

MOOLARBEN COAL COMPLEX
OC4 SOUTH-WEST MODIFICATION
RESPONSE TO SUBMISSIONS

JUNE 2015
Project No. MCM-13-02
Document No. 00682555.docx

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1 INTRODUCTION

Moolarben Coal Operations Pty Ltd (MCO) prepared the *OC4 South-West Modification Environmental Assessment (EA)* to modify both the Stage 1 and Stage 2 Project Approvals (05_0117 and 08_0135, respectively) under section 75W of the New South Wales (NSW) *Environmental Planning and Assessment Act, 1979* (EP&A Act).

The OC4 South-West Modification (the Modification) includes construction of the OC4 south-west haul road (located south-west of the approved Stage 2 Haul Road), adjustments to the site water management system, refinements to the early stages of mining and associated infrastructure layout at OC4, and backfilling of the northern OC1 final void.

The EA was placed on public exhibition by the NSW Department of Planning and Environment (DP&E) from 5 May 2015 to 22 May 2015. During this period, government agencies, non-government organisations, businesses and members of the public were invited to provide submissions on the EA to the DP&E.

The following submissions have been received (Table 1):

- 2 submissions from members of the public supporting the Modification.
- 4 submissions (from members of the public) objecting to the Modification.
- 4 submissions from community groups objecting to the Modification.
- 5 submissions from agencies/council providing comments on the Modification.

MCO's Responses to Submissions are structured as follows:

- Table 2 – Responses to submissions from members of the public and community groups (including Aboriginal groups).
- Table 3 – Responses to submissions from regulatory agencies and council.

Table 1
Summary of Submissions

Submission		Supports/Objects
Members of the Public and Community Groups (including Aboriginal Groups)		
1	Hunter Communities Network (HCN)	Objects
2	Mudgee District Environment Group (MDEG)	Objects
3	Wellington Valley Wiradjuri Aboriginal Corporation	Objects
4	Gallangabang Aboriginal Corporation	Objects
5	Timothy Dennis	Supports
6	(Name Withheld) (1)	Supports
7	Patricia Carbone	Objects
8	Phyllis Setchell	Objects
9	(Name Withheld) (2)	Objects
10	(Name Withheld) (3)	Objects
Regulatory Agencies and Council		
1	Environment Protection Agency (EPA)	
2	Transport – Road & Maritime Services (RMS)	
3	Office of Environment & Heritage	
4	Mid-Western Regional Council	
5	NSW Office of Water (NOW) (Department of Primary Industries)	

Table 2
Responses to Submissions – Members of the Public and Community Groups (including Aboriginal Groups)

Comment	Response
1. Hunter Communities Network (HCN)	
<p>Introduction</p> <p>The HCN provided comments regarding noise and air quality modelling, including the number of modelling scenarios and inclusion of OC2 mining operations.</p>	<p>The noise and air quality modelling scenarios considered years when the potential changes associated with the Modification are expected to be greatest (i.e. 2016 and 2018) when compared to the currently approved mining activities at the Moolarben Coal Complex.</p> <p>The OC4 south-west haul road would be used to transport material from OC4 to OC1.</p> <p>Therefore, the noise modelling considered mining operations in OC4 as well as the use of the OC4 south-west haul road. 2016 and 2018 were chosen as modelling scenarios to capture maximum production, maximum working elevations and operations on the western side of OC4 (i.e. closest to key receivers to the west and south-west).</p> <p>Following 2018, as mining operations move east (away from receivers) noise and dust levels are expected to decrease at receiver locations to the west and south-west.</p> <p>The Modification would not change approved mining operations in OC2, and therefore, additional scenarios to model mining operations in OC2 were not required for the Modification.</p> <p>The noise and air quality modelling indicated the proposed changes associated with the Modification would be very minor in comparison to the currently approved mining operations at the Moolarben Coal Complex. As such, it was predicted the Modification would not result in exceedances of the current Project Approval limits for noise and air quality at any private receiver.</p>
<p>Low Frequency Noise</p> <p>The HCN provided comments in regard to the consideration of low frequency noise.</p>	<p>MCO's noise consultants, SLR Consulting, conducted monitoring to characterise low frequency noise associated with the existing mining fleet and fixed plant. SLR Consulting (2015) assessed the differences between A-weighted and C-weighted noise levels noise in accordance with the NSW Industrial Noise Policy and concluded that noise from the existing operations does not contain dominant low frequency content.</p> <p>The Modification would not generate additional low frequency noise in comparison to approved operations. While the locations of equipment would change (i.e. using the OC4 south-west haul road rather than approved haul road) the types of equipment (e.g. haul trucks) would not change.</p>
<p>Real-time Response Protocols and Reactive Dust Mitigation Management</p> <p>The HCN provided comments in regard to the use of real-time air quality and noise management protocols.</p>	<p>Real-time noise and air quality management protocols have been used successfully at the Moolarben Coal Complex to avoid potential exceedances of Project Approval limits as far as possible.</p> <p>As described in the Noise Management Plan (NMP), the response protocols are triggered by real-time monitoring results (i.e. as opposed to in response to complaints) based on trigger levels set below the Project Approval limits.</p> <p>All complaints received by MCO relating to noise are responded to in accordance with the Community Complaints Procedure described in the site Environmental Management Strategy (EMS). Following each noise related complaint the source and noise levels are assessed. In addition to the real-time management system and associated response protocols described above, in some instances, mining operations have also been altered in response to a complaint lodged with MCO where warranted. However, there were no occasions when MCO was non-compliant with its noise limits during the 2013-2014 reporting period (September 2013 to December 2014).</p>

Comment	Response
1. Hunter Communities Network (HCN) (Continued)	
The HCN commented that the OC4 south-west haul road would increase noise and dust levels.	<p>The potential changes in noise and dust levels associated with haul trucks using the OC4-south west haul road (as opposed to the approved haul road location) have been assessed and modelled.</p> <p>The modelling conservatively assumed all material would be transported by haul truck via the OC4-south west haul road. However, the use of the haul road and associated noise and dust emissions would reduce once the approved OC4 conveyor is constructed.</p> <p>The noise and air quality modelling indicated the proposed changes associated with the Modification would be very minor in comparison to the currently approved mining operations at the Moolarben Coal Complex. As such, it was predicted the Modification would not result in exceedances of the current Project Approval limits for noise and air quality at any private receiver.</p>
<p>Fair compensation for affected landholders</p> <p>The HCN commented that all landholders wishing to leave the district because of cumulative mine impacts and loss of property value should be offered compensation in the form of full replacement value of the property, house and infrastructure, water supply and amenity.</p>	The DP&E's Voluntary Land Acquisition and Mitigation Policy and the Project Approvals for the Moolarben Coal Complex (05_0117 and 08_0135) provide the framework for compensation to affected landowners as a result of noise and air quality impacts.
2. Mudgee District Environment Group (MDEG)	
The MDEG commented on the number of modelling scenarios.	<p>The noise and air quality modelling scenarios considered years when the potential changes associated with the Modification are expected to be greatest (i.e. 2016 and 2018) when compared to the currently approved mining activities at the Moolarben Coal Complex.</p> <p>The OC4 south-west haul road would be used to transport material from OC4 to OC1.</p> <p>Therefore, the noise modelling considered mining operations in OC4 as well as the use of the OC4 south-west haul road. 2016 and 2018 were chosen as modelling scenarios to capture maximum production, maximum working elevations and operations on the western side of OC4 (i.e. closest to key receivers to the west and south-west).</p>
The MDEG commented on modelling of haul trucks on incline/decline.	<p>The noise modelling conducted by SLR Consulting considers the sound power levels of mining equipment required at the Moolarben Coal Complex.</p> <p>The sound power levels used by SLR Consulting for haul trucks are based on monitored noise levels for the full range of the haul trucks' operational requirements, including trucks travelling uphill and downhill on haul roads.</p>
The MDEG commented that the modelling scenarios should have included OC2.	<p>The OC4 south-west haul road would be used to transport material from OC4 to OC1.</p> <p>The Modification would not change approved mining operations in OC2, and therefore, additional scenarios to model mining operations in OC2 were not required for the Modification.</p>

Comment	Response
3. Mudgee District Environment Group (MDEG) (Continued)	
The MDEG commented that the effect of operational shutdowns as a result of real-time noise and air quality management to production levels has not been quantified.	This comment is not considered to be relevant to the Modification, as the Modification would not change coal production at the Moolarben Coal Complex. In addition, the noise and air quality modelling indicated that the proposed changes associated with the Modification would be very minor in comparison to the currently approved mining operations at the Moolarben Coal Complex, and therefore, the Modification is not expected to change the frequency that real-time management responses are implemented.
The MDEG requested an explanation regarding how tabulated noise levels are calculated.	<p>Tables 20, 21 and 22 of the Noise Assessment (SLR Consulting, 2015) provide modelled noise levels calculated at receiver locations for the day, evening and night respectively. The tabulated noise levels are calculated for each receiver location (i.e. based on its easting/northing coordinates).</p> <p>By comparison, the contour diagrams represent predicted noise levels across the entire model domain (i.e. the calculations used to generate the contours are not specific to each receiver location).</p>
4. Wellington Valley Wiradjuri Aboriginal Corporation (WVWAC)	
<p>The WVWAC stated:</p> <p><i>WVWAC are a Traditional Organization and Native Title Claimants. WVWAC are in the process or reregistering our claim. Previously whilst having an active claim Moolarben coal excluded us and our cultural heritage specialists and Elders from all dealings with Stage 1. WVWAC have to date still been excluded from all Stage 1 and on that Basis as Native Title Claimants we Strongly object to all expansions of this mine as they have not negotiated and agreed outcome to our Cultural Heritage and Environmental concerns.</i></p>	<p>The Aboriginal Cultural Heritage Assessment (ACHA) included consultation with Registered Aboriginal Parties (RAPs), identified via a registration process consistent with the requirements of the OEH policy <i>Aboriginal cultural heritage consultation requirements for proponents 2010</i> (DECCW, 2010a) (Appendix E to the EA).</p> <p>Following the completion of the ACHA for the Moolarben Coal Project Stage 2 Environmental Assessment, Wellington Valley Wiradjuri Aboriginal Corporation (WVWAC) registered an interest in being consulted regarding Aboriginal heritage at the Moolarben Coal Mine (specifically in relation to the Stage 2 application).</p> <p>A copy of the draft ACHA for the OC4 South-West Modification was provided to WVWAC for their review and comment on 9 May 2015, along with a copy of the Proposed Methodology for their records.</p> <p>Comments on the draft ACHA were provided by WVWAC on 6 June 2014 and these comments were considered and addressed during finalisation of the ACHA. However, it is noted that at the request of WVWAC they were not individually identified in any documentation in the ACHA.</p>

Comment	Response
5. Gallangabang Aboriginal Corporation (GAC)	
<p>The GAC stated:</p> <p><i>We received a copy of a CD from Moolarben Coal informing of an amendment to the alignment of OC4 South West Haul Road was made. this further states that there are No Aboriginal Heritage sites within or close proximity to the revised haul road alignment hence no material changes were required to the assessment.</i></p> <p><i>Our Native Title Body and Cultural Heritage Corporation, Wellington Valley Wiradjuri Aboriginal Corporation have never been in this section and not been involved in identifying any heritage sites, we have no first hand knowledge as to if this is correct or not, only a statement from a mining company doing all they can do to expand.</i></p>	<p>The ACHA included consultation with RAPs, identified via a registration process consistent with the requirements of the OEH policy <i>Aboriginal cultural heritage consultation requirements for proponents 2010</i> (DECCW, 2010a) (Appendix E to the EA).</p> <p>Refer to response prepared above regarding the involvement of WVWAC in the consultation process for the OC4 South-West Modification.</p> <p>Archaeological surveys of the OC4 South-West Modification disturbance area were undertaken in consultation with the RAPs on 12 March and 31 July 2014 by heritage consultants Niche Environment and Heritage (2015). During both the March 2014 and July 2014 survey campaigns, the survey team consisted of five team members (i.e. four representatives of the RAPs and one archaeologist).</p> <p>It is noted that in accordance with the OEH policy <i>Aboriginal cultural heritage consultation requirements for proponents 2010</i> (DECCW, 2010a), “consultation does not include the employment of Aboriginal people to assist in field assessment and/or site monitoring. Aboriginal people may provide services to proponents through a contractual arrangement; however, this is separate from consultation.”</p> <p>Due to the relatively small and accessible size of the OC4 South-West Modification area, and because the Modification area included some areas that had been previously surveyed, a systematic low intensity transect survey across the majority of the area including all those landforms that occur within it, was undertaken (Appendix E of the EA).</p> <p>As reported by Niche Environment and Heritage (2015), no Aboriginal objects or specific areas or places of cultural value were identified by the RAPs during the archaeological surveys for the OC4 South-West Modification.</p> <p>It was further concluded by Niche Environment and Heritage (2005) that the survey results were consistent with the predictive model developed for the OC4 South-West Modification, the results of previous surveys that have overlapped with the area, and previous surveys in the immediate surrounds, which have generally not found any Aboriginal objects or areas of Aboriginal cultural heritage value, or have found only low numbers of Aboriginal objects for areas similar to within the OC4 south-west haul road disturbance area.</p>
6. Timothy Dennis	
Comments providing support for the Modification.	Comments noted.
7. (Name Withheld) (1)	
Comments providing support for the Modification.	Comments noted.

Comment	Response
8. Patricia Carbone	
Comments regarding existing noise levels.	The Moolarben Coal Complex operates in accordance with Project Approval noise limits. The 2014 AEMR describes that the Moolarben Coal Complex was in compliance with the Project Approval noise limits at all monitoring sites during the September 2013 to December 2014 reporting period.
Comments that noise modelling should include haul trucks on incline.	The noise modelling conducted by SLR Consulting considers the sound power levels of mining equipment required at the Moolarben Coal Complex. The sound power levels used by SLR Consulting for haul trucks are based on monitored noise levels for the full range of the haul trucks' operational requirements, including trucks travelling uphill and downhill on haul roads.
<p>Comment as follows:</p> <p><i>The noise contours in App F1 and App F2 show my property to be within the 35dBA to 40dBA contours, the same as neighbouring property No 75 yet my property has not been given noise mitigation rights.</i></p>	<p>Point source calculations for the property (ID 76) indicated predicted noise levels would be up to 35 dBA $L_{Aeq(15min)}$ during adverse weather conditions at night. This is consistent with the contour diagrams shown in Appendices F1 and F2 of the Noise Assessment (Appendix A to the EA).</p> <p>The DP&E's Voluntary Land Acquisition and Mitigation Policy provides the framework for noise mitigation works upon request, which are afforded where predicted noise levels are 3-5dB(A) above the project specific noise level (i.e. 38 to 40 dBA $L_{Aeq(15min)}$).</p>
Comment that the modelling scenarios should have included OC2.	<p>The OC4 south-west haul road would be used to transport material from OC4 to OC1.</p> <p>The Modification would not change approved mining operations in OC2, and therefore, additional scenarios to model mining operations in OC2 were not required for the Modification.</p>
Comments regarding the complaint responses.	MCO maintains a 24 hour Community Hotline (1800 556 484) to respond to any complaints from neighbouring residents or interested stakeholders in accordance with the Community Complaints Procedure.
Comment that the air quality assessment does not take into account the height of the OC4 south west haul road.	As described in Appendix B to the EA, the air quality modelling for the Modification incorporated local mine terrain. This includes the elevations of the OC4 south-west haul road.
9. Phyllis Setchell	
Comments regarding potential noise and dust impacts.	The noise and air quality modelling indicated the proposed changes associated with the Modification would be very minor in comparison to the currently approved mining operations at the Moolarben Coal Complex. As such, it was predicted the Modification would not result in exceedances of the current Project Approval limits for noise and air quality at any private receiver.
10. (Name Withheld) (1)	
Comments regarding potential noise and dust impacts.	The noise and air quality modelling indicated the proposed changes associated with the Modification would be very minor in comparison to the currently approved mining operations at the Moolarben Coal Complex. As such, it was predicted the Modification would not result in exceedances of the current Project Approval limits for noise and air quality at any private receiver.

Comment	Response
11. (Name Withheld) (3)	
Comments regarding potential noise and dust impacts and modelling methodology.	The noise and air quality modelling indicated the proposed changes associated with the Modification would be very minor in comparison to the currently approved mining operations at the Moolarben Coal Complex. As such, it was predicted the Modification would not result in exceedances of the current Project Approval limits for noise and air quality at any private receiver.
Comment regarding potential visual impacts.	<p>The EA considered potential changes in visual impacts associated with the Modification (i.e. the OC4 south-west haul road) at key viewpoint locations in comparison to the previously assessed potential views of the approved Moolarben Coal Complex.</p> <p>As described in Section 4.6 of the EA, the OC4 south-west haul road would be cut (up to approximately 5 m) into the ridgeline along the majority of its length, which would minimise direct views of the OC4 south-west haul road. Therefore, it is unlikely that any previously assessed viewpoints or privately owned residences would have direct views of the proposed OC4 south-west haul road.</p> <p>Potential views of the proposed OC4 south-west haul road would likely be available from a small section of Ulan Road that is south of Ulan-Wollar Road and north of the OC1 Pit. Where the limited views of the OC4 south-west haul road may be available, there would also be views of existing/approved mining infrastructure (e.g. OC1 pit and out-of-pit waste emplacement, OC1 workshop and ancillary infrastructure, Ulan Coal Mine CHPP and product stockpiles). As such, in consideration of this existing mining infrastructure, the level of visual modification associated with the OC4 south-west haul road would be minimal (Section 4.6 of the EA).</p>
Comments regarding potential impacts to ecology, including fauna connectivity and loss of biodiversity.	<p>The proposed OC4 south-west haul road requires clearing of approximately 5.1 ha of native vegetation, some 13.4 ha less than the approved clearance. Therefore, the OC4 South-West Modification would result in a net reduction of native vegetation required to be cleared at the Moolarben Coal Complex.</p> <p>As described in Section 4.3.2 of the EA, fragmentation of habitat occurs where areas that were once continuous become divided into separate, isolated fragments by non-woodland areas. The approved Stage 2 disturbance footprint includes a conveyor (and associated access track) through the same vegetation and parallel with the proposed OC4 south-west haul road. The approved Stage 2 disturbance footprint also includes a haul road around the north east edge of the woodland vegetation as well as clearance for ancillary works. Therefore, the proposed OC4 south-west haul road would not significantly alter potential disturbance/fragmentation impacts (i.e. in comparison to the currently approved Moolarben Coal Complex).</p>

Table 3
Responses to Submissions – Regulatory Agencies and Council

Comment	Response
1. Environment Protection Agency (EPA)	
<p><i>Meteorological Data</i></p> <p>In regard to the meteorological parameters modelled in the Noise Assessment, the EPA stated:</p> <p><i>The NIA in the EA utilised meteorological data obtained from the weather station location near the Stage 1 offices while the Mod 9 EA utilised data from the weather station located in proximity to open cut 2 (Rayner residence).</i></p>	<p>The Noise Assessment (SLR Consulting, 2015) identified assessable meteorological conditions for the 42 month period from January 2011 to June 2014 in accordance with the methodology specified in the INP based on meteorological data from the EPA approved weather station WS3, which is located between OC4 and the closest receivers to the south-west (i.e. Cooks Gap). The analysis was not based on the weather station located near the Stage 1 offices as stated by the EPA.</p> <p>The assessable meteorological conditions modelled for this Modification included east-north-easterly winds (i.e. source to receiver), including with drainage during a strong inversion (5.2°C/100 m).</p> <p>Accordingly, the Noise Assessment included adverse meteorological conditions relevant to the receivers to the south-west.</p>
<p><i>Modelled Scenarios</i></p> <p>In regard to the noise modelling scenarios, the EPA stated:</p> <p><i>The EPA notes that two scenarios have been modelled, being 2016 and 2018 which represent typical operations at the Mine (as per section 6.4 of the NIA) and worst case noise impacts (as per section 6.4.1 of the NIA). The Mod 9 EA provided modelled scenarios for years 2, 6, 11, 16 and 21.</i></p> <p><i>When comparing predicted noise levels for the Mod 9 EA and 2016 for the Proposal, the EPA notes that a number of residences are predicted to receive noise level increases of 2-3 dBA as a result of the Proposal. In the majority of cases, these noise levels were not predicted to occur until years 6 or 11 of the Mine.</i></p> <p><i>While the increases do not require an alteration to the Environment Protection Licence, it is likely that such increases will be audible and may generate additional complaints.</i></p>	<p>Noted.</p> <p>As stated by the EPA, the existing Environment Protect Licence noise limits (and Project Approval noise limits) would not require any change as a result of the Modification.</p> <p>MCO will continue to implement noise management measures and the Community Complaints Procedure at the Moolarben Coal Complex.</p>

Comment	Response
Environment Protection Agency (EPA) (Continued)	
<p><i>Surface Water Management</i></p> <p>The EPA recommends that further information is requested in relation to the surface water management system:</p> <p>1. <i>Change to the water management system design, particularly in relation to the ROM area;</i></p>	<p>The Modification would not change the approved Stage 1 or Stage 2 ROM handling facilities, approved conveyor trace or associated water management infrastructure.</p>
<p>2. <i>How dirty water will be managed along the extent of the conveyor trace which is 60 m wide;</i></p>	<p>MCO is currently updating the complex-wide Water Management Plan for the approved Stage 1 and Stage 2 operations in consultation with the EPA.</p>
<p>3. <i>Given the proposal to fill the open cut 1 void – the proposed ongoing need for mine water dam 10 and the need for OC1 mine water dam 1 proposed in the Mod 9 Moolarben Coal project Stage 1 Optimisation Modification – Surface Water Impact Assessment (May 2013) to replace mine water dam 10 once that area has been mined through</i></p>	<p>These water storages (Mine Water Dam 10 and OC1 Mine Water Dam 1) are not required in the locations previously shown in the Modification 9 Environmental Assessment, as mining has progressed to the south-west and new mine water dams have been established or are proposed. The recent Water Management Plan provided to the EPA for comment did not include mine water dams in these locations.</p> <p>The OC1 would be backfilled for the Modification, as described in the Environmental Assessment. Any water management infrastructure required in the vicinity of the backfilled void would be located within the approved disturbance area and shown in future revisions of the Water Management Plan.</p>
<p><i>Environment Protection Licence</i></p> <p>The EPA described the current EPA licence variation request includes ancillary quarrying and crushing activities to enable beneficial use of excavated material for the construction of dam DD1.</p> <p>The EPA also state:</p> <p><i>The EPA is unaware as to whether such a proposal was assessed and considered as part of the Stage 2 approval process and therefore requests advice regarding its permissibility.</i></p>	<p>It is considered this comment is unrelated to this Modification.</p> <p>Notwithstanding, DD1 is part of the approved water management system, and as such, its construction is approved.</p> <p>Initial establishment and construction/development activities for the Moolarben Coal Project Stage 2 will involve the extraction and use of extractive materials (e.g. clay, gravel and rock) from borrow pit areas located wholly within the approved disturbance boundary for OC4.</p> <p>The Stage 2 Preferred Project Report (Responses to Submissions) (p72) describes that dams will be constructed with earthen embankments and in-ground excavations for borrow areas.</p> <p>That is, the beneficial use of material excavated for the construction of water storages was described in the Stage 2 Preferred Project Report and is approved.</p>
2. Transport – Road & Maritime Services (RMS)	
<p>The RMS stated they had no submission to make for the Modification.</p>	<p>Noted.</p>

Comment	Response
3. Office of Environment and Heritage (OEH)	
<p>The OEH recommended:</p> <p><i>Recommendation: 1.1 That the location of the approved haul road is confirmed.</i></p>	<p>Figure ES2 and Figure 2 of the Environmental Assessment (Main Text) show the location of both the approved haul road (include road alignment and disturbance extent) and the proposed relocation.</p>
<p>The OEH recommended:</p> <p><i>Recommendation: 1.2 That information regarding the vegetation types, and their condition, is provided to allow direct comparison of impacts of the two routes.</i></p>	<p>Vegetation communities mapped by the Stage 2 EA and PPR within the disturbance footprint of the approved haul road were “Secondary Grassland and Shrublands” and “Western Slopes Dry Sclerophyll Forest”.</p> <p>These communities were subsequently (i.e. in communications from MCO to DP&E post PPR) mapped according to BioBanking Vegetation Type as (Cumberland December 2012):</p> <ul style="list-style-type: none"> • Derived grasslands of the slopes on the Merriwa Plateau (secondary grasslands and shrublands). • White Box – Narrow-leaved Ironbark shrubby open forest on hills of the central Hunter Valley, Sydney Basin (Western Slopes Dry Sclerophyll Forest). <p>The Stage 2 PPR originally described the secondary grassland as poor quality. However, during the assessment of the application these areas were re-classified into a native Biobanking Vegetation Type and offset accordingly.</p> <p>The approved haul road includes approximately 17.4 ha of Derived grasslands of the slopes on the Merriwa Plateau (as mapped in the Stage 2 EA/PPR) and 1.1 ha of White Box – Narrow-leaved Ironbark shrubby open forest on hills of the central Hunter Valley (as mapped in the EA/PPR). Total of 18.5 ha.</p> <p>In comparison, the proposed haul road contains approximately 1.8 ha of Grey Gum - Narrow-leaved Stringybark - Ironbark Woodland on ridges of the upper Hunter Valley and 3.3 ha of White Box – Narrow-leaved Ironbark Shrubby Open Forest on hills of the central Hunter Valley. Total of 5.1 ha.</p> <p>Of note, since original recording and community allocation in 2007, the secondary grassland (as mapped in the EA and re-produced in the PPR) has undergone substantial natural regeneration (e.g. due to the removal of stock). EcoLogical Australia consider that if this area were to be re-mapped to contemporary classification standards that the areas of natural regeneration would be mapped as forest or woodland communities as opposed to grassland.</p> <p>As described in the OC4 Modification, the Moolarben Coal Project Stage 2 project includes the clearing of approximately 1,534 ha of native vegetation, including 902 ha of remnant vegetation and 632 ha of grassland (including 123 ha of the <i>Box-Gum Woodland and Derived Native Grassland</i> threatened ecological community).</p> <p>The vegetation loss within the Stage 2 approval area has resulted in the provision of ecological offsets totalling 4,822 ha of native vegetation, including 3,689 ha of remnant vegetation, 1,134 ha of grassland (including 1,154 ha of <i>Box-Gum Woodland and Derived Native Grassland</i>).</p> <p>The proposed haul road disturbance area represents a smaller area to be cleared than the approved haul road, creating surplus offset areas. The approved haul road would impact 18.5 ha which is approximately 13.4 ha more vegetation than the proposed OC4 haul road realignment. The current Biodiversity Offset Strategy developed for Stage 2 therefore adequately covers the proposed impacts from the proposed haul road realignment, with surplus area.</p>

Comment	Response
Office of Environment and Heritage (OEH) (Continued)	
<p>The OEH recommended:</p> <p><i>Recommendation: 2.1 Further consideration should be given as to the likelihood of all species predicted to occur within the development area and a rationale provided for those species deemed unlikely to occur.</i></p> <p><i>Recommendation: 2.2 A direct comparison of species potentially impacted by the approved and proposed haul roads should be provided.</i></p>	<p>The OEH describes in its submission that the following species have the potential to occur in the OC4 south-west haul road disturbance area: <i>Acacia ausfeldii</i>, Spotted-tailed Quoll, Squirrel Glider and Gilbert's Whistler. Further justification why Ecological Australia considers these species unlikely to occur in the OC4 south-west haul road disturbance area (i.e. further to the justification provided in Appendix C to the EA) is provided below.</p> <p><i>Acacia ausfeldii</i> was specifically targeted during the field survey of the proposed haul road and was not recorded. The potential for the species to be present was considered by ELA to be low, given the lack of disturbance along the proposed haul road route and the preference of this species for disturbed areas. ELA considers that the approved haul road provides greater habitat for this species than the proposed haul road.</p> <p>Spotted-tailed Quoll and Squirrel Glider. ELA considers that whilst some habitat may potentially occur along the proposed haul road, given that neither of these species have been recorded during assessments undertaken for Stage 1 and Stage 2 nor have they been recorded within the nearby offsets, it is unlikely they would be present along the proposed haul road.</p> <p>Gilbert's Whistler. This species was recorded during surveys for the Stage 1 EA in 2005 although has not been recorded onsite since. ELA considered it unlikely to be present based on lack of records despite numerous extensive surveys across the complex and a lack of records.</p> <p>The proposed haul road contains woodland and open forest communities while the approved haul road contains open forest and grassland (with scattered trees) communities. Threatened species with potential habitat associated with the proposed haul will generally have potential habitat associated with the approved haul road, albeit the amount of habitat to be cleared for the proposed haul road (5.1 ha) is smaller than the approved haul road (18.5 ha).</p>
4. Mid-Western Regional Council	
<p>The Mid-Western Regional Council stated it has no objection to the Modification as proposed.</p>	<p>Noted.</p>

Comment	Response
5. NSW Office of Water (NOW) (Department of Primary Industries)	
<p><i>Backfilling of the Stage 1 OC1 pit northern void</i></p> <p>NOW stated:</p> <p><i>The proponent is requested to confirm whether OC1 has or will intercept groundwater, and provide an impact assessment on the proposed backfilling activities on the quality and quantity of groundwater, including any proposed mitigation measures.</i></p>	<p>Potential groundwater impacts associated with OC1 were assessed and approved for Stage 1 of the Moolarben Mine Complex.</p> <p>The OC4 South-West Modification would not change the approved extent of OC1 (or other open cuts or underground mines approved for the Moolarben Coal Complex) or increase the maximum mining rate. Therefore, backfilling the OC1 void would not increase previously predicted groundwater inflow or drawdown (Section 4.5 of the EA).</p>
<p><i>Additionally, clarification is requested as to whether the proposed backfilling of OC1 will require the Site Water Balance to be amended, and whether this has any impacts on the projected maximum take of groundwater (and subsequent licensing requirements).</i></p>	<p>The OC1 final void was proposed to be used to access UG4, however, following approval of Stage 2, the preferred access to UG4 is now from UG1 (note that approval for access to UG4 via UG1 would be sought as part of a separate EA and approval application).</p> <p>The OC1 final void (to be backfilled) was not proposed to be used as a water storage in the currently approved water management system. Therefore, there would be no loss of water storage as a result of backfilling the OC1 final void and no amendment to the site water balance would be required. In addition, a benefit of backfilling the OC1 final void would be that, following rehabilitation, surface drainage could be reinstated, therefore reducing catchment excision post-mining.</p> <p>The Moolarben Coal Complex site water balance is regularly reviewed and updated by MCO (e.g. to account for the progression of mining).</p>
<p><i>Changing the location of the approved Stage 2 Haul Road, with associated adjustments to the site water management system</i></p> <p>NOW stated:</p> <p><i>NSW Office of Water has no concerns regarding the proposed re-location of the Stage 2 haul road, and associated adjustments to the site water management system.</i></p>	<p>Comment noted.</p>
<p><i>Refining the Stage 2 OC4 pit mining schedule and the layout of the OC4 pit temporary infrastructure area</i></p> <p>NOW stated:</p> <p><i>NSW Office of Water has no concerns regarding the proposed refinements to the Stage 2 OC4 pit mining schedule and layout of the temporary infrastructure area.</i></p>	<p>Comment noted.</p>

2 REFERENCES

Department of Environment, Climate Change and Water (2010a) *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010*.

Niche Environment and Heritage (2015) *Aboriginal Cultural Heritage Assessment: Moolarben Coal Complex OC4 South-West Modification*.

SLR Consulting (2015) *Moolarben Coal Complex OC4 South West Modification Noise Assessment*.