

**BOGGABRI MINE PROJECT
APPROVAL 09_0182**

Environmental Assessment
Modification 7

FINAL

August 2018



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Environmental Assessment
Modification 7

FINAL

Prepared by
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on behalf of
Boggabri Coal Operations Pty Ltd

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Report No. 3965/R01
Date: August 2018



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Document Status

Rev No.	Reviewer		Approved for Issue	
	Name	Date	Name	Date
Final	Bret Jenkins	30 August 2018	John Merrell	31 August 2018

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1.0 Introduction

The Boggabri Coal Mine (BCM) is an open cut coal mine located about 15 kilometres (km) north east of the Boggabri township in North Western NSW (refer to **Figure 1.1**) which is operated by Boggabri Coal Operations Pty Ltd (BCOPL).

BCOPL is a wholly owned subsidiary of Idemitsu Australia Resources Pty Limited (80%), Chugoku Electric Power Australia Resources Pty. Ltd (10%) and NS Boggabri Pty Limited (10%).

The BCM currently operates in accordance with the Boggabri Coal Project Approval PA 09_0182 (Boggabri Project Approval). The mine has an approved capacity to extract up to 8.6 million tonnes per annum (Mtpa) of run-of-mine (ROM) coal until the end of December 2033. The Boggabri Project Approval includes processing of up to 4.2 Mtpa of ROM coal through the coal handling and preparation plant (CHPP). The BCM owns and operates the Boggabri train loading facility, rail loop and rail spur line, and is approved to transport up to 8.6 Mtpa of product coal by rail from the BCM, with the capacity of the rail system capped at 10 Mtpa.

The BCM is also approved to receive and process up to 3 Mtpa of coal from the neighbouring Tarrawonga Coal Mine (TCM) including stockpiling of the TCM coal on a dedicated stockpile area and loading onto trains for transportation off site.

This Modification application seeks to make largely administrative amendments to the Boggabri Project Approval with minimal resulting impacts, in relation to the following:

- realignment of the TCM Common Boundary Area to ensure consistency with the approved TCM project boundary and to facilitate implementation of an integrated final landform;
- long term security mechanisms for biodiversity offset areas
- BCM use of the TCM product stockpile area
- the inclusion of a range of drilling and exploration activities to support approved mining activities, and
- the road transportation of coal samples required for marketing and analysis purposes.

Further details on each proposed change requested in this Modification are provided in **Section 4.0**.

1.1 Applicant

Boggabri Coal Operations Pty Ltd (BCOPL) is the applicant for this proposed Modification.

1.2 History of Approvals

The BCM was originally approved in 1989 under Development Consent DA 36/88, however production did not commence until 2006. An application to modify Development Consent DA 36/88 was approved on 19 October 2011, allowing production of up to 3.5 Mtpa for a further 2 years until December 2013.

The BCM Expansion Project was approved by the Planning Assessment Commission on 18 July 2012, with the Boggabri Project Approval allowing extraction of up to 8.6 Mtpa of ROM coal until the end of December 2033.

A number of modifications of the Boggabri Project Approval have been previously approved as detailed in **Table 1.1**.

Table 1.1 Boggabri Project Approval (PA 09_0182) and Modifications

Approval/Modification Number	Date Determined	Key Details
PA 09_0182	18/07/2012	<ul style="list-style-type: none"> extraction of up to 8.6 Mtpa of ROM coal until the end of December 2033; processing of up to 3 Mtpa of ROM coal through the CHPP; the construction and operation of the Boggabri train loading facility, rail loop and rail spur line; and transportation of up to 7 Mtpa of product coal by rail.
1	Withdrawn	
2	17/02/2015	<ul style="list-style-type: none"> expanding existing run-of-mine and product coal stockpiles; relocating the existing haul road to the open cut; increasing the throughput of the Boggabri CHPP from 3 Mtpa to 3.5 Mtpa; transportation of 10 Mtpa of coal on the Boggabri Rail Spur Line including up to 3 Mtpa coal from the neighbouring Tarrawonga Coal Mine (TCM), subject to agreement between the mine owners (in addition to the 7 Mtpa approved for the BCM); and disposing additional reject material generated from the processing of TCM coal at the BCM.
3	17/03/2014	<ul style="list-style-type: none"> construction of two permanent access roads linking the Kamilaroi Highway to the Boggabri private haul road; temporary storage of overburden material at a former quarry and reuse of this material during construction of the rail spur; use of the Daisymede Laydown Compound for vehicle, equipment and material storage; and use of temporary in-pit fuel storage facilities.
4	23/03/2015	<ul style="list-style-type: none"> additional mine infrastructure; and revision to the project boundary.
5	30/08/2016	<ul style="list-style-type: none"> construction and operation of a bore field; and increase the CHPP throughput from 3.5 to 4.2 Mtpa.
6	07/07/2017	<ul style="list-style-type: none"> transport up to 8.6 Mtpa from the Boggabri mine by rail with the capacity of the Boggabri Rail Spur Line capped at 10 Mtpa.



Figure 1.1 Project Location

2.0 Overview of Approved Operations

Mining operations at the BCM occurs on a 24 hour/7 days per week basis using excavator/shovel and truck open cut mining methods to extract up to 8.6 Mtpa of coal from the Maules Creek formation including seams from the Herndale seam down to the Merriown seam. Up to 4.2 Mtpa of ROM coal can be processed through the CHPP.

Whilst the BCM is approved to receive, process, stockpile and load onto trains up to 3 Mtpa of coal from the neighbouring TCM, no commercial agreement has been reached with the TCM to enable the handling of coal from the TCM to proceed.

All BCM product coal is transported from the site via the Boggabri Rail Spur for sale in export markets. Around 500 full time equivalent personnel and contractors are employed at the BCM.

The location of the BCM and rail infrastructure is provided in **Figure 1.1**.

2.1 Environmental Management Overview

BCOPL operates a comprehensive Environmental Management System (EMS) including an extensive range of approved Environmental Management Plans (EMPs) and various environmental strategies required under the Boggabri Project Approval including the following:

- Noise Management Plan
- Blast management Plan
- Air Quality and Greenhouse Gas Management Plan
- Water Management Plan incorporating:
 - a Site Water Balance
 - a Surface Water Management Plan
 - Groundwater Management Plan, and
 - a Leard Forest Precinct Water Management Strategy
- Leard Forest Mining Precinct Regional Biodiversity Strategies
- Biodiversity Offset Strategy
- Biodiversity Management Plan
- Forest Plantation Offset Strategy
- Aboriginal Cultural Heritage Conservation Strategy
- Heritage Management Plan
- Traffic Management Plan

- Rehabilitation Management Plan
- Housing Strategy
- Social Impact Management Plan
- Pollution Incident Response Management Plan.

The Boggabri Project Approval also includes stringent environmental monitoring and reporting requirements to confirm that operations are undertaken in accordance with a range of environmental impact criteria.

In addition, operations are carried out in accordance with an Environment Protection Licence (EPL No. 12407) issued under the *Protection of the Environment Operations Act 1997* (NSW) (POEO Act).

2.2 Biodiversity Management Overview

Consistent with conditions of the Boggabri Project Approval, BCOPL is implementing a range of approved environmental management plans dedicated to the management of impacts on biodiversity, including the following:

- Leard Forest Mining Precinct Regional Biodiversity Strategy
- Biodiversity Offset Strategy
- Biodiversity Management Plan
- Rehabilitation Management Plan.

Progress with the implementation of each of these management plans is monitored and reported annually, in the Annual Review.

BCOPL has participated in the development of the Leard Forest Mining Precinct Regional Biodiversity Strategy which involves mining operators in the vicinity of the Leards Forest developing an extensive three stage regional biodiversity strategy to assist with mitigating and offsetting the potential cumulative impacts of local mining activities on the biodiversity values of the Leards Forest. This strategy has been developed by an independent specialist in consultation with representatives of NSW Department of Planning and Environment, (DPE), NSW Office of Environment and Heritage (OEH), former Division of Resources and Energy – now NSW Division of Resources and Geoscience (DRG), North West Local Land Services (LLS), Narrabri Shire Council (NSC) the Commonwealth Department of Environment and Energy (DoEE) and the other Leard Forest Mining Precinct mines.

In addition, BCOPL has developed a Biodiversity Offset Strategy, in consultation with OEH, DRG, North West LLS, the Community Consultative Committee (CCC) and the DoEE, and approved by DPE with the objective of providing biodiversity offset lands consistent with the requirements of the Boggabri Project Approval (Schedule 3, Condition 43).

BCOPL must make arrangements to provide long term security of the biodiversity offsets lands subject to the BCM Biodiversity Offset Strategy, as required under the Boggabri Project Approval, Schedule 3, Condition 47.

3.0 Community Engagement

3.1 Engagement Overview

BCOPL participates in the BCM CCC as required under the Boggabri Project Approval. The CCC is operated in accordance with the relevant DPE Guideline, meets quarterly and is made up of active community members who live and work in Boggabri and the surrounding region. Members are approved by the State Government and represent a variety of interest groups, businesses, and residents. The CCC minutes are published online after each meeting.

BCOPL is a long-standing member of the community, providing employment opportunities, supporting local businesses, and developing strong relationships across the region.

BCOPL works with the local communities of Boggabri, Narrabri, Gunnedah and surrounding areas where staff and suppliers live. BCOPL's major recent community contributions include:

- Voluntary Planning Agreement with Narrabri Shire Council to commit up to \$8.7 million over the life of the mine for community infrastructure
- major sponsor of the annual Narrabri and Boggabri Carp Musters
- major sponsor of the Boggabri Campdraft (since 2006)
- long-term supporter of the Westpac Rescue Helicopter Service in the New England-North West Region
- inviting school groups to visit the BCM to educate young people about the mining industry.

In addition, BCOPL have established strong working relationships with neighbouring land holders.

BCOPL participates in local community forums such as the Boggabri Business and Community Progress Association. BCOPL also provides reports of environmental monitoring to the community through the BCM website, in accordance with the reporting arrangements specified in the Boggabri Project Approval.

3.2 Management of Complaints

In the event of a complaint from a community member regarding BCM activities, all relevant information available pertaining to the time of the alleged issue is gathered and recorded. Specific noise complaints are investigated based on the protocol outlined in the Noise Management Plan. Where possible, the noise issue is investigated by the mine environmental staff and issues are communicated to operations personnel so that operation changes can be investigated and considered to reduce noise impacts.

For all complaints received directly by BCM, discussions are held with the complainant covering the investigation and any operational changes that have been implemented.

A record of all complaints is maintained. Complaints are discussed at the BCM CCC meetings and published in the Annual Review, provided to DPE, EPA and available on the BCM website.

3.2.1 Community Complaint Analysis

Over the preceding 4 years from 2014 to 2017 (inclusive), the total number of complaints received by BCOPL regarding its mining operations has seen a decreasing trend from a total of 21 complaints received in 2014 down to 8 complaints received in 2016, and only 5 complaints received in 2017. The history of complaints per year is shown in **Figure 3.1** below.

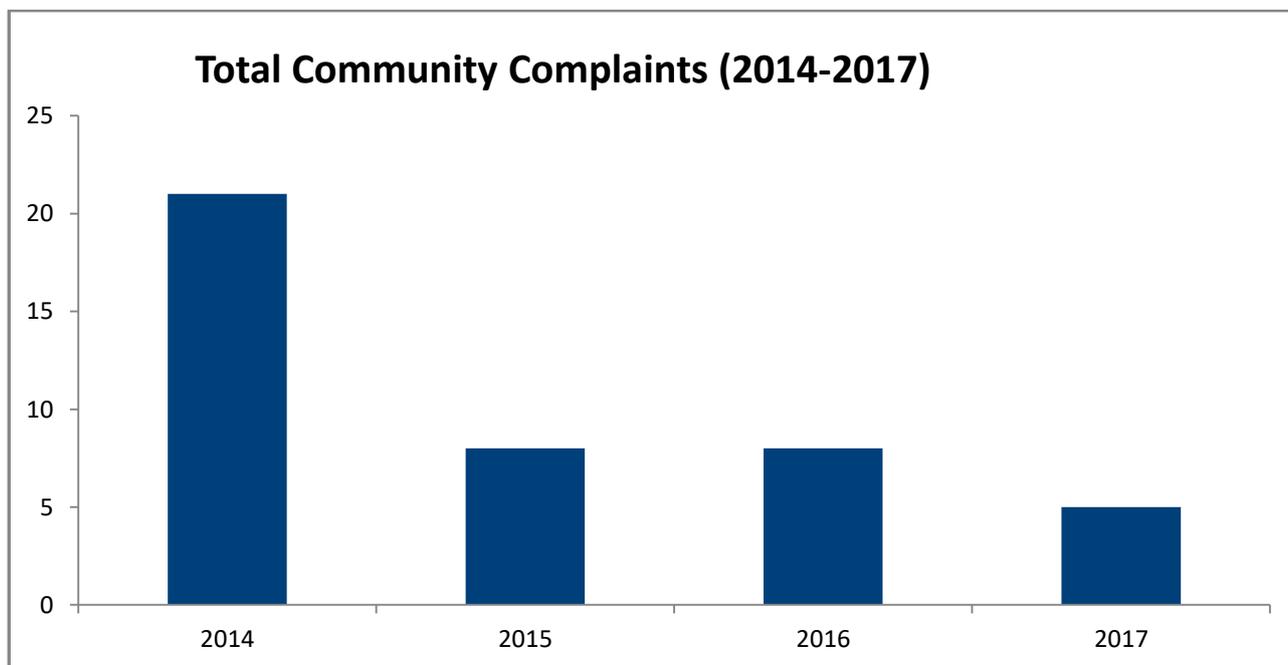


Figure 3.1 Total Community Complaints

Of the 5 complaints received in 2017 calendar year, 4 related to blasting and 1 to dust.

4.0 Proposed Modifications

This Modification application seeks to make amendments to the Boggabri Project Approval in relation to the following:

- TCM common boundary Project Approval area
- long term biodiversity offset area security arrangements
- BCM use of the stockpile area approved for TCM
- the inclusion of a range of drilling and exploration activities to support approved mining activities
- the transportation of coal samples required for marketing and analysis purposes by road.

Further details on each proposed change and an assessment of the potential impacts are provided in the following subsections.

4.1 Statutory Context

The Boggabri Project Approval was originally granted under the former Part 3A of the *Environmental Planning and Assessment Act 1979* (NSW) (EP&A Act). It is proposed that this Modification Application be considered under the former section 75W of the EP&A Act relating to the modification of former Part 3A projects. Clause 3BA(3), Schedule 2 of the *Environmental Planning and Assessment (Savings, Transitional and Other Provisions) Regulation 2017* provides that a modification application can still be considered under section 75W, despite the winding-up of the Part 3A transitional provisions, provided that a request was lodged prior to 1 March 2018. Such a request was made and subsequently agreed to by DPE, confirmed in writing on 2 February 2018.

In addition, BCM operates in accordance with Environment Protection Licence (EPL No. 12407) issued pursuant to the Protection of the Environment Operations Act (1997) covering Scheduled activities being Coal Works greater than 500,000 T annual capacity, Crushing, grinding or separating up to 2,000,000 T annual processing capacity and mining for coal greater than 500,000 T annual capacity. The scheduled premises is defined by reference to the “Boggabri Project Boundary” identified in the Project Approval.

4.2 TCM Common Project Boundary

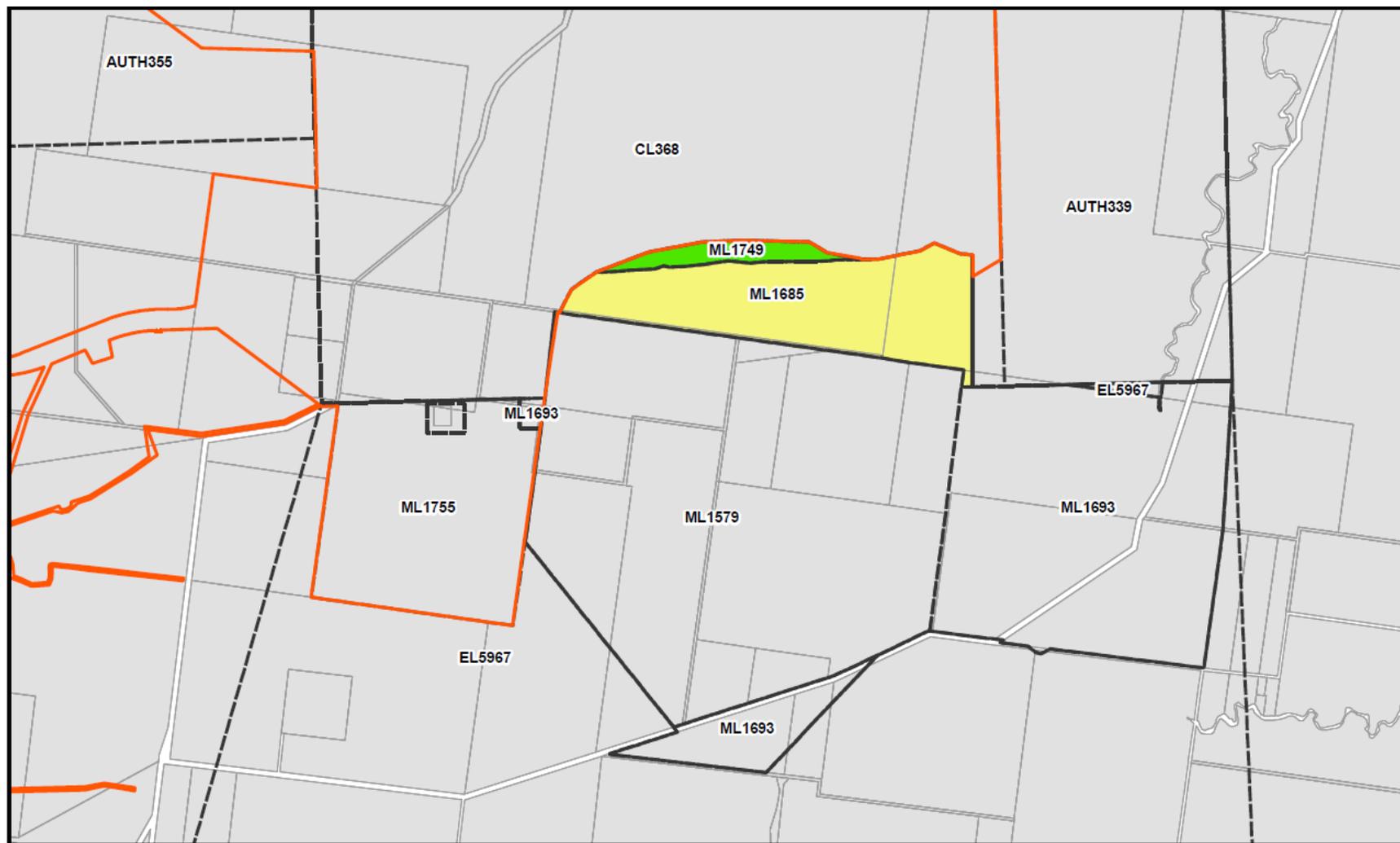
BCM and TCM share a common boundary along parts of the southern boundary of the BCM Project Approval Area. A range of processes have been undertaken to ensure an integrated final landform will be achieved across the common boundary between the two operations including agreement to a Common Boundary Integrated Management Plan and changes to Mining tenements as detailed below. This modification is proposed to realign the BCM Project Boundary to be consistent with both the approved TCM Project Boundary and the current mining tenements.

BCOPL and TCPL negotiated a partial mining lease transfer which was undertaken in two stages and involved the transfer of two adjoining portions of Coal Lease (CL) 368 being Mining Lease (ML) 1685 and ML1749 from BCOPL to TCPL. The first stage of this transfer was completed in August 2013 with the granting of ML1685 to TCPL. This lease enabled TCPL to commence open cut mining and overburden emplacement in part of the approved TCM Northern Extension Area. The second stage involved the transfer of a further portion of BCOPL’s CL368 within TCM’s approved Northern Extension area, being ML1749. These mining tenements are shown on **Figure 4.1**

BCOPL and TCPL agreed to and signed a Common Boundary Integrated Management Plan (2015) (CBIMP) in August 2015. This management plan outlines strategies that will be implemented jointly by BCOPL and TCPL to rehabilitate mining and overburden emplacement areas that adjoin both mines. The plan also identifies key activities and relevant roles and responsibilities for implementation during each stage of the lease transfer. The general strategy for rehabilitation of the lease transfer area is described in the respective Mine Operations Plans (MOPs).

The Tarrawonga Project Approval (PA 11_0047 Modification 5), granted in August 2017, involved the extension of the Tarrawonga Northern Emplacement to the north, into CL 368, and the integration with the southern part of the Boggabri waste rock emplacement. The Tarrawonga Northern Emplacement area was extended with the granting of ML1685 and ML1749 to TCPL.

According to the CBIMP, the area of responsibility between BCOPL and TCPL is defined by the lease boundary. As the lease boundary changes have been completed, TCPL has assumed responsibility for the rehabilitation of the area covered by the revised mining tenements and it is therefore proposed to modify the Boggabri Project Approval to reflect this change in responsibility.



0 0.5 1 km
 Scale 1:50,000
 Author: SuansriR
 Date: 31/07/2018
 Map no: 2200545A_GIS_F048_A1

Boggabri Project Approval Area
 Mine tenement boundaries
 Property area
Key MLs
 ML1685 - 26/08/2013
 ML1749 - 4/10/2017

Key mining leases

Figure 4.1 Revised Project Boundary and Mining Tenements

4.2.1 Current Project Approval

The Project Boundary for the BCM is defined in the Boggabri Project Approval Appendix 1, “Figures Depicting Project Boundary and Land”. Those parts of the Project Boundary that are subject to the common boundary arrangements with TCM are shown on the first figure “Land within project boundary” and Map 3 of 3 in the Boggabri Project Approval Appendix 1.

Project Approval conditions for BCM and TCM require both mines to ensure rehabilitation activities are coordinated between the two sites in a way that ensures vegetation communities and the final landform are integrated. The conditions outlined in each operations project approval relevant to final landform and rehabilitation integration are shown in **Table 4.1** below.

Table 4.1 Approval requirements for rehabilitation integration between BCM and TCM

Project / Approval	Condition	Details
BCM Project Approval 09_0182 (Modification 6)	Schedule 3 Condition 72	Final Void Design and Closure The Proponent shall prepare and implement an updated Final Void and Mine Closure Plan (as a component of the overall Rehabilitation Management Plan required under condition 71 of Schedule 3) to the satisfaction of DRE. This plan must: (e) identify opportunities for integrated mine planning with adjoining mines to minimise environmental impacts of the final landform.
TCM Project Approval 11_0047 (Modification 5)	Schedule 3 Condition 61	The proponent shall rehabilitate the site... Table 14 Rehabilitation objectives Mine Site (as a whole) – Landforms fully integrated with the final landform for the Boggabri Coal Mine
	Schedule 3 Condition 64	Rehabilitation Management Plan The Proponent shall prepare and implement a Rehabilitation Management Plan to the satisfaction of DRE. This plan must: (d) describe how the rehabilitation of the site would be integrated with: - the implementation of the biodiversity offset strategy; and - the final landform for the Boggabri Coal Mine
	Schedule 3 Condition 65	Final Void Design and Closure The Proponent shall prepare and implement an updated Final Void and Mine Closure Plan (as a component of the overall Rehabilitation Management Plan required under condition 64 of schedule 3) to the satisfaction of DRE, following consultation with the Secretary. A draft plan must be prepared and submitted to DRE by the end of December 2019, and a final plan must be prepared and submitted to DRE by the end of December 2024. Each version of the plan must: (b) identify and consider: <ul style="list-style-type: none"> • interactions with the final landform of adjoining mines (including any direct or indirect interactions between the final voids); • opportunities for integrated mine planning to minimise environmental impacts of the mines’ final landforms.

4.2.2 Assessment of Impacts

This proposed Modification will not result in any changes to impacts assessed for the BCM and TCM mine approvals and will not introduce any new impacts at either of the two mines. BCOPL and TCPL have agreed to the CBIMP for the lease transfer area which provides a detailed strategy to ensure that the requirements of both Project Approval conditions are met.

The proposed Modification will reflect the status of the completed mining lease transfers and will be consistent with both BCM and TCM Project Approval conditions related to the establishment of a common landform, and undertaking rehabilitation along the common Project Approval Boundary, as listed in **Table 4.1**.

4.2.3 Proposed Modification

In order to achieve a merged final landform across the common boundary between the BCM and TCM, partial lease transfers have been agreed and completed. The Project Approval boundary shown in the Boggabri Project Approval is proposed to be modified to align with the Project Approval boundary shown in the TCM Project Approval, where those boundaries align. The common boundary between BCM and TCM and the areas of the lease transfers are shown on **Figure 4.1**.

The Boggabri Project Approval (Schedule 3, Condition 72 e) provides the requirements for final landform and mine rehabilitation activities along the boundary with the TCM, as outlined in **Table 4.1**. No changes are proposed to this condition.

A number of figures included in the current Boggabri Project Approval Appendices 1 and 2 are proposed to be replaced to reflect the revised Project Approval boundary and revised mining tenement boundaries. Currently, the Boggabri Project Approval Appendix 1 includes a series of four plans showing details of land parcels, mining tenements and the Project Approval boundary. The first of the four current plans in the Boggabri Project Approval Appendix 1 titled “Land within project boundary” is shown in **Figure 4.2**. It is proposed to simplify the figures by including one plan in the Boggabri Project Approval Appendix 1 showing the full Project Approval boundary and associated details. The proposed replacement plan is shown in **Figure 4.3**.

In addition, the Boggabri Project Approval Appendix 2 Project Layout Plan labelled as “Figure 1: Mine Site Location” shows the current Project Approval Boundary adjacent to the TCM. It is proposed to replace this figure with a figure based on **Figure 4.4** showing the revised Project Approval Boundary. **Table 4.2** summarises the current Boggabri Project Approval figures and the proposed replacement figures.

Table 4.2 Boggabri Project Approval – proposed replacement figures

Project / Approval	Current Figure	Proposed Figure
BCM Project Approval 09_0182 (Modification 6)	Appendix 1 “Land within project boundary” Shown in Figure 4.2.	Figure 4.3: “Overview of land within project area and mine tenements”.
	Appendix 1 “Land within project area Map 1 of 3”	Replaced by Figure 4.3
	Appendix 1 “Land within project area Map 2 of 3”	Replaced by Figure 4.3
	Appendix 1 “Land within project area Map 3 of 3”	Replaced by figure 4.3
	Appendix 2 Figure 1: Mine Site Location	Figure 4.4: “Project Overview”

The proposed revised figures noted above will ensure consistency with the TCM Project Approval (PA 11_0047).

In addition, the Schedule of Lands shown in the Boggabri Project Approval Appendix 1 is proposed to be replaced with the Schedule of Lands provided in **Appendix 1** to ensure consistency with the proposed changes to the Project Approval boundary.

4.2.3.1 EPL Premises Boundary

The definition of the Premises Boundary contained in Condition A2.1 of EPL No 12407 will require amendment to ensure consistency with the proposed changes to the Boggabri Project Approval boundary, should the proposed Modification be approved.

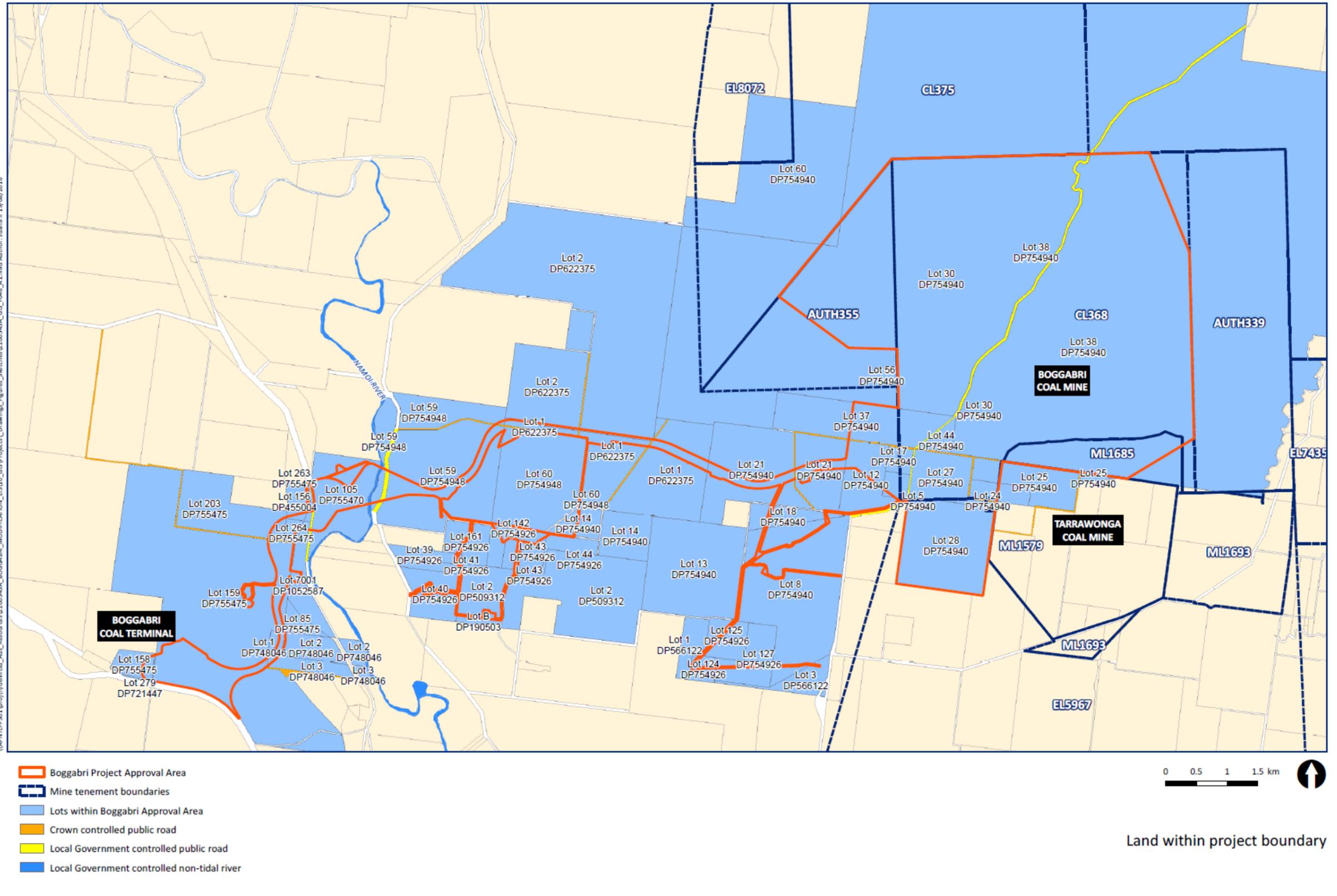
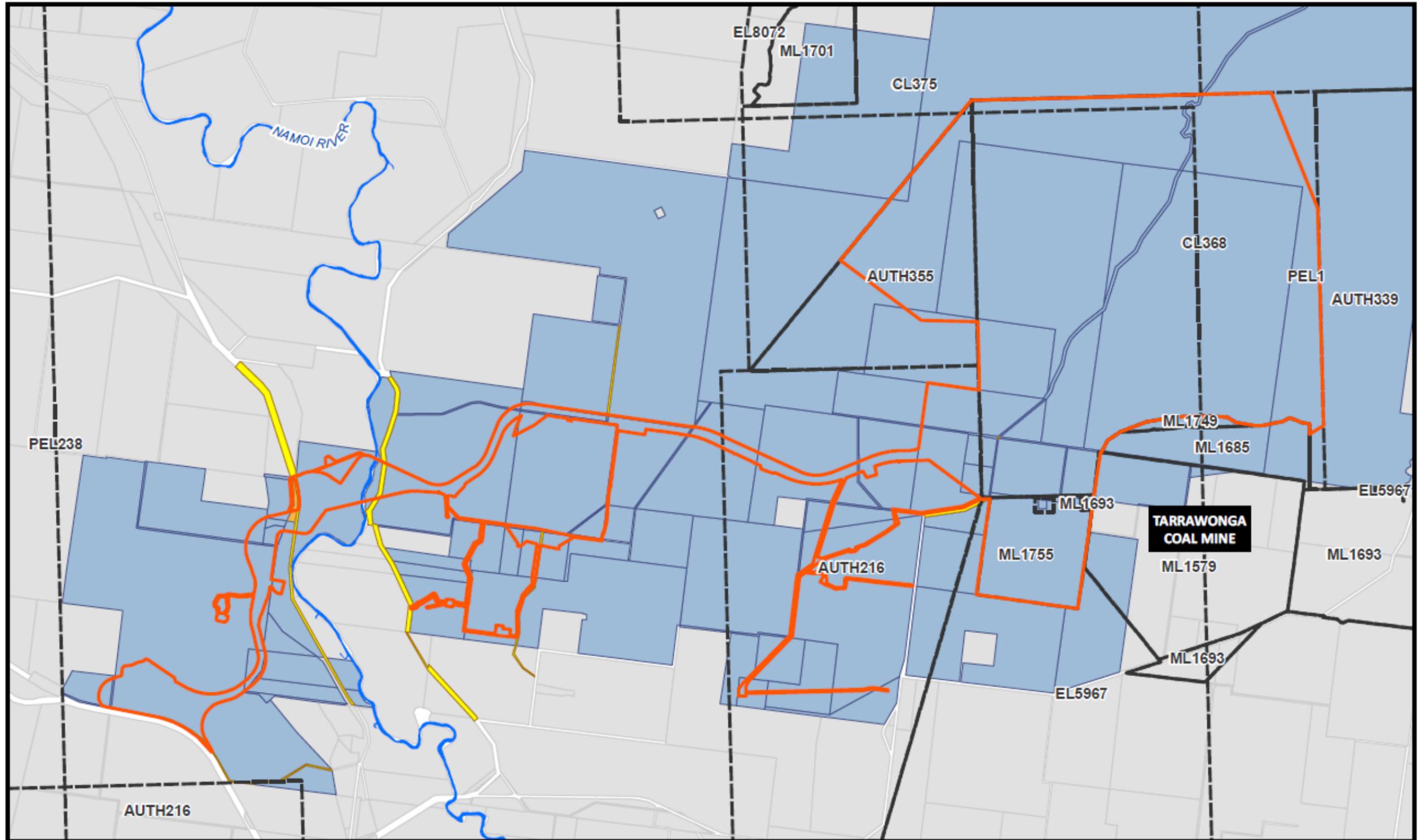


Figure 4.2 Current Boggabri Project Approval Appendix 1 “Land within project boundary”



0 0.5 1
km

Scale 1:100,000

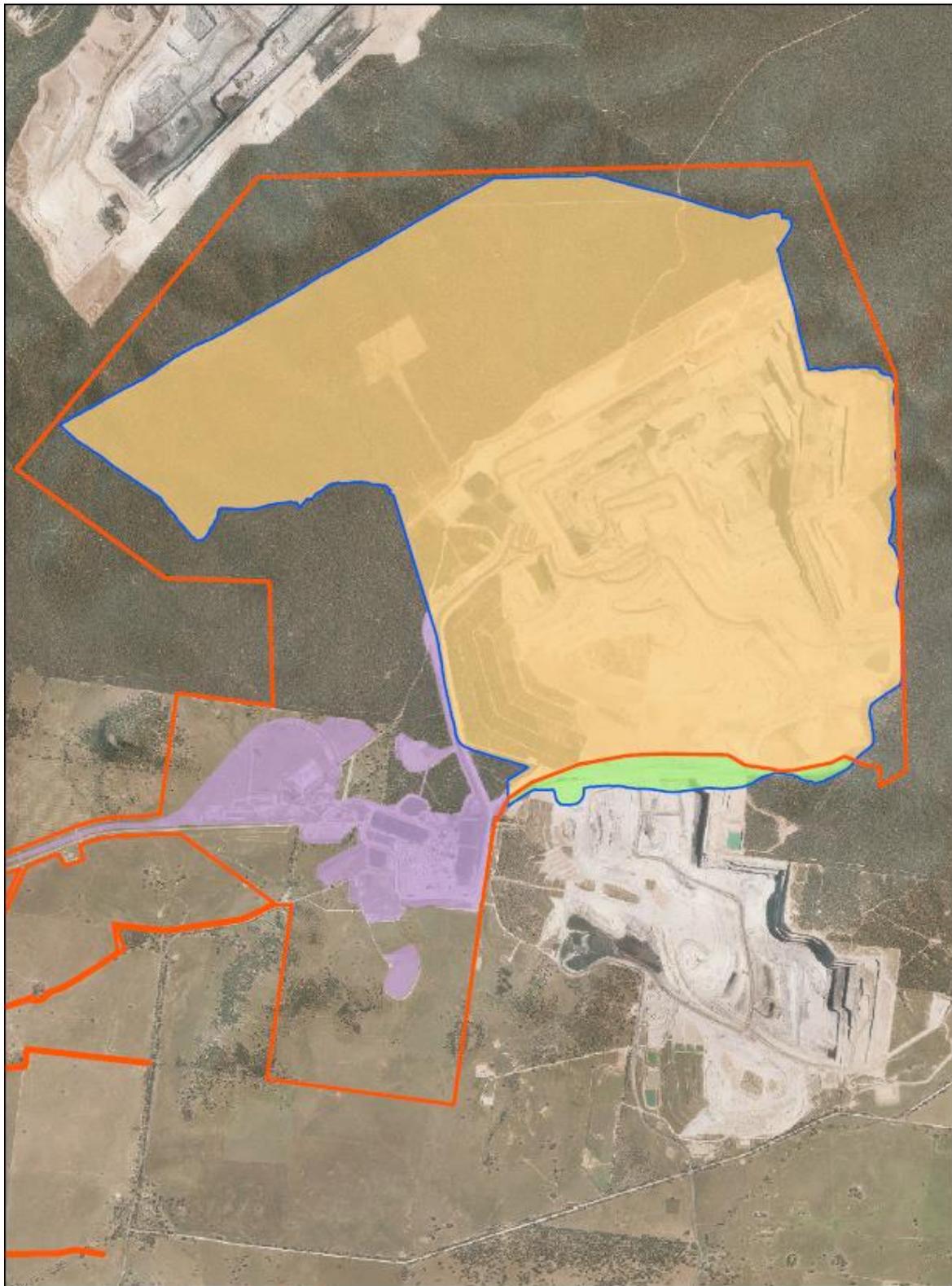
Author: SuansrR
Date: 30/08/2018
Map no: 2200545A_GIS_F045_A3



- Boggabri Project Approval Area
- Mine tenement boundaries
- Lots within Boggabri Approval Area
- Other property areas
- Local government controlled public road
- Local government controlled non-tidal river
- Crown land

Overview of land within project area and mine tenements

Figure 4.3 Replaces Boggabri Project Approval Appendix 1 "Land within project boundary"



U:\Sector\DMA\Environment\EPSE\COOLOY\Z_bogabri\GIS_Shared_GIS\4_Production\MI\app\umwelt\MOOT\2200545A_GIS_F051_A3.mxd

0 0.5 1 km
 Scale 1:40,000
 Author - Mitchell
 Date: 30/08/2015
 Map no: 2200545A_GIS_F051_A3



- Boggabri Project Approval Area
- Mining disturbance boundary
- Existing Approved Mine disturbance
- Mine disturbance under current EA to be transferred to Tarrawonga
- Infrastructure area

Project overview

Figure 4.4 Boggabri Project Overview

4.3 Biodiversity offset long term security arrangements

BCOPL has developed a Biodiversity Offset Strategy, in consultation with OEH, DRG, North West LLS, the CCC and the DoEE, and approved by DPE with the objective of providing biodiversity offset lands consistent with the requirements of the Boggabri Project Approval (Schedule 3, Condition 43).

BCOPL must make arrangements to provide long term security of the biodiversity offsets for the lands subject to the BCM Biodiversity Offset Strategy, as required under the Boggabri Project Approval, Schedule 3, Condition 47.

Condition 47(a) of Schedule 3 of the Boggabri Project Approval requires the long term security for the offset areas to be provided “by way of a conservation agreement or agreements pursuant to section 69B of the *National Parks and Wildlife Act 1974*”. In contrast, Condition 47(b) of Schedule 3 relates to the development of offsets on Crown Reserve Land and Additional Land managed for Corridor Enhancement and provides for more flexibility in this regard as it does not identify which agreement, as long as the agreement is acceptable to the Secretary.

Condition 52 of the Project Approval requires that BCOPL pay a Conservation and Biodiversity Bond to the DPE “to ensure that the biodiversity offset strategy is implemented in accordance with the performance and completion criteria of the Biodiversity Management Plan”.

Subsequent to the issuing of the original Project Approval in July 2012, alternate mechanisms have become available for providing long term security for biodiversity offset land. BCOPL proposes to utilise these current mechanisms in consultation with and to the satisfaction of the Secretary and therefore proposes a change to the wording of Condition 47(a) of Schedule 3 to allow this outcome.

4.3.1 Current Project Approval Requirements

A copy of the current Boggabri Project Approval conditions relating to the long term security for offsets and the conversation bond is provided below:

Long Term Security of Offset

47. *The Proponent shall make suitable arrangements to provide appropriate long-term security for the offset areas:*
- (a) For the areas included in Table 15 as owned, under option or committed by the Proponent, the long term security shall be provided by way of the Proponent entering into a conservation agreement or agreements pursuant to section 69B of the National Parks and Wildlife Act 1974, recording the obligations assumed by the Proponent under the conditions of this approval in relation to these offset areas, and registering the agreement(s) pursuant to section 69F of the National Parks and Wildlife Act 1974. The conservation agreement(s) must be registered by December 2014 unless agreed otherwise by the Secretary after consultation with Chief Executive of OEH. The conservation agreements must remain in force in perpetuity.*
 - (b) For the areas included in Table 15 as Crown Reserve Land and Additional Land managed for Corridor Enhancement, the long-term security shall be provided by a form of binding agreement acceptable to the Secretary that records the obligations assumed by the Proponent under the conditions of this approval in relation to these offset areas. These agreements must be in force within 12 months of the approval of Stage 2 of the Leard Forest Mining Precinct Regional Biodiversity Strategy, or other date agreed by the Secretary, to the satisfaction of the Secretary.*

Conservation Bond

52. Within 36 months of the date of this approval or within 6 months of the approval of the revised Biodiversity Management Plan required under condition 50 of Schedule 3 (whichever is sooner), the Proponent shall lodge a Conservation and Biodiversity Bond with the Department to ensure that the biodiversity offset strategy is implemented in accordance with the performance and completion criteria of the Biodiversity Management Plan. The sum of the bond shall be determined by:

(a) calculating the full cost of implementing the biodiversity offset strategy (other than land acquisition costs); and

(b) employing a suitably qualified quantity surveyor to verify the calculated costs.

to the satisfaction of the Secretary.

If the offset strategy is completed generally in accordance with the completion criteria in the Biodiversity Management Plan to the satisfaction of the Secretary, the Secretary will release the bond.

If the offset strategy is not completed generally in accordance with the completion criteria in the Biodiversity Management Plan, the Secretary will call in all or part of the conservation bond, and arrange for the satisfactory completion of the relevant works.

With the agreement of the Secretary, this bond may be combined with rehabilitation security deposit administered by DRE.

Note: Alternative funding arrangements for long term management of the Biodiversity Offset Strategy, such as provision of capital and management funding as agreed by OEH as part of a Biobanking Agreement or transfer to conservation reserve estate can be used to reduce the liability of the conservation and biodiversity bond.

4.3.2 Assessment of Impacts

This Modification would not result in any potential impacts as new biodiversity offset security arrangements will be determined on their merits under the biodiversity offset framework and policy that is available at the time. This proposed modification will not alter the land or associated biodiversity values agreed to be used for the offset strategy approved under the Boggabri Project Approval. The objective of this proposed modification is to contemporise the range of offset security mechanisms available to be applied to the currently agreed and approved offset strategy.

4.3.3 Proposed Modification

It is proposed that Condition 47 (a) of Schedule 3 be modified to reflect similar wording to Condition 47(b) in order to enable greater flexibility in the type of security to be used.

The following modification (in underlined text) to Condition 47(a) of Schedule 3 is proposed:

Long Term Security of Offset

47. The Proponent shall make suitable arrangements to provide appropriate long-term security for the offset areas:

(a) For the areas included in Table 15 as owned, under option or committed by the Proponent, the long-term security shall be provided by a form of binding agreement acceptable to the Secretary that records the obligations assumed by the Proponent under the conditions of this approval in relation to these offset areas. These agreements must be registered by December 2019 unless agreed otherwise by the Secretary after consultation with Chief Executive of OEH. The agreements must remain in force in perpetuity.

4.4 TCM Product Stockpile Area

The Boggabri Project Approval (Modification 2), approved on 17 February 2015, allowed for receiving, handling and processing of up to 3 Mtpa of coal from the neighbouring TCM through the BCM CHPP infrastructure including stockpiling of TCM coal on a dedicated stockpile area prior to loading onto trains for transportation from the site.

In order to accommodate coal from the TCM, the Boggabri Project Approval (Modification 2) provided for the following changes:

- expanding existing ROM and product coal stockpiles including the construction of a product stockpile for up to 3 Mtpa of TCM product coal, prior to loading onto trains
- relocating the existing haul road to the open cut
- increasing the throughput of the Boggabri CHPP from 3 Mtpa to 3.5 Mtpa, which was further increased to 4.2 Mtpa with the Boggabri Project Approval (Modification 5) approved on 30 August 2016 (processing does not include bypass coal from either the BCM or TCM)
- transportation of 10 Mtpa of coal on the Boggabri Rail Spur Line including up to 3 Mtpa coal from the neighbouring TCM, subject to agreement between the mine owners
- disposing additional reject material generated from the processing of TCM coal at the BCM.

These arrangements are subject to commercial agreement being established between both mine owners. To date no commercial agreement has been reached with TCPL to enable the handling of coal from the TCM at the BCM coal handling facilities. As these new facilities have been built and the impacts of using these facilities have been assessed and approved, it is an inefficient use of resources for these facilities to not be used due to the absence of a current commercial agreement. BCOPL therefore proposes to utilise the completed stockpile area for stockpiling BCM product coal, whilst also maintaining the opportunity for these facilities for TCM coal should a commercial agreement be reached. No additional BCM coal above the current limit of 8.6 Mtpa is proposed to be handled through the BCM Infrastructure Facilities Area.

4.4.1 Current Project Approval Requirements

Following the approval of Modification 2, BCM completed the construction of the additional product stockpile area and associated water management structures, consistent with the proposed general layout shown in the Boggabri Project Approval Appendix 2, Figure 2. A copy of Figure 2 is provided in **Figure 4.5**, which shows the product stockpile intended to hold TCM product coal, along with the proposed conveyor systems associated with the operation of the stockpile.

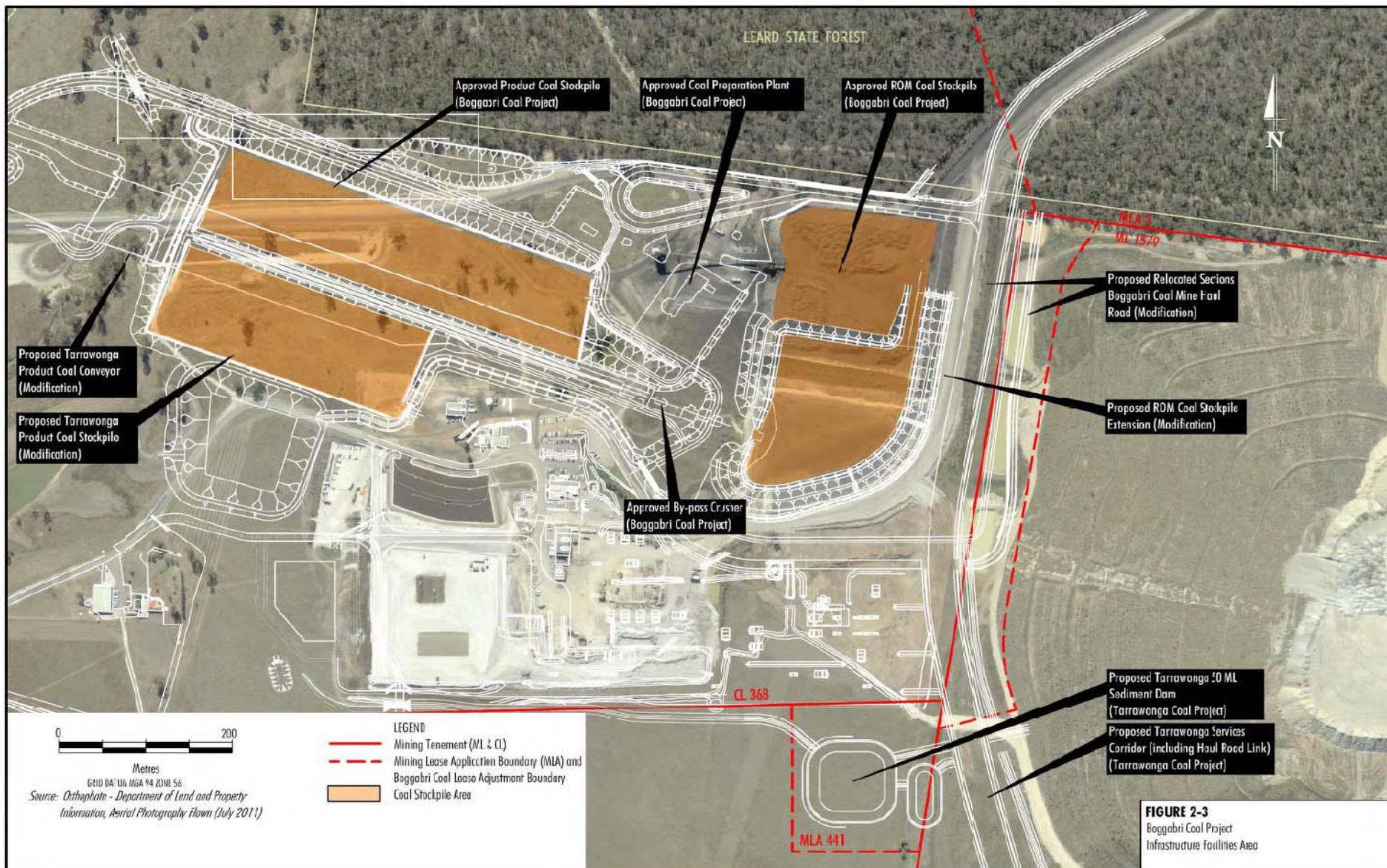
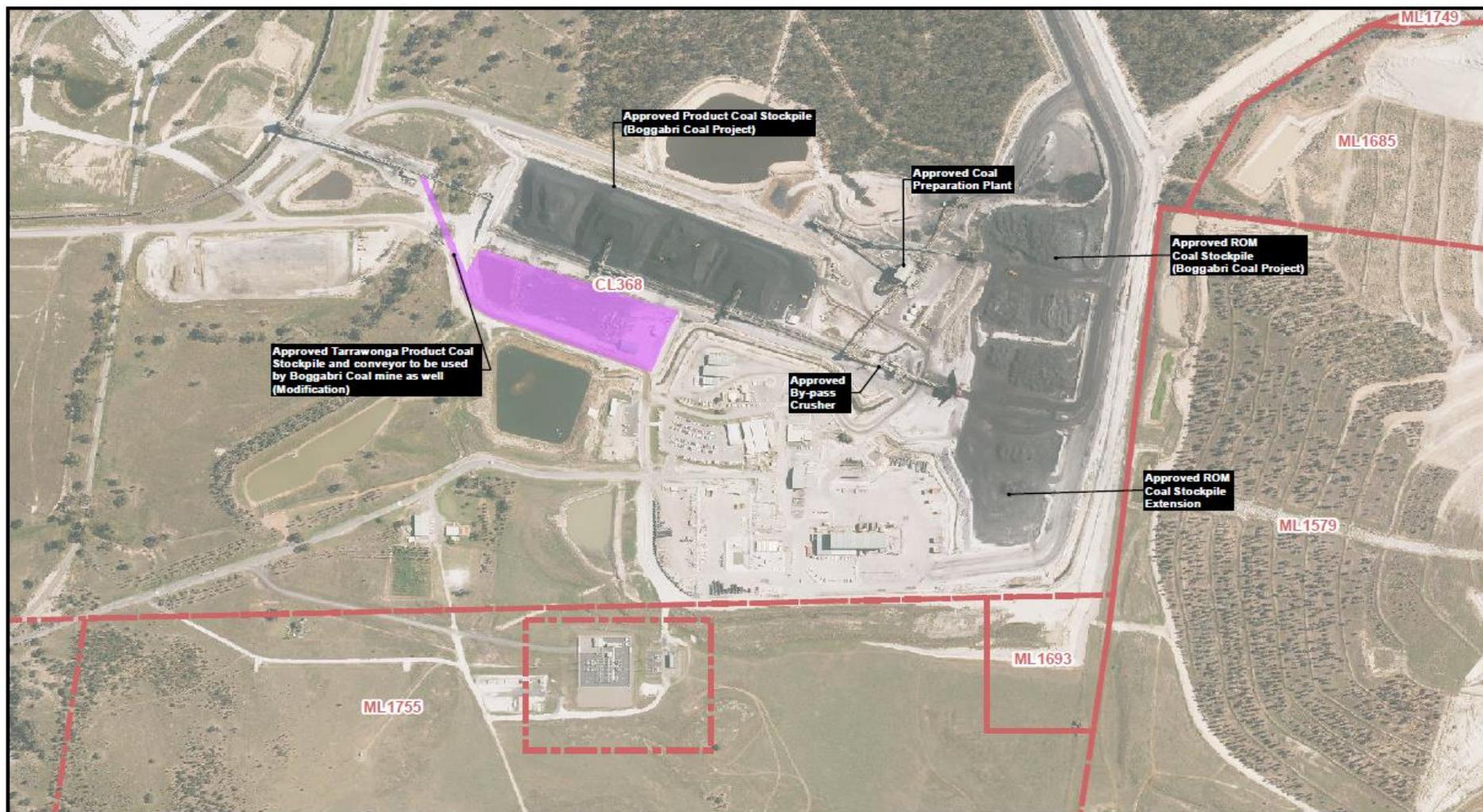


Figure 4.5 Current Boggabri Project Approval Appendix 2, Figure 2: Infrastructure Area



0 0.1 0.2
km



Scale 1:10,688

Author: SuansIR
Date: 31/07/2018
Map no: 2200545A_GIS_F049_A1

● Adjustment details
 Mine lease boundary

Approved Tarrawonga
Coal Stockpile Area and
conveyor

General layout

Figure 4.6 Replaces Current Boggabri Project Approval Appendix 2, Figure 2: Infrastructure Area

4.4.2 Assessment of Impacts

This proposed Modification would not result in the alteration of the extraction rates, capacity of the coal handling and processing plant or other requirements under the current Boggabri Project Approval. This proposed Modification will enable BCOPL to utilise the completed product stockpile area for BCM product coal by removing the current constraint in the Boggabri Project Approval that limits the use of the stockpile area for TCM product coal only. At present, due to the absence of a commercial agreement this stockpile area is unused which is an inefficient use of this approved and partially constructed infrastructure resource.

This proposed Modification does not include processing or stockpiling any additional BCM coal through the BCM Infrastructure Facilities Area above the current Boggabri Project Approval limit of 8.6 Mtpa.

Construction of the TCM product stockpile area and associated infrastructure at the BCM Infrastructure Facilities Area has been partially completed in accordance with the conditions set out in the Boggabri Project Approval.

Impacts resulting from the operation of the TCM product stockpile area and associated infrastructure at the BCM Infrastructure Facilities Area were assessed for the Boggabri Project Approval (Modification 2), which was approved on 17 February 2015. This included the assessment of additional fixed and mobile equipment required to process the TCM coal the Boggabri Infrastructure Facilities Area (i.e. conveyors, a loader, a dozer and two trucks).

No new impacts or changes to existing approved impacts are predicted as a result of this proposed modification.

4.4.3 Proposed Modification

It is proposed that the Tarrawonga product stockpile area and associated infrastructure constructed within the BCM Infrastructure Facilities Area be made available for use by both BCM and TCM.

In order to achieve this, it is proposed to include this Modification 7 EA in the list of documents under 'EA' in the 'Definitions' section of the Boggabri Project Approval and to replace the current Boggabri Project Approval Appendix 2, Figure 2 with the revised figure provided as **Figure 4.6**. This will ensure that the product stockpile area for Tarrawonga product coal can be utilised by BCM and TCM, if a commercial agreement can be reached.

Should an agreement be reached with TCPL in the future, the stockpile area would be able to be utilised by TCM as well as by BCM, subject to the existing coal handling and coal transportation tonnage constraints contained within the Boggabri Project Approval.

4.5 Drilling and Exploration Activities

In order to successfully undertake ongoing mining activities, it will be necessary for the BCOPL to undertake further exploration activities to refine the understanding of geological structures, geotechnical and coal quality characteristics, understanding of hydrogeological conditions and also to improve the understanding of the overlying or underlying strata, within the Project Approval area. There are a number of geophysical exploration techniques, as well as drilling and sampling techniques that may be required including:

- seismic, gravitational, magnetic, electrical and electromagnetic testing
- cored and open-hole drilling to the basement of the coal basin

- in-fill drilling
- limit of oxidation drilling
- down-hole testing including gas sampling and testing
- geotechnical investigation and testing techniques
- the establishment of access tracks.

Exploration activities have previously been undertaken subject to the requirements of the *Mining Act 1992* (NSW) and in accordance with the conditions of the relevant Mining Leases and Exploration Licences held for BCM. A program of exploration activities has also been outlined in the MOP provided to-date.

4.5.1 Current Project Approval Requirements

A review of EA documents previously submitted in support of the original Boggabri Project Approval application, and subsequent modifications, has identified that ongoing exploration activities have not been expressly included in the description of works to be undertaken at the BCM.

For clarification purposes, exploration activities are proposed to be added to the description of works in the Project Description for the BCM. To achieve this, it is proposed that the EA for this Modification Application be included in the list of documents under 'EA' contained in the 'Definitions' section of the Boggabri Project Approval.

4.5.2 Assessment of Impacts

Potential impacts resulting from undertaking exploration activities include sediment and erosion impacts, vegetation clearing, noise and dust impacts and aquifer interference.

Whilst these activities are generally low impact activities in the context of the nearby mining operation, the potential impacts will be managed and controlled in accordance with the extensive program of environmental management measures approved for the BCM, as outlined in **Section 2.1**, and having regard to the relevant mining industry best practice guideline "*Exploration Code of Practice: Environmental Management*" (Department of Industry, 2015).

Exploration will also be subject to the conditions of the applicable mining lease, subject to the requirements of the *Mining Act 1992*, where applicable, and a program of exploration activities will be outlined in the MOP.

Given the detailed environmental management measures that will be applied to ongoing exploration activities, and given that these exploration activities will be undertaken in accordance with industry best practice guidelines, minimal adverse impacts are anticipated from future exploration activities to be undertaken within the approved Boggabri Project disturbance area.

4.5.3 Proposed Modification

The exploration activities described in **Section 2.6** are proposed to be included in the Project Description of the Boggabri Project Approval.

It is proposed to achieve this by including this Modification 7 EA in the list of documents under 'EA' in the 'Definitions' section of the Boggabri Project Approval. This will ensure that the exploration activities within the approved Boggabri Project disturbance area are included in the Project Description for the BCM.

4.6 Transport of Coal Samples by Road

The current Boggabri Project Approval, Condition 12, Schedule 2 ensures that the regular transport of product coal from the BCM, being up to 8.6 Mtpa, is undertaken using the approved BCM rail loop and spur line, in order to ensure that the regular transportation of product coal is undertaken by rail, and not by road unless there are exceptional circumstances.

BCOPL notes that on occasions there is a need to transport small amounts of coal for coal samples by road for specific testing purposes, and to provide new customers with samples for commissioning and testing purposes in laboratories, test plant or customers facilities. The scale of these samples can range from a single 220 litre drum to around three shipping containers full of product coal (from 150 kg to 60 tonnes).

The transportation of coal samples by road is required on an irregular basis for marketing or analytical purposes, involving a maximum individual sample size of 60 tonnes.

4.6.1 Current Project Approval Requirements

In accordance with the Boggabri Project Approval Condition 12, Schedule 2, all coal is to be transported from the BCM site via the Boggabri Rail Spur unless 'in exceptional circumstances', when it requires agreement from the Roads and Maritime Services (RMS), Council and the Secretary. A copy of the current Boggabri Project Approval Condition 12, Schedule 2 is provided below:

Coal Transport

12. *The Proponent may transport up to 10 million tonnes of product coal via the Boggabri Rail Spur Line in any calendar year; comprising:*
- (a) up to 8.6 million tonnes of product coal from the Boggabri Coal Mine in any calendar year; and*
 - (b) up to 3 million tonnes of product coal from the Tarrawonga Coal Mine in any calendar year.*
12. *The Proponent may only transport coal from the site by road for 22 months following the date of this approval, or for such additional period as may result from delays in construction of the Boggabri Rail Spur Line as agreed by the Secretary. Following expiry of this period, all coal is to be transported from the site via the Boggabri Rail Spur Line unless in exceptional circumstances as agreed with RMS, the Council and approved by the Secretary.*

It is proposed that the transport of coal samples by road, up to 60 tonnes per sample, be allowed under the Condition 12, Schedule 2.

4.6.2 Assessment of Impacts

The proposed transportation of coal samples will occur on an irregular basis. Coal samples are relatively small, and will range from around 150 kilograms up to 60 tonnes of coal, involving a maximum individual sample size of three shipping containers (or equivalent) as required by coal quality and marketing purposes.

The transportation of coal samples by road is not considered to be of sufficient scale to trigger the intent of Condition 12 in Schedule 3 of the Boggabri Project Approval. Condition 12 ensures that the regular transport of product coal from the BCM, being up to 8.6 Mtpa, is undertaken using the approved BCM rail loop and spur line, in order to ensure that the regular transportation of product coal is not undertaken by road.

The proposed road transport of coal samples is to be undertaken by registered transport company vehicles in accordance with normal road transport traffic regulations and RMS requirements. No additional adverse traffic impacts are anticipated from the transportation of coal samples by road.

4.6.3 Proposed Modification

It is proposed that Condition 12 Schedule 2, and be modified to allow coal samples to be transported from the BCM by normal road transport methods.

The following modification (in underlined text) to Condition 12 of Schedule 2 is proposed:

Coal Transport

12. *The Proponent may transport up to 10 million tonnes of product coal via the Boggabri Rail Spur Line in any calendar year; comprising:*
 - (a) *up to 8.6 million tonnes of product coal from the Boggabri Coal Mine in any calendar year; and*
 - (b) *up to 3 million tonnes of product coal from the Tarrawonga Coal Mine in any calendar year.*
12. *The Proponent may only transport coal from the site by road for 22 months following the date of this approval, or for such additional period as may result from delays in construction of the Boggabri Rail Spur Line as agreed by the Secretary. Following expiry of this period, all coal is to be transported from the site via the Boggabri Rail Spur Line unless in exceptional circumstances as agreed with RMS, the Council and approved by the Secretary, or coal samples for testing or marketing purposes, up to a maximum of 60 tonnes per sample which may be transported by road from the Boggabri Coal Mine.*

5.0 Conclusion

This Modification application seeks to make changes to the Boggabri Project Approval in 5 areas. An environmental assessment has been conducted for each of the proposed changes and has concluded the following:

TCM Common Boundary

In order to achieve a merged final landform across the common boundary between the BCM and TCM, partial mining lease transfers have been agreed and completed. The Project Approval boundary shown in the Boggabri Project Approval is proposed to be modified to align with the Project Approval boundary shown in the TCM Project Approval, where those boundaries coincide. This revised Boggabri Project Approval boundary represents an administrative change and will not result in any additional impacts.

Long Term biodiversity offset area security arrangements

Following the issuing of the original Boggabri Project Approval in July 2012, new and updated long term security mechanisms have become available for protection of biodiversity offset areas. BCM would like to make use of these mechanisms, in consultation with and with the agreement with the Secretary. New arrangements will be determined on their merits under the framework and policy that is available at the time. This administrative change will not result in any changes to the impacts of the project.

TCM Product Stockpile Area

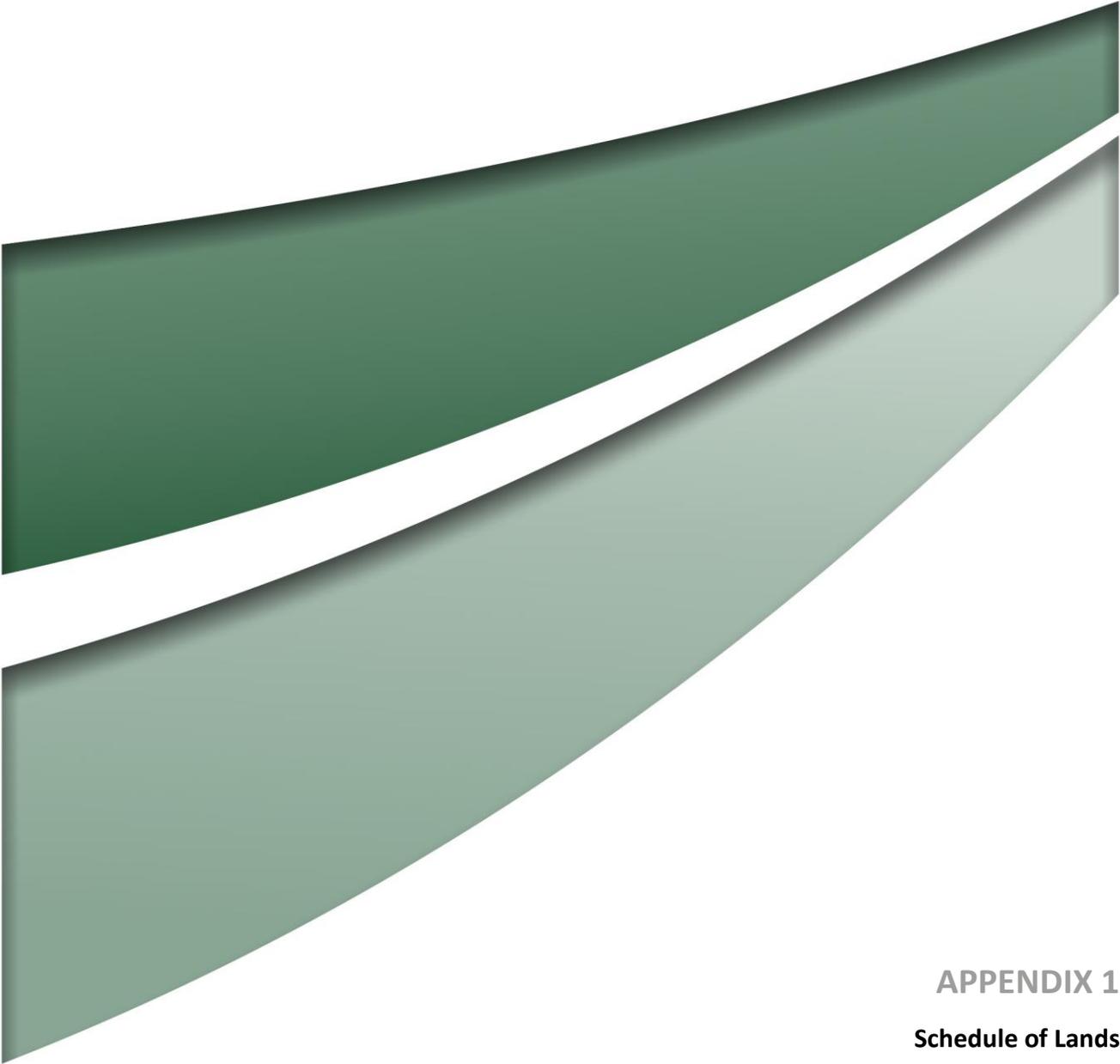
Facilities dedicated for the stockpiling and handling of TCM coal have been partially constructed within the BCM Infrastructure Facilities Area, consistent with the Boggabri Project Approval. However, to date, no commercial agreement has been reached with TCPL regarding the use of the BCM Infrastructure Facilities Area for the processing of TCM coal. BCOPL proposes to utilise these facilities for the stockpiling and handling of BCM coal, whilst retaining the currently approved capacity to process and stockpile TCM coal if an agreement is reached with TCPL in the future. No additional BCM coal tonnages are proposed to be handled through the BCM Infrastructure Facilities Area and no additional environmental impacts are predicted.

Drilling and exploration activities in the Project Description

Ongoing exploration activities have not previously been included in the Project Description for the BCM. The impacts of these activities are minor in the context of the mining project, and are proposed to be undertaken within the approved Project disturbance area, and will be managed through the extensive environmental management framework in place at the BCM.

The transportation of coal samples by road

All product coal leaving the BCM is required to be transported from the site by rail via the Boggabri Rail Spur. However, samples of coal are required to be transported to customers and laboratories for marketing and testing purposes on an irregular basis. Given the small size of these samples (up to 60 tonnes each) compared to the 8.6 Mtpa product coal leaving the site annually, and considering the intermittent nature of the supply of samples, there are not anticipated to be any impacts from the road transport of coal samples. It is proposed that the transport of coal samples up to a maximum of 60 tonnes per sample be allowed under Condition 12 Schedule 2 of the Boggabri Project Approval.



APPENDIX 1
Schedule of Lands

SCHEDULE OF LANDS

Property Description	
Lot	DP
B	190503
156	455004
2	509312
1	566122
3	566122
1	622375
279	721447
1	748046
2	748046
3	748046
39	754926
40	754926
41	754926
43	754926
44	754926
124	754926
125	754926
127	754926
142	754926
161	754926
5	754940
8	754940
10	754940
12	754940
13	754940
14	754940
17	754940
18	754940
21	754940
22	754940
23	754940
30	754940
37	754940
38	754940
44	754940
56	754940
60	754940
59	754948
60	754948
105	755470
85	755475
158	755475

Property Description	
Lot	DP
159	755475
203	755475
262	755475
264	755475
1	970060
7001	1052587
9	1096302
12	1182291
263	1193634
279	1196626
280	1196626
281	1196626
1	1200040
2	1200040
3	1200040
11	1200767
12	1200767
13	1200767
14	1200767
15	1200767
16	1200767
17	1200767
1	1201952
1	1202450
3	1202450
4	1202450
5	1202450
7	1202450
8	1202450
102	1204994
38	1211027
241	1219864
242	1219864
243	1219864
1	1226200
Parts of Trunk Road No.72, T.S & C-R 28354	
State Forest-undefined	
Therribri Road (r9542) within the land district of Narrabri	
Un-named public roads within the project boundary	



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