC239	Artefact Scatter	3	Low	UG2	Surface collection where monitoring indicates impacts are likely	No Change	No Change
S2MC240	Artefact Scatter	7	Low	Not Impacted	Nil required	No Change	Red Hills Conservation Area
S2MC241	Artefact Scatter	4	Low	Not Impacted	Nil required	No Change	Red Hills Conservation Area
S2MC242	Isolated Find	1	Low	Not Impacted	Nil required	No Change	Red Hills Conservation Area
S2MC243	Isolated Find	1	Low	Not Impacted	Nil required	No Change	Red Hills Conservation Area
S2MC244	Isolated Find	1	Low	Not Impacted	Nil required	No Change	Red Hills Conservation Area
S2MC245	Isolated Find	1	Low	Not Impacted	Nil required	No Change	Red Hills Conservation Area
S2MC246	Isolated Find	1	Low	Not Impacted	Nil required	No Change	No Change
S2MC247	Artefact Scatter	3	Low	Not Impacted	Nil required	No Change	No Change
S2MC248	Artefact Scatter	2	Low	Not Impacted	Nil required	No Change	No Change
S2MC249	Artefact Scatter	7	Low	Not Impacted	Nil required	No Change	No Change
S2MC250	Artefact Scatter and PAD	2	Medium	Not Impacted	Nil required	No Change	No Change
S2MC251	Artefact Scatter and PAD	12	Medium	Not Impacted	Nil required	No Change	No Change
S2MC252	Isolated Find	1	Low	Not Impacted	Nil required	No Change	No Change
S2MC253	Isolated Find	1	Low	Not Impacted	Nil required	No Change	No Change
S2MC254	Isolated Find	1	Low	Not Impacted	Nil required	No Change	No Change
S2MC255	Isolated Find	1	Low	Not Impacted	Nil required	No Change	No Change
S2MC256	Artefact Scatter	2	Low	Not Impacted	Nil required	No Change	No Change
S2MC257	Isolated Find	1	Low	Not Impacted	Nil required	No Change	No Change
S2MC258	Artefact Scatter	9	Medium	Not Impacted	Nil required	No Change	No Change
S2MC259	Isolated Find	1	Low	Not Impacted	Nil required	No Change	No Change
S2MC260	Isolated Find	1	Low	Infrastructure	Surface collection	No Change	Red Hills Conservation Area
S2MC059b	Isolated Find	1	Low	Not Impacted	Murrumbidgee Creek Conservation Area	No Change	No Change
S2MC261	Grinding Grooves	92	High	Not Impacted	Murrumbidgee Creek Conservation Area	Surveyed since the Stage 2 EA	Murrumbidgee Creek Conservation Area
S2MC262	Isolated Artefact	1	Low	Not Impacted	Not identified	Surveyed since the Stage 2 EA	Murrumbidgee Creek Conservation Area

^Sites 36-3-0287 and 36-3-0720 are the same site, having the same site cards; the information has been entered into AHIMS twice, with 36-3-0287 having an incorrect digit. The site card records the site as being an 'art site', but there are no details regarding the art. A site inspection indicated that there was no art in the vicinity. † Described in the Stage 1 EA. § Rock overhangs with a floor area of 1 x 2 m or greater are considered to be rock shelters and sites of potential archaeological deposits (PAD)

APPENDIX 9 NON-ABORIGINAL HERITAGE

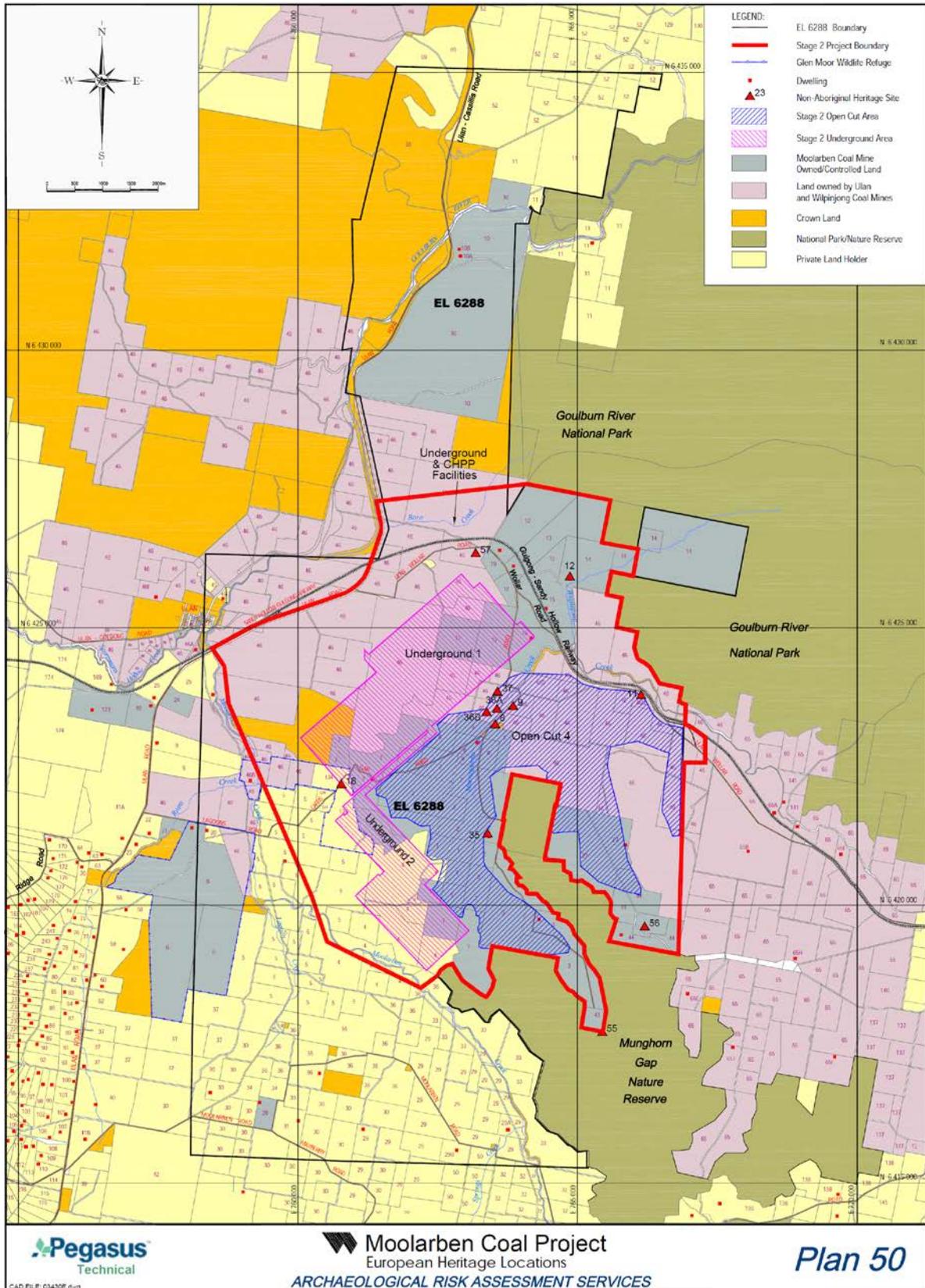


Figure 9.1

Table 9.1

Item #	Item Name	Significance	Impact Status	Recommendation
8	Murrugamba School Site	Local – moderate	High - within Open Cut 4	Archival Record Archaeological Assessment
9	Farm Site	Local – high	High – within Open Cut 4	Historical Research Archival Record
11	Farm Site	Local – moderate	High - on boundary of Open Cut 4	Historical Research Archival Record Archaeological Assessment
18	Carr’s Gap Road stone wall	Local – moderate	High - on boundary of Open Cut 4 and Underground 1	Historical Research Archival Record
35	House Site ⁵	Local – intrusive	High - on boundary of Open Cut 4	No further action
36a	House Site	Local – high	High - within Open Cut 4	Historical Research Archival Record Archaeological Assessment
36b	Burial	Local – high	High - within Open Cut 4	Historical Research Archival Record Archaeological Assessment
37	House Site	Local – moderate	High - within Open Cut 4	Historical Research Archival Record
55	Water Trough and Spring Fed Well	Not assessed, but noted as an item of interest	Low/nil - outside area of Open Cut 4 – possible indirect impact by draining of water	Archival Record
56	Water Trough and Spring Fed Well	Not assessed, but noted as an item of interest	Low/nil - outside area of Open Cut 4 – possible indirect impact by draining of water	Archival Record
57	Feed Trough	Not assessed, but noted as an item of interest	High – adjacent to road re-alignments	Historical Research Archival Record Ex situ Conservation

APPENDIX 10 REHABILITATION PLAN

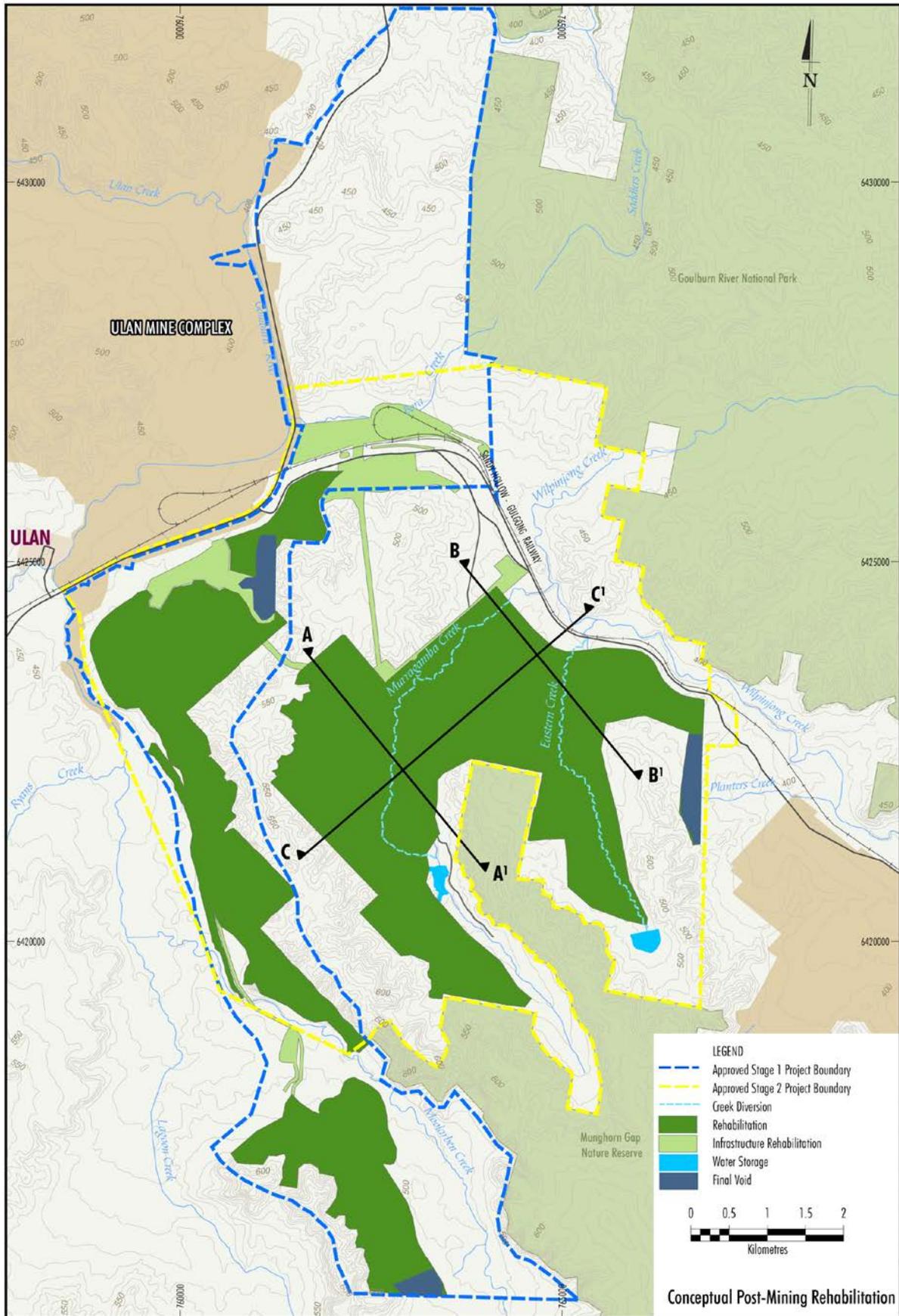


Figure 10.1

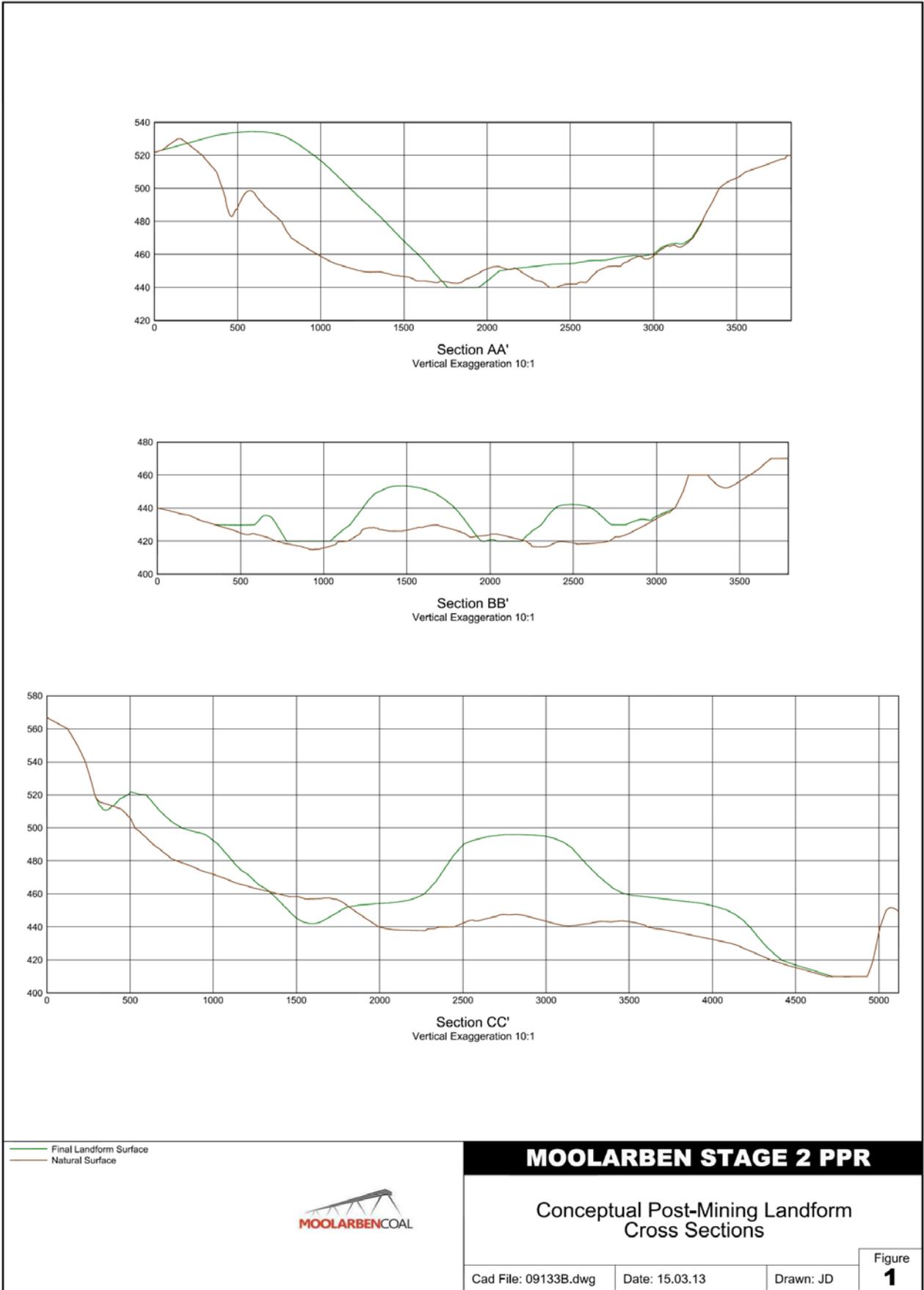


Figure 10.2

APPENDIX G: ENVIRONMENTAL ASSESSMENT

See Department's website

http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=7029

and

http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=7030

APPENDIX H: SUBMISSIONS

See Department's website

http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=7029

and

http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=7030

APPENDIX I: RESPONSE TO SUBMISSIONS

See Department's website

http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=7029

and

http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=7030