

NOISE MANAGEMENT STRATEGY

For Boggabri – Tarrawonga – Maules Creek Complex

APRIL 2024

Idemitsu Australia Pty Ltd
Boggabri Coal Operations Pty Ltd

Whitehaven Coal Limited
Tarrawonga Coal Pty Ltd, Maules Creek Coal Pty Ltd



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Glossary

Glossary	
AQMS	Air Quality Management Strategy
BCOPL	Boggabri Coal Operations Pty Ltd
BTM Complex	Boggabri-Tarrawonga-Maules Creek Complex (previously Leard Forest Mining Precinct)
CCC	Community Consultative Committee
CL	Coal Lease
DA	Development Application
dB(A)	A-weighted Decibel
DCCEEW	Commonwealth Department of Climate Change, Energy, the Environment and Water
DoEE	Commonwealth Department of the Environment and Energy (Now DCCEEW)
DP&E	NSW Department of Planning and Environment (Now DPPI)
DPPI	NSW Department of Planning, Housing and Infrastructure
EA	Environmental Assessment
EPA	NSW Environmental Protection Agency
EP&A Act	<i>Environmental Planning and Assessment Act, 1979</i>
IA	Idemitsu Australia Pty Limited
MCCM	Maules Creek Coal Mine
Mtpa	Million Tonnes Per Annum
NMP	Noise Management Plan
NMS	Noise Management Strategy
OEA	Overburden Emplacement Area
OEH	NSW Office of Environment and Heritage
PAC	NSW Planning Assessment Commission
ROM	Run of Mine
SCADA	Supervisory Control and Data Acquisition
TCM	Tarrawonga Coal Mine
TCPL	Tarrawonga Coal Pty Ltd - Tarrawonga Joint Venture
the Strategy	BTM Complex Noise Management Strategy
WRF	Weather Research and Forecasting

1. Introduction

1.1 Background and purpose

The purpose of this cumulative noise management strategy (NMS) is to document the approach that will be taken by mines within the Boggabri-Tarrawonga-Maules Creek Complex (BTM Complex)¹ to monitor and collectively manage the cumulative noise impacts of their operations. The NMS outlines the cumulative noise management protocols that will be implemented within the BTM Complex.

The BTM Complex is an existing mining precinct located within and around the Leard State Forest, approximately 15 kilometres (km) northeast of Boggabri in the Narrabri Local Government Area (LGA). The BTM Complex includes the Tarrawonga Coal Mine (TCM) in the south, the Boggabri Coal Mine (BCM) to the north and the Maules Creek Coal Mine (MCCM) to the northwest. The extent of the relevant tenements for each of the mines that comprise the BTM Complex are presented in Figure 2.1. BCM is managed by Boggabri Coal Operations Pty Limited (BCOPL), a wholly owned subsidiary of Idemitsu Australia Pty Limited (IA). TCM is managed by Tarrawonga Coal Pty Ltd, a wholly owned subsidiary of Whitehaven. MCCM is managed by Maules Creek Coal Pty Ltd, a wholly owned subsidiary of Whitehaven Coal Mining Limited (Whitehaven). A Summary of the ownership details for the mines within the BTM Complex is provided below in Table 1.1 Management and Ownership of BTM Complex Mines.

Table 1.1 Management and Ownership of BTM Complex Mines

Mine	Management	Ownership	Share
Boggabri Coal Mine	Boggabri Coal Operations Pty Ltd	Idemitsu Australia	80%
		Chugoku Electric Power	10%
		NS Boggabri Pty Limited	10%
Tarrawonga Coal Mine	Tarrawonga Coal Pty Limited	Whitehaven Coal Mining Limited	100%
Maules Creek Coal Mine	Maules Creek Coal Pty Limited	Aston Coal 2 Pty Limited (owned 100% by Whitehaven Coal Limited)	75%
		Itochu Coal Resources Australia Maules Creek Pty Ltd (ICRA MC)	15%
		J-Power Australia (J-Power)	10%

Project applications for the continued operation of BCM (application number 09_0182) and the development of the MCCM (application number 10_0138) were determined by the NSW Planning Assessment Commission (PAC) in July and October 2012 respectively, under delegation by the NSW Minister for Planning and Infrastructure. Subsequent to this, the (then) Commonwealth Department of Sustainability, Environment, Water, Population and Communities (SEWPAC), now the Commonwealth Department of Climate Change, Energy, the Environment and Water DCCEEW) granted conditional approval for both the BCM Extension (EPBC 2009/5256) and the MCCM Project (EPBC 2010/5566) on

¹ In previous environmental assessments and approval documents this group of mines has been referred to as the Leard Forest Mining Precinct. For the purposes of this strategy and all other relevant cumulative impact management documents, all references to the 'Leard Forest Mining Precinct' have been replaced with the term 'BTM Complex'.

11 February 2013. These projects were granted approval subject to stringent conditions related to the management of cumulative impacts.

The TCM application for continuation of mining was approved on 22 January 2013, with similar cumulative impact management conditions to those detailed in the BCM and MCCM. The (now) DDCCEEW granted EPBC approval (EPBC 2011/5923) to the Tarrawonga project on 11 March 2013.

Approval conditions require the preparation of a suite of regional strategies, developed in partnership by all three mines of the BTM Complex. This NMS has been developed to satisfy each mine's project approval conditions, and should be considered in conjunction with other BTM Complex Strategies, in particular the Air Quality Management Strategy (AQMS) that describes the predictive meteorological forecasting system for the Complex.

Approval conditions relevant to the management of cumulative noise impacts within the BTM Complex are detailed in Table 1.2.

Table 1.2 Approval requirements for cumulative noise impact management

Boggabri Coal Mine Project Approval 09_0182 Condition	Maules Creek Coal Mine Project Approval 10_0138 Condition	Tarrawonga Coal Mine Project Approval 11_0047 Condition	Details	Section reference in NMS
Schedule 3 Condition 12 (b)	Schedule 3 Condition 15 (b)	11 (b)	Operate a comprehensive noise management system on site that uses a combination of predictive meteorological forecasting and real time noise monitoring data to guide the day-to-day planning of mining operations and implementation of both proactive and reactive noise mitigation measures to ensure compliance with the relevant conditions of this approval	Whole of NMS along with respective site NMP's and the AQMS
Schedule 3 Condition 12 (j)	Schedule 3 Condition 15 (i)	11 (h)	Co-ordinate the noise management on site with the noise management at other mines within the Leard Forest Mining Precinct to minimize the cumulative noise impacts of these mines	Whole of NMS, including Section 4
	Schedule 3 Condition 16 (g)	12 (g)	Prepare and implement a Noise Management Plan that... includes a Leard Forest Mining Precinct Noise Management Strategy that has been prepared in consultation with other coal mines in the Precinct to minimise the cumulative noise impacts of all mines within the Complex Precinct, and includes: <ul style="list-style-type: none"> ▪ A description of the measures that would be implemented to ensure that the noise management of the mines is properly coordinated to ensure compliance with the relevant noise criteria; ▪ a suitable monitoring network for the Precinct; ▪ protocols for data sharing; and ▪ procedures for identifying and apportioning the source/s and contribution/s to cumulative noise impacts for the operating mines and other sources, using the noise and 	Whole of NMS.

Boggabri Coal Mine Project Approval 09_0182 Condition	Maules Creek Coal Mine Project Approval 10_0138 Condition	Tarrawonga Coal Mine Project Approval 11_0047 Condition	Details	Section reference in NMS
			<p>meteorological monitoring network and appropriate investigative tools.</p> <p>Note: The Leard Forest Mining Precinct Noise Management Strategy can be developed in stages and will need to be subject to ongoing review dependent upon the determination and commencement of other mining projects in the area.</p>	
Schedule 3 Condition 13 (g)			<p>Prepare and implement a Noise Management Plan that...</p> <p>includes a Leard Forest Mining Precinct Noise Management Strategy that has been prepared in consultation with other coal mines in the Precinct to minimise the cumulative noise impacts of all mines within the Precinct, that includes:</p> <ul style="list-style-type: none"> ▪ Systems and processes to ensure that all mines are managed to achieve their noise criteria; ▪ a shared environmental monitoring network and data sharing protocol; and ▪ procedures for identifying and apportioning the source/s and contribution/s to cumulative noise impacts for operating mines and other sources, using the noise and meteorological monitoring network and appropriate investigative tools. <p>Note: The Leard Forest Mining Precinct Noise Management Strategy can be developed in stages and will need to be subject to ongoing review dependent upon the determination and commencement of other mining projects in the area.</p>	Whole of NMS, specifically Sections 4 and 5

1.2 Document structure

The structure of this strategy is as follows:

- **Section 1** provides an introduction to the NMS, including the background to the NMS, and the scope of the NMS.
- **Section 2** provides an overview of the BTM Complex mines (BCM, TCM, MCCM).
- **Section 3** describes the cumulative noise criteria applicable to each of the mines in the BTM Complex
- **Section 4** describes existing monitoring networks, sets objectives for cumulative noise monitoring, responsibilities of each mine, data interpretation, noise triggers for each individual mine and mitigation measures and processes to mitigate outcomes for the BTM Complex.
- **Section 5** describes data management
- **Section 6** describes the review and revision of the NMS

- **Section 7** provides a list of references used in this document.

1.3 Scope

This document is the overarching strategy for management of cumulative noise for the BTM Complex.

Individual mines will manage their ongoing operations and associated noise emissions in accordance with their site-specific Noise Management Plans (NMPs) that will, by default, ensure that the cumulative noise criteria of the BTM Complex will be met. Statutory requirements relating to noise will be provided in each individual mine's NMP.

2. BTM Complex

The BTM Complex is centred within and around the Leard State Forest, approximately 15 km northeast of Boggabri in the Narrabri Shire local government area. The current mines within the Complex include TCM in the south, the BCM to the north and the MCCM to the northwest. The extents of the EA boundaries and noise monitoring locations for each of the mines that comprise the BTM Complex are presented in Figure 2.1.

2.1 Boggabri Coal Mine

BCM is an existing open cut mine that consists of an open cut pit, overburden dump, infrastructure area including coal processing facilities, water management structures, and a rail spur. BCM obtained NSW State Government approval on the 18 July 2012, and Commonwealth Government approval on 11 February 2013. These approvals (as modified) allow operations at BCM to extend until 2036 at a rate of 8.6 million tonnes per annum (Mtpa) of run-of-mine (ROM) coal. The project approval for BCM provides for operation of existing ancillary equipment; construction and operation of a new coal handling and preparation plant (CHPP); 17 km rail spur line; bridges over the Namoi River and Kamilaroi Highway; a rail load-out facility located at the mine; upgrade of the overburden and coal extraction haulage fleet (with an option for a drag-line); upgrade of electricity transmission lines; and establishment of a water supply bore field and other ancillary infrastructure.

BCM have modified PA09_0182 on multiple occasions since approval with the most recent being in January 2024, relating to an increase in the depth of mining.

2.2 Tarrawonga Coal Mine

The TCM is an existing coal mining operation that was granted approval by the (now) DPPI to extract 2 Mtpa of ROM coal in 2005 (DA88-4-2005). TCPL, a subsidiary of Whitehaven Coal, submitted a project application in July 2011 for an extension of open cut mining operations with an increased production rate to 3 Mtpa of ROM coal for a further 17 years from 2013 to 2030. This project application was determined by the PAC on 22 January 2013 and included, under Condition 12 (g), the requirement that the proponent shall prepare and implement a NMP that must include a NMS for the BTM Complex.

TCM have modified Project Approval 11_0047 on a number of occasions since then, increasing coal extraction to a maximum of 3.5 million tonnes in 2020. The most recent modification was determined in December 2023 to increase the road haulage hours of operation.

2.3 Maules Creek Coal Mine

The MCCM Project Approval (PA 10-0138) was granted by the PAC as delegate of the Minister of DP&E on 23 October 2012. The approval includes extraction of up to 13 Mtpa of ROM coal for 21 years, construction and operation of site infrastructure including a CHPP and associated facilities; train loading facility; rail spur and loop; a mine access road; communications and power reticulation; explosives storage; and a water pipeline from the Namoi River.

MCCM have modified Project Approval 10_0138 on a number of occasions since then, with the most recent being in March 2024. This latest modification authorised changes to the existing biodiversity strategy and construction and use of an electricity transmission line.

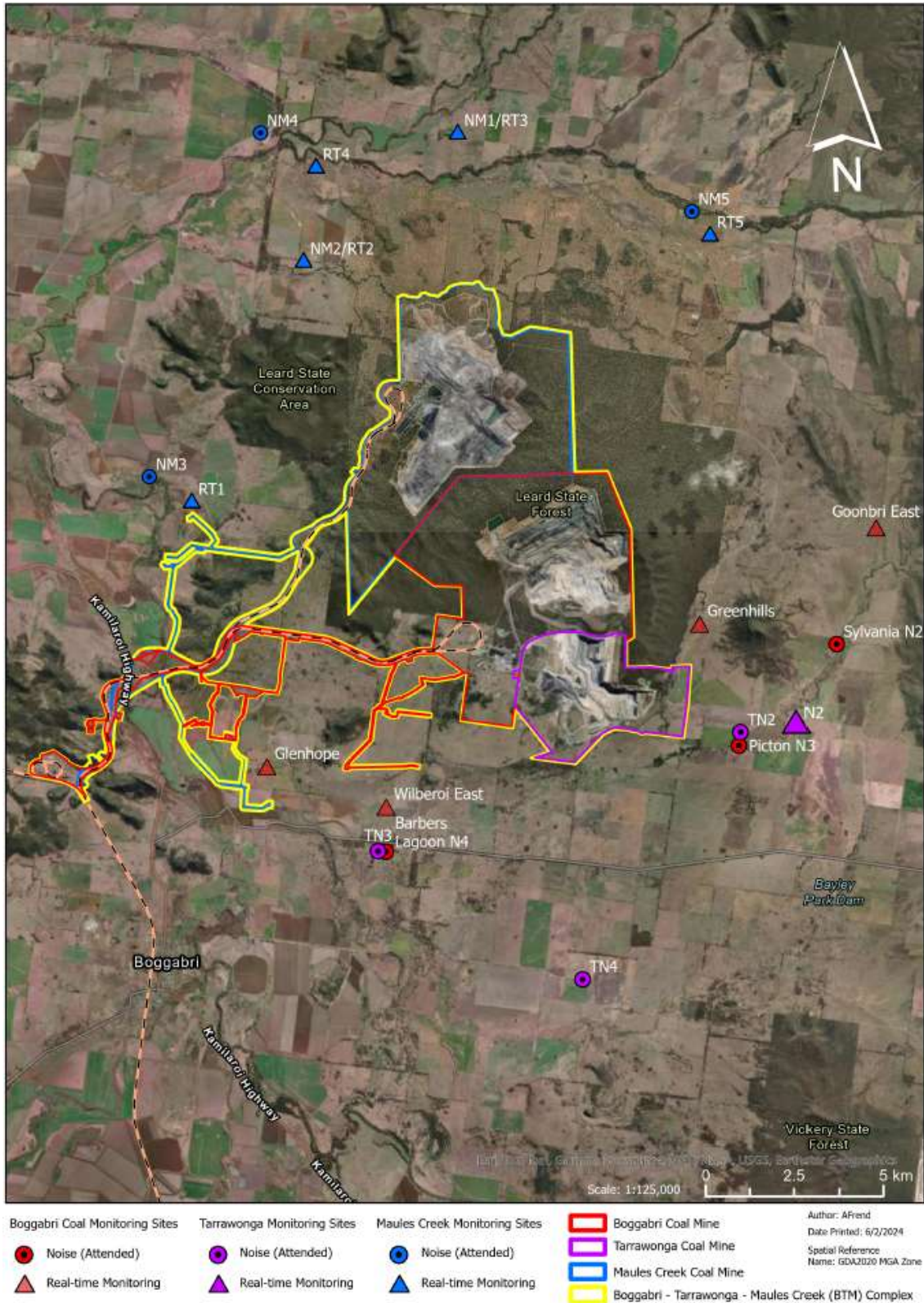


Figure 2.1 Project boundaries and noise monitoring locations for the BTM Complex Mines

3. Noise criteria

3.1 Cumulative noise assessment criteria

Cumulative noise assessment criteria are contained in the Boggabri Coal Project Approval (09_0182), the Maules Creek Coal Project Approval (10_0138) and the Tarrawonga Coal Project Approval (11_0047). Except for the noise affected land identified in Condition 3 of Project Approval 09_0182, Table 1 of Project Approval 10_0138, and Table 1 of Project Approval 11_0047, each mine is required to ensure that the operational noise generated by their respective project, combined with the noise generated by other mines in the BTM Complex, does not exceed the criteria in Table 3.1 at any residence on privately-owned land.

Table 3.1 Cumulative noise assessment criteria

Location	Day (LAeq (period))	Evening (LAeq (period))	Night (LAeq (period))
All privately-owned land	40	40	40

Note: Cumulative noise is to be measured in accordance with the relevant requirements, and exemptions (including certain meteorological conditions), of the NSW Noise Policy for Industry (EPA, 2017).

Operational noise includes noise from the mining operations and use of private haul roads and rail spurs.

4. Monitoring Network

The mines of the BTM Complex implement comprehensive noise management systems. These noise management systems utilise a combination of attended monitoring for compliance with project approval's and EPL's for the individual mines, and unattended real time monitoring for use as management tools as part of the day-to-day operations.

This existing noise monitoring network will be used to monitor and manage cumulative impacts associated with the operation of mines in the BTM Complex. The existing network may be reviewed and modified in accordance with each of BTM Complex mine project approvals (refer to Section 6).

A noise monitoring network has been established to quantify cumulative noise levels from the BTM Complex and noise from individual mines by monitoring in real-time (unattended) and attended noise levels at sensitive receivers. Attended and unattended noise monitoring will be conducted at the locations outlined in the individual mines' approved Noise Management Plans, refer Figure 2.1. Real-time noise monitors are used to manage operating noise from the mines' and attended noise monitoring is conducted to confirm individual and cumulative noise affectation criteria are achieved. The objective of the cumulative noise monitoring is to determine whether received noise meets relevant noise affectation criteria, both cumulative (40 dBA) and the lower mine specific (35 dBA).

Where attended monitoring results indicate noise levels are above 35dB(A) the noise specialist conducting the monitoring will assess whether the noise impact is a result of cumulative impacts from other mines in the BTM Complex, and in doing so attempt to identify the source and apportion the noise contribution accordingly.

Where cumulative impacts are suspected, the noise specialist will undertake attended monitoring at additional locations, with consideration of real-time meteorological conditions and direction to operations, to assist determination of respective noise contributions.

Should it be determined that the elevated noise is due to cumulative impacts, notification to the neighbouring mining operations will occur as per section 5. Monitoring data from relevant mines' noise management systems will be used to assist in apportioning this contribution.

Mitigation measures and processes as described in each sites respective NMP's (e.g relocation/stand down of equipment as necessary), will be followed should exceedance of noise criteria be determined.

5. Data Sharing

Each mine is responsible for the maintenance, calibration, repair, operating costs, site access agreements and data storage of the noise monitoring network of their operations.

To ensure that there is a coordinated approach to noise management of the mines in the BTM Complex, a level of data sharing is required. Data that will be shared includes:

- Attended noise monitoring reports
- Meteorological data
- Historic data files from real time noise monitors
- Calibration certificates

This data will be provided on request to assist investigation of potential noise sources and/or contributions from other mines following exceedance of noise criteria, during attended noise monitoring.

Data may also be requested in the event that a mine's (proactive and reactive noise management system) noise trigger levels are activated, to assist in determining contributing noise sources.

Data will not be validated prior to sharing with other mines.

Regular meetings are held between BTM Complex environmental personnel to discuss various cumulative impacts, a minimum of 10 meetings will be held each year. The implementation of the BTM Noise strategy and the management of cumulative noise impacts of the member mines is discussed as a standing agenda item.

When cumulative noise criteria are identified as exceeded, discussions will be held as soon as practicable between BTM Complex mines to review causal factors and response actions, and the appropriate agencies notified in accordance with the requirements of each mines' project approval.

6. Non compliance notifications

Notification criteria are contained in the Boggabri Coal Project Approval (09_0182), the Maules Creek Coal Project Approval (10_0138) and the Tarrawonga Coal Project Approval (11_0047). Each mine is required to ensure that notification of non-compliance is undertaken in accordance with their reporting obligations. Reporting obligations for each of the mines in the BTM complex are outlined in Table 6.1.

Table 6.1 Boggabri Coal Reporting Obligations for Non-Compliances

Boggabri Coal Mine Project Approval 09_0182 Condition	Details
Schedule 5 Condition 8	The Proponent must notify, at the earliest opportunity, the Secretary and any other relevant agencies of any incident that has caused, or threatens to cause, material harm to the environment. For any other incident associated with the project, the Proponent must notify the Secretary and any other relevant agencies as soon as practicable after the Proponent becomes aware of the incident. Within 7 days of the date of the incident, the Proponent must

Boggabri Coal Mine Project Approval 09_0182 Condition	Details
	provide the Secretary and any relevant agencies with a detailed report on the incident, and such further reports as may be requested.

Table 6.2 Tarrawonga Coal Mine Reporting Obligations for Non-Compliances

Tarrawonga Coal Mine Project Approval 11_0047 Condition	Details
Schedule 5 Condition 8	The Secretary must be notified in writing via the Major Projects website immediately after the Proponent becomes aware of an incident. The notification must identify the development (including the development application number and the name of the development if it has one) and set out the location and nature of the incident. Subsequent notification requirements must be given, and reports submitted in accordance with the requirements set out in Appendix 9.
Schedule 5 Condition 8 A	The Secretary must be notified in writing via the Major Projects website within seven days after the Proponent becomes aware of any non-compliance.
Schedule 5 Condition 8 B	A non-compliance notification must identify the development and the application number for it, set out the condition of consent that the development is non-compliant with, the way in which it does not comply and the reasons for the non-compliance (if known) and what actions have been, or will be, undertaken to address the non-compliance.
Schedule 5 Condition 8 C	A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.

Table 6.3 Maules Creek Coal Mine Reporting Obligations for Non-Compliances

Tarrawonga Coal Mine Project Approval 11_0047 Condition	Details
Schedule 5 Condition 8	The Planning Secretary must be notified in writing via the Major Projects website immediately after the Applicant becomes aware of an incident. The notification must identify the development (including the development application number and the name of the development if it has one) and set out the location and nature of the incident. Subsequent notification requirements must be given, and reports submitted in accordance with the requirements set out in Appendix 9.
Schedule 5 Condition 8 A	The Planning Secretary must be notified in writing via the Major Projects website within seven days after the Applicant becomes aware of any non-compliance.
Schedule 5 Condition 8 B	A non-compliance notification must identify the development and the application number for it, set out the condition of consent that the development is non-compliant with, the way in which it does not comply and the reasons for the non-compliance (if known) and what actions have been, or will be, undertaken to address the non-compliance.
Schedule 5 Condition 8 C	A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.

7. Review and revision

The NMS has been developed with the input of representatives of BCPL, TCM and MCC.

In accordance with the project approvals, the NMS and respective sites NMPs will be reviewed, and if necessary revised, within three months of:

- an annual review
- incident threatening material harm, requiring notification of the Secretary of relevant agencies
- statutory audit
- modification of project approval.

8. References

Project Approval (PA 09_0182) for Boggabri Coal Mine.

Project Approval (PA 10_0138) for Maules Creek Coal Mine.

Project Approval (PA 11_0047) for Tarrawonga Coal Mine.