

Figure 1: Regional context of the Tritton Copper Mine

The mine is located in a sparsely populated rural area. Four privately-owned residences are located within approximately 6 km of the mine, with the nearest located approximately 4 km - southeast.

Tritton also operates the Girilambone copper mine located approximately 20 km to the north and has a number of other prospects in the region including the Kurrajong, Budgery and Carters prospects and the proposed Avoca Tank Mine (see figure 1).

The mine operates under a development consent granted by the then Minister for Urban Affairs and Planning on 1 September 1999 (DA 41/98). This consent has been modified on four occasions, and allows:

- the extraction of approximately 10 million tonnes per annum (Mtpa) of copper ore;
- processing ore on site at the Tritton Processing Plant, to produce copper concentrate;
- up to 1 Mtpa of copper ore to be imported for processing from Tritton's Girilambone copper mine;
- transporting copper concentrate to the Hermidale rail siding by road, and onward railing to Port Kembla for export.

Tritton is also permitted to develop a non-acid forming (NAF) waste rock emplacement area. The emplacement area is located in the mine's infrastructure area (see Figure 2), and is approved to a maximum height of 10 metres (m) above the land surface.

The mine currently provides employment for approximately 300 people.

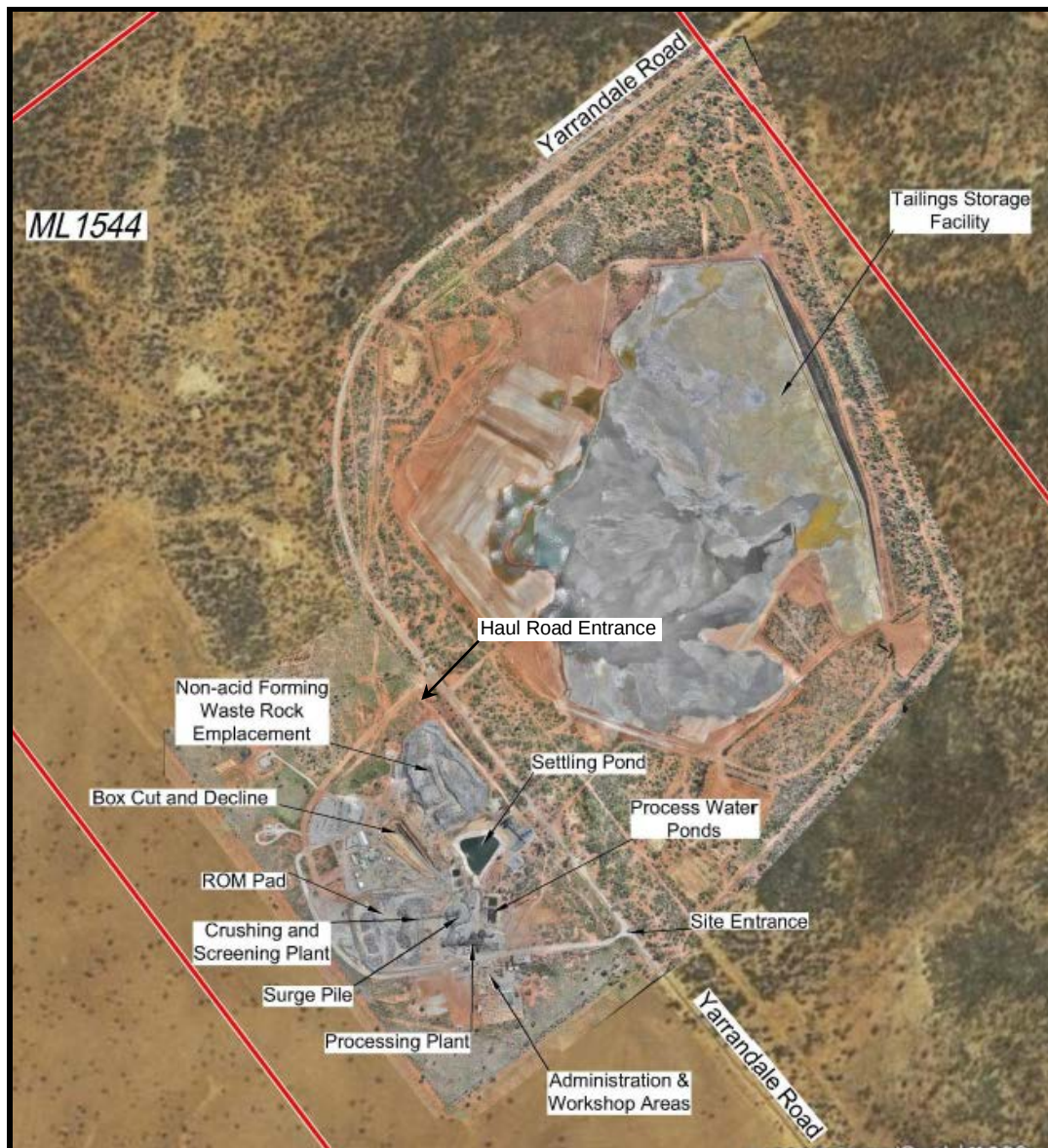


Figure 2: Tritton Copper Mine Infrastructure Area

2 PROPOSED MODIFICATION

Tritton is proposing to further modify its development consent under Section 75W of the *Environmental Planning and Assessment Act 1979* (EP&A Act). The proposed modification (DA41/98 MOD 5) involves:

- increasing the maximum height of the Waste Rock Emplacement from 10 m to 20 m above the natural surface;
- allowing ore material from other nearby deposits to be received and processed at the mine; and
- transporting up to 30,000 tonnes per annum of crushed waste rock to external customers.

Waste Rock Emplacement

Two types of waste rock are generated at the mine, potentially acid forming (PAF) waste rock and NAF waste rock.

PAF waste rock is emplaced into completed underground mining stopes, which minimises the exposure of this material to the air and ensures limited potential to generate acidic leachate. Cemented pastefill is also used to backfill completed stopes, providing stability to the underground workings and allowing extraction of the ore that would otherwise be required to stabilise the workings.

NAF waste rock is placed into the approved Waste Rock Emplacement (see Figure 2). Tritton preferentially transports NAF waste rock to the surface to maximise the use of PAF material or pastefill in the completed stopes.

However, increasing the use of pastefill in the underground workings has resulted in more NAF waste rock requiring surface emplacement. Tritton is therefore seeking to increase capacity of its NAF waste rock emplacement, by increasing the allowable final height of the emplacement from 10 m to 20 m above the ground surface. This increase would allow an additional 350,000 m³ of NAF waste rock to be emplaced, sufficient for a further approximately two years of mining operations. Further emplacement of NAF waste rock following this period would be considered in conjunction with a proposed review of future mining operations during the two year period.

The footprint of the existing emplacement would not increase (see Figure 3).

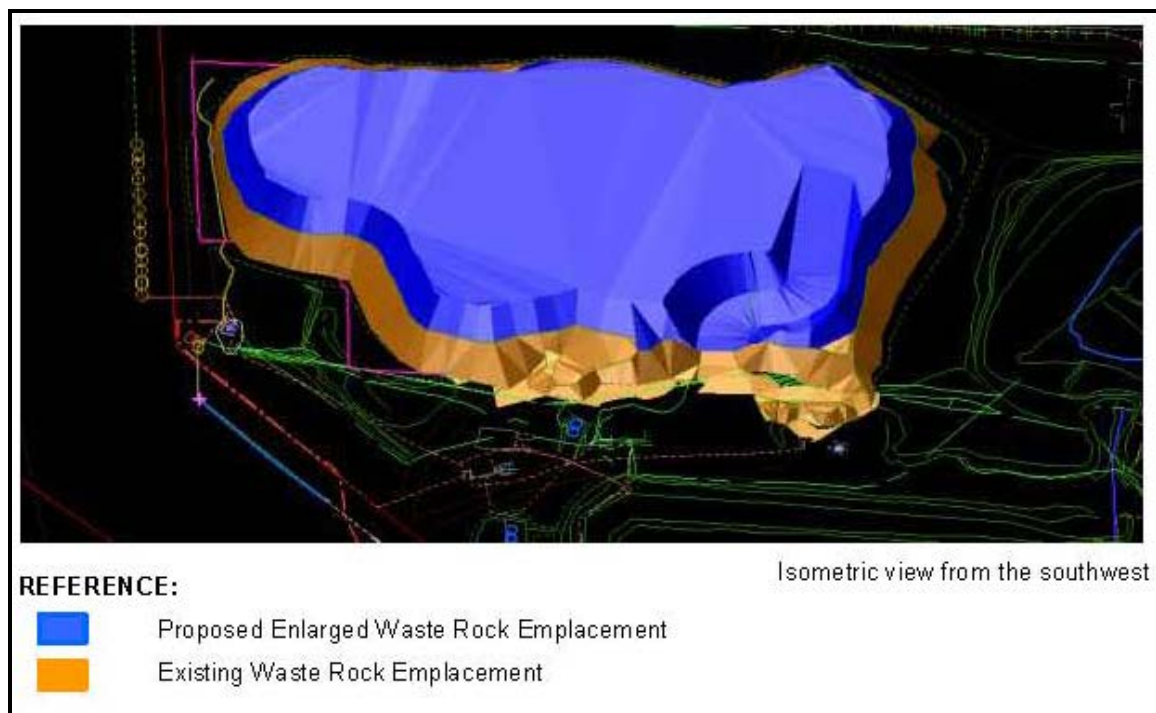


Figure 3: Proposed Enlarged Waste Rock Emplacement

Receipt and Processing of Ore from Nearby Operations

The current consent allows up to 1 Mtpa of ore to be received at the mine from Tritton's Girilambone Mine. Tritton has requested the ability to receive ore from the proposed Avoca Tank Copper Mine, and from other identified copper deposits near the mine (see Figure 1), as they become operational. This is in

effect an administrative change affecting only the sources of the material, as the receipt of ore from these operations would not affect the maximum approved rate of 1 Mtpa allowed to be imported to the mine. The Department notes that Tritton is yet to lodge an application with Bogan Shire Council for the Avoca Tank Mine.

Crushed Waste Rock Exportation

Tritton crushes some of its NAF waste rock to create road base material, which it uses for its internal roads and underground roads. Bogan Shire Council has approached Tritton to supply it with crushed waste rock for road maintenance uses and other civil construction uses. Tritton has requested the opportunity to transport up to 30,000 tonnes per annum of crushed waste rock to Council and other external customers.

3 STATUTORY CONTEXT

3.1 Section 75 W

The application is assessed under Section 75W of the EP&A Act. Under Clause 8J(8)(c) of the *Environmental Planning and Assessment Regulation 2000*, a State significant development consent which was granted by the Minister under Part 4 of the EP&A Act before 1 August 2005 is considered for the purposes of modification to be an approval under Part 3A of the EP&A Act..

Part 3A was repealed on 1 October 2011. However Schedule 6A of the EP&A Act classifies the Tritton Copper Mine as a 'transitional' Part 3A project, and Section 75W still applies to development consent modifications.

The Department is satisfied that the proposed modification can be characterised as a modification to the existing consent, as it would:

- not alter the approved mining footprint or the approved mining methods;
- not increase the approved maximum production and processing rates; and
- not significantly increase the approved environmental impacts of the mine.

3.2 Approval Authority

The Minister for Urban Affairs and Planning was the consent authority for the original development application, and therefore the Minister for Planning is the approval authority for this modification application. However, the Director, Resources Assessments may determine the application under the Minister's delegation of 16 February 2015, as Tritton has not made reportable political donations, Bogan Shire Council (Council) did not object, and as less than 10 public objections were received.

4 CONSULTATION

4.1 Exhibition and Notification

The Department exhibited the modification application and the accompanying Environmental Assessment from 2 December until 18 December 2014, at the Department's Information Centre, Bogan Shire Council and the Nature Conservation Council. The Department made these documents publically available on its website, and notified government agencies of the application in writing.

4.2 Submissions

The Department received submissions from five government agencies, none of which objected to the proposed modification. No submissions were received from the general public. Copies of all submissions are included in **Appendix D**. Some agencies raised concerns and recommended conditions of approval, which are summarised below.

Division of Resources and Energy (DRE) recommended the preparation of a Rehabilitation Management Plan.

Bogan Shire Council (Council) recommended that transportation be restricted to 7.00 am – 10.00 pm, that the increased waste rock emplacement is designed to minimise visual impacts, and that adequate mitigation measures are implemented to manage water quality, air quality, and acid mine drainage.

RMS raised issues relating to impacts on the Barrier and Mitchell Highways. RMS also recommended that Tritton prepares a code of conduct for the transport of material on public roads.

Department of Primary Industries (DPI) including the NSW Office of Water (NOW) supports Tritton's commitments and mitigation measures regarding the rehabilitation of the waste rock emplacement. NOW recommended that the current Surface Water Management Plan is updated to ensure adequate sediment and erosion controls are in place at the expanded waste rock emplacement.

Office of Environment and Heritage (OEH) provided no specific comments or issues requiring further assessment.

Environmental Protection Authority (EPA) provided its advice directly to Tritton, prior to the exhibition of the EA. The EPA does not object to the proposed modification as it considers that Tritton's Environmental Protection Licence (EPL) would continue to provide an effective framework for the management of impacts. The EPA also stated that Tritton should identify and implement measures to mitigate any potential impacts from the proposed modification.

Tritton addressed the concerns raised in submissions in its Response to Submissions document (see **Appendix E**). The Department has considered all issues raised in submissions, and Tritton's responses, in its assessment of the proposed modification.

5 ASSESSMENT

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

- the EA;
- agency submissions and Tritton's Response to Submissions;
- current conditions of consent;
- relevant environmental planning instruments, policies and guidelines; and
- the objects of the EP&A Act.

The Department considers the key assessment issues are:

- impacts on the public road network;
- potential increased dust and noise emissions; and
- the potential visual impact of the from elevated waste rock emplacement.

5.1 Traffic and Transport

RMS raised concerns about the potential impacts of the proposed modification on the Barrier Highway and the Mitchell Highway. To address these concerns, the Department requested additional information to assess the potential impacts on the road network.

Firstly, it is important to consider that Tritton is not seeking to increase the amount of ore it receives for processing from external sources (currently the Tritton consent only allows the receipt of ore from its Girilambone copper mine). It is only seeking approval to receive ore from other local sources in addition to Girilambone (ie its proposed Avoca Tank Mine, and from future development of its Budgery, Carters and Kurrajong prospects). The transportation of the ore from these other sources would be subject to the approvals attached to those operations. The Department notes that Tritton is yet to lodge an application with Bogan Shire Council for Avoca Tank Mine.

Therefore the proposal to receive ore from these other sources in itself would have little effect on the local or regional road network in the short-term. The longer-term impacts on the regional road network would be appropriately assessed under the development applications for these resources if they proceed.

Transporting waste rock from the site would likely be scheduled on a campaign basis. Tritton conservatively assumed a worst-case maximum 48 heavy vehicle movements over a 12 hour period (ie a average of four truck movements per hour). The Department considers that this worst-case is unlikely to have any effect on traffic flows on any local road near the mine.

Extensive upgrades have already been undertaken to the local road network by Tritton to minimise the impacts of its heavy vehicle movements, including:

- tar-sealing Yarrandale Road;
- constructing an auxiliary right turn lane at the Yarrandale Road/mine entrance intersection; and
- constructing an auxiliary right turn and basic left turn at the Yarrandale Road/Barrier Highway intersection.

These upgrades act to reduce the impacts on non-project related traffic flows on Yarrandale Road, which in any case are very low (ie between 20 and 40 vehicle movements per day). The Department also notes that the Barrier and Mitchell Highways are approved road train routes and operate well below their maximum capacity.

The Department is therefore satisfied that the local road network can handle the proposed increase in traffic movements from the proposed modification, and that the proposed activities would be unlikely to have any significant impacts. The Department has recommended conditions allowing Tritton to receive ore from the abovementioned sources at the approved rate of 1 Mtpa, and for up to 30,000 tonnes per annum of waste rock products to be transported from the site.

Council requested that the transportation of waste rock products from the site is restricted to between 7.00 am - 10.00 pm. The Department considers it reasonable for this restriction to be imposed, and has recommended these transportation hours as a condition of approval. The Department also notes RMS's recommendation for a code of conduct to transport materials on State roads and has recommended a condition in this regard.

5.1 Air Quality

Ambient dust levels in the surrounding area are generally low given the rural setting of the mine. However, dust levels have at times been relatively high due to regional climatic conditions.

Monitoring undertaken in the vicinity of the mine indicates that the mine has consistently complied with the dust deposition criteria in the mine's EPL (ie 4 g/m²/month), with a small number of exceptions. These exceptions have occurred at times when background dust deposition levels have been significant.

The proposed modification has the potential to affect air quality from dust lift-off as the elevations to the emplacement are developed. Internal haulage and stockpiling would also potentially increase on-site dust emissions.

However, the likelihood of increased air quality impacts at the closest residences is limited by the range of mitigation measures which Tritton currently implements, which include:

- regular grading and watering of all internal roads;
- regular watering of the waste rock emplacement and stockpile areas; and
- fitting mining, crushing and screening equipment with dust suppression systems where appropriate.

While the proposed modification may result in some additional dust emissions, the Department considers that these would not be significant given the large distances to sensitive receivers (the closest of which is located approximately 4 km from the mine) and the context of reasonably high background concentrations. Importantly, Tritton would still be required to continue to comply with the current conditions of its EPL, which includes the requirement to minimise dust emissions on site.

The Department is satisfied that Tritton's mitigation measures and its EPL would continue to effectively manage dust impacts and that no additional conditions are necessary.

5.2 Noise

The EA includes a Noise Impact Assessment (NIA) undertaken by EMGA Mitchell McLennan (EMM), with reference to the EPA's *Industrial Noise Policy* (INP). The assessment considered the mine's current noise performance, and the increased noise associated with the proposed modification.

Tritton would initially construct the north western and north eastern faces of the emplacement area, which would then act as a noise barrier to provide further acoustic attenuation of the emplacement activities at receivers north of the mine. To further minimise noise impacts, Tritton has committed to only developing the north western and north eastern faces of the emplacement area during daylight hours.

Notwithstanding the implementation of these measures, noise levels from all operations including those required for the proposed modification are predicted to be below the lowest allowable intrusive noise level (ie 35 dB(A)) at all residences, during all assessment periods and under all meteorological conditions. The EA also considered potential sleep disturbance impacts as a result of intermittent noises from the waste rock emplacement. The assessment predicts that sleep disturbance levels would be below 35 dB(A) L_{max}, which is significantly below the applicable sleep disturbance criterion of 45dB(A) L_{max}.

The Department is therefore satisfied that the proposed modification would be unlikely to increase noise impacts at any privately-owned residences near the mine. The Department has recommended that Tritton update the Environmental Management Plan (EMP) to include the mitigation measures identified above and is satisfied that no further conditions are necessary to manage noise impacts.

5.3 Visual

The EA includes a visual impact assessment. The land surrounding the mine is typical of rural areas in Western NSW, in that it is predominantly comprised of shrubby woodland vegetation and land cleared for agriculture. The mine's infrastructure area, including the existing waste rock emplacement, cannot be viewed from any of the surrounding residences, however it is visible to local traffic using Yarrandale Road (see Figure 2). Yarrandale Road is a local road which services the mines in the area and a small amount of local non-project related traffic (between 20 and 40 vehicle movements per day).

The elevated emplacement would also not be visible from residences. However, the users of Yarrandale Road would be subject to additional impacts. Tritton would mitigate potential visual impacts with progressive rehabilitation and planting vegetation on the lower sections of the emplacement area. The early development of the sections of the emplacement facing Yarrandale Road would limit the direct visibility of the headlights from vehicles working on the waste rock emplacement to the travellers on the road.

The Department considers that the proposed modification would not significantly increase the visual impacts of the emplacement area, given that it would not be visible from any surrounding residences. Although the elevated emplacement area would be more visible from Yarrandale road, these impacts would not be significant given the small amount of non-project related traffic using the road and that passing motorists would only view the emplacement area for a very short period of time. Additionally, the Department notes that any impacts would reduce overtime as the waste rock emplacement area is rehabilitated and that the current approval requires Tritton to revegetate all disturbed areas as soon as practicable following construction.

The Department is satisfied that the existing conditions of approval allow the effective mitigation and management of visual impacts of the increased emplacement area.

5.5 Other Issues

The Department's assessment of other issues is summarised in Table 1.

Table 1: Assessment of Other Issues

Issue	Consideration	Recommendation
<i>Water</i>	- The proposed modification does not seek to increase the amount of ore processed at the site, and no additional water is required. - The proposed modification would not require any significant upgrades to the current water management system. - The proposed modification would not change the management of PAF waste rock, which would continue to be disposed of in underground workings. - However the increased waste rock emplacement would potentially alter runoff regimes. The impacts of altered run-off regimes would be managed by appropriate drainage and sediment structures at the emplacement area. - The approved Environmental Management Plan for the mine details the water management system, which includes an erosion and sediment control strategy.	The Department has recommended that Tritton updates its Environmental Management Plan for the mine.
<i>Biodiversity</i>	- The proposed development would not result in any additional surface disturbance. - The proposed planting and rehabilitation of the waste rock emplacement would lessen the biodiversity impacts of the mine over time.	No additional conditions necessary to manage biodiversity impacts.
<i>Rehabilitation</i>	- DRE recommended the development of a Rehabilitation Management Plan/Mining Operations Plan. - The rehabilitation of the site is currently described in the approved Mining Operations Plan (MOP) required under the development consent for the mine. - This plan expires at the end of 2015, at such time Tritton will be	No additional conditions necessary to manage rehabilitation.

Issue	Consideration	Recommendation
	required to prepare and submit a new MOP to DRE. - The opportunity therefore exists to incorporate any minor changes from the modification at this time. - Consequently, the Department is satisfied that rehabilitation would be appropriately managed under the existing consent, and no further conditions are necessary.	
Other Issues	Other issues associated with the proposed modification are considered to be minor issues, components of key issues, or of minor environmental impact and can be adequately managed via the existing conditions of consent.	No additional conditions or amendments necessary.

6 RECOMMENDED CONDITIONS

The Department has drafted a Notice of Modification (see **Appendix A**). The Department has included conditions which require Tritton to update its Environmental Management Plan for the mine to reflect the management of impacts during the development of the waste rock emplacement. The Department has also recommended restricting the hours Tritton is allowed to transport crushed waste rock.

These conditions would allow Tritton to increase the height of its waste rock emplacement from 10 m to 20 m above ground level, receive ore from multiple sources other than Gilirambone mine and allow the transportation of up to 30,000 tonnes per annum of crushed waste rock.

The Department has also recommended a number of administrative changes to the development consent including updates to various definitions to reflect recent changes to government departments and updating the duration of the consent to provide more certainty concerning the approved operational life of the mine.

7 CONCLUSION

The Department has assessed the modification application in accordance with the relevant requirements of the EP&A Act and is satisfied that the impacts of the proposed modification would be effectively managed within the existing regulatory framework for the mine.

The proposed modification has a number of benefits, including:

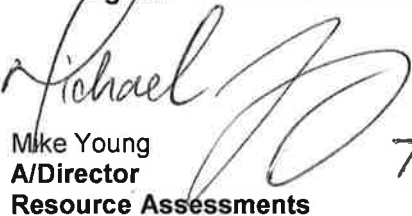
- allowing greater efficiency in mining ore, by allowing more NAF waste rock to be emplaced at the surface;
- allowing Tritton continuity in receiving ore from external sources for processing; and
- making use of a waste stream from the project for road maintenance and other civil construction uses.

The proposal would not substantially increase any of the approved impacts of the original development, and no upgrades to existing infrastructure are required to facilitate the proposal. Consequently the Department believes the proposed modification is in the public interest and should be approved, subject to conditions.

8 RECOMMENDATION

It is RECOMMENDED that the Director, Resources Assessments, as delegate of the Minister:

- consider** the findings and recommendations of this report;
- determine** that the modification is within the scope of section 75W of the EP&A Act;
- approve** the application under section 75W, subject to conditions; and
- sign** the notice of modification (**Appendix A**).


 Mike Young
 A/Director
 Resource Assessments

7.4.15

APPENDIX A: NOTICE OF MODIFICATION

APPENDIX B: ENVIRONMENTAL ASSESSMENT

APPENDIX C: SUBMISSIONS

APPENDIX D: RESPONSE TO SUBMISSIONS

APPENDIX E: DRAFT CONSOLIDATED CONSENT