

ASSESSMENT REPORT

BENGALLA COAL MINE Geotechnical Investigations Modification (DA 211/93 Mod 5)

1 BACKGROUND

The Bengalla Coal Mine is located approximately 4 kilometres (km) west of Muswellbrook in the Upper Hunter Valley (see Figure 1), and approximately 130 km northwest of Newcastle. The mine is owned by Bengalla Mining Company Pty Limited (BMC), a joint venture between Coal & Allied Limited, Wesfarmers Limited, Taiwan Power Company and Mitsui Coal Holdings Pty Limited.

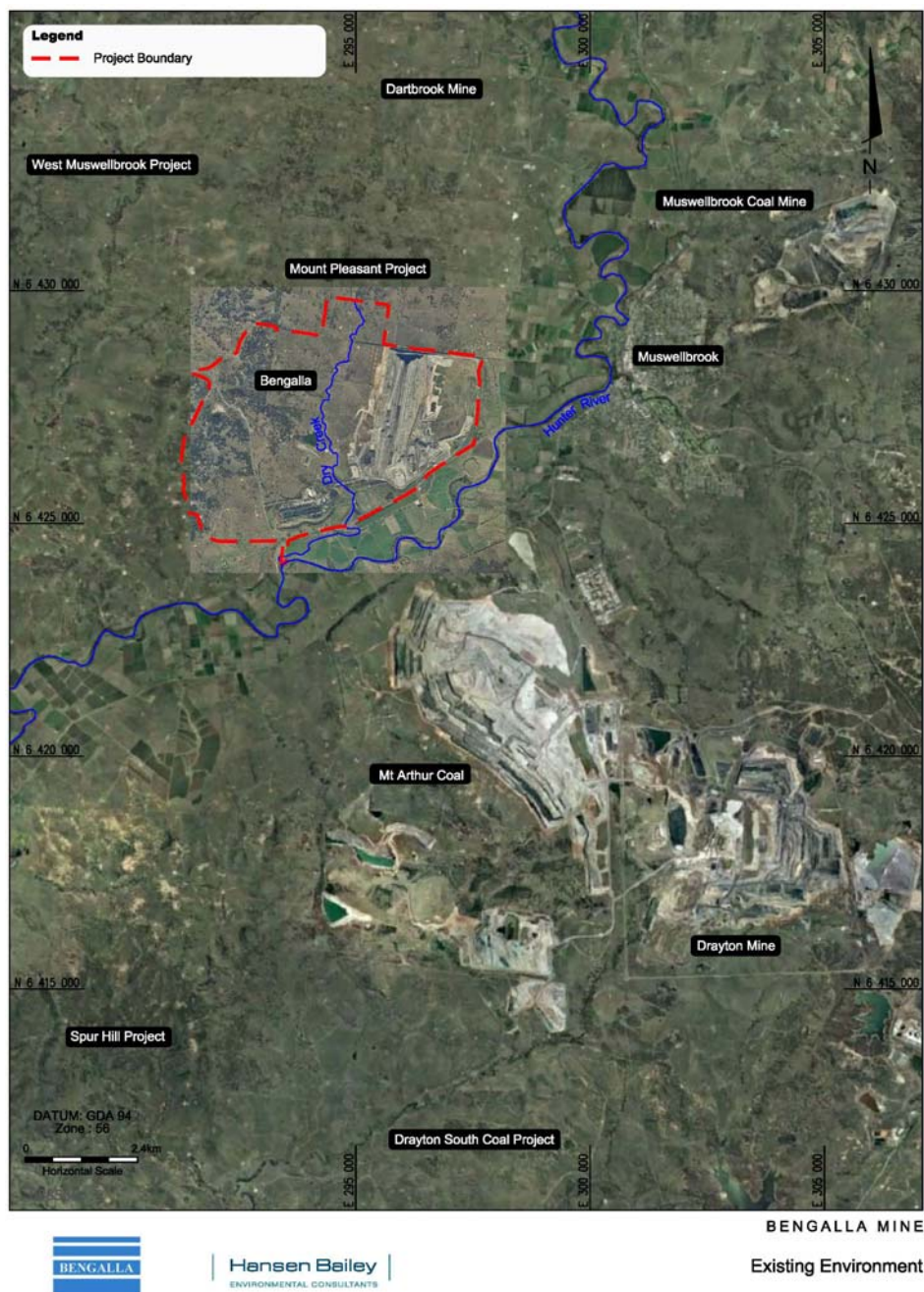


Figure 1: Bengalla Mine and surrounding area

The open cut mine is located in an area dominated by coal mining and agricultural activity (Figure 2), including:

- the Mount Arthur mining complex located to the southeast of the mine, across the Hunter River and Denman Road, and the approved (but not yet operating) Mount Pleasant coal project located directly north of the mine;
- intensive agriculture enterprises on either side of the Hunter River on its alluvial floodplain; and
- extensive areas of grazing land.

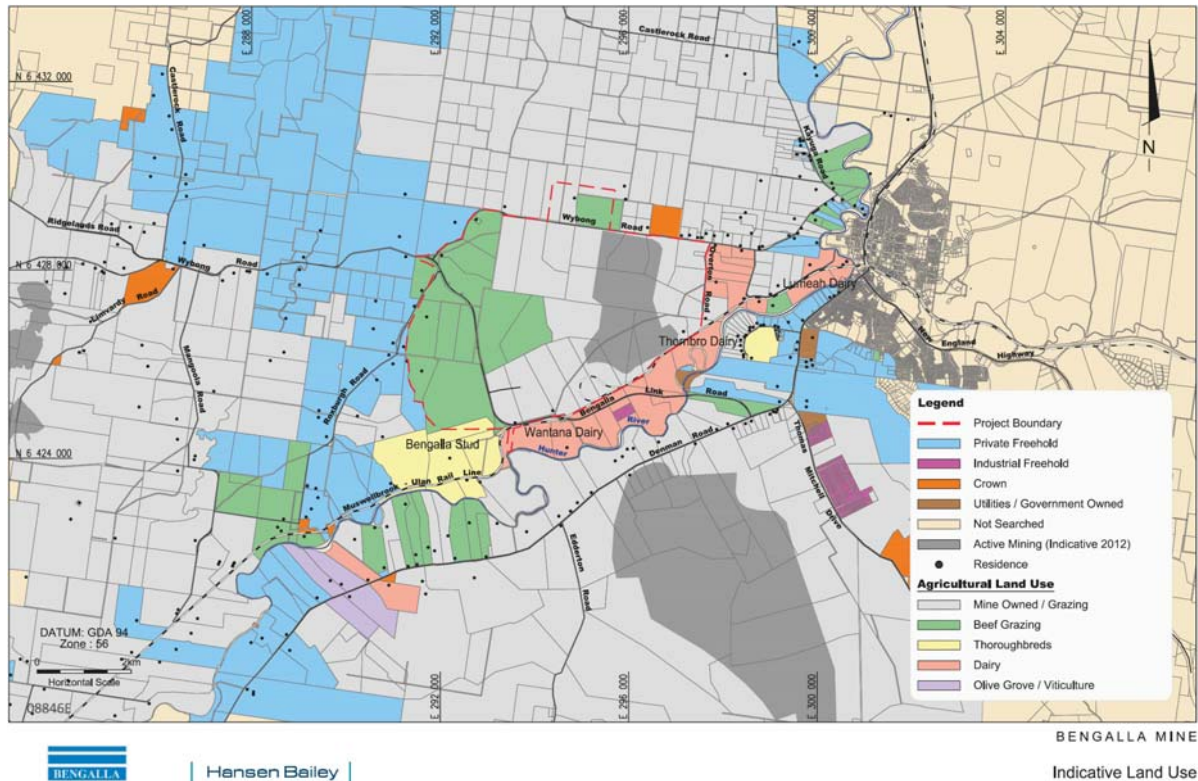


Figure 2: Land use around the Bengalla Mine

The mine was originally approved by the then Minister for Urban Affairs & Planning on 7 August 1995 (DA 211/93), following a Commission of Inquiry. The development consent has been modified 4 times and allows for (see Figure 3):

- the extraction of 146.3 million tonnes (Mt) of run-of-mine (ROM) coal, over a period of 21 years, at a maximum extraction rate of 10.7 Mt per year of ROM coal;
- open pit mining, based on a series of 60 metre (m) wide dragline strips running north south and initially starting in the east and progressing westwards;
- a large overburden area in the east with a maximum allowable height of RL 270 m; and
- a coal handling and preparation plant located in the southwest corner of the project, with adjacent related ROM and clean coal stockpiles.

Bengalla Continuation Project

In September 2013, BMC lodged a development application and Environmental Impact Statement (EIS) for a westward expansion of the mine, to extract an additional 316 Mt of ROM coal, known as the Bengalla Continuation Project. This application is currently being assessed by the Department as a State Significant Development (SSD) under Part 4.1 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

One element of the Bengalla Continuation Project is the construction of new water infrastructure, including relocated mine water storages and the temporary diversion of Dry Creek, an ephemeral drainage line which is to be mined through as part of the mine expansion (see Figure 4). As part of the Dry Creek diversion, BMC proposes to install upstream and downstream water storages (known as CV1 and BMC DW1, respectively) and an underground pipeline to transfer water from CV1, to maintain any flows in Dry Creek downstream of the mine which may occur from time to time.

During the design of the project, BMC has identified the need to obtain further geotechnical information to progress the detailed design of this water infrastructure. Given the location of Dry Creek immediately west of the current mining operations, BMC has also realised that the design of the infrastructure would need to be completed as soon as possible, to ensure the mining operations would be able to continue efficiently if the SSD application is approved.

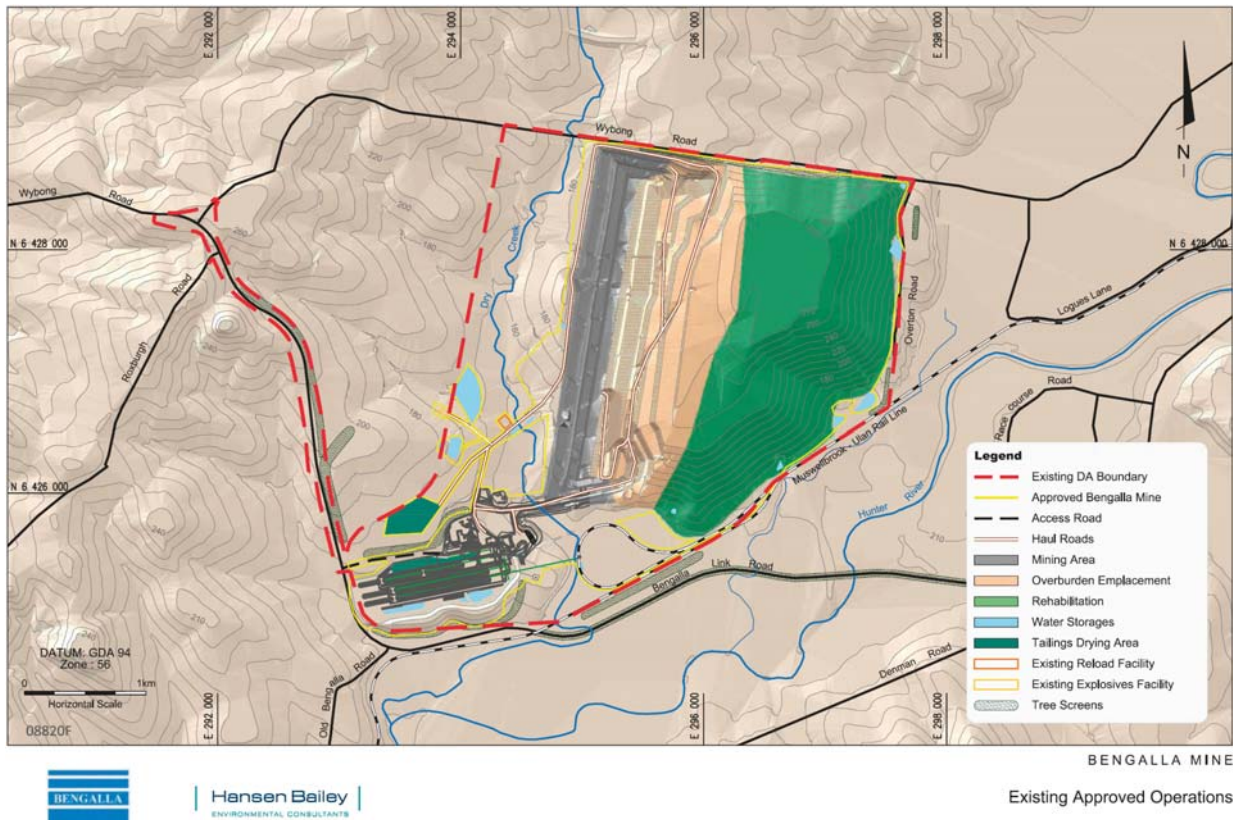


Figure 3: Approved Operations

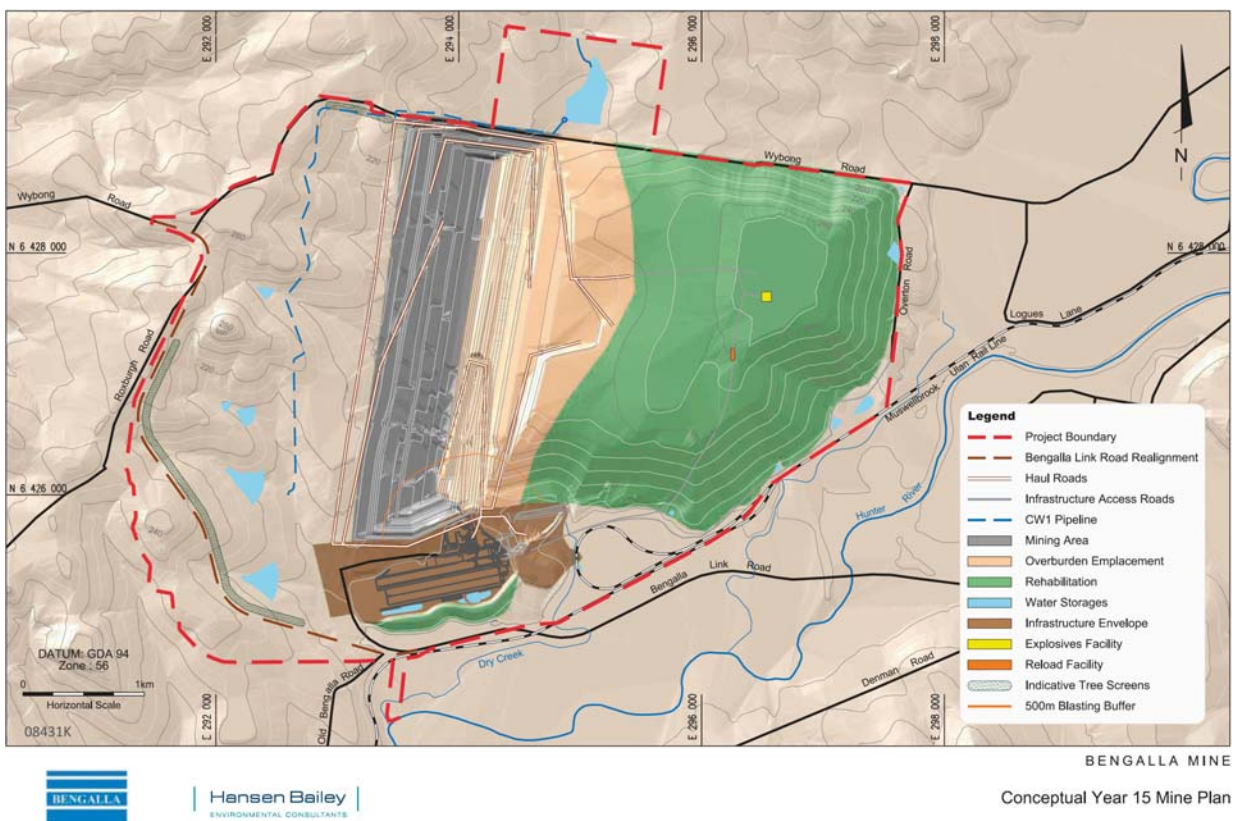


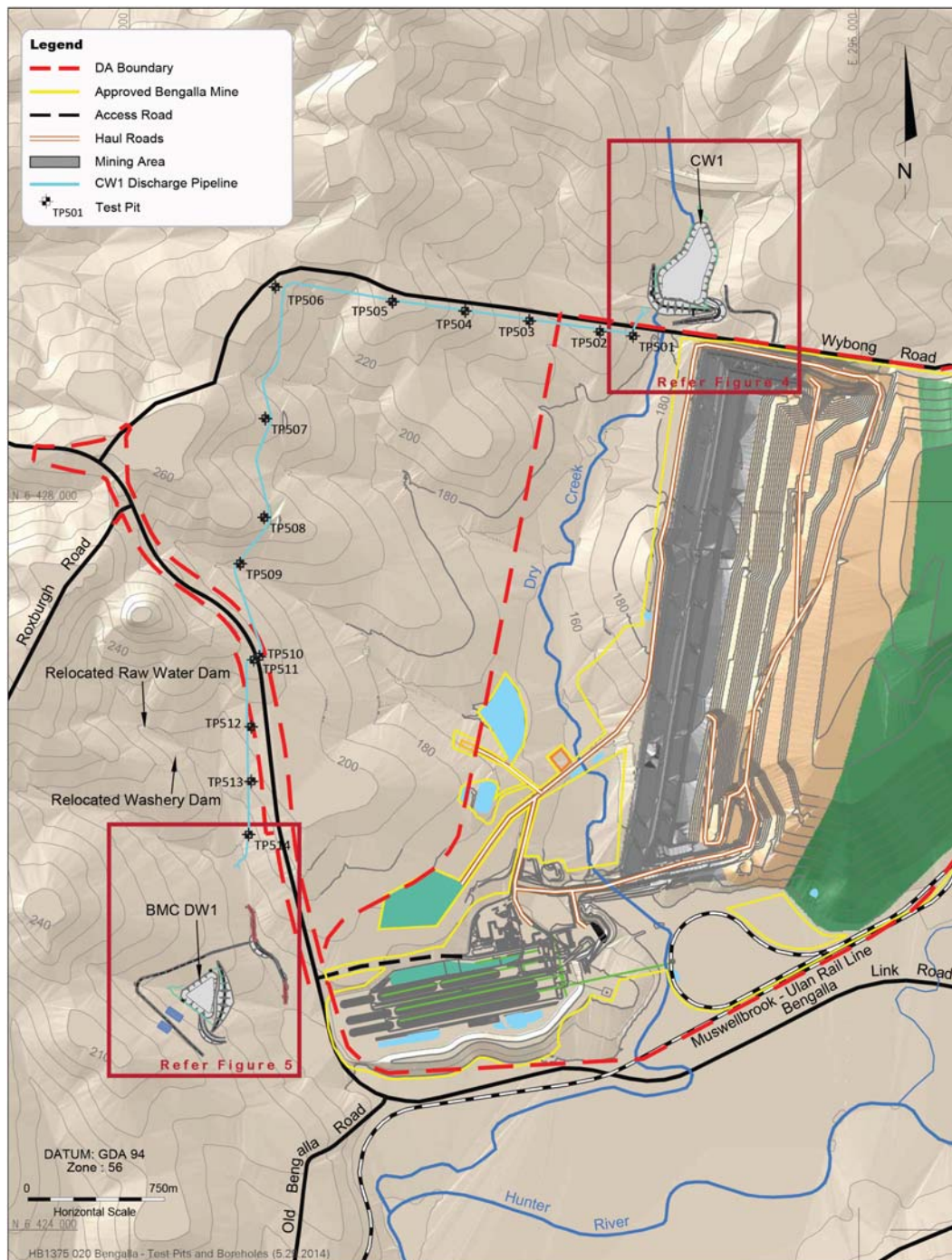
Figure 4: Bengalla Continuation Project – Year 15 Conceptual Layout

2 PROPOSED MODIFICATION

BMC is seeking to modify the development consent for the Bengalla mine under section 75W of the EP&A Act. The proposed modification involves geotechnical investigations consisting of up to 51 test pits and 2 boreholes to inform the detailed design of the water storage and reticulation infrastructure for the Continuation Project. The proposed modification is described in more detail in the Environmental Assessment (EA) supporting the application (see Appendix A).

The investigations would be carried out between 7 am and 5:30 pm, Monday to Friday, and comprise the following (Figure 5):

- test pits and 2 boreholes at the site of the proposed CW1 dam, upstream of Dry Creek;
- test pits within the 3 proposed dam locations associated with the relocation of BMC DW1, and two water storages, the Hunter River Raw Water Dam and Washery Dam; and
- test pits along the proposed pipeline alignment between CW1 and BMC DW1.



Indicative Test Pit and Borehole Locations

Figure 5: Location of proposed investigations

Each test pit would disturb an approximately 16 m² (4 m x 4 m) area, and would be excavated to a depth between 3 and 5 metres. The works associated with the 100 mm diameter boreholes, to be drilled up to 12 m deep, would occur within a 10 m x 10 m area which allows for the drill rig and support vehicle. BMC proposes to rehabilitate the test pits directly following the completion of activities generally to pre disturbance conditions, in accordance with the mine Rehabilitation Management Plan.

3 STATUTORY CONTEXT

3.1 Legislative Framework

Under clause 8J(8)(a) of the *Environmental Planning and Assessment Regulation 2000*, a development consent granted by the Minister under section 101 of the EP&A Act can only be modified under Section 75W of the Act.

Although Part 3A (and Section 75W) of the EP&A Act has since been repealed, savings and transitional provisions in Schedule 6A of the Act mean that Section 75W continues to apply to any such modification. Consequently, Section 75W of the EP&A Act is the appropriate statutory provision under which this modification application must be determined.

The Department considers that the modification application falls within the scope of a request to modify under Section 75W. In this regard, the Department notes that the proposed modification:

- is located within the existing mining lease boundary;
- would not change the mining, processing and transport methods, operating hours, maximum annual production limit or life of the development consent; and
- involves minimal disturbance for the purposes of investigation.

Although the modification process is taking place under Section 75W of the previous Part 3A, any modified consent would remain a development consent under Part 4 of the EP&A Act.

3.2 Approval Authority

The Minister was the consent authority for the original development consent, and is consequently the approval authority for the modification application. However, under the Minister's delegation of 14 September 2011, the Director, Mining Projects may determine the modification application, since BMC declared that it had made no reportable political donations, Council does not object to the proposal and no objections were received from the public.

3.3 Environmental Planning Instruments

The Department has considered the relevant environmental planning instruments in its assessment and is satisfied that none of these instruments substantially govern the carrying out of the proposal.

4 CONSULTATION

After accepting the application the Department referred it to key government agencies for comment and made it publicly available on its website from 10 June 2014.

The Department received submissions on the proposal from 4 public authorities, none of which objected to the modification. A summary of the submissions is provided below, and full copies are provided in Appendix B.

Muswellbrook Shire Council does not object to the proposal.

The **Office of Environment & Heritage** (OEH) noted that there is some uncertainty about the extent of disturbance area for the proposed investigations, and recommended measures to ensure the works avoid impacting Aboriginal heritage sites, and that BMC prepare a detailed report on the actual disturbance of the works, to be considered for potential offsetting should the Continuation Project not proceed.

The **Division of Resources and Energy**, within the Department of Trade & Investment, Regional Infrastructure and Services, does not object to the proposal and recommended that BMC record the pre-existing conditions and progressively rehabilitate the disturbed areas, consistent with recommended rehabilitation objectives.

The **Environment Protection Authority** does not object to the proposal, and noted that the works would need to be managed to ensure no pollution of waters.

The **NSW Office of Water** (NOW) raised no objections to the proposal and noted that any works within 40 m of Dry Creek would need to be carried out in accordance with the *Guidelines for Controlled Activities on Waterfront Land*.

BMC has provided a response to these submissions (see Appendix C). The response addresses the issues raised in the submissions, and includes supplementary information on the proposed mitigation measures to ensure there is no impact on Aboriginal heritage and biodiversity and a commitment to ensure no works are carried out within 40 m of Dry Creek.

5 ASSESSMENT

Based on the issues raised in submissions and its consideration of the proposal, the Department believes that the key issues associated with the proposed modification relate to its potential biodiversity and Aboriginal heritage impacts associated with ground disturbance. Consideration of these issues is presented below.

To ensure minimum disturbance and associated impact, BMC has committed to:

- identify areas containing Aboriginal sites or important biodiversity characteristics, to avoid disturbance of these key areas;
- clearly demarcate the access and the site for the test pit/borehole using appropriate measures (e.g. flagging tape) to ensure that all disturbance is contained within the designated footprint;
- access the sites only along existing tracks where practical, or plan and execute careful navigation across grassland and avoid trees and shrubs where deviation from tracks is required; and
- ensure that there is appropriate supervision by an appropriately qualified person at all times during the geotechnical investigations.

5.1 Biodiversity

The EA estimates the modification would disturb approximately 0.1 ha of land, and these areas were within the land surveyed for the ecological assessment in the Continuation Project EIS. The land has previously been disturbed by grazing, comprising large areas of open grassland and scattered trees interspersed with small remnant patches of open forest and woodland.

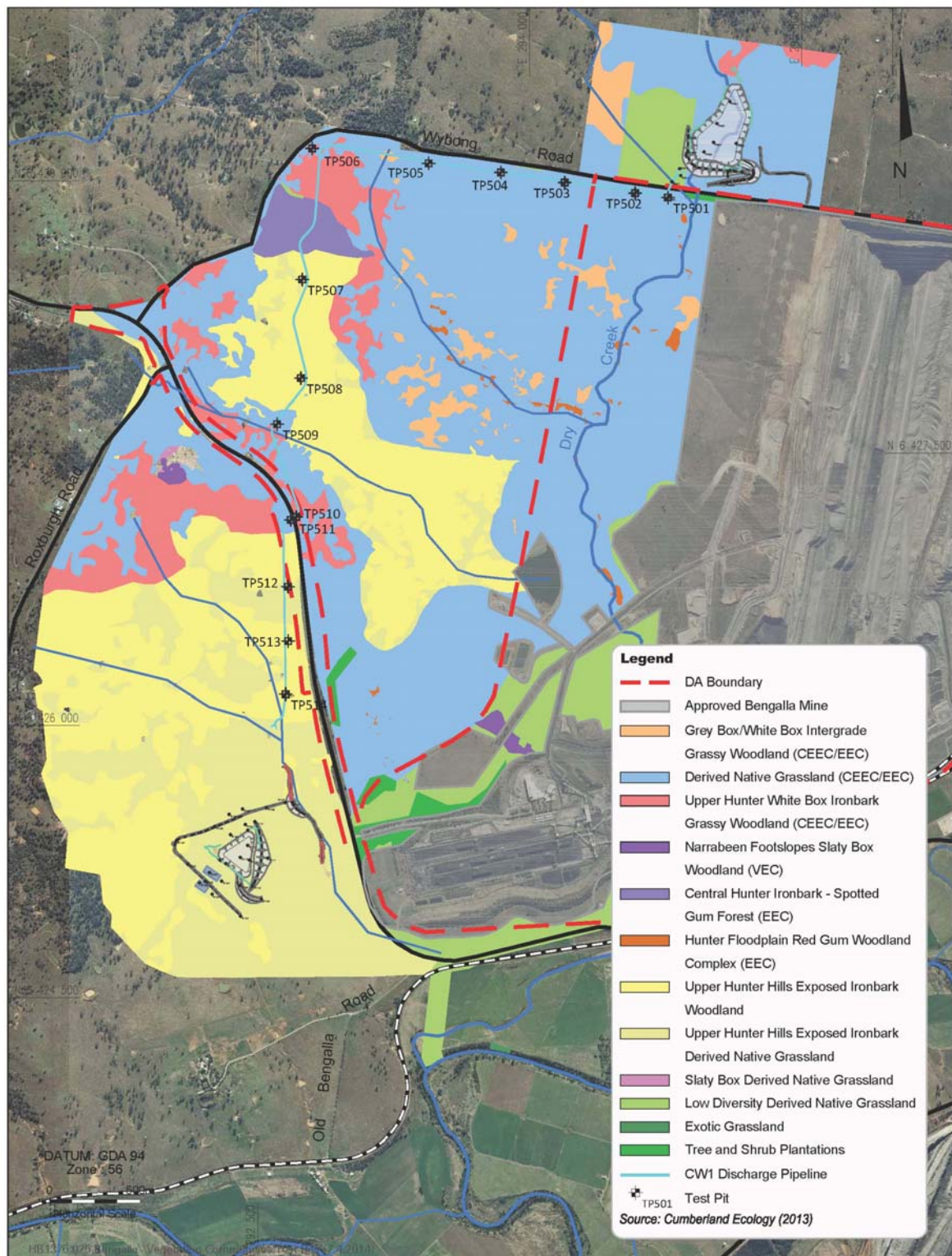
The ecological surveys identified 9 native vegetation communities in the broader study area, including one vulnerable vegetation community and 5 endangered ecological communities (EECs) as defined by the NSW *Threatened Species Conservation Act 1995* (TSC Act). These include the Hunter Floodplain Red Gum Woodland EEC, Central Hunter Ironbark - Spotted Gum Forest Woodland EEC and Box Gum Woodland EEC. The Box Gum Woodland EEC is also listed as Critically Endangered under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The remaining areas of native vegetation in the study area were found to be representative of Derived Native Grassland, Low Diversity Derived Native Grassland and Upper Hunter Exposed Ironbark Woodland.

The EA estimates that the investigations would disturb approximately 0.03 ha of Box Gum Woodland EEC, with the remaining areas consisting of Upper Hunter Exposed Ironbark and/or derived grasslands, neither of which are listed as threatened communities.

Three individuals of *Cymbidium canaliculatum*, listed as an Endangered Population under the TSC Act have previously been identified near the pipeline corridor adjacent to Bengalla and Wybong Roads. However the sites for the geotechnical activities are positioned within areas of previously cleared land and away from these areas, ensuring no TSC or EPBC listed species would be impacted by the investigations.

With the small areas of disturbance proposed by the geotechnical activities and the implementation of the proposed mitigation measures discussed in section 2, the assessment found that no significant impact to any listed EEC or CEEC vegetation communities or species would occur. BMC has also committed to prepare a report which details the actual work undertaken, as sought by the OEH, to confirm the actual nature and extent of the disturbance and rehabilitation. This would also achieve the recommended outcomes sought by DRE.

With the implementation of these avoidance and mitigation measures, the Department is satisfied the geotechnical investigations could be undertaken with minimal impact on the biodiversity values of the area.



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ENVIRONMENTAL CONSULTANTS

BENGALLA MINE
Vegetation Communities & Test Pits

Figure 6: Vegetation Communities & Test Pits

5.2 Aboriginal Heritage

As with biodiversity, the area in the vicinity of the proposed investigations was subject to a survey for Aboriginal archaeology as part of the Continuation Project EIS. The EIS assessment identified 21 low archaeological significance Aboriginal sites within the area of the geotechnical investigations. However, as shown on Figure 7, BMC has selected areas to carry out the investigations to avoid previously identified significant Aboriginal artefacts to ensure no impacts occur to any items/place of Aboriginal cultural significance.

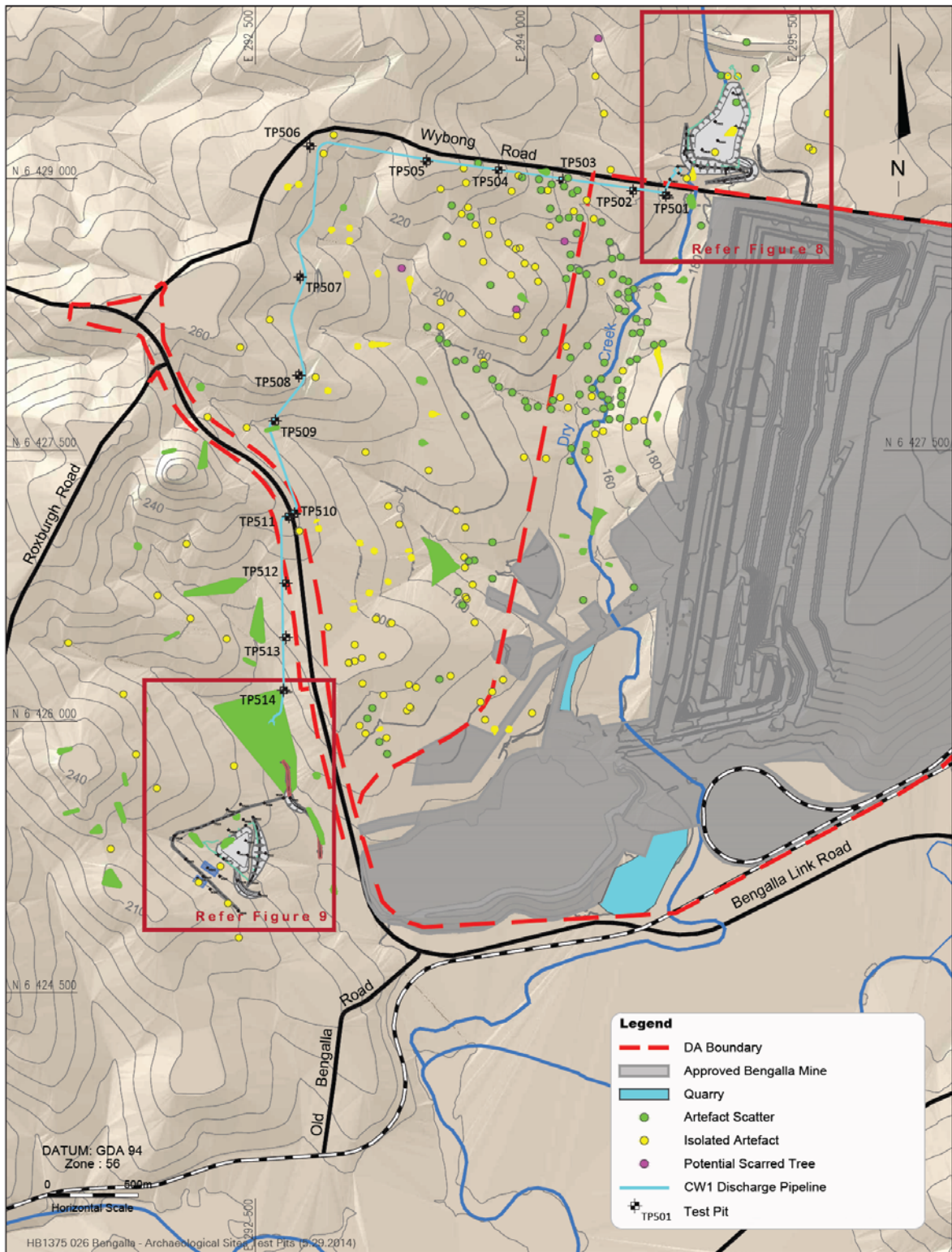


Figure 7: Aboriginal Archaeological Sites and Test Pits

In addition to the measures previously discussed, BMC proposes the following to minimise potential impacts on Aboriginal Heritage:

- a due diligence assessment would be completed by a suitably qualified person prior to disturbance to ensure no impacts would occur to previously identified or unidentified Aboriginal archaeology, and test pits and boreholes would be relocated as required; and
- should an item or place of Aboriginal heritage be identified within a test pit/borehole site, activities would cease, appropriate measures would be taken to ensure no harm to the object or place has occurred. Any Aboriginal heritage material found would be managed in accordance with the mine's existing Aboriginal Cultural Heritage Management Plan.

With the implementation of the proposed measures, particularly the avoidance of impact, the Department is satisfied that the proposed modification would not result in any significant impact on the Aboriginal heritage values of the locality.

5.3 Other Issues

The modification is unlikely to generate any other major environmental impacts and the Department is satisfied that they can be controlled, mitigated or managed through existing conditions of the development consent and the mine's environmental management strategy.

6 RECOMMENDED CONDITIONS

The Department has drafted a recommended notice of modification (see **Tag A**) for the proposal as well as a consolidated version of the development consent as modified (see Appendix D).

These conditions allow BMC to carry out the geotechnical investigations in accordance with the EA and response to submissions. The Department has also taken the opportunity to update the agency names in the project approval.

BNC has reviewed the proposed conditions and has raised no objections.

7 CONCLUSION

The Department has assessed the modification application in accordance with the relevant requirements of the EP&A Act. Based on this assessment, the Department is satisfied that:

- the proposal is consistent with the provisions of the relevant planning instruments;
- the potential environmental impacts are not significant and can be adequately minimised, mitigated and/or managed;
- the site is suitable for the development; and
- the proposed modification can be carried out in a manner that is consistent with the objects of the EP&A Act, including the principles of ecologically sustainable development.

The Department therefore believes that the proposed modification is in the public interest and should be approved, subject to conditions.

8 RECOMMENDATION

It is RECOMMENDED that the Director, Mining Projects:

- **consider** the findings and recommendations of this report;
- **determine** that the proposed modification is within the scope of section 75W of the EP&A Act;
- **approve** the proposed modifications under section 75W of the EP&A Act; and
- **sign** the attached notice of modification (**Tag A**).


Kane Winwood
Team Leader
Mining Projects
11/7/14


David Kitto
Director
Mining Projects

APPENDIX A – Environmental Assessment

APPENDIX B – Submissions

APPENDIX C – Response to Submissions

APPENDIX D – Recommended Consolidated Development Consent