

DARGUES REEF GOLD PROJECT

Section 75W Modification (MP_10_0054 Mod 2)

1 BACKGROUND

Big Island Mining Pty Ltd (BIM), a wholly-owned subsidiary of Dargues Gold Mine Limited owns and operates the Dargues Reef Gold Project (the Project). Dargues Gold Mine Limited is a fully owned subsidiary of Unity Mining Limited, an Australian listed public gold mining and exploration company. The Project is located in Majors Creek, approximately 13 kilometres south of Braidwood in the Palerang local government area (see Figure 1).

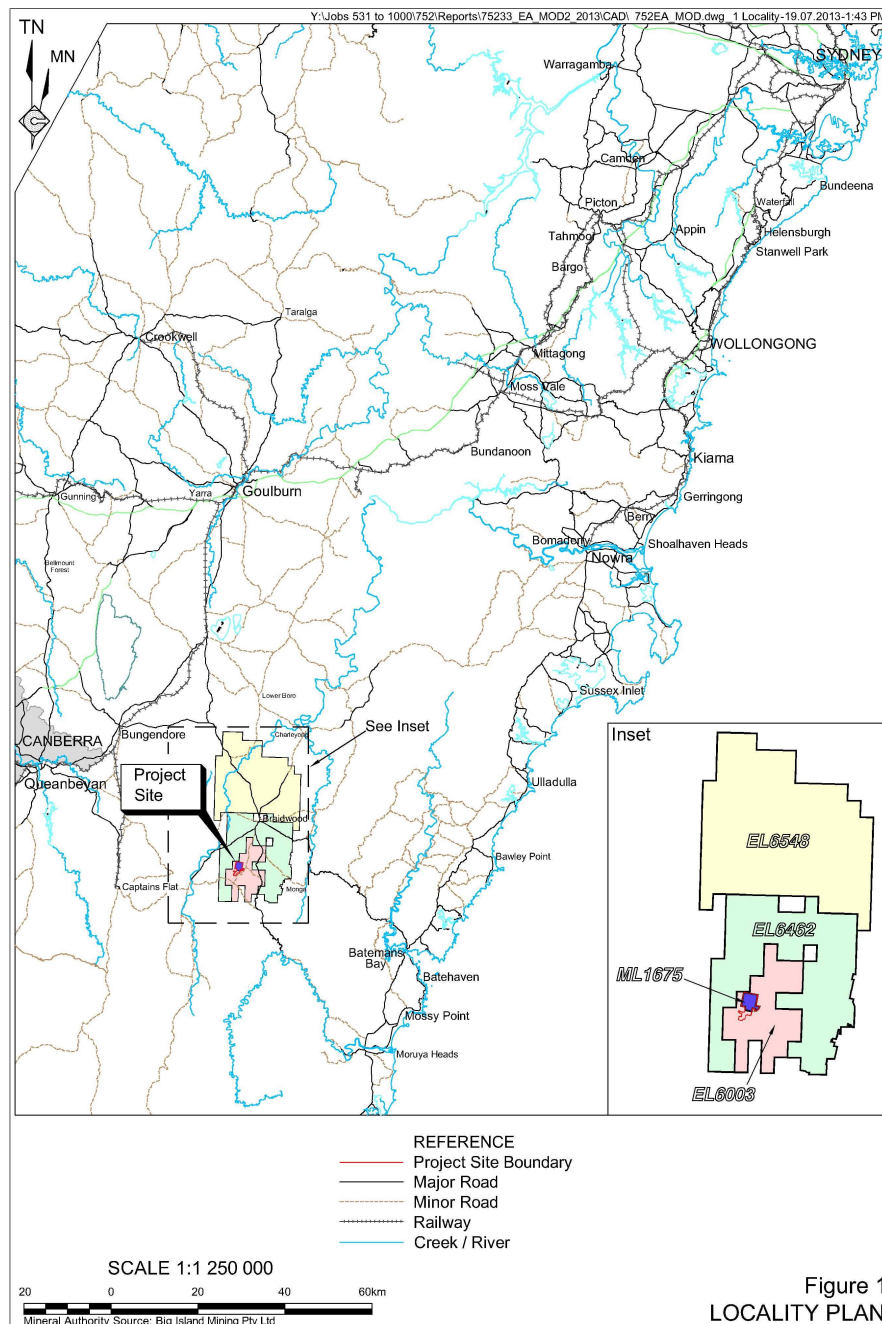


Figure 1: Regional Context

The Project was originally approved by the Planning Assessment Commission (PAC) on 2 September 2011. However, the merits of the PAC's decision were subsequently appealed in the Land and Environment Court. On 8 February 2012, the Court approved the Project by issuing consent orders.

The approval allows BIM to:

- construct and operate an underground gold mine, including ancillary infrastructure;
- extract and process up to 355,000 tonnes of gold ore per annum (tpa) for up to 7 years;
- transport the processed ore from the site via road; and
- progressively rehabilitate the site.

A modification to the original project approval was approved in July 2012 for the use of paste fill as back fill in the underground mining operation.

2 PROPOSED MODIFICATION

In July 2013, BIM lodged a second modification for the Project. The proposed modification is described in detail in the Environmental Assessment (EA) submitted in support of the application (see **Appendix A**).

The proposed modification involves various changes to the approved layout of surface infrastructure at the mine, including:

- changes to the surface layout of the boxcut;
- changes to the shape of the Run-Of-Mine (ROM) Pad and Processing Plant Area;
- relocation of the core yard, workshop, laydown yard and transmission line;
- establishment of a separate Office and Core Processing Area and Mine Infrastructure Area;
- relocation and enlargement of the Mine Water Settlement Dam;
- relocation of the Site Access Road and Tailings Storage Facility Access Road; and
- other ancillary changes to mining infrastructure.

The proposed changes to the layout of surface infrastructure have come about as a result of the detailed design process, and do not involve any changes to the approved mining operations. The objectives of the modification are to ensure that the detailed design/as constructed layout conforms with the approved layout and to reduce the environmental impacts of the Project as far as practicable.

The existing layout and surrounds is shown in Figure 2, and a comparison of the approved and proposed layout is shown in Figure 3. It can be seen from Figure 3 that the majority of the revised layout would be located within the originally approved footprint, but that there would be some areas of additional disturbance.

3 STATUTORY CONTEXT

3.1 Section 75W

The Project was approved under the former Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act). Although Part 3A was repealed on 11 October 2011, the Project remains a "transitional Part 3A project" under Schedule 6A of the EP&A Act, and therefore the proposed modification can be considered under Section 75W of the EP&A Act.

The Department is satisfied that the application can be considered as a modification to the original project approval as:

- it would not change the essential function of the mine for which approval was originally granted;
- it would not change the mining, processing and transport methods, operating hours, or life of the approved mine;
- no additional employees are required;
- it does not change the approved maximum rates of ore extraction;
- it involves relatively minor changes to the approved surface infrastructure; and
- the impacts would generally be similar to the approved project.

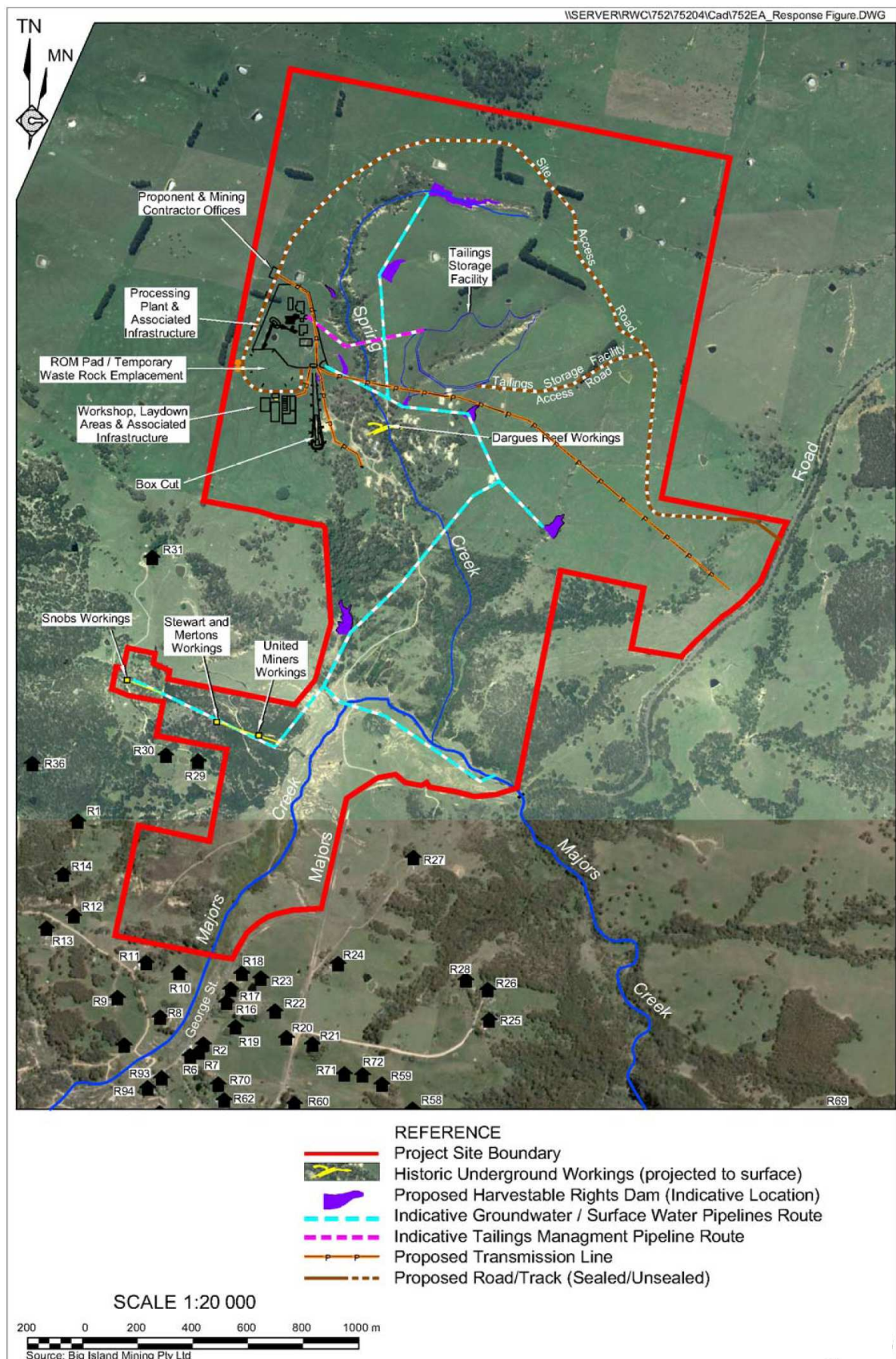


Figure 2: Approved Project Layout and Local Context

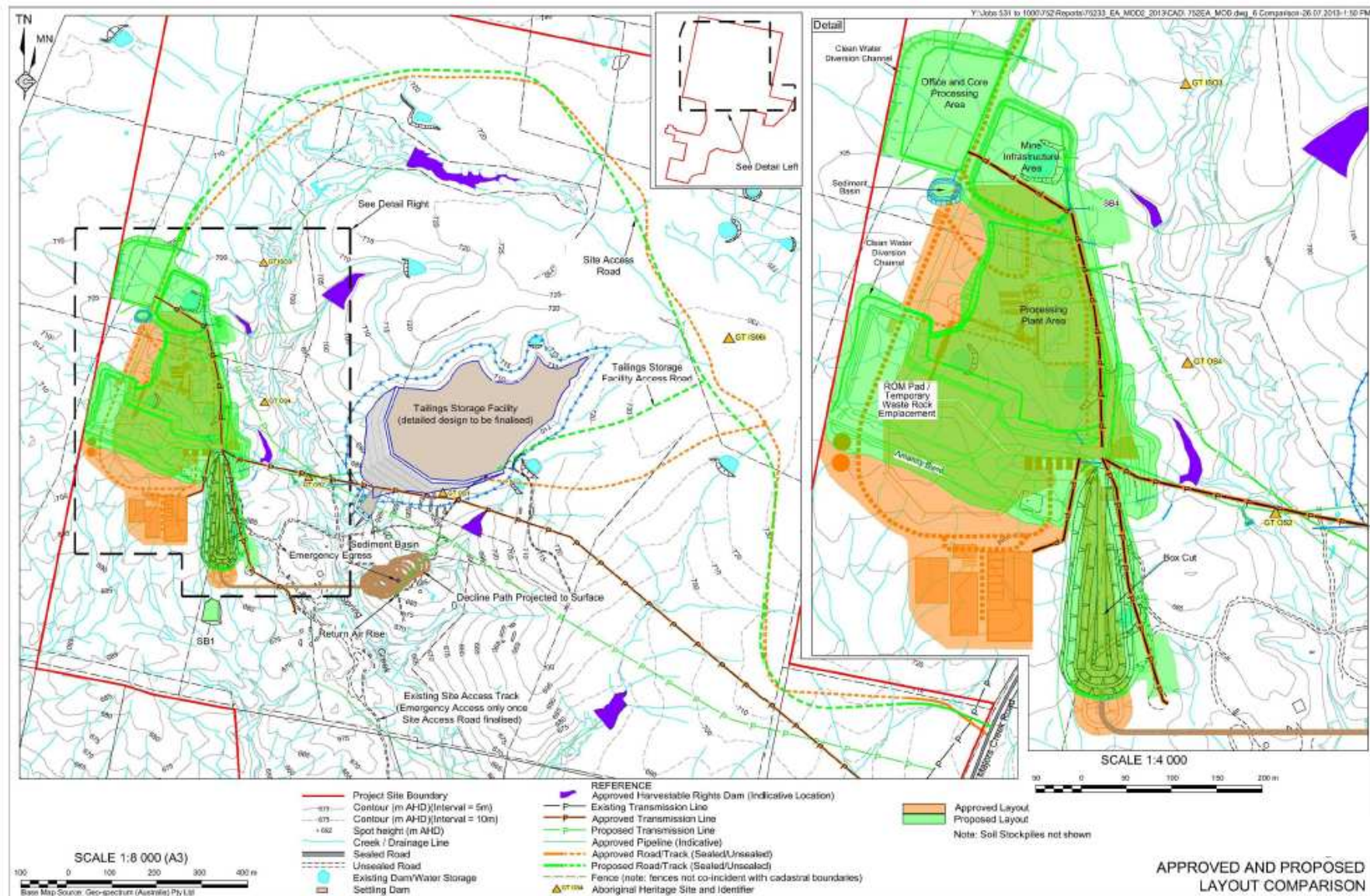


Figure 3: Comparison of Approved and Proposed Project Layout

3.2 Approval Authority

The Minister for Planning and Infrastructure is the approval authority for the modification application. However, under the Minister's delegation of 27 February 2013, the Executive Director, Development Assessment Systems and Approvals may determine the application on behalf of the Minister as:

- less than 25 submissions have been received that are in the nature of an objection;
- BIM has made no reportable political donations; and
- Palerang Council has not objected to the proposed modification.

3.3 Environmental Planning Instruments

In accordance with Section 75I of the EP&A Act, the Department has considered the proposal against the relevant environmental planning instruments and is satisfied that none of these instruments substantially govern the carrying out of the proposal.

4 CONSULTATION

After receiving BIM's request and the associated EA for the proposed modification, the Department:

- made the EA publically available from 7 to 28 August 2013;
- referred the EA to the relevant government agencies for comment; and
- advertised the exhibition in the Braidwood Times, Bateman's Bay Post and the Canberra Times newspapers.

The Department received a total of 30 submissions on the proposed modification, including:

- 6 from government agencies;
- 4 from special interest groups; and
- 20 from the general public.

Submissions are provided in full in **Appendix B**. A summary of the issues raised in submissions is provided below.

4.1 Government Agencies

All of the government agencies consulted did not object to the proposed modification. However a number of concerns were raised and recommendations provided, as detailed below.

- The **Environment Protection Authority (EPA)** recommended that revised noise modelling be calibrated against actual monitoring measurements rather than parameters used in the 2010 noise modelling, and that diesel be stored and dispensed in accordance with relevant Australian Standards.
- The **Office of Environment and Heritage (OEH)** raised concerns in relation to the adequacy of the 2010 Aboriginal Heritage Assessment, particularly the lack of clarity regarding which areas were assessed in the original survey. In addition, OEH raised concerns regarding the impacts on Aboriginal sites during construction.
- The **NSW Office of Water (NOW)** requested clarification regarding the consistency of the proposed changes to the surface water management system with the Maximum Harvestable Rights Dam Capacity for the site. Furthermore, NOW recommended that BIM undertake a review of the Water Management Plan to ensure that changes to the site layout are adequately captured.
- The **Division of Resources and Energy (DRE)** noted that within one month of the determination of the modification, an amended Mining Operations Plan must be submitted for approval.
- **Eurobodalla Shire Council (ESC)** strongly objected to BIM's request to modify Condition 2(2) to allow the Project to be undertaken '*generally* in accordance with the EA' rather than 'in accordance with the EA'. ESC believed this request was inconsistent with the purpose of the modification which is designed to regularise inconsistencies of the site layout with the original approval. ESC also recommended that the Water Management be updated to reflect the modified site layout.

4.2 Special Interest Group and Public Submissions

The Department received 4 special interest group submissions and 20 public submissions, of which 22 objected to the proposed modification. The majority of submissions were received from the nearby towns of Majors Creek, Braidwood and Araluen. Several submissions were received from slightly further afield, including Canberra, Sydney and towns on the NSW South Coast. There were also three submissions from interstate.

A summary of the key issues raised by each group is provided in Table 1 below.

Table 1 – Key issues raised in public submissions

Aspect	Issue
Water Pollution	<ul style="list-style-type: none">Concerns were raised about the water pollution incidents at the site over the last few months during construction, and the impacts on aquatic ecosystems and community water supply.Some submissions called for the approval of the proposed modification to be delayed until further soil and water testing is conducted and the EPA Pollution Reduction Program is fully implemented on the site.
Noise	<ul style="list-style-type: none">Concerns were raised about noise impacts during construction and the lack of noise monitoring.
Compliance	<ul style="list-style-type: none">Concerns were raised about the poor environmental performance of BIM and lack of compliance with the existing conditions of approval.The Community Consultative Committee did not support the proposal to alter the conditions to '<i>generally</i>' in accordance with the EA.
Consultation	<ul style="list-style-type: none">Concerns were raised about the lack of consultation and notification of local residents about the proposed modification.

4.3 Response to Submissions

BIM has provided a response to the issues raised in these submissions (see **Appendix C**). The Department has considered all issues in the submissions and BIM's response to these issues in its assessment below.

5 ASSESSMENT

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

- the EA for the original project;
- the existing conditions of approval;
- the EA for the modification, submissions and Response to Submissions;
- relevant environmental planning instruments, policies and guidelines; and
- the objects of the EP&A Act.

Based on its assessment, the Department is satisfied that the proposed modification would not significantly alter the nature and scale of impacts of the approved project, and in some instances would actually reduce the impacts of the approved project. However, the Department believes there would be some minor changes to the impacts of the project as a result of the proposed modification, and these have been considered in detail below.

5.1 Noise

The noise environment in the area is typical of a quiet rural area with relatively low background noise, especially at night. There are no residential receivers immediately adjacent to the site, and the original assessment predicted that there would be no exceedances of the applicable noise criteria. The majority of the receivers live more than 2 km south of the site in the village of Majors Creek, although there is one residence approximately 1 km to the south (see Figure 3).

The EA for the proposed modification includes a revised noise assessment for the site that considers the proposed changes to the layout during both construction and operation.

The assessment found there would be some minor increases and decreases in noise levels at surrounding receivers, but that in all instances the noise from the project would remain below the existing noise limit of 35dB(A) $L_{Aeq(15min)}$.

Noise monitoring undertaken earlier in the year indicated that noise was exceeding the approval limits at times, however recent noise monitoring in August 2013 indicated that the project is currently complying with the noise criteria in the project approval at all residences. It is important to note that the conditions require real-time unattended noise monitoring to be undertaken at the site, and under the approved noise management plan, a noise trigger level of 33 dB(A) has been set. If this level is reached, operations on the site would need to be reviewed, and if necessary modified, to ensure compliance with the noise criteria in the consent. The Department is therefore satisfied that the existing noise monitoring arrangements are sufficiently robust to ensure ongoing compliance at the site.

The EPA raised concerns about the lack of calibration of the revised noise modelling with noise monitoring from the site. However, the Department notes that the noise monitoring conducted to date has been during construction, and does not provide a sound basis to calibrate the noise model at this stage. Furthermore, the proposed modification is unlikely to appreciably alter the noise envelope of the project, and is likely to reduce noise impacts as some of the components of the project would be located further away from the residents (refer to Figure 2).

Overall, the Department is satisfied that the revised noise assessment undertaken for the proposed modification provides a credible assessment of the likely impacts of the project, and that the proposed modification would not result in significant impacts on the amenity of the local residents. The Department is also satisfied that the existing conditions of approval, which require the implementation of a detailed Noise Management Plan and a Noise Monitoring Program, provide a robust basis for the management, monitoring and enforcement of noise associated with the Project.

5.2 Surface Water

Many of the submissions on the proposed modification raised concerns about previous incidents of water pollution from the site during construction. The Department is aware of these incidents, but notes that these matters are being addressed by the EPA under the *Protection of the Environment Operations Act 1997*. In this regard, the Department is satisfied that BIM has undertaken a number of revisions to its existing Sediment and Erosion Control Plan to minimise the risks of further incidents occurring, in consultation with the Department and the EPA.

In regard to the proposed modification, the Department is satisfied that the changes to the layout of the surface facilities would not appreciably increase the risk of off-site pollution occurring provided the additional areas of disturbance are adequately incorporated into the Sediment and Erosion Control Plan and the Water Management Plan for the site. To this end, the Department notes that existing conditions of approval require BIM to update management plans following any modification to the approval.

In regards to harvestable rights, the Department notes that the proposed modification involves the use of one of the harvestable rights surface water storage dams at the toe of the Tailings Storage Facility as a sedimentation basin and seepage collection pond. Concerns were raised by NOW about the ability of BIM to maintain its compensatory water flows into Spring Creek with the removal of this dam. To address this, BIM has marginally resized the other seven approved surface water storage dams on the site. This ensures that the total water take on the site remains the same, and that the compensatory water flows from the site can be maintained. Furthermore, the Department

believes the original location of this dam at the toe of the Tailings Storage Facility was not the most appropriate. The proposal to use this dam to collect dirty water during the construction of the Tailings Storage Facility, and to collect seepage from the dam during operations, is far more appropriate.

The EPA raised concerns about the increase in diesel storage on the site from 50,000 to 68,000 L, and recommended that it be stored and dispensed in accordance with the relevant Australian Standard. In response, BIM reiterated its commitment to comply with the *AS 1940:2004 The storage and handling of flammable and combustible liquids* as documented in the original EA for the project.

Overall, the Department is satisfied that the proposed modification would not result in any significant impacts on water resources, and that the management, monitoring and contingency measures in the existing approval are sufficient to ensure this is the case.

5.3 Flora & Fauna

The site is largely cleared and dominated by disturbed land, pastures, weeds and exotic species. The EA indicated that the proposed modification would result in an additional 2.1 hectares of disturbance, which would almost entirely occur in areas of grassland with a mix of native and exotic species. The exception is the vent and emergency exit for the underground workings, which would be located in an area mapped as Fragmented Ribbon Gum Forest. However, BIM has indicated that this infrastructure would be located in a disturbed area, and measures would be put in place to ensure no trees are removed during construction.

The Department is satisfied that the proposed changes to the layout of surface infrastructure would not result in any significant impacts on the ecology of the site. As such, the Department is satisfied with the proposed modification to the Statement of Commitments to include BIM's commitment to avoid the removal of any trees associated with the Fragmented Ribbon Gum Forest.

5.4 Visual Amenity

The project is located in a rural area, and mine infrastructure would be visible from a number of residences to the south-east, south and south-west, as well as users of Majors Creek Road. Overall, the proposed changes involve moving components of the surface infrastructure at the mine further away from local residents, and hence reducing the visual impacts of the project.

However, the extension and relocation of the amenity bund to the north and west has meant that the height of the bund has been reduced by five metres. The changes to the location of the bund increase the effectiveness of noise attenuation from the processing area, but marginally increase the visibility of the tallest components of the processing plant from some vantage points. In particular, the revised sight lines in the assessment indicate that a number of residents would have a distant view (at least 2 km) of the upper few metres of the concrete silo. To address this, BIM is proposing to construct the silo (and other components of the processing plant) in non-reflective materials and paint it with neutral colours that would blend with the surrounding landscape.

The Department is satisfied that the proposed modification would generally result in a reduction in visual impacts compared with the approved project. The Department also notes that existing conditions require BIM to minimise the visual impacts of the project, and implement additional visual mitigation measures (e.g. tree screening) at any residence that has direct views of the mine, upon request. Consequently, the Department is satisfied that the existing conditions adequately protect the visual amenity of potentially affected residents.

5.5 Aboriginal Heritage

Detailed Aboriginal heritage surveys were conducted in the project area in 2010, and the current assessment indicates that the changes associated with the proposed modification would not result in any additional disturbance of known Aboriginal heritage sites.

OEH raised concerns about the adequacy of the survey undertaken in 2010. However, the Department notes that OEH did not raise any concerns about the original assessment for the project at the time this was assessed. Furthermore, the Department is satisfied that the 2010 survey was undertaken in accordance with relevant OEH guidelines, and covered the areas of additional disturbance associated with this modification.

To address the concerns raised by OEH regarding the protection of a number of Aboriginal sites previously identified within the project area, BIM recently established an exclusion zone and appropriate fencing/signage around each of these sites to ensure they are protected during construction.

Overall, the Department is satisfied that the risk of any significant impacts associated with the proposed modification on Aboriginal heritage is low. The Department also notes that the existing conditions require BIM to implement a detailed Aboriginal Heritage Management Plan for the site, which includes a protocol for identifying and managing any unidentified Aboriginal heritage items that may be disturbed during construction. Accordingly, the Department is satisfied that no additional conditions are necessary to manage, monitor and protect Aboriginal heritage on the site.

5.6 Other Issues

The Department has considered other potential impacts of the proposed modification (e.g. air quality, groundwater, and transport), and is satisfied that none of these issues would result in any material change to the impacts associated with the existing project. Consequently, the Department is satisfied that no further changes to the existing conditions of approval are warranted.

6 RECOMMENDED CONDITIONS

The Department has drafted a recommended notice of modification (see **Appendix D**) for the proposed modification as well as a consolidated version of the project approval as modified (see **Appendix E**). In summary, these revisions include:

- a range of changes to the definitions contained in the project approval to provide clarity in the interpretation of the existing conditions;
- some minor changes to the Statement of Commitments, including a commitment to avoid removal of trees associated with the Ribbon Gum Forest community during construction; and
- various amended figures to reflect the changes to the layout of surface infrastructure at the mine.

The Department has also inserted the word '*generally* in accordance with' in the modified approval. This is consistent with contemporary mining approvals in NSW, and recognises the complex nature of large mining projects where a certain level of flexibility in the layout of the mine within the approved footprint is reasonable and appropriate. The Department notes that any substantial changes that are likely to alter the nature or scale of the assessed impacts of the approved project would require a modification to the approval.

BIM has reviewed the proposed modification to the project approval, and has raised no objections.

7 CONCLUSION

The Department has assessed the modification application and associated EA in accordance with the relevant requirements of the EP&A Act. Based on this assessment, the Department is satisfied that the proposed modification would not result in any material increase in the environment impacts of the mine, and in some instances the impacts of the modified project would be less than those of the approved project. The Department is also satisfied that, apart from some minor changes, the existing conditions of approval provide an appropriate level of protection to the environment and to the local community.

The Department also notes that the proposed changes to the project would allow BIM to proceed with the construction of the project, and facilitate the economic benefits of the project, including the creation of up to 100 jobs and more than \$40 million in capital investment.

Overall, the Department is satisfied that the benefits of the proposed modification substantially outweigh any residual impacts. Consequently, the Department believes that the proposed modification is in the public interest, and should be approved.


8 RECOMMENDATION

It is RECOMMENDED that the Executive Director, Development Assessment Systems and Approvals, as a delegate to the Minister for Planning and Infrastructure:

- **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 application to modify the project approval, subject to conditions, under Section 75W of the EP&A Act; and
- **sign** the attached notice of modification (**Appendix D**).


16.10.13
Mike Young
Manager
Mining Projects


16/10/13
David Kitto
Director
Mining and Industry


24.10.13
Chris Wilson
Executive Director
Development Assessment Systems and Approvals

APPENDIX A: ENVIRONMENTAL ASSESSMENT

The EA can be viewed on the Department's website at the following link:

http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=6068

APPENDIX B: SUBMISSIONS

APPENDIX C: RESPONSE TO SUBMISSIONS

The Response to Submissions can be viewed on the Department's website at the following link:
http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=6068

APPENDIX D: NOTICE OF MODIFICATION

APPENDIX E: CONSOLIDATED PROJECT APPROVAL