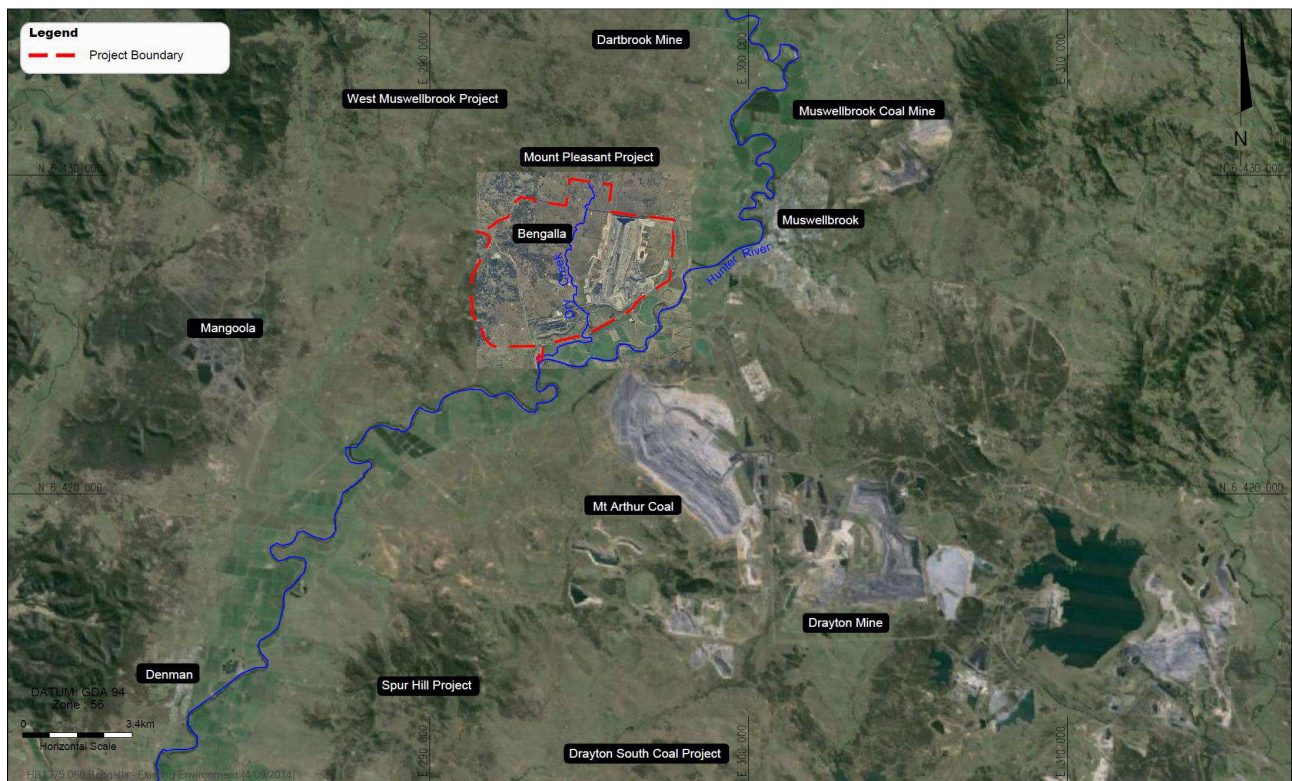


## ASSESSMENT REPORT

### Bengalla Coal Mine – Ancillary Infrastructure Changes (SSD 5170 MOD 1)

#### 1 BACKGROUND

The Bengalla Coal Mine is located approximately 4 kilometres (km) west of Muswellbrook in the Upper Hunter Valley (see Figure 1). The mine is owned and operated by the Bengalla Mining Company Pty Limited (Bengalla), a joint venture between Coal & Allied Limited, Wesfarmers Limited, Taiwan Power Company and Mitsui Coal Holdings Pty Limited. Coal & Allied recently sold its stake to New Hope Group; however this deal will not be finalised until early in 2016.



**Figure 1: Locality Plan**

The mine was originally approved by the then Minister for Urban Affairs and Planning on 7 August 1995, following a Commission of Inquiry. Mining operations started under this consent in 1998 and the coal resource would have been exhausted by 2017. This consent is still active but will be surrendered shortly.

To allow mining to continue, a new development application for a large mine extension was lodged in 2013. On 3 March 2015, Bengalla was granted development consent (SSD 5170) by the Secretary of the Department, as delegate for the Minister of Planning. This consent allows:

- extracting a further 316 million tonnes (Mt) of coal over 24 years at a rate of up to 15 Mt a year;
- upgrading and augmenting existing infrastructure at the mine, including the Coal Handling and Preparation Plant (CHPP), stockpiles and rail loading facility;
- temporarily diverting Dry Creek;
- realigning the Bengalla Link Road; and
- progressively rehabilitating the site.

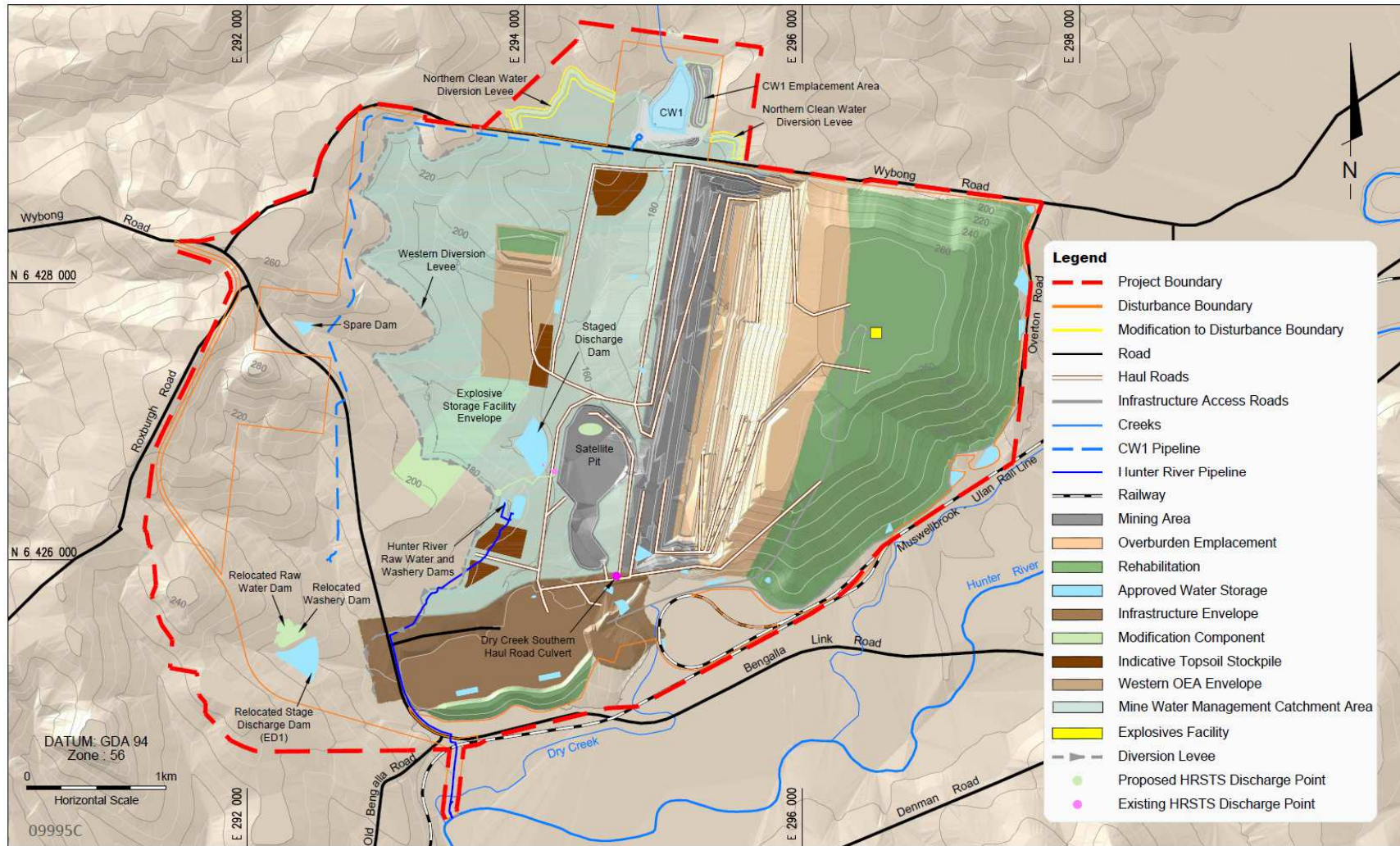
To the north of Bengalla lays the approved but as yet unconstructed Mt Pleasant Coal Mine. The mine is 80 per cent owned by the Rio Tinto Group and 20 per cent owned by Mitsubishi Development. The closest active mine is the Mt Arthur coal mine, which is 2.4 km to the south of Bengalla. The mine is operated by Hunter Valley Energy Coal Pty Ltd, a subsidiary of BHP Billiton (see Figure 1).

## 2 PROPOSED MODIFICATION

Bengalla is proposing to modify its consent SSD 5170, under section 96(2) of the *Environmental Planning and Assessment Act 1979* (EP&A Act), primarily to amend its surface water management system. The proposed modifications are fully described in the Statement of Environmental Effects (SEE) (see **Appendix A**) which accompanied the application and are summarised in Table 1 and shown in Figure 2.

**Table 1: Key Aspects of Existing and Proposed Mining Operations**

<b>Aspect</b>	<b>Existing Mine SSD 5170</b>	<b>Proposed Mod 1</b>
<i>Mining and Reserves</i>	Continued operations to extract an additional 316 Mt of ROM coal, at a rate of up to 15 Mtpa.	No change
<i>Coal Processing</i>	Processing at a maximum rate of 15 Mtpa.	No change
<i>Coal Reject and Overburden Management</i>	Coarse rejects and tailings would be dewatered and disposed of in pit. Overburden would be disposed of in pit once or placed in a temporary out-of-pit overburden emplacement.	No change
<i>Disturbance Area</i>	964 hectares (ha) of mining, with the total area disturbed equivalent to 1,938 ha.	Clearing 3.52 ha (including 1.24 ha of EEC) and indirectly impacting on an extra 5.56 ha.
<i>Product Coal Transport</i>	Product coal would be loaded onto trains to Newcastle Port for export.	No change
<i>Project Life</i>	24 years total operating life (to 2038).	No change
<i>Hours of Operation</i>	24 hours a day, 7 days a week.	No change
<i>Employment</i>	Up to 900 operational staff plus 315 construction employees during the first 3 years.	No change
<i>Capital Investment Value</i>	\$689 million	
<i>Infrastructure</i>	Infrastructure upgrades or changes including: <ul style="list-style-type: none"> <li>realignment of Bengalla Link Road;</li> <li>upgrades of the existing CHPP, stockpiles and rail loading facility;</li> <li>changes to water infrastructure, including constructing a new 900 ML clean water diversion dam (CW1) and Mt Pleasant Discharge Dam and temporary diversion of Dry Creek via dams and pipework, to be reinstated following the completion of mining and placement of overburden; and</li> <li>other ancillary infrastructure including power supply, water storage and distribution, administration and workshop facilities.</li> </ul>	Changes to ancillary infrastructure including: <ul style="list-style-type: none"> <li>additional locations for the approved explosives storage facility;</li> <li>placing soil from construction of the CW 1 dam adjacent to the dam;</li> <li>constructing clean water diversion levees associated with CW1;</li> <li>using the Satellite Pit as a temporary dirty water storage dam;</li> <li>revising the locations of the Hunter River Raw Water and Washery dams; and</li> <li>relocation of the Staged Discharge Dam Hunter River Salinity Trading Scheme (HRSTS) discharge point.</li> </ul>
<i>Biodiversity Offsets and Rehabilitation</i>	<ul style="list-style-type: none"> <li>964 ha of land, including 881 ha of native vegetation to be disturbed. The 6,215 ha biodiversity offset strategy comprises about 4,600 ha of existing native woodland vegetation and 1,500 ha of native grassland.</li> <li>Rehabilitation of the 1,938 ha mine site mainly for agricultural use (grazing), with plantings of native woodland vegetation to achieve minimum of 10% vegetation cover.</li> <li>Reinstatement of Dry Creek through the rehabilitated mine landform.</li> <li>Final void would be approximately 342 ha. The final void is predicted to fill with water in the long term (1,000 years) to approximately 100 metres (m) below the surface level.</li> </ul>	<ul style="list-style-type: none"> <li>No additional offset proposed.</li> <li>All disturbed land associated with the modification to be reinstated and rehabilitated.</li> </ul>



BENGALLA MINE

Modification Overview Year 4 Mine Plan



Figure 2: Project Layout and Proposed Modified Components

### 3 STATUTORY CONTEXT

#### Section 96(2)

Development consent SSD 5170 was granted in March 2015 under Part 4, Division 4.1 of the EP&A Act. Section 96 of the EP&A Act allows for a development consent to be modified by the authority that granted the original consent. Given the application would involve a level of environmental impact that is not minor, the modification must be considered in accordance with section 96(2) of the EP&A Act. Section 96(2) requires the consent authority to be satisfied that the following matters are addressed:

**Table 2: Section 96(2) Mandatory Considerations**

<b>Section 96(2) matters for consideration</b>	<b>Comment</b>
The modified development must be substantially the same as that originally granted	<p>The modified project would require the relocation of various water management structures, which would require clearing a minor amount of additional vegetation.</p> <p>The modification would not change any of the core elements of the project such as the total resource, production rate, operational hours, pit dimensions, overburden emplacements, employee numbers or the overall intensity of the operations.</p> <p>The Department considers that the modified development would be substantially the same as originally approved.</p>
Notified the application in accordance with the <i>Environmental Planning and Assessment Regulation 2000</i>	Refer Section 4 – Consultation
Consideration of any submissions made	Refer Sections 5 and 6 – Submissions and Assessment
Consideration of relevant environmental planning instruments	The relevant provisions of the applicable environmental planning instruments have been considered as part of the assessment and separately in the SEE.

#### Commonwealth Approval

The mine has an existing approval under the Commonwealth's *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). Bengalla did not refer the modification to the Commonwealth Department of Environment as it considers that it would not significantly impact on matters of national environmental significance.

The Department advised the Commonwealth that a modification application had been made. As no EPBC referral was made it is Bengalla's regulatory responsibility to ensure it complies with its EPBC approval. The Commonwealth is in discussion with Bengalla regarding whether a referral or a variation is required.

#### Mt Pleasant Consent

Parts of the proposed Northern Diversion Levee would be located on land covered by Mt Pleasant Coal Mine's development consent. The owners of the Mt Pleasant mine support the proposed modification and Bengalla has applied to sub-lease the affected area of Mt Pleasant's mining lease.

#### Approval Authority

The Minister for Planning is the approval authority for the application. However, in accordance with the Minister's delegation dated 16 February 2015, the Executive Director, Resource Assessments and Compliance may determine the application as:

- Muswellbrook Council has not objected to the application;
- no reportable political donations have been made; and
- there are no public submissions in the nature of objections.

#### Environmental Planning Instruments

A number of environmental planning instruments (EPIs) apply to the modification, including:

- SEPP (State and Regional Development) 2011;
- SEPP (*Mining, Petroleum and Extractive Industries*) 2007 (the Mining SEPP);
- *Muswellbrook Local Environmental Plan 2009* (Muswellbrook LEP); and
- *Hunter Regional Environmental Plan 1989* (Hunter REP).

The Department has considered the modification against the relevant provisions of these EPIs, as well as Bengalla's consideration of these matters. Based on this assessment, the Department considers that the proposed development can be undertaken in a manner that is generally consistent with the aims, objectives and provisions of these EPIs, subject to the measures that have been incorporated into the modified conditions of consent.

#### 4 CONSULTATION

Under clause 118 of the *Environmental Planning and Assessment Regulation 2000*, the Secretary is required to make the modification application publicly available. Consequently, the Department:

- placed a public exhibition notice in the Muswellbrook Chronicle and Hunter Valley News;
- made the application and accompanying SEE publicly available at its Information Centre, Muswellbrook Council and the Nature Conservation Council from Thursday 20 August until Monday 7 September 2015;
- placed the application and SEE on its website; and
- wrote to all submitters for the original project, and provided them with the notice of exhibition.

#### 5 SUBMISSIONS

The Department received nine submissions from government agencies (see **Appendix B**). Bengalla provided a Response to Submissions (RTS) document to address concerns raised in these submissions (see **Appendix C**). Below is a summary of the issues raised and Bengalla's responses.

The Commonwealth Department of the Environment (**Commonwealth**) advised that approval of the modification may result in inconsistencies with Bengalla's approval under the EPBC Act. These inconsistencies relate to total vegetation clearing and management of mine-affected water.

Bengalla is in discussion with the Commonwealth regarding any requirements to vary its existing EPBC approval. The modification does not require any changes to the consent's conditions relating to management of mine-affected water; accordingly Bengalla's State development consent and Commonwealth approval would remain consistent in this regard.

Muswellbrook Shire Council (**Council**) raised concerns regarding:

- the suitability of proposed rehabilitation methods;
- stability of the material to be extracted from the site of the CW1 dam; and
- potential erosion caused by proposed activities west of the western clean water diversion levee.

Following review of the RTS Council made no further comment on these concerns.

The Office of Environment and Heritage (**OEH**) recommended that an additional biodiversity offset be considered for the modification. Bengalla has a substantial existing biodiversity offset of 6,215 ha. Bengalla argues that the minor additional clearing now proposed has already been accounted for in its existing biodiversity offset. The Department's consideration of this matter is in Section 7.1 below.

The Department of Primary Industries – Water (**DPI – Water**) raised concerns over characterisation of the water catchments reporting to the Satellite Pit. Bengalla in its RTS clarified the nature of the catchments and revised its site water balance to account for any temporary clean water take.

NSW Health – Hunter New England Health District (**NSW Health**) considers that the proposal would have minimal health impacts and is satisfied with the existing approval conditions.

NSW Environment Protection Authority (**EPA**) considers that the proposal's noise, air and water quality impacts can be managed under Bengalla's existing Environment Protection Licence (EPL 6538). EPA advises that Bengalla would have to submit a licence variation to relocate its dirty water discharge point.

Roads and Maritime Services (**RMS**) stated it had no objections or requirements regarding the proposal.

The Division of Resources and Energy (**DRE**) of the NSW Department of Industry raised no objection to the proposal but noted that Bengalla would be required to revise its Mining Operations Plan.

NSW Dams Safety Committee (**DSC**) raised no objection to the proposal but noted that one existing dam (Bengalla Staged Discharge Dam) and two dams yet to be built (the new Bengalla Staged Discharge Dam and the Bengalla Clean Water Dam) are prescribed dams under the *Dams Safety Act 1978*.

## 6 ASSESSMENT

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

- modification application and accompanying SEE;
- submissions received and the RTS;
- existing conditions of consent;
- relevant environmental planning instruments, policies and guidelines; and
- relevant requirements of the EP&A Act.

### 6.1 Biodiversity

#### Disturbance Area

The SEE contained a specialist ecological impact assessment (EIA) undertaken by Cumberland Ecology. The EIA found that construction of the Northern Clean Water Diversion Levee associated with the water storage dam CW-1 would disturb vegetated land north of Wybong Road (see Figure 3). This area is currently used for cattle grazing and has had a long history of agricultural activities.

Importantly this land is located within Mt Pleasant Coal Mine's development consent (DA92/97) area. While the Mt Pleasant Coal Mine has not been developed, its consent was modified in 2011 to extend the life of the consent until 22 December 2020.

The EIA found that the proposed levee construction would permanently remove 1.24 ha of native vegetation consisting of 0.59 ha of *Grey Box/White Box Grassy Woodland EEC* and 0.65 of this community's derived native grassland (DNG). It would also remove 2.28 ha of non-native pasture.

Bengalla has conservatively assumed an indirect disturbance boundary around the levee and has included this in the total disturbance area. This 'buffer area' is where workers and machinery would operate during construction of the levee. This is an assumed maximum area and the actual area of disturbance is likely to be lower. Indirect disturbance in the buffer area would include 2.2 ha of *Grey Box/White Box Grassy Woodland EEC*, 2.61 ha of this community's DNG and 2.97 ha of non-native pastures.

Both the Box Gum Woodland and its DNG are listed as endangered ecological communities (EECs) under the *Threatened Species Conservation Act 1995* and critically endangered ecological communities (CEECs) under the EPBC Act. The vegetation to be permanently removed and that within the disturbance buffer is summarised in Table 3.

**Table 3: Vegetation Communities and Disturbance Categories**

<b>Vegetation Community</b>	<b>TSC Act Status</b>	<b>EPBC Act Status</b>	<b>Permanently Removed (Levee) (ha)</b>	<b>Temporarily disturbed (Buffer) (ha)</b>	<b>Total Disturbed Area (ha)</b>
<i>Grey Box/White Box Intergrade Grassy Woodland</i>	EEC	CEEC	0.59	2.2	2.79
Derived Native Grassland	EEC	CEEC	0.65	2.66	3.31
Low Diversity Derived Native Grassland/Exotic Pasture			2.28	0.69	2.97
<b>Total</b>			<b>3.52</b>	<b>5.56</b>	<b>9.07</b>

#### Mt Pleasant Approval

The Environmental Assessment for the 2011 modification to Mt Pleasant's development consent includes a vegetation map showing the worst-case scenario for vegetation clearing for project-related infrastructure (refer Figure 4). This figure shows that the approved processing infrastructure for the Mt Pleasant Coal Mine is located within the same area of box gum woodland and DNG as the eastern part of Bengalla's proposed Northern Clean Water Diversion Levee.

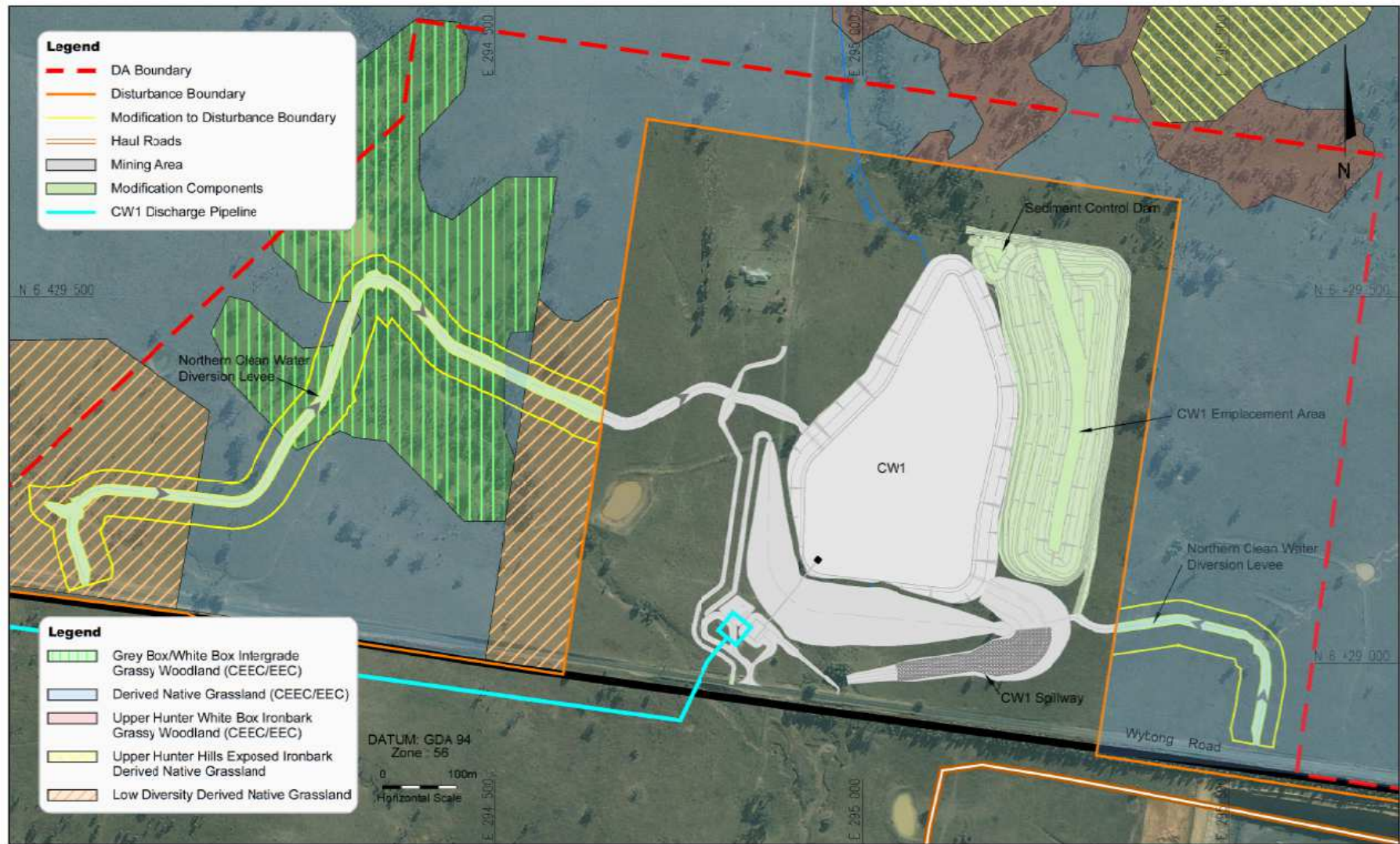
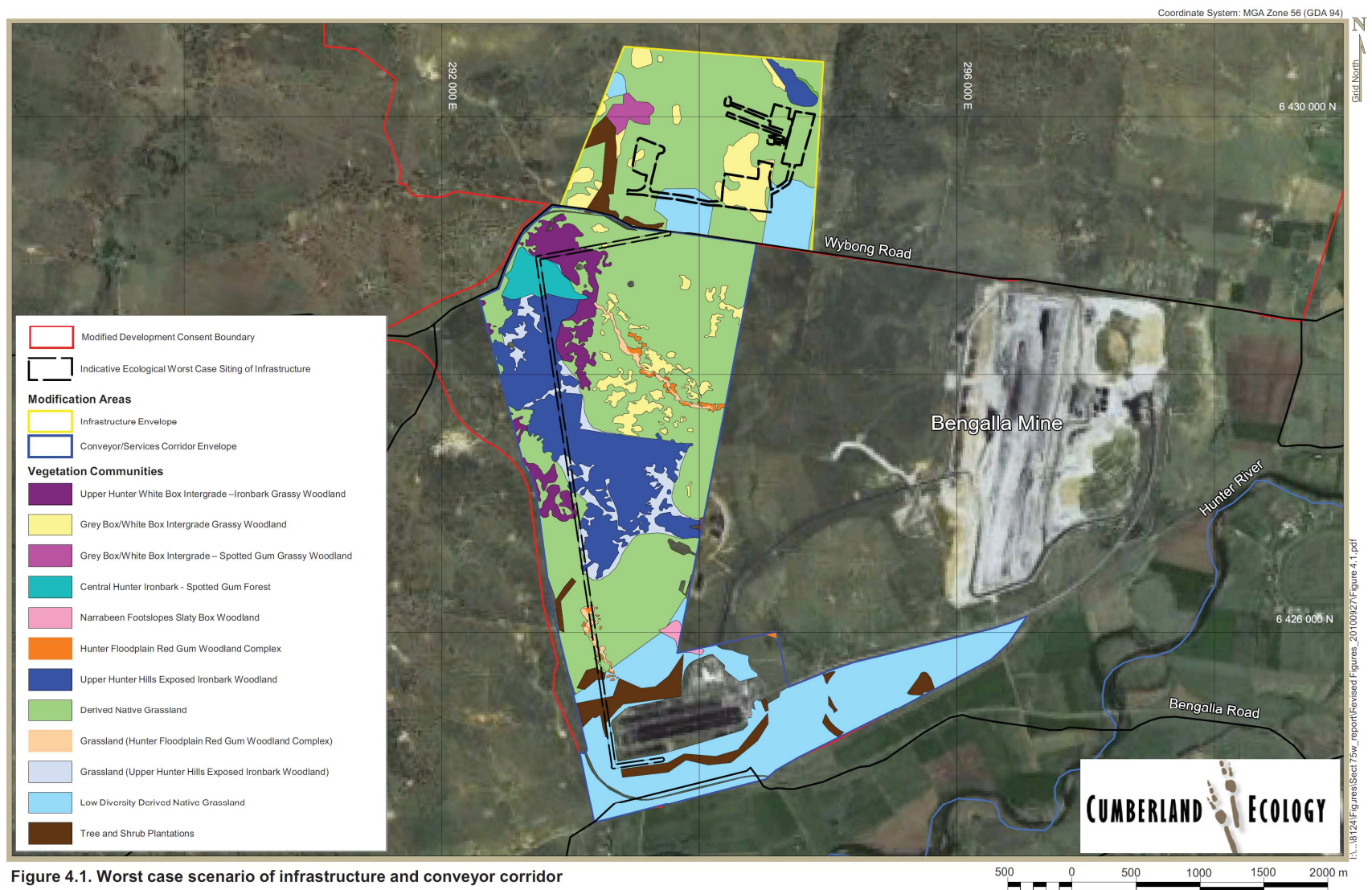


Figure 3: Northern Diversion Levee and Vegetation Communities

FIGURE 7



**Figure 4.1. Worst case scenario of infrastructure and conveyor corridor**

**Figure 4: Mt Pleasant Coal Mine - Worst-case Infrastructure Scenario**

Consequently, this area of EEC woodland and part of the DNG is already approved for removal by the Mt Pleasant development consent. Also this vegetation was assessed and appropriately offset as part of the modification application by both the Department and the Commonwealth.

***Biodiversity Offsets***

As part of the requirements of its existing consent, Bengalla is establishing a substantial biodiversity offset of 6,214.5 ha of high quality native vegetation across 3 offset areas. This offset accounts for the clearing of approximately 881 ha of largely degraded native vegetation for the extension project, providing a direct offset ratio of 7:1 (see Table 4). Table 4 compares the approved vegetation community disturbance, offsets and ratios with those which would result from approval of the modification. Even it is assumed that all potentially-disturbed DNG should be fully offset, the offset ratios for both the DNG and all other EECs remain unchanged.

**Table 4: Summary of Existing and Proposed Vegetation Community Disturbance, Offsets and Ratios**

Vegetation Group	Existing Approval			Mod 1 SEE		
	Disturbance Boundary (ha)	Total BOS (ha)	Ratio	Modification Disturbance Boundary (ha)	Revised Total Disturbance (ha)	Revised Ratio
Box Gum Woodland C/EEC	73.2	1,719.7	23.5:1	-	73.2	23.5:1
Box Gum Woodland DNG C/EEC	462.1	1,500.1	3.2:1	3.31 (0.65 removed + 2.66 disturbed)	465.41	3.2:1
Total C/EEC	535.3	3,219.8	6:1	3.31	538.61	6:1
All other vegetation	346.3	2994.7	8.6:1	2.97	349.27	8.6:1
Total Vegetation	881.6	6,214.5	7.1:1	6.28	887.88	7.0:1

Bengalla has also undertaken surveys and Biobank Credit Calculator assessments using the biodiversity offsets policy that applied at the time that SSD 5170 was assessed and approved (ie the *Interim Policy on Assessing and offsetting biodiversity impacts of Part 3A, State significant development (SSD) and State Significant Infrastructure (SSI) Projects* (OEH 2011)). Table 5 shows that Bengalla has an overall net surplus of 35,491 ecosystem credits associated with its original approval.

**Table 5: Existing Ecosystem Credits**

Vegetation Group	Approved Disturbance Boundary (Ecosystem Credits)	Approved BOS Offset (Ecosystem Credits)
Box Gum Woodland and Derived Native Grassland C/EEC	15,660	34,801
EECs	1,144	92
Narrow-leaved Ironbark	12,276	5,214
Other native vegetation	0	24,603
Total	29,080	64,710

OEH has recommended that Bengalla should calculate its offset obligation for the proposed modification using the more recent offsets policy (ie the *NSW Biodiversity Offsets Policy for Major Projects and Framework for Biodiversity Assessment* (OEH 2014)). OEH calculated an approximate credit requirement under the new policy, based on the assumption that all 9.07 ha would be fully cleared, and determined that on this basis 139 credits would be required. While the methods to calculate credits differs between the two policies, it is clear that Bengalla has a significant surplus of credits and is likely to also have a significant surplus if the newer policy had been used to calculate its offset requirements in 2011.

OEH also acknowledged that the new policy is currently in an interim (ie transitional) period and that the Department has the discretion to not apply the policy. The Department has closely reviewed the new

policy (including its transitional provisions) and considers that it should not be applied for the following reasons:

- a) this is a modification to an existing project and not a new State significant development application;
- b) Secretary's Environmental Assessment Requirements for the original development application were issued in 2012, well before the starting date of the new policy;
- c) as this is section 96(2) modification application, SEARs were not required or issued (which may have brought the new policy into play); and
- d) there is no other legislative provision or EPI which makes the new Offsets Policy or the associated Framework for Biodiversity Assessment formally applicable to projects which had SEARs issued prior to the policy's starting date or for which no SEARs were issued.

Further, the Department is firmly of the view that the substantial offsets provided by Bengalla in 2011, including the large surplus of offset credits, should be taken into account in determining whether Bengalla should now provide an additional offset under either the interim policy or the current policy.

The Department considers that, in this particular case, no additional offset should be sought from Bengalla, and instead that management of construction of the levee should focus on minimising impacts to EECs. Best practice management measures should be applied by Bengalla to ensure that impacts on EEC are minimised, and that disturbance is remediated as effectively as is reasonable and feasible.

#### Proposed Management

To minimise the impact on native vegetation from the levee construction Bengalla proposes to:

- avoid removing or damaging mature trees;
- demarcate and signpost the levee area to ensure that no vegetation beyond the disturbance area is removed; and
- rehabilitate the native vegetation in the buffer area to its previous condition by;
  - returning topsoil;
  - fencing off to prevent cattle entering; and
  - implementing weed management protocols.

The Department considers these measures are helpful in ensuring the proposed impact is acceptable. However, the Department has recommended additional conditions requiring that, during construction and maintenance of the Northern Diversion Levee, Bengalla must ensure that impacts to native vegetation (particularly EECs) are minimised as far as is reasonable and feasible, to the satisfaction of the Secretary.

Council and OEH raised issues regarding the effectiveness of rehabilitation in disturbed areas such as that which will be disturbed by construction of the levee. Given that impacts will be minimised, the soil structure will remain largely intact and the sound prospects of recolonisation from nearby areas, the Department considers that the likelihood of successful rehabilitation is high.

#### Threatened Fauna and Flora

The EIA reported that no threatened fauna or flora species listed under the TSC Act or EPBC Act were recorded within the modification disturbance boundary. However, a total of 15 threatened fauna and 4 threatened flora species were considered likely to occur. The fauna species are highly mobile (generally birds and bats) and therefore may use the disturbance area as part of larger foraging ranges.

The EIA states that, in accordance with the assessments of significance under the TSC Act, the Project is not considered to result in a significant impact on any threatened flora or fauna species, so long as the recommended mitigation measures are implemented.

#### Conclusion

The Department has carefully considered both OEH and Council's comments on biodiversity. The Department considers that the biodiversity impacts of the proposal would be minor and acceptable. Bengalla would permanently clear only a small area of vegetation that is outside the existing approved disturbance footprint for the Mt Pleasant Coal Mine. This minor amount of vegetation is degraded by current land practices. The additional disturbance would be satisfactorily offset by Bengalla's existing high quality accredited and secured biodiversity offset.

The Department has reviewed the existing consent and considers that Bengalla already has comprehensive requirements to manage the land to which the project applies and to ensure best practice

land management at all times. However, the Department has proposed amended conditions to manage this particular impact and to ensure that it is minimised.

## 6.2 Other Issues

The Department has assessed other issues relating to the proposed modification in accordance with the requirements of the EP&A Act, and summarised the findings of this assessment in **Table 6** below.

**Table 6: Assessment of Other Issues**

<b>Issue</b>	<b>Consideration and Assessment</b>	<b>Recommendation</b>
<i>Water</i>	<ul style="list-style-type: none"> <li>Bengalla has proposed four changes to its surface water management system (see Table 1). Following consideration of the RTS, both DPI – Water and EPA are satisfied that these changes are acceptable.</li> <li>As part of the ongoing detailed design work for the diversion of Dry Creek, Bengalla has identified the optimum location to construct the Northern Diversion Levee to divert clean water into CW-1. This would prevent clean water from entering the mine’s operational areas to the south and thereby prevent clean water from entering Bengalla’s dirty water management system. This clean water would be pumped around the mining operations and then drain to the Hunter River.</li> <li>Bengalla is proposing to remove an approved but unconstructed clean water dam known as the Satellite Pit Diversion Dam. The dam’s approved location was north of the proposed extraction area known as Satellite Pit and east of the Western Diversion Levee (see Figure 2). In refining its water management system, Bengalla has found that this dam’s catchment contains a number of dirty water sources, including roads, stockpiles and maintenance areas. Further, since the catchment is adjacent to the mining face, exploration and drilling works must be undertaken within it. Consequently this catchment is now considered a dirty water catchment. Bengalla is proposing to allow water from this area to enter a dirty water dam constructed within the Satellite Pit, which would be commenced in 2016. This would be a temporary arrangement as the area would be mined through by 2019. The new dam would be designed to prevent the potential release of sediment-laden water from this catchment.</li> <li>Bengalla has remodelled its water balance to take into account the changed water management system and has estimated its clean water take from the Hunter River would be reduced and that it can meet its water requirements in a large range of climatic scenarios.</li> <li>In response to the open cut pit progressing further west, Bengalla proposes to relocate its Staged Discharge Dam licensed discharge point, also to the west. The discharge point would remain inside the clean water Western Diversion Levee (ie in the dirty water management area).</li> </ul>	<ul style="list-style-type: none"> <li>The Department has carefully reviewed existing consent conditions governing water management. Conditions 22 – 25 of Schedule 3 require Bengalla to: <ul style="list-style-type: none"> <li>ensure that any water discharged from the site complies with EPL 6538;</li> <li>adjust its operations to match its available water supply;</li> <li>meet a strict set of water management performance measures; and</li> <li>prepare and implement a comprehensive site water management plan, including a surface water management plan, that documents how surface water would be monitored and managed to ensure that performance measures and other restrictions are met.</li> </ul> </li> <li>Condition 5(d) of Schedule 5 requires that all management plans are reviewed, and revised if necessary, following modification of the consent.</li> <li>The Department considers the proposed changes to the water management system are minor operational changes that increase the overall effectiveness of the water management system.</li> <li>No changes to existing conditions are considered necessary.</li> </ul>
<i>Soils and Erosion</i>	<ul style="list-style-type: none"> <li>Council raised concerns relating to the risk of erosion from the placement of spoil after constructing CW-1.</li> <li>In its RTS, Bengalla provided a construction diagram for the emplacement prepared by Parsons Brinckerhoff. The RTS also included further detail on the measures designed to minimise the risk of erosion. These include: <ul style="list-style-type: none"> <li>95% compaction of material for the bottom 10 m of material and 90% compaction for that above;</li> <li>2H:1V batters with 5 m wide benches, at 8 m maximum spacing. Benches would be graded to drain to a sediment dam;</li> <li>the dam would be sized with capacity to meet standards for a 95<sup>th</sup> percentile 5-day rainfall event, with the spillway designed for the 1 in 100 year average recurrence interval;</li> <li>a heavy compost blanket would be hydraulically</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>The Department considers that the proposed sediment control measures would adequately prevent unwanted erosion of soils. No changes to existing conditions are considered necessary.</li> </ul>

<b>Issue</b>	<b>Consideration and Assessment</b>	<b>Recommendation</b>
	<ul style="list-style-type: none"> <li>○ applied to all batter slopes (2H:1V) and benches; and</li> <li>○ the top of the emplacement would be covered in topsoil and seeded.</li> </ul>	
<i>Aboriginal Cultural Heritage</i>	<ul style="list-style-type: none"> <li>• The SEE contained an Aboriginal Archaeological Due Diligence Assessment undertaken by AECOM.</li> <li>• Construction of the levee would disturb one artefact scatter and an isolated artefact site. Bengalla proposes to salvage these items in accordance with its approved Aboriginal Cultural Heritage Management Plan, which would require it to consult with the Aboriginal community.</li> <li>• OEH raised no issues with the assessment and supported the proposed management strategy.</li> </ul>	<ul style="list-style-type: none"> <li>• No changed conditions required.</li> </ul>
<i>Hazards</i>	<ul style="list-style-type: none"> <li>• Bengalla is seeking a changed location for its approved Explosives Storage Facility. The proposed location is not yet finally determined, but would be within a given 'envelope' or perimeter of land (see Figure 2). Bengalla does not propose any changes to the approved storage capacity, type or use of explosives.</li> <li>• The new facility would be constructed in accordance with AS 2187:1998 Explosives - Storage, Transport and Use – Storage and relevant NSW Occupational Health and Safety (OH&amp;S) regulations. Bengalla currently holds two licences to store explosives and associated materials, being 07-100151-001 and XSTR100151.</li> <li>• Bengalla states that the proposed Explosives Storage Facility Envelope would provide efficient and safe access by light and heavy vehicles by limiting travel through active open cut mining areas.</li> </ul>	<ul style="list-style-type: none"> <li>• No changed conditions required.</li> </ul>
<i>Final landform</i>	<ul style="list-style-type: none"> <li>• Bengalla has revised its final landform to account for the modified project.</li> <li>• A key change is that the fill from CW-1 would be pushed back into the dam at the end of the mine life. This differs from the approved operations where that material was to be placed within the overburden emplacement.</li> </ul>	<ul style="list-style-type: none"> <li>• The Department considers that the proposed final landform would be a better outcome.</li> <li>• The existing conditions require progressive rehabilitation of the site and preparation of a Rehabilitation Management Plan. This Plan would include comprehensive measures to meet rehabilitation objectives and undertake rehabilitation in a progressive manner.</li> </ul>
<i>Noise</i>	<ul style="list-style-type: none"> <li>• The SEE contained a specialist noise impact assessment (NIA) undertaken by Bridges Acoustics Pty Ltd.</li> <li>• The NIA calculated that operational noise from the modified project would remain unchanged and would not exceed criteria in the existing development consent.</li> <li>• Construction noise was not predicted to differ significantly from that already approved.</li> </ul>	<ul style="list-style-type: none"> <li>• The existing condition for a Noise Management Plan requires comprehensive measures to ensure that approved noise criteria are met, even during adverse weather conditions. No changed conditions required.</li> </ul>
<i>Air Quality</i>	<ul style="list-style-type: none"> <li>• The EA contained a specialist air quality impact assessment undertaken by Todoroski Air Sciences.</li> <li>• The assessment predicted that overall emissions from the mine would remain well below the relevant dust criteria, which are included in the existing consent.</li> </ul>	<ul style="list-style-type: none"> <li>• No additional conditions are recommended as no additional impact is predicted above existing air quality criteria.</li> </ul>
<i>Economic</i>	<ul style="list-style-type: none"> <li>• The modification would allow Bengalla to optimise its surface water management system, preventing mixing of clean and dirty water. It would also allow the explosives facility to be located in a more central location, away from the active overburden emplacement.</li> <li>• The modification would ensure the ongoing viability of the mine, protecting jobs. Consequently the modification would support the State Priority of creating 150,000 jobs by 2019 (see <i>NSW Making it Happen (2015)</i>).</li> </ul>	<ul style="list-style-type: none"> <li>• No changed conditions required.</li> </ul>
<i>Administrative</i>	<ul style="list-style-type: none"> <li>• Bengalla has provided an updated project layout figure to replace the existing figure in Appendix 2 of the development consent.</li> </ul>	<ul style="list-style-type: none"> <li>• The Department agrees that the figure in Appendix 2 should be updated.</li> </ul>

Issue	Consideration and Assessment	Recommendation
	<ul style="list-style-type: none"> <li>• Apart from reflecting the proposed modifications, the new figure does not differentiate between disturbance areas approved in the original 1995 consent and the additional disturbances area approved in the 2015 consent. Bengalla states that the previous figure was more suited for assessment purposes, and that the distinction could cause some confusion.</li> <li>• The Department has closely examined the new figure and considers it appropriate as the 2015 consent applies to all land covered by 1995 consent and the 1995 consent is due to be surrendered by the end of June 2016.</li> </ul>	<ul style="list-style-type: none"> <li>• The Department has also revised the wording of the conditions relating to management plans to reflect best practice.</li> </ul>

### 6.3 Conclusion

The Department considers that the proposal has merit as it would prevent clean water entering the dirty water management system and would improve the overall operational efficiency of the mine. The placement of fill adjacent to CW-1 would prevent the needless trucking of material across Wybong Road for placement into the overburden emplacement area. Further efficiencies would be gained by moving the Explosive Storage Facility and other water-related infrastructure. Consequently this modification would help to secure the long-term future of the mine, protecting local jobs.

The Department has carefully considered the impacts associated with the proposed modification and has recommended minor changes to conditions to manage these impacts. These conditions reflect key recommendations made by State agencies and Council.

Consequently, the proposal would result in negligible additional environmental impacts and, the Department recommends that the application be approved, subject to some changes to the existing conditions.

## 7 CONDITIONS


The Department has prepared a Notice of Modification (see **Appendix D**) to incorporate the proposed modification and to provide updated and appropriate conditions of consent. It has also prepared a consolidated development consent which reflects the changes to the project resulting from the Notice of Modification (see **Appendix E**).

Bengalla has reviewed and accepted the recommended conditions of consent.

## 8 RECOMMENDATION

It is RECOMMENDED that the Executive Director, Resource Assessments and Compliance, as delegate of the Minister:

- **considers** the findings and recommendations of this report;
- **determines** that the proposed modification falls within the scope of section 96(2) of the EP&A Act;
- **approves** the application under section 96(2), subject to conditions; and
- **signs** the notice of modification in **Appendix D**.

  
Howard Reed  
Director  
Resource Assessments  
Compliance  
11.12.15

  
Oliver Holm  
Executive Director  
Resource Assessments and  
16/12/15

## **APPENDIX A: STATEMENT OF ENVIRONMENTAL EFFECTS**

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See the Department's website at [www.majorprojects.planning.nsw.gov.au](http://www.majorprojects.planning.nsw.gov.au)

## APPENDIX B: SUBMISSIONS

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See the Department's website at [www.majorprojects.planning.nsw.gov.au](http://www.majorprojects.planning.nsw.gov.au)

## **APPENDIX C: RESPONSE TO SUBMISSIONS**

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See the Department's website at [www.majorprojects.planning.nsw.gov.au](http://www.majorprojects.planning.nsw.gov.au)

## **APPENDIX D: NOTICE OF MODIFICATION**

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## **APPENDIX E: CONSOLIDATED CONSENT**

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