

Marulan South Limestone Mine | SSD 7009

Environment Management Strategy

Prepared for Boral Cement Limited | 8 August 2022





Marulan South Limestone Mine

SSD 7009 | ENVIRONMENT MANAGEMENT STRATEGY

Prepared for Boral Cement Limited
8 August 2022

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1 INTRODUCTION

1.1 Background

Boral Cement Limited (Boral) owns and operates the Marulan South Limestone Mine (the mine), an open cut mine in Marulan South, New South Wales (NSW). Limestone mining north of Bungonia Gorge began around 1830 with major developments emerging in the 1920s to supply limestone for cement manufacturing and steel making.

The mine was opened in 1929 to supply limestone for cement, manufacturing and steel making. By 1953 two main pits (northern mine pit and southern mine pit) were well established and by the early 1970s the facets of the business included limestone for cement, steel making, agriculture, glass making, lime manufacturing, quicklime and hydrated lime.

The mine produces up to 3.38 million tonnes (Mt) of limestone based products per year for the cement, steel, agricultural, construction and commercial markets.

Due to changes in the NSW *Mining Act 1992* (Mining Act) and the NSW *Environmental Planning & Assessment Act 1979* (EP&A Act), a State significant development (SSD) consent under the EP&A Act was required to move mining operations beyond the area covered by the mining operations plan (MOP).

Two approvals are required for the mine:

- a consent for the development (SSD 7009) under Part 4, Division 4.7 of the EP&A Act; and
- controlled action approval under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) for impacts on listed threatened species and communities (sections 18 and 18A of the Act).

An environmental impact statement (EIS) was prepared to accompany the application for SSD 7009 and addresses the requirements of State agencies under the EP&A Act and the Commonwealth Department of Agriculture, Water and the Environment. A response to submissions (RTS) report was subsequently prepared to consider and respond to agency and public submissions and provide clarification of development components where relevant.

Development consent (the consent) was granted by the Department of Planning, Industry and Environment (DPIE) on 19 August 2021, to continue mining limestone at a rate of up to 4 million tonnes per annum (Mtpa) for up to 30 years (the Project).

To satisfy Condition of Consent (CoC) D5(i), the EIS, RTS, development consent and other publicly available information related to the assessment and determination of SSD 7009 can be accessed on DPIE's Major Projects Planning Portal (<https://www.planningportal.nsw.gov.au/major-projects/project/9691>).

The consent requires the preparation and implementation of management plans, strategies, protocols and procedures detailing environmental commitments, controls and performance objectives at the mine throughout its operational life. An environmental management strategy (EMS) is required under CoC D1.

This EMS incorporates the relevant management measures in the EIS, RTS and conditions of consent relating to environmental management. This EMS will be a dynamic document which will be updated as required over the life of mining operations until 31 August 2051.

This EMS has been prepared by Element Environment on behalf of Boral.

1.2 Overview of operations

1.2.1 Site description

The mine is in Marulan South, 10 km south-east of Marulan village and 35 km east of Goulburn. It is in the Goulburn Mulwaree Local Government Area (LGA).

The mine is separated from the Bungonia National Park (NP) and State Conservation Area to the south by Bungonia Creek and is separated from the Shoalhaven River and Morton NP to the east by Barbers Creek.

The mine and surrounds are characterised by rolling hills of pasture interspersed with forest to the west, contrasting with the heavily wooded, deep gorges that begin abruptly to the east of the mine, forming part of the Great Escarpment and catchment of the Shoalhaven River.

Access is via Marulan South Road, which connects the mine and Boral's Peppertree Quarry with the Hume Highway approximately 9 km to the north-west. Boral's private rail line connects the mine and Peppertree Quarry with the Main Southern Railway approximately 6 km to the north.

The Project site (site) covers historical and proposed future areas of disturbance and comprises two geographically separate areas:

- the existing mine including the proposed 30-year mine footprint and associated infrastructure; and
- the proposed Marulan Creek dam to be on Marulan Creek, within Boral landholdings approximately 2.5 km north of the mine entrance.

The site covers an area of 846.4 ha. The existing pre-SSD disturbance footprint is 341.5 ha with 256.5 ha of new disturbance associated with the proposed 30-year mine plan.

Most of the site is zoned RU1 – Primary Production under the Goulburn Mulwaree Local Environmental Plan (LEP) 2009. Mining and extractive industries are permissible in this zone with consent. The remaining area is zoned E3 – Environmental Management. Mining and extractive industries are prohibited in this zone. However, as agriculture is permitted in the E3 zone with consent, mining is also permitted in this zone under the State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007 (now the Resources and Energy SEPP 2022) with consent.

1.2.2 Overview of existing mining

The mine is on a high-grade limestone resource. Subject to market demand the mine has typically produced up to 3.38 Mt of limestone and up to 200,000 t of shale per annum.

The mine produces a range of limestone products for internal and external customers in the Southern Highlands/Tablelands, the Illawarra and metropolitan Sydney markets for use primarily in cement and lime manufacture, steel making, agriculture and other commercial uses. Products are despatched by road and rail, with the majority despatched by rail.

Historically limestone mining was focused on the approximately 200-300 m wide Eastern Limestone and was split between a north pit and a south pit. A limestone wall (the 'centre ridge') rising almost to the original land surface, divided the two pits.

The north and south pits were joined in 2016/2017 by mining the centre ridge to form a single contiguous pit, approximately 2 kilometres (km) in length. However, the north pit/south pit naming remains important as mining locations continue to be reported with respect to one or other of the old pits.

Limestone and shale are extracted using open-cut hard rock drill and blast techniques. Limestone is loaded using front end loaders and hauled either to stockpiles or the processing plant using haul trucks. Oversized material is stockpiled and reduced in size using a hydraulic hammer attached to an excavator.

Limestone processing facilities including primary and secondary crushing, screening, conveying and stockpiling plant and equipment are in the northern end of the north pit. Kiln stone grade limestone is also processed on site through the existing lime plant comprising kiln stone stockpiles, rotary lime kiln, hydration plant and associated auxiliary conveying, processing, storage, despatch plant and equipment. Overburden from stripping operations is emplaced in the Western Overburden Emplacement (WOE), west of the open cut pits.

1.2.3 Overview of approved project

Consent was granted for a 30-year mine plan accessing approximately 120 Mt of limestone to a depth of 335 m. The mine footprint focuses on an expansion of the pit westwards to mine the Middle Limestone and to mine deeper into the Eastern Limestone.

As the Middle Limestone lies approximately 70-150 m west of the Eastern Limestone, the 30-year mine plan avoids mining where practical the interburden between these two limestone units thereby creating a smaller second, north-south oriented west pit with a ridge remaining between.

The north pit will also be expanded southwards, encompassing part of the south pit, leaving the remainder of the south pit for overburden emplacement and a visual barrier.

Limestone will be extracted at up to 4 Mtpa for 30 years until 31 August 2051. Clay shale will also continue to be extracted at up to 200,000 tonnes per annum (tpa). The limestone will be processed to create limestone and lime products including limestone aggregates and sand, hydrated lime and quick lime.

Existing infrastructure is being retained along with the following changes:

- relocation of a section of high voltage power line to accommodate a proposed overburden emplacement;
- realignment of a section of Marulan South Road, to accommodate a proposed overburden emplacement;
- relocation of the processing infrastructure and the stockpile and reclaim area at the northern end of the north pit to allow the northward expansion of the pit;
- development of a shared Road Sales Stockpile Area including a weighbridge and wheel wash to service both the mine and Peppertree Quarry; and
- construction of a 118 million litre (ML) in-stream water supply dam on Marulan Creek.

Boral will transport up to 600,000 tpa of limestone and hard rock products along Marulan South Road to the Hume Highway, as well as 120,000 tpa of limestone products to the agricultural lime manufacturing facility.

The Project provides continued direct employment for 118 people on the mine site and 73 offsite. It will operate 24-hours per day, 7 days per week. Blasting will continue to be restricted to daylight hours on weekdays, excluding public holidays.

Figure 1.1 and Figure 1.2 provide an overview of the approved project.

Figure 1.1
Project overview

MARULAN SOUTH LIMESTONE MINE CONTINUED OPERATIONS - SSD APPLICATION

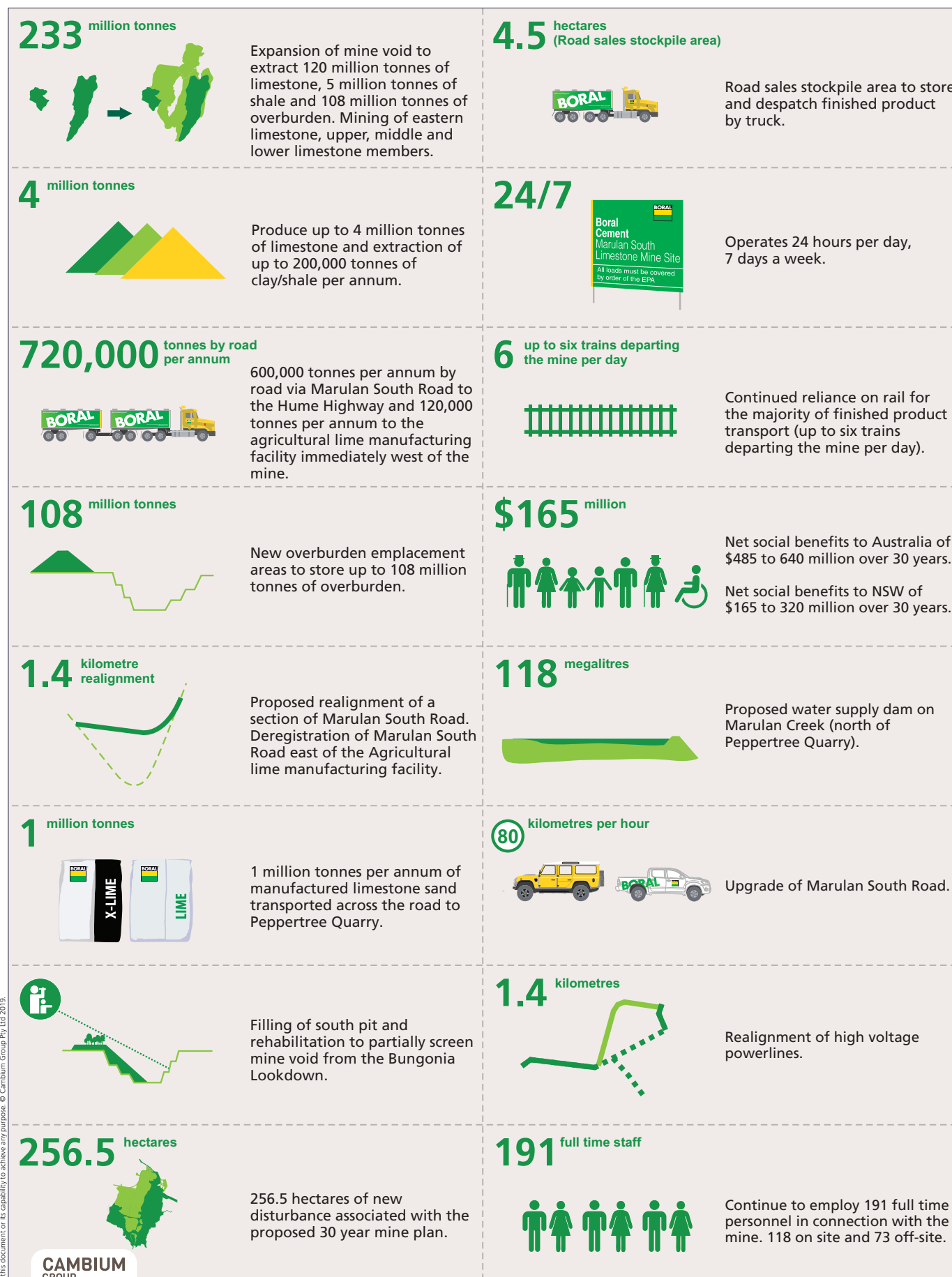
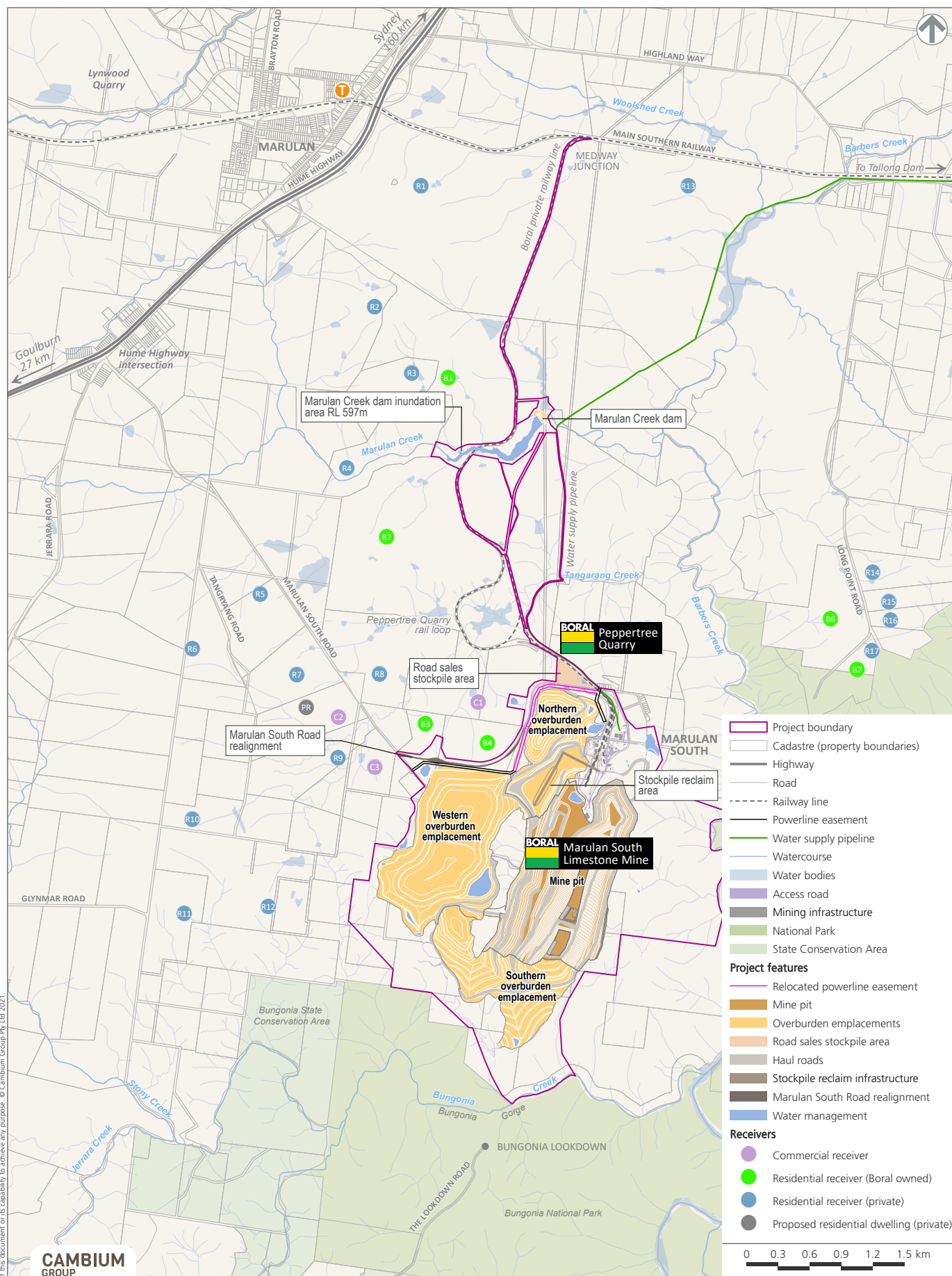


Figure 1.2
The Project

MARULAN SOUTH LIMESTONE MINE CONTINUED OPERATIONS - SSD APPLICATION



1.3 Environmental management framework

The mine operates in accordance with the Boral integrated Health Safety, Environment and Quality Management System (HSEQ MS) which establishes a strategic platform for regulatory compliance and continual improvement in environmental management. This framework is documented in *GRP-HSEQ-1-01 Management System Framework and Operational Control*. The Boral HSEQ MS is aligned with the international standard ISO-14001.

1.3.1 Environmental management strategy

CoC D1 requires the preparation of an environmental management strategy (EMS) for the mine. The EMS provides the mine's strategic framework for environmental management.

1.3.2 Alignment with other plans

This document outlines the overarching strategy of which the other environmental management plans – air quality and greenhouse gas, traffic, water, groundwater, Aboriginal heritage, historic heritage, noise, blasting, bushfire management and biodiversity and rehabilitation form a part of.

1.4 Purpose and objectives

This EMS applies to all activities approved under SSD 7009, including maintenance activities and associated service and support functions.

The performance of environmental management at the mine will be managed through an EMS that is implemented across all of Boral's businesses. This EMS is tailored specifically to the mine and integrates the management plans and monitoring programs that have been prepared in accordance with relevant conditions of SSD 7009.

This EMS has been prepared to comply with CoC D1, which is described in Section 0

The EMS is structured around the plan-do-check-review framework and continual improvement objectives outlined in the international environmental management standard ISO-14001.

1.5 Document structure

The structure of this EMS is outlined in Table 1.1.

Table 1.1 Structure of the EMS

Section	Content
1	Provides an overview of the Project and objectives of the EMS.
2	Outlines statutory requirements associated with the development consent and consultation regarding the EMS.
3	Outlines implementation components of the EMS.
4	Includes checking and review components of the EMS.
Appendix A	Boral Environment Policy
Appendix B	Development Consent (SSD 7009)
Appendix C	EPBC Act Approval (EPBC 2015/7521)
Appendix D	Noise management plan
Appendix E	Blast management plan
Appendix F	Air quality and greenhouse gas management plan
Appendix G	Water management plan (including groundwater management plan)

Appendix H	Biodiversity management plan
Appendix I	Aboriginal cultural heritage management plan
Appendix J	Historic heritage management plan
Appendix K	Contaminated materials protocol
Appendix L	Bushfire management plan
Appendix M	Rehabilitation strategy
Appendix N	Traffic management plan
Appendix O	Emergency response procedure
Appendix P	Pollution Incident Response Management Plan

2 POLICY AND PLANNING

The success of the EMS requires detailed understanding and planning towards the mine's environmental impacts and controls, regulatory compliance requirements, internal corporate obligations, and community expectations. This Section outlines the planning aspects of the EMS.

2.1 Environmental policy

The context for environmental management at the mine is guided by the Corporate Environmental Policy of Boral Limited, regulatory compliance, growing community awareness/expectations and the proximity of the site to other local industry.

The Boral Limited Corporate Environmental Policy (see Appendix A) underpins the way in which the environment is managed across all of Boral's operations internationally. Boral is committed to pursuing industry specific best practice in environmental performance, complying with environmental legislation and open, constructive engagement with communities surrounding its operations.

The Boral Environmental Policy (November 2016) provides the foundation for the environmental objectives and the commitment that all employees and contractors undertake their duties in consideration of:

- efficient use of energy (including appropriate use of alternative fuels);
- conservation of water;
- minimisation and recycling of wastes;
- prevention of pollution;
- effective use of virgin and recovered resources and supplemental materials;
- open and constructive engagement with communities surrounding Boral operations;
- reducing the greenhouse gas emissions from Boral processes, operations and facilities;
- protecting and, where possible, enhancing biodiversity values at and around Boral facilities; and
- complying with environmental legislation, regulations, standards and codes of practice relevant to the particular business as the absolute minimum requirement in each of the communities in which Boral operate.

It is a Boral Corporate requirement that the Environmental Policy is clearly displayed in prominent locations at all operations and is included in training and induction programs undertaken by all employees and contractors.

Local communities are increasingly becoming more aware of the environmental performance of industry and have resulting high expectations. Marulan South is no different, and in light of this, community relations activities for the mine will seek to meet these expectations and earn a social licence to operate from the local community.

It is also recognised that the mine is in a semi-rural environment adjacent to other local industry. Peppertree Quarry is north of the mine, and Aglime Fertiliser's processing plant to the north west. The environmental performance of the mine will be monitored, assessed and managed in light of these cumulative impacts.

2.2 Aspects and impacts

Key Boral documents *GRP-HSEQ-1-03 Hazard Identification and Risk Management* and *GRP-HSEQ-8-01 Environmental Aspects and Impacts* will be implemented at the mine. The aspects

and impacts register is subject to scheduled reviews and updates (if required) to reflect any operational changes.

2.3 Development consent

This EMS has been prepared in accordance with the development consent. Table 2.1 presents the consent conditions relevant to the EMS and identifies where each condition has been addressed in this strategy. The development consent is in Appendix B.

Table 2.1 EMS requirements

Condition	Condition requirement	Section reference
D1	The Applicant must prepare an Environmental Management Strategy for the development to the satisfaction of the Planning Secretary. This strategy must:	This strategy
(a)	provide the strategic framework for environmental management of the development;	1.3
(b)	identify the statutory approvals that apply to the development;	2.2, 2.3
(c)	set out the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the development;	3.1
(d)	set out the procedures to be implemented to:	
(i)	keep the local community and relevant agencies informed about the operation and environmental performance of the development;	3.3, 4.3.2, 4.4, 4.5
(ii)	receive record, handle and respond to complaints;	3.3.4, 3.3.5
(iii)	resolve any disputes that may arise during the course of the development;	3.3.4, 3.3.5
(iv)	respond to any non-compliance and any incident;	4.4
(v)	respond to emergencies; and	3.6
(e)	include:	
(i)	references to any strategies, plans and programs approved under the conditions of this consent; and	1.3.2, 1.6
(ii)	a clear plan depicting all the monitoring to be carried out under the conditions of this consent.	4.1
D2	The Environmental Management Strategy must be approved by the Planning Secretary within 3 months from the date of this consent, unless otherwise agreed by the Planning Secretary.	Noted
D3	The Applicant must implement the Environmental Management Strategy as approved by the Planning Secretary.	Noted

2.4 Statutory requirements

Key Boral document: *GRP-HSEQ-1-04 Legal Compliance and Other Requirements* will be implemented at the mine.

Operators need to know and understand the statutory requirements that apply to their operations. Boral maintains subscriptions to a number of on-line legal resources which are accessible for all employees through links available on the company's intranet.

The mine operates under the compliance requirements of a statutory approval and a NSW EPA environment protection licence. The following key statutory instruments apply to the mine.

2.4.1 Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*

Approval from the Minister for the Environment under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) is required for any action that would result in a significant impact on matters of national environmental significance.

EPBC Act approval was sought in 2015 and granted in October 2021 ((EPBC 2015/7521) (refer to Appendix C). Conditions were applied in reference to native vegetation clearing (White Box-Yellow Box-Blakelys Red Gum Grassy Woodland and Derived Native Grassland and Koala/Large-eared Pied Bat habitat) and offsetting of approved clearing of the above vegetation/habitat).

2.4.2 The operations will need to be able to demonstrate compliance against the EPBC Act approval. Commonwealth *National Greenhouse and Energy Reporting Act 2007*

The Commonwealth *National Greenhouse and Energy Reporting Act 2007* (NGER Act) provides a single national framework for the reporting and dissemination of information about the greenhouse gas emissions, greenhouse gas projects, and energy use and production of corporations. It makes registration and reporting mandatory for corporations whose energy production, energy use or greenhouse gas emissions meet specified thresholds.

Boral triggers the threshold for reporting under the NGER Act, and reports energy use and greenhouse gas emissions from its operations, including the mine.

2.4.3 NSW *Environmental Planning and Assessment Act 1979*

The Project was declared a State significant development (SSD) under Part 4, Division 4.7 of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act) and clause 8(1) of State Environmental Planning Policy (State and Regional Development) 2011 (now the Planning Systems SEPP).

Secretary's environmental assessment requirements were issued for the Project by the equivalent to the current NSW Department of Planning, Industry and Environment (DPIE) on 10 June 2015 with the development application and environmental impact assessment submitted on 20 March 2019.

Development consent was granted by DPIE on 19 August 2021.

The mine will be subject to the provisions of the EP&A Act for any future changes or modifications to the operations. Additionally, the operations will need to be able to demonstrate compliance against the CoC under the provisions of the EP&A Act.

2.4.4 NSW *Protection of the Environment Operations Act 1997*

The objectives of the NSW *Protection of Environment Operations Act 1997* (POEO Act) are to protect, restore and enhance the quality of the environment. Some of the mechanisms that can be applied, under the POEO Act, to achieve these objectives include reduction of pollution at source, monitoring and reporting of environmental quality.

Based on annual production volumes, the mine has been determined to be a 'scheduled activity' under Schedule 1 of the POEO Act which requires site operations to be the subject of an environmental protection licence (EPL No. 944).

The EPL is issued for the scheduled activities of cement or lime works and mining for minerals. The EPL will be varied in accordance with the consent prior to the commencement of operations under the consent.

2.4.5 NSW Water Management Act 2000

The NSW *Water Act 1912* (Water Act) and NSW *Water Management Act 2000* (WM Act) regulate the management of water by granting licences, approvals for taking and using water, and trading groundwater and surface water. The WM Act applies to those areas where a water sharing plan has commenced. Alternatively, if a water sharing plan has not yet commenced, the Water Act applies. The WM Act is progressively replacing the Water Act as relevant water sharing plans are introduced across the State.

Water sharing plans (WSPs) have commenced for most of NSW. Licensing of monitoring bores continues under the Water Act until a regulation for aquifer interference gives a mechanism to approve these activities. Licensing of reinjection into groundwater systems is also still currently managed under the Water Act.

Surface water

The project is in the area of the Greater Metropolitan Region Unregulated Area WSP and the following three surface water sources within the WSP:

- Bungonia Creek Management Zone (commenced July 2011);
- Barbers Creek Management Zone (commenced July 2011); and
- Shoalhaven River Gorge Management Zone (commenced July 2011).

Boral's existing entitlements in these WALs are summarised in Table 2.2. Total water entitlements in the management zones and their access rules are summarised in Table 2.2.

Table 2.2 Surface water entitlements and access rules

WAL No	Works Approval	Water Source	Management Zone	Entitlement (ML)
Unregulated River				
WAL25207	10WA102352	Shoalhaven River Water Source	Barbers Creek Management Zone	76
WAL25373	10WA102377	Shoalhaven River Water Source	Barbers Creek Management Zone	10
Total Unregulated River				86
Domestic and stock				
WAL25352	10WA102352	Shoalhaven River Water Source	Barbers Creek Management Zone	1
Aquifer				
WAL24697	10WA116141 and 10WA116142	Goulburn Fractured Rock Groundwater Source		12
WAL41976		Goulburn Fractured Rock Groundwater Source		838
Total Aquifer				850

The proposed Marulan Creek dam will be in the Barbers Creek Management Zone. The surface water assessment identified a total annual surface water entitlement of up to 183 ML/year would be required. As summarised in Table 2.2, water licence trading is permitted in the Barbers Creek Management Zone, and sufficient surface water entitlements exist for the Marulan Creek dam.

Prior to construction of the Marulan Creek Dam, Boral would seek to acquire additional entitlements in the Barbers Creek Management Zone to account for water extracted from the dam.

Groundwater

Groundwater in the Project site is managed under the Goulburn Fractured Rock Groundwater Source zone of the 2011 Greater Metropolitan Region Groundwater Sources Water Sharing Plan (the plan).

Groundwater extraction requires an authorisation under the plan via a water access licence or some form of exemption. Boral holds entitlement to extract 12 ML/year (WAL24697) from two bores (10WA116142) for water supply on site. Boral also owns groundwater Water Access Licence 41976 for 838 ML, which was issued in September 2017.

2.4.6 State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011

State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011 (Drinking Water SEPP) aims to provide for healthy water catchments that will deliver high quality water while permitting development that is compatible with that goal.

The mine is in Sydney's drinking water catchment. Under clause 10 of the SEPP, a consent authority must not grant consent to the carrying out of development on land in the Sydney drinking water catchment unless it is satisfied that the carrying out of the proposed development would have a neutral or beneficial effect on water quality.

It is considered that the Project can be managed to provide at least a neutral effect on water quality in the Shoalhaven River catchment

2.4.7 NSW Biodiversity Conservation Act 2016

The NSW *Biodiversity Conservation Act 2016* (BC Act) replaced the *NSW Threatened Species Conservation Act 1995*, *NSW Native Vegetation Act 2003* and the flora and fauna provisions of the NP&W Act.

As the Project is SSD, it is required to consider biodiversity impacts in accordance with the Biodiversity Offset Scheme of the BC Act, that requires impacts to first be avoided and then mitigated before being offset in accordance with the scheme. The preliminary biodiversity offset strategy is summarised below

The ecosystem credits required to offset vegetation and habitat impacts are summarised in Table 2.3.

Table 2.3 Ecosystem credit requirements

PCT	Required credits
PCT 1334 Yellow Box - Blakely's Red Gum grassy woodland on the tablelands, South Eastern Highlands (SR670)	1,038
PCT 778 Coast Grey Box – stringybark dry woodland on slopes of the Shoalhaven Gorges -Southern Sydney Basin (SR534)	885
PCT 1150 - Silvertop Ash - Blue-leaved Stringybark shrubby open forest on ridges, north east South Eastern Highlands Bioregion (SR624)	260
731 - Broad-leaved Peppermint - Red Stringybark grassy open forest on undulating hills, South Eastern Highlands Bioregion (SR524)	325

PCT 1334 Yellow Box - Blakely's Red Gum grassy woodland on the tablelands, South Eastern Highlands (SR670) - Non-EEC water dependent	0
Total	1,470

The species credits required to offset impacts on threatened fauna and flora are summarised in Table 2.4.

Table 2.4 Species credit requirements

Species credit species	Required credits
<i>Solanum celatum</i>	2
Koala	2,454
Large-eared Pied Bat	3,836

As required by the SEARs, a biodiversity offset strategy has been prepared for the Project. Boral has investigated offsetting opportunities in the Bungonia subregion and adjacent subregions and has purchased a 1,000 ha property and a 360 ha property in the Bungonia subregion for this purpose. The details of the properties have been withheld for confidentiality reasons.

The biodiversity values identified on the properties satisfy the following liabilities:

- PCT 778 Coast Grey Box stringybark dry woodland on slopes of the Shoalhaven Gorges - Southern Sydney Basin (SR534);
- PCT 1334 Yellow Box - Blakely's Red Gum grassy woodland on the tablelands, South Eastern Highlands (SR670) and subsequent EPBC listed White Box Yellow Box Blakely's Red Gum Grassy Woodland;
- the EPBC Act offset requirement for the Koala and Large-eared Pied Bat; and
- partially satisfy the Koala and Large-eared Pied Bat BC Act offset liability.

The properties have been surveyed by Niche Environment and Heritage Pty Ltd and biodiversity credits have been calculated.

The remaining BC Act credit liability will be paid into the BCT Fund.

2.4.8 NSW Contaminated Land Management Act 1997

The phase 1 and 2 environmental assessment of the mine concluded there is no duty to report contamination to the EPA under Section 60 of the NSW *Contaminated Land Management Act 1997* (CLM Act).

If previously unidentified contamination is identified during construction or operation of the Project, additional assessment will be undertaken, and depending on the conclusions of the assessment, the contaminated area may be required to be notified to the EPA under Section 60 the CLM Act, and potentially remediated if required by the regulatory authority.

2.4.9 Other statutory requirements

Other Statutory instruments to which operations require compliance management are:

- NSW *Dangerous Goods (Road and Rail Transport) Act 2008*.
- NSW *Local Government Act 1993*.
- NSW *Work Health and Safety (Mines and Petroleum Sites) Act 2013*.
- NSW *Mining Act 1992*.
- NSW *Pesticides Act 1999*.

- NSW *Biosecurity Act 2015*.
- NSW *Soil Conservation Act 1938*.
- NSW *Roads Act 1993*.
- NSW *Work Health and Safety Act 2011*.

2.5 Objectives, targets and improvement programs

As part of a continual improvement process under key Boral document: GRP-HSEQ-1-05 Objectives, Targets and Improvement Plans, the environmental performance of every Boral site is measured with respect to progress and achievements on objectives, targets and program milestones.

A number of objectives and associated performance criteria has been developed for the mine and are outlined in the management plans.

3 IMPLEMENTATION AND MAINTENANCE

The implementation of the EMS will be the responsibility of a number of key internal stakeholders to ensure there is an appropriate level of resources, training and engagement in meeting the objectives outlined in Section 1.4.

3.1 Roles and responsibilities

This section will be implemented with reference to key Boral document: *GRP-HSEQ-MP-2-01 Organisational Roles, Responsibilities and Resources*.

Overall responsibility for environmental management and performance of the mine is placed on the site manager. The site manager will be accountable for ensuring appropriate resources and training is made available to achieve compliance with the consent, relevant legislation, and implement and maintain the EMS to minimise on-site and near-site environmental impacts associated with the mine.

An environmental coordinator will be based at the mine to coordinate the implementation of the CoC together with EMS implementation and management. The environmental coordinator will:

- be responsible for environmental controls being employed during operations, responding to environmental incidents that occur on site, and coordinating resources to resolve them.
- be responsible for carrying out and/or coordinating the monitoring and reporting requirements of this EMS.
- take the lead and be the primary contact with government agencies and community relations as well as site environmental training.
- toolbox employees daily on aspects of the operation that might have specific environmental impacts on that day.

Mine employees will be responsible for good housekeeping and maintaining the areas in which they work. This includes alerting the environmental coordinator to adverse environmental impacts as a result of mine operations and responding to incidents such as spills and repairing environmental controls.

3.2 Environmental training and awareness

This section will be implemented with reference to key Boral document: *GRP-HSEQ-MP-1-06 Training, Competency and Awareness*.

Environmental training and awareness is undertaken in a number of ways.

All employees and contractors working on site are required to be inducted to site annually, which covers both the safety and environmental requirements of the site.

Site specific environmental training occurs in relation to standard operating procedures or safe work method statements where environmental management is required.

Training will be given to all employees relative to the specific conditions stipulated in the consent.

Environmental awareness occurs through regular onsite briefing notes, displays and updates on the internal visual monitors.

The on-site environmental coordinator identifies training needs and provides periodic site-specific environmental awareness training and induction sessions to employees and contractors, as needed.

The mine production manager, technical manager and environmental coordinator provide environmental information through the regular toolbox talks.

Boral environmental alerts, which provide outcomes and learnings of industry sector issues are frequently posted on bulletin boards and become the topic of toolbox-talk sessions.

In accordance with the HSEQMS and corporate divisional requirements a regular report on environmental compliance and performance is prepared by the site environmental coordinator. The report is presented to the mine management team for review and action where necessary.

The Boral state and group environmental advisors are also provided with a regular overview of any significant matters which may be escalated to Board level.

3.3 Stakeholder communication and engagement

This section will be implemented with reference to key Boral document: *GRP-HSEQ-MP-1-05 Communication and Consultation*.

A key commitment in the Boral Environment Policy (Appendix A) is that all operations will be undertaken through open and constructive relationships with local communities and government agencies.

In support of the policy, the HSEQ Management System requires that “All Site/Operation Managers have a responsibility to communicate on a range of topics including site performance to ensure employee, community and other stakeholder involvement and engagement in our HSEQ Management System strategies and to meet legislative requirements”.

3.3.1 Government agencies

As with all of Boral NSW operations, open and frequent dialogue will be maintained with DPIE and other government agencies including the resources regulator.

Regulatory authorities such as NSW EPA and DPIE will be informed of key operational activities in addition to the annual reporting required through annual returns, annual reviews and website publishing of environmental monitoring data.

3.3.2 Community

The mine has actively engaged with the local community throughout its life. Ongoing communication and engagement with the community will include:

- Representation on the community consultation committee (CCC) – see below.
- Membership of the Marulan Chamber of Commerce.
- Regular publishing of community newsletters.
- Active participation in local community events.
- Facilitation of site inspections and one on one consultation.
- Active engagement with key regulators, government and non-government organisations.
- Maintenance of an environmental and community complaints line and register.
- Actively managing and resolving community issues as they arise.

The site manager and environmental coordinator will be available to respond to any stakeholder enquiry or complaint. Signage at the mine entrance provides relevant contact details for general enquiries and environmental complaints.

Members of the public are also invited by appointment to inspect the mine and operations.

Copies of all approvals, management plans, licences, strategies, procedures, monitoring, complaints, and annual regulatory reports are all readily available on-site and on Boral's website should copies be required.

A stakeholder engagement plan, available on the website, outlines Boral's commitment to events and involvement in the community.

Community consultative committee

As required by CoC A24, a CCC will be established prior to commencement of development under the consent. The CCC will be established in accordance with DPIE's (2019) *Community Consultative Committee Guidelines: State Significant Projects*. The CCC will continue to operate during the life of the development, or other timeframe agreed by the Planning Secretary.

In accordance with CoC A25, the mine and adjoining Peppertree Quarry will form a combined CCC.

3.3.3 Access to information

Boral will, during the life of the mine, operate a phone line for general inquiries, complaints and concerns. This line will also be used as the blasting hotline.

Information regarding the environmental performance of the operations can be requested and sent to the caller by email, fax or mail.

In recognition of Part D Condition D17 of the consent, copies of all documentation required by the consent will be made available on the company website www.boral.com.au/locations/boral-marulan-south-operations.

3.3.4 Community complaints

Complaints about the environmental performance of the mine will be received through a complaint phone line which will be posted on the mine's website and regular newsletters. Complaints will also be received via the website and sent to the environmental coordinator and site manager. Initial contact with a complainant will be made within 24 hours (or as soon as is reasonably practical) of the complaint being received by the environmental coordinator or site manager.

The environmental coordinator will record each complaint in the sites complaint register and follow internal reporting processes through line management. The complainant will also be followed up to communicate what measures were put in place to deal with the complaint and prevent a recurrence.

The details of each complaint will be recorded including the:

- Date and time of the complaint.
- Method by which the complaint was made.
- Personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect.
- Nature of the complaint.
- Action taken by Boral in relation to the complaint, including any follow-up contact with the complainant; and if no action was taken, the reasons why no action was taken.

A summary of the complaints received will be tabled at each CCC meeting, placed on the website and included in the annual review.

3.3.5 Dispute resolution

If an environmental complaint or other matter of concern associated with the mine is unable to be satisfactorily resolved, a meeting with the senior operations, environmental and business managers will be convened.

The meeting will assess whether all practical actions have been taken to resolve the matter. All relevant stakeholders will be advised in writing of the meeting outcomes and on any further actions able to be taken to resolve the matter.

Boral will always endeavour to resolve disputes with neighbours and members of the local community without the need for third party intervention. However, if a matter cannot be resolved directly with Boral, landowners can refer the matter to the Planning Secretary for resolution. The decision made by the Planning Secretary once this process is followed, will be final.

3.4 Document control

This section will be implemented with reference to key Boral document: *GRP-HSEQ-MP-2-04 Document Control and Records Management*.

The site manager, technical manager and environmental coordinator will have the joint responsibility of managing the EMS in accordance with the HSEQ MS Document Control Standard. All referenced documentation will be kept on-site and will be made readily available to anyone requesting a copy.

Revised versions of the EMS will be communicated to relevant internal and external stakeholders with all obsolete versions kept on-site to be destroyed.

3.5 Operational control

Documentation in relation to operations includes but is not limited to management plans, standard operating procedures, safe work method statements and checklists.

The Boral HSEQ system has several documents which outline the minimal operating requirements for environment management.

These Boral HSEQ standards include:

- *GRP-HSEQ-8-02 Water Management.*
- *GRP-HSEQ-8-03 Land Management.*
- *GRP-HSEQ-8-04 Waste Management.*
- *GRP-HSEQ-8-05 Noise Management.*
- *GRP-HSEQ-8-06 Air Quality Management.*
- *GRP-HSEQ-8-07 Spill Management.*
- *GRP-HSEQ-8-08 Ecosystems and Biodiversity Conservation Management.*
- *GRP-HSEQ-8-09 Culture and Heritage Protection Management.*

The operational standards are incorporated in the corresponding environmental management sub-plans, which are in the appendices of this EMS and incorporate the environmental management measures to which Boral committed in the EIS and response to submissions report and to comply with the consent.

3.6 Emergency response and preparedness

This section will be implemented with reference to key Boral document: *GRP-HSEQ-MP-3-03 Emergency Preparedness and Response*.

As part of the EMS, an emergency response procedure (Appendix O) is in place to address emergencies that occur on site. Potential environmental emergencies have been identified along with associated risks and control measures to be implemented. All site employees, contractors and visitors will be educated on the emergency response procedure during the site induction.

Key emergency controllers will be trained in their specific role, and emergency drills will be carried out at least once per year.

As a means of preventing potential incidents and emergency situations, environmental hazard reporting will be promoted and encouraged amongst the workforce. Identified hazards will be entered into the incident reporting database with agreed controls and timeframes for completion and signed off by a site supervisor.

A more specific pollution incident response management plan (PIRMP) will be implemented at the mine and will include (Appendix P):

- Identifying and risk assessing the likelihood of hazards.
- Actions for preventing and responding to incidents.
- A site-specific inventory of all potential pollutants.
- Equipment to be used in an incident response.
- A plan to minimise environmental and human harm by the implementation of actions to be taken during or immediately after a pollution incident.
- Consideration of how an incident may impact neighbours.
- Communicating an incident to authorities and neighbours.
- Staff training on their roles and responsibilities under the PIRMP.
- Annual testing and review of the PIRMP.

The environmental coordinator ensures all employees and contractors with direct responsibilities associated with the PIRMP have a clear understanding of their roles and responsibilities by conducting periodic training and simulated incident drills. The PIRMP is reviewed at least once every 12-months.

4 CHECKING AND REVIEW

The effectiveness in the implementation of the EMS is assessed through environmental performance monitoring and periodic audit assessments of regulatory compliance.

4.1 Monitoring program

This section will be implemented with reference to key Boral document: *GRP-HSEQ-MP-4-01 Monitoring and Review*.

An environmental monitoring program has been prepared that consolidates the statutory compliance requirements with development consent and EPL monitoring conditions. The site-based environmental coordinator has the responsibility to ensure all monitoring and reporting is completed in accordance with statutory requirements and EMS objectives. Monitoring is summarised below.

Results from the monitoring will be reported monthly to the management team, on a regular basis to the CCC and placed on the website as part of the EPL requirements.

4.1.1 Air quality

Stack testing

Emissions from the kiln stack and lime hydration plant stack will be tested annually. The kiln stack is to be sampled for nitrogen oxides and solid particles and the lime hydration plant stack is to be sampled for solid particles. In addition, discharge parameters including diameter, volumetric flow rate, velocity and temperature are to be measured.

Meteorology

The site operates a 10 m tall automatic weather station to assist with the environmental management of site operations (Figure 4.1). The on-site weather station continuously measures the parameters in Table 4.1. The weather station is to be relocated in the future to a suitable position west of the current location due to the progression of the Project and the establishment of the WOE.

Table 4.1 Meteorological monitoring

Parameter	Unit of measure	Sampling frequency	Averaging period
Temperature	°C	Continuous	1-hour
Relative humidity	%	Continuous	1-hour
Wind speed	m/s	Continuous	15-minute
Wind direction	Degrees	Continuous	15-minute
Standard deviation of wind direction	Degrees	Continuous	15-minute
Rainfall	mm	Continuous	15-minute

Ambient air quality

The air quality monitors operated as part of the mine air quality monitoring network include three high volume air samplers (HVAS) measuring either TSP, PM₁₀ and PM_{2.5} and are shared with the Peppertree Quarry. In addition to this the mine also operates three dust deposition gauges.

The monitors are located as summarised in Table 4.2 and shown on Figure 4.2.

Table 4.2 Ambient air quality monitoring

Monitoring site ID	Type	Averaging period	Sampling period
Limestone Mine			
Sub Station	Dust Gauge	1-month	30 +/- 2 days
Freddie's Hill	Dust Gauge	1-month	30 +/- 2 days
Store Paddock	Dust Gauge	1-month	30 +/- 2 days
RT Dust 2	Real-time dust	10-minute	Continuous
Shared Limestone Mine and Peppertree Quarry			
HVAS – PM _{2.5}	HVAS – PM _{2.5}	24-hour	Every six days
HVAS – PM ₁₀	HVAS - PM ₁₀	24-hour	Every six days
HVAS - TSP	HVAS - TSP	24-hour	Every six days
Peppertree Quarry			
D1	Dust Gauge	1-month	30 +/- 2 days
D2	Dust Gauge	1-month	30 +/- 2 days
D3	Dust Gauge	1-month	30 +/- 2 days
RT Dust 1	Real-time dust	10-minute	Continuous

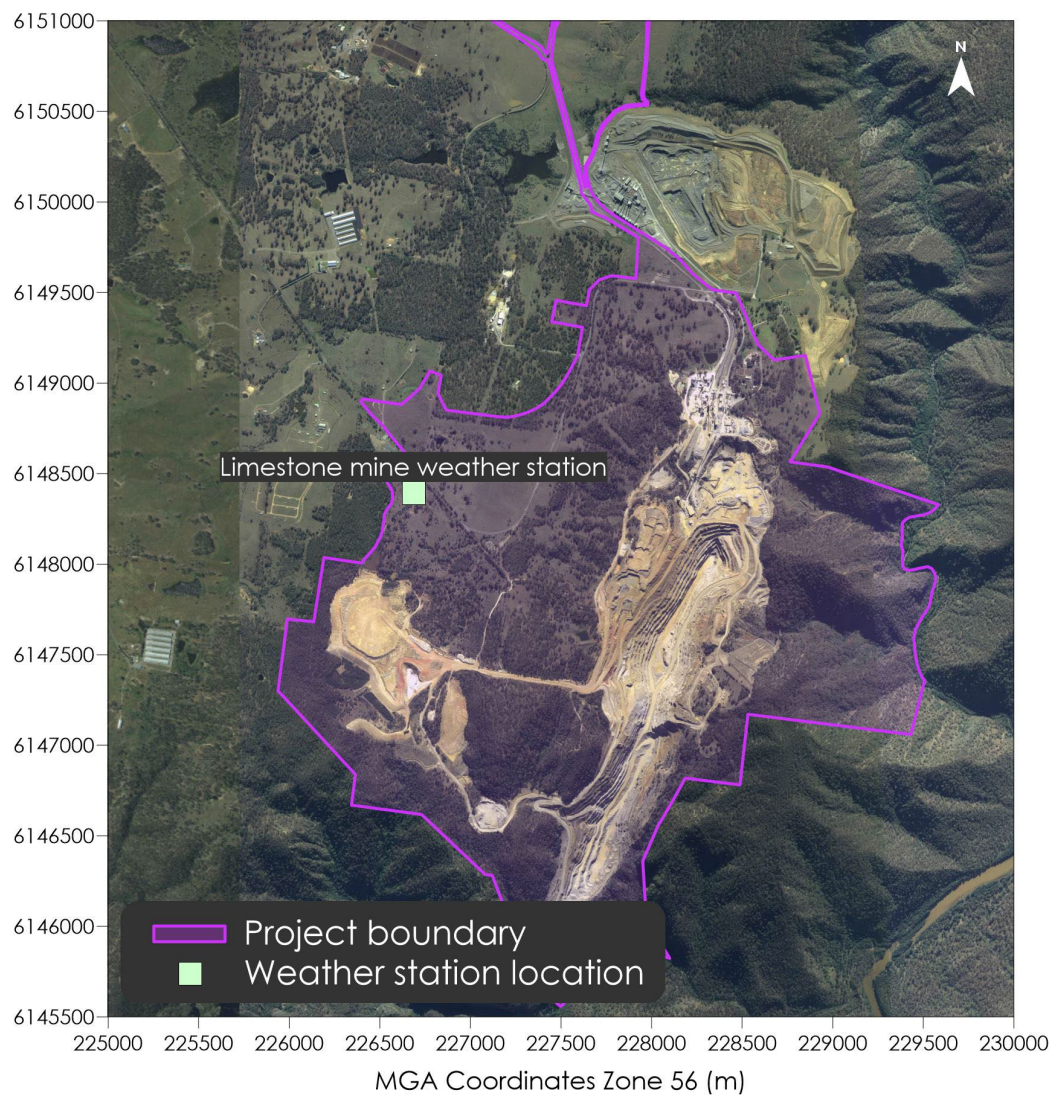


Figure 4.1 On-site weather station location

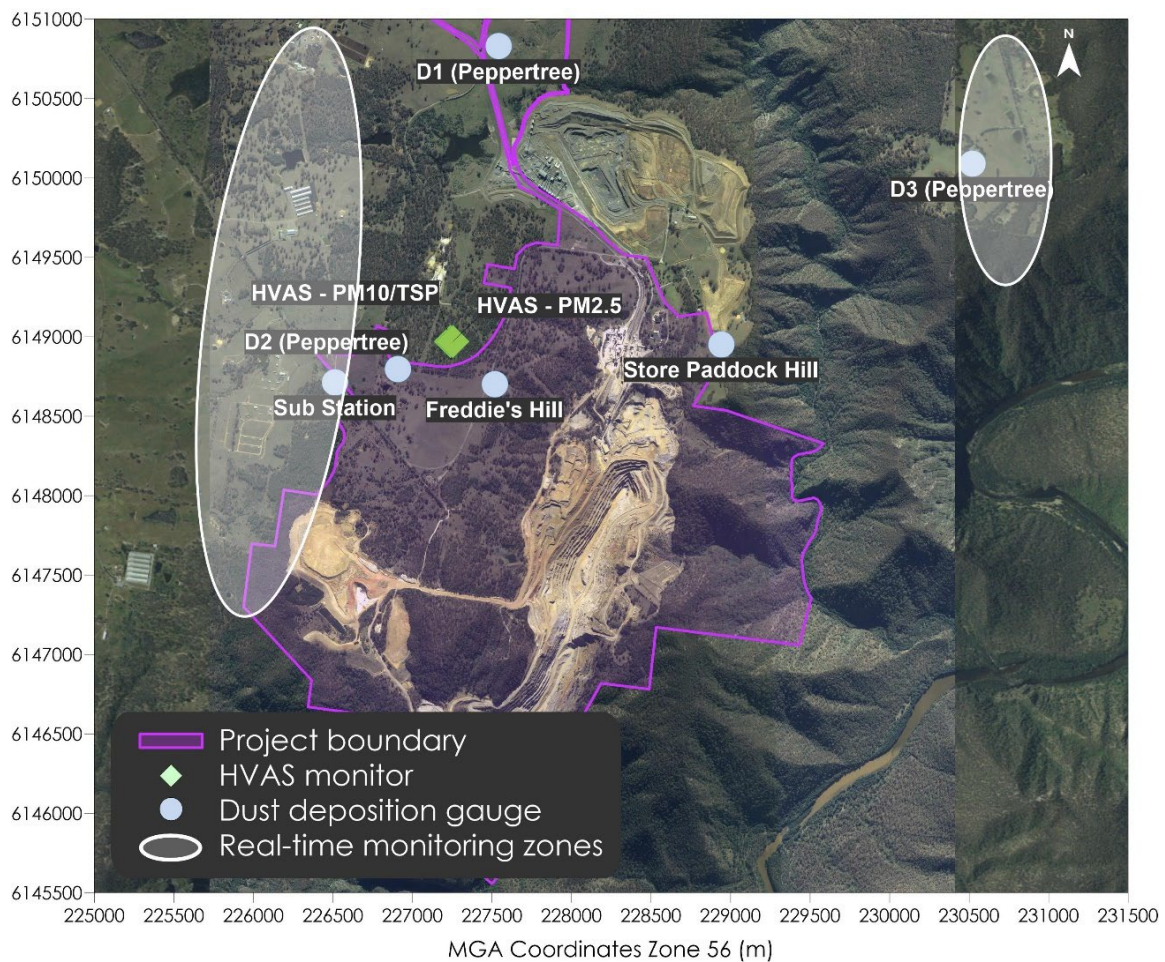


Figure 4.2 Ambient air quality monitoring network

4.1.2 Biodiversity

Biodiversity monitoring will be undertaken to:

- assess the effectiveness of the management measures presented in chapters 4 and 5 of Appendix H;
- assess progress against the performance indicators presented in Chapter 6 of Appendix H; and
- identify improvements that could be implemented to improve biodiversity outcomes.

Monitoring methods relevant to remnant vegetation are provided in Chapter 7 of Appendix H. The monitoring methods relevant to rehabilitation areas are provided in the rehabilitation strategy and currently include the use of ecosystem function analysis methodology.

4.1.3 Blasting

All blasts at the mine are monitored. Currently the mine has a blast monitor located near the mine managers residence, situated to the west of Marulan South Road (refer to Figure 4.3). An additional blast monitor will be installed to the north west of the mine.

In addition to the two mine specific blast monitors, additional monitoring from the Peppertree Quarry blast monitoring system is also available. This system measures blasts at five locations which are described in Table 4.3 and shown in Figure 4.3.

The blast monitoring system for the mine is proposed to be like the Peppertree Quarry blast monitoring system which comprises remote monitors that are in continuous operation with results being able to be reviewed online through a restricted access website.

Table 4.3 Blast monitoring locations

Monitoring Station	Entry Address	Station Description	Managed by
Blast Monitor	Marulan South Road	Adjacent to limestone mine managers house	Marulan South Limestone
B1	Long Point Road 1.8km from closest blast	Residence on opposite side of Barbers Creek gorge	Peppertree Quarry
B2	Rail Line 970m from closest blast	At the points to the north of the site	Peppertree Quarry
B3	Gas Pipeline 680m from closest blast	Adjacent to ramp up to the TLO	Peppertree Quarry
B4	643 Marulan South Road 1.6km from closest blast	Limestone mine managers house	Peppertree Quarry
B5	Turkey Farm 950m from closest blast	Adjacent to high voltage corridor and boundary fence	Peppertree Quarry

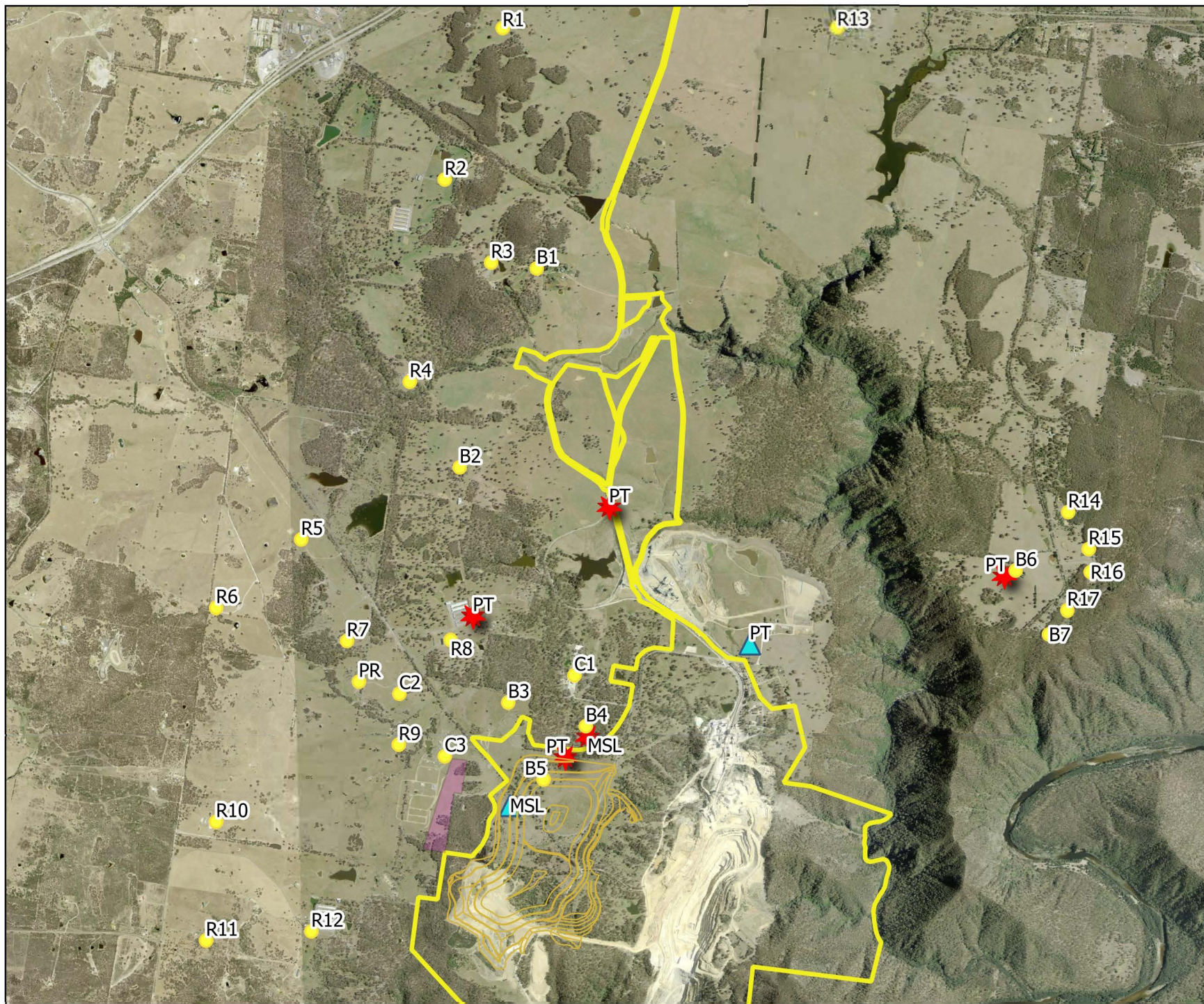


FIGURE 4.3
Noise Monitoring Terminal
and Blast Monitor
Locations

Note: PT=Peppertree;
MSL = Marulan South
Limestone Mine

KEY

- Receivers
- ★ Blast Monitor
- ▲ Weather Station Potential
- NMT & blast monitor location
- Project_boundary



4.1.4 Noise

Noise monitoring will comprise the following components:

- a permanent real time noise monitoring terminal (NMT) capable of facilitating adaptive management of noise within the mine;
- an operator attended monitoring program capable of determining compliance with the noise criteria; and
- a permanent real-time meteorological monitoring program capable of detecting and forecasting noise enhancing meteorological conditions.

The NMT will be installed at a location between the potentially most affected receiver identified in the EIS (R9) and the WOE as shown in Figure 4.3. Operator attended noise monitoring will be undertaken by an independent, suitably qualified acoustic consultant. Operator attended noise monitoring shall be conducted at suitable publicly accessible locations representative of receivers R6, R8, R9, R12 and R17.

Operator attended noise monitoring will be on a quarterly basis as a minimum. Monitoring will be undertaken during the daytime, evening and night time at each of the nominated representative receiver locations.

A summary of the unattended/permanent and operator attended noise monitoring locations is provided in Table 4.4.

Table 4.4 Noise monitoring locations

ID	Description	Type of Monitoring	Frequency of Monitoring	Criteria dB LAeq(15min)			Criteria dB LAF(max)
				Day	Evening	Night	Night
NMT	Noise Monitoring Terminal	Unattended	Continuous	451	411	411	571
R6	Residential Receiver	Operator attended	Quarterly	40	35	35	52
R8	Residential Receiver	Operator attended	Quarterly	40	35	35	52
R9	Residential Receiver	Operator attended	Quarterly	40	36	36	52
R12	Residential Receiver	Operator attended	Quarterly	40	35	35	52
R17	Residential Receiver	Operator attended	Quarterly	40	35	35	52

4.1.5 Rehabilitation

Boral has currently adopted the ecosystem function analysis (EFA) monitoring methodology to assess rehabilitation progress. EFA is a transect-based monitoring method that measures for:

- landscape function analysis;
- vegetation dynamics;
- habitat complexity; and
- disturbance.

EFA involves the periodic measurement of landscape and vegetation parameters along transects established in rehabilitated areas. The data collected is converted into indices for comparison

against measurements made at nearby analogue (or reference) sites established in undisturbed target communities. Repeated EFA measurements should demonstrate development of rehabilitation towards rehabilitation completion criteria over time.

The domain rehabilitation objectives and completion criteria are in Table 6.1 of Appendix M.

4.1.6 Traffic and transport

Boral records all loads of product that depart the site via train and truck on the site road and rail weighbridge systems. The programs on the weighbridges record the following:

- Product code and description.
- Dispatch time and date.
- Quantity in tonnes.
- Customer.
- Mode of transport.

An annual summary of these records (product description, quantity in tonnes and modes of transport) will be included in the Annual Review.

Product dispatches will be monitored to prevent an exceedance of the hourly and daily limits prescribed in the consent.

4.1.7 Water quality

Ambient water quality

The ambient water quality parameters in Table 4.5 will be monitored at the sites in

Table 4.6 and Figure 4.4. Monitoring may cease in Barbers Creek and the Shoalhaven River once the NOE and WOE and all externally draining sections of the SOE are completed and rehabilitation has been established. However, ongoing quarterly monitoring will continue in Main Gully and Bungonia Creek for the duration of the Project.

Table 4.5 Ambient water quality monitoring parameters

Parameter		
pH	Sodium Adsorption Ratio	Electrical Conductivity @ 25°C
Total Dissolved Solids	Suspended Solids	Total hardness as CaCO ₃
Bromide	Hydroxide Alkalinity as CaCO ₃	Carbonate Alkalinity as CaCO ₃
Bicarbonate Alkalinity as CaCO ₃	Total Alkalinity as CaCO ₃	Sulphate as SO ₄
Chloride	Calcium	Magnesium
Sodium	Potassium	Fluoride
Arsenic (dissolved & total)	Aluminium (dissolved & total)	Barium (dissolved & total)
Copper (dissolved & total)	Iron (dissolved & total)	Lead (dissolved & total)
Manganese (dissolved & total)	Molybdenum (dissolved & total)	Nickel (dissolved & total)
Strontium (dissolved & total)	Zinc (dissolved & total)	Silicon as SiO ₂
Nitrate + Nitrate as N	Total Kjeldahl Nitrogen as N	Total Nitrogen as N
Total Phosphorus as P		
Total Anions	Total Cations	Ionic Balance
Total Organic Carbon	Dissolved Oxygen	Biochemical Oxygen Demand

Table 4.6 Ambient water quality monitoring sites

Site	Description	Easting	Northing	Frequency
U1	Tangarang Creek upstream of Dam 1	226950	6149970	Quarterly
T1	Tangarang Creek downstream of Dam 1	228730	6150550	Quarterly
Marulan Up	Marulan Creek upstream of track crossing	225825	6151504	Quarterly
Marulan Down	Marulan Creek downstream of track crossing	228002	6151977	Quarterly
Barbers Up	Barbers Creek upstream	229518	6148416	Quarterly
Barbers Dn	Barbers Creek downstream	229542	6147306	Quarterly
Bungonia Up	Bungonia Creek upstream of mine	227294	6145485	Quarterly
Bungonia Dn	Bungonia Creek downstream of mine	228445	6145589	Quarterly
SR1	Shoalhaven River site 1	229183	6145620	Quarterly
SR2	Shoalhaven River site 2	229940	6146335	Quarterly
SR3	Shoalhaven River site 3	231172	6146891	Quarterly

Discharge

Excess runoff collected in sediment basins may be discharged from the locations detailed in Table 4.7. The following parameters will be monitored:

- Oil and grease
- pH
- Total Suspended Solids
- Turbidity

Table 4.7 Discharge monitoring

Receiving Water	Discharge Structure	Proposed Monitoring	Easting	Northing
Main Gully	Sediment Basin S2	Daily samples collected at the automated water sampler downstream of S2 during any discharge offsite	227325	6146075
North-eastern tributary of Tangarang Creek	Sediment Basin N2	Daily samples collected during any discharge offsite	227420	6149425
Eastern tributary of Tangarang Creek	Sediment Basin W1	Daily samples collected during any discharge offsite	226700	6148850

Water balance

Following the construction of the mine water dams, elevation-storage curves will be determined by “as constructed” survey and staff gauges will be installed within the reservoir to allow for the monitoring of water levels. The estimated location of the staff gauges is detailed in Table 4.8 and will be updated following installation.

Table 4.8 Water storage monitoring

Dam	Description	Easting	Northing
Kiln Dam	Expansion of the Kiln Dam as part of the NOE	228255	6149110
Eastern Gully Dam	New dam to be constructed to the east of the processing facility	228830	6148950
Central Dam	New dam constructed as part of the expansion of the WOE	227185	6147610
Main Mine Dam 2	Existing water supply dam	227360	6147600

Key water transfer and use (processing and dust suppression) will be monitored by the flowmeters summarised in Table 4.9. Monthly and total flow will be recorded at least monthly.

Table 4.9 Flowmeter locations

Flowmeter ID	Description	Easting	Northing
TBA	Tallong Weir to Marulan pipeline	228515	6149125
TBA	Eastern Gully Dam supply pipeline	228745	6148945
TBA	Kiln Dam supply pipeline	228500	6149100
TBA	Central Dam dust suppression supply	227080	6147500
TBA	North Pit Sump dust suppression supply	228150	6148250
TBA	Processing Plant Supply	228515	6149125
TBA	Sediment Basin N1 to Kiln Dam	228225	6149250
TBA	Sediment Basin N2 to Kiln Dam	227500	6149430
TBA	Sediment Basin W1 to Central Dam	226715	6148685
TBA	Sediment Basin W2 to Central Dam	226575	6147280

Stream and riparian health

Inspections will be conducted quarterly of Marulan, Barbers and Bungonia Creek to assess any potential changes in the stream or vegetation health. The inspections will be carried out by the environmental coordinator and include site notes and photographs. Inspections will be conducted at the surface water quality monitoring sites:

- Marulan Up
- Marulan Dn
- Barbers Up
- Barbers Dn
- Bungonia Up
- Bungonia Dn

Channel stability will be monitored via regular photographic records, as collected as part of stream and riparian vegetation monitoring inspections.

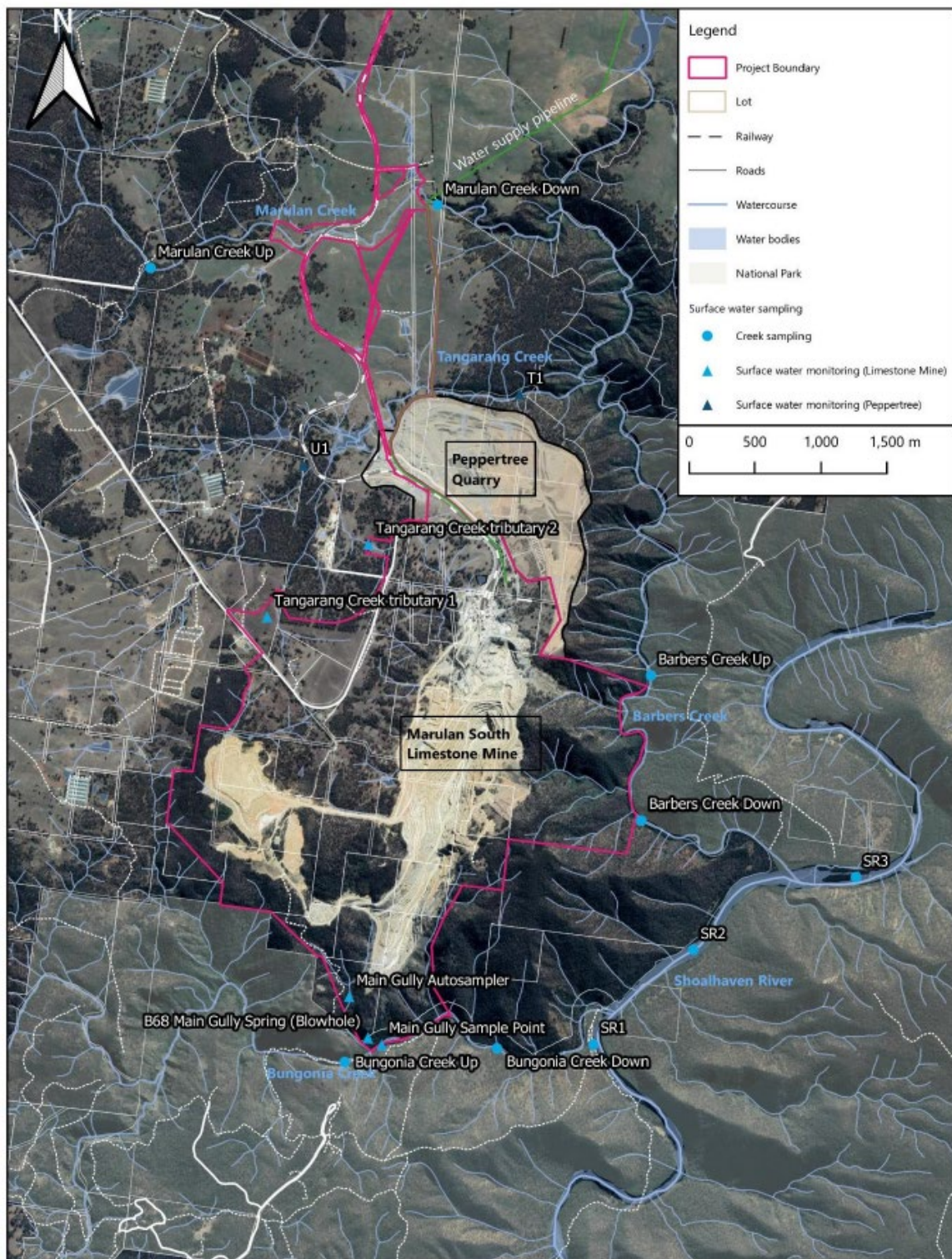


Figure 4.4 Water quality monitoring sites (Figure 3.1 of Appendix G)

4.1.8 Groundwater

Groundwater monitoring requirements are summarised below and in Table 4.10. Monitoring locations are shown on Figure 4.5.

Mine monitoring bores

Standing groundwater levels will be measured in all the mine monitoring bores with a decontaminated electronic water level meter and recorded to the top of the bore casing.

Manual level gauging and pressure logger sensor downloads will occur as part of each quarterly monitoring round. Data loggers will also be installed in the proposed monitoring bores.

The two shallow bores located along the Main Gully drainage line (MW3S and MW4S) monitor the potential interaction between groundwater and surface water associated with climatic conditions.

Groundwater users

The existing and additional monitoring bores proposed in Section 4 will monitor the regional groundwater levels and potential drawdown towards the groundwater users situated to the west and south-west of the mine.

The groundwater monitoring network will be adjusted to include any privately registered bores that may fall within the two-metre drawdown prediction on completion of model validations using the monitoring data. In addition, Boral may consider monitoring particularly concerned landholders or those in relatively close proximity and according to groundwater level trends observed in the monitoring bores.

Groundwater quality

Field measurement/observations of parameters, including pH, electrical conductivity, temperature, redox potential, colour, odour and sediment load will be recorded. The water quality analytical suite, to be analysed by a NATA accredited laboratory, includes the following parameters:

- pH, electrical conductivity and total dissolved solids (calc.);
- sodium adsorption ratio (SAR);
- total hardness;
- anions - fluoride, bromide, sulphate, chloride;
- alkalinity - hydroxide, carbonate, bicarbonate and total alkalinity;
- cations – calcium, magnesium, sodium, potassium;
- total and dissolved metals - aluminium, arsenic, beryllium, barium, cadmium, chromium, cobalt, copper, lead, manganese, molybdenum, nickel, selenium, strontium, vanadium, zinc, boron, iron;
- dissolved and total recoverable mercury;
- dissolved silica; and
- suspended solids and oil and grease (WP16 only as required by EPL944 and to be replaced by the proposed groundwater monitoring WB07).

In addition, nitrates and total nitrogen will be analysed for groundwater monitoring bores MW5 and MW8. This is to detect any diffuse contamination associated with general mining activities, such as chemicals used for rock blasting seeping into underlying groundwater.

Groundwater quality samples will be collected from the mine monitoring bores bi-annually, after the wet season (March/April) and after the dry season (August/Sept).

Project water supply and groundwater production bores

Groundwater abstraction from production bores is measured through installed flow meters. The monthly production rates will be calculated from the flow meter readings and reported in the annual review and used to inform the water balance

Table 4.10 Summary of groundwater monitoring requirements

Bore ID	East	North	Purpose	Groundwater level monitoring frequency	Groundwater quality monitoring frequency	GW level trigger value		GW Q (EC) trigger [uS/cm]		GW Q (pH) trigger		Metals	Other site specific triggers
						5 th %	95 th %	5 th %	95 th %	5 th %	95 th %		
Marulan South monitoring bores													
MW3S	226618	6148365	GW Level and quality	Download logger and manual dip quarterly	bi-annually	599.9	602.13	1208	1452	7.4	7.9	Three exceedances of appropriate ANZECC guidelines based on beneficial use	None
MW3D	226608	6148370	GW Level and quality	Download logger and manual dip quarterly	bi-annually	600	602.2	1096	1375	7.4	8.1		None
MW4S	226718	6147140	GW Level and quality	Download logger and manual dip quarterly	bi-annually	564.25	565.78	1490	1728	7.3	7.8		dissolved Fe [mg/l]
MW4D	226717	6147129	GW Level and quality	Download logger and manual dip quarterly	bi-annually	547.02	548.89	1076	1384	7.7	8.8		None
MW5	227826	6148352	GW Level and quality	Download logger and manual dip quarterly	bi-annually ^			765	1386	6.5	11.5		None
MW6	228482	6147186	GW Level and quality	Download logger and manual dip quarterly	bi-annually	468	468.2	1039	2315	7.1	7.9		None
MW7	227525	6147816	GW Level and quality	Download logger and manual dip quarterly	bi-annually	bore dry, no sufficient baseline data available							
WB07	228001	6148555	Water supply GW Level and quality	Download logger and manual dip quarterly	bi-annually ^^	TBC (trigger levels derived after two years of monitoring)							
MW8	227447	6146019	GW Level and quality	Download logger and manual dip quarterly	bi-annually ^								
MW9	227570	6149019	GW Level and quality	Download logger and manual dip quarterly	bi-annually								

* Peppertree monitoring bores: groundwater level data reported on in annual report													
PQ01S	228788	6149365	To include data in annual review and 3-year model validation										
PQ01D	228783	6149375											
PQ03	228288	6149608											
PQ04S	227607	6149951											
PQ04D	227626	6149947											
PQ05	227423	6149780											
PQ06	227796	6150247											
** Monitoring groundwater towards private bores at Marulan South monitoring bores													
MW3D	226608	6148370	GW Level and quality	Download logger and manual dip quarterly	bi-annually	Review groundwater level data against 5th percentile and drawdown >2m due to mine influence. Assess groundwater quality against 95th percentile and beneficial use.							
MW9	227570	6149019	GW Level and quality	Download logger and manual dip quarterly	bi-annually								
MW4D	226717	6147129	GW Level and quality	Download logger and manual dip quarterly	bi-annually								
*** Monitoring groundwater seepage as spring flow at "Blow hole" through surface water monitoring plan													
Blowhole' Sampling Point	227432	6145617	Spring flow and water quality	Quarterly	bi-annually								
Groundwater take													
Incidental, passive, and consumptive groundwater take:						> 100 % of Water Access Licences units for each applicable water source affected by the Project							

- Notes:**
- ^ nitrates and total nitrogen will be analysed for groundwater monitoring bores MW5 and MW8. This is to detect any diffuse contamination associated with general quarrying mining activities, such as chemicals used for rock blasting, seeping into underlying groundwater.
 - ^^ suspended solids and oil and grease (historical from WP16 only as required by EPL944 and to be replaced by the proposed groundwater monitoring WB07.
 - * Groundwater monitoring data from the Peppertree Quarry groundwater monitoring network will be used to evaluate groundwater levels in the annual groundwater review. This relates especially to the four monitoring bores closest to the Marulan South mine complex, namely PQ01, PQ03, PQ04 and PQ05. All Peppertree piezometers were installed into granitic bedrock that Boral quarries at Peppertree.
 - ** The groundwater monitoring network will be adjusted to include any privately registered bores that may fall within the two-metre drawdown prediction on completion of model validations using the monitoring data from these monitoring bores.
 - *** Monitoring and trigger information WMP.

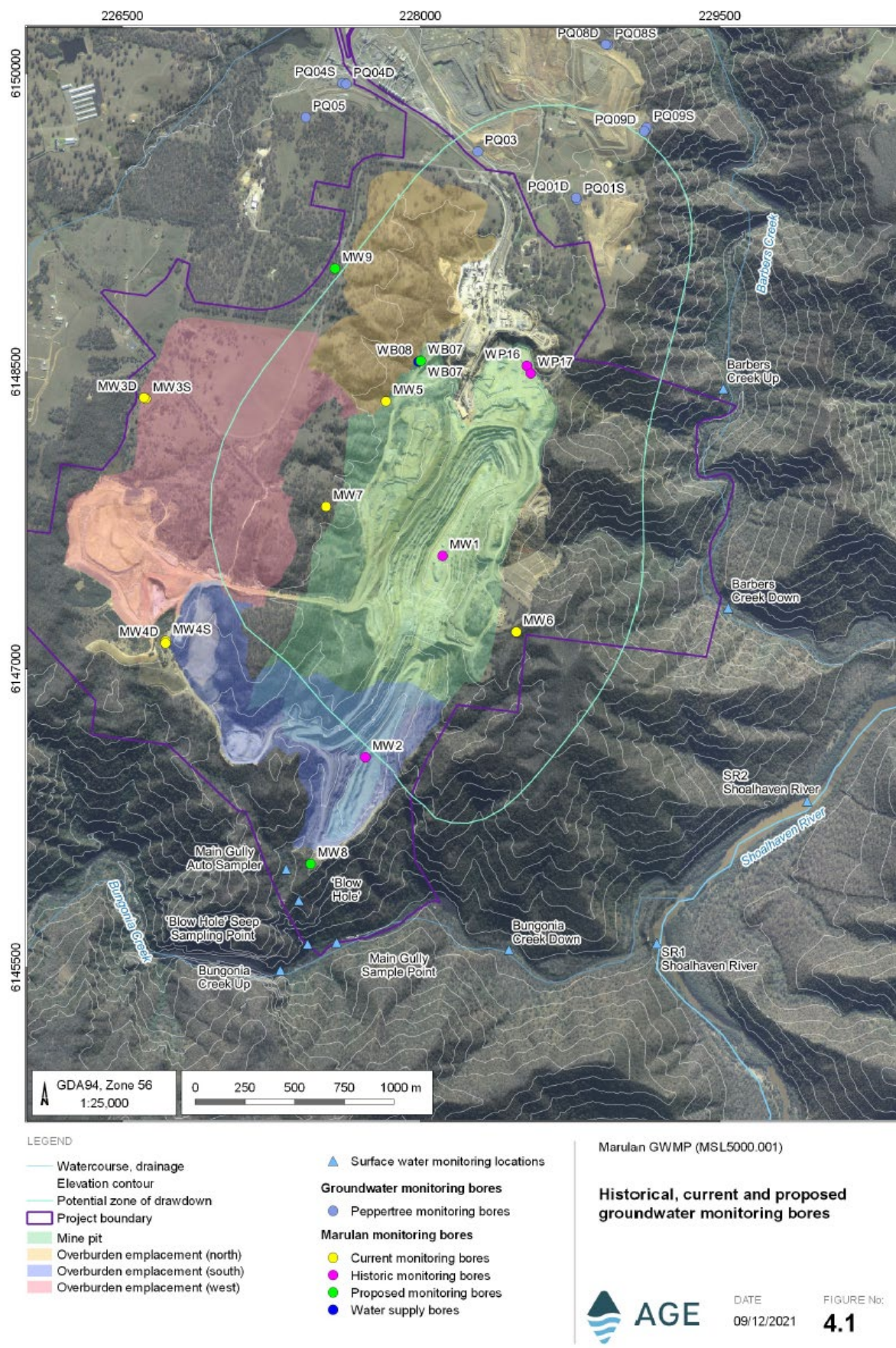


Figure 4.5 Historical, current and proposed monitoring bores (Figure 4.1 of Appendix A of Appendix G)

4.2 Cumulative impacts

Boral is committed to reducing cumulative impacts created by the collective operation of local industry including the mine, Boral's Peppertree Quarry and Aglime Fertilisers processing facility.

Effective management of cumulative impacts of noise and dust will be achieved by continuous improvement of mine practices to minimise the individual contribution of the mine. The analysis of mine monitoring programs will also be compared to those for the adjacent Peppertree Quarry to better understand what works could be undertaken in conjunction with these operations to reduce cumulative impacts. Measures taken to reduce cumulative impacts will be reported in the annual review.

4.3 Auditing and inspections

This section will be implemented with reference to key Boral document: *GRP-HSEQ-3-03 Performance Assessments and Audits*.

4.3.1 Internal audits and inspections

The mine is subject to Boral corporate and business level compliance governance programs that include the auditing of site based conformance with the HSEQ Management System and regulatory compliance requirements.

The site manager and environmental coordinator will conduct or coordinate scheduled site environmental inspections on key operational activities with findings being documented onto specific checklists.

Non-compliances identified during the audits and inspections will be reported to the relevant regulatory authorities, where required and registered onto the Boral Safety Information Management System (SIMS) from which electronic alerts are directed to senior business managers for action and tracking towards re-establishing compliance.

Alerts not actioned within specified timelines are progressively escalated through senior managers and ultimately to the CEO if corrective actions have not been appropriately implemented.

4.3.2 External audits

In accordance with Condition D13 (Part D) of the consent, an independent environmental audit will be engaged in the first year of operation then every 3 years thereafter.

Independent auditors will be suitably qualified and experienced and their appointment will be endorsed by the Planning Secretary. The audits and subsequent reporting will be in accordance with DPIE (2020) *Independent Audit – Post Approval Requirements*.

4.4 Management of non-compliances and incidents

This section will be implemented with reference to key Boral document: *GRP-HSEQ-3-02 Incident Reporting, Investigation and Action Management*.

Boral has a comprehensive incident management protocol in place for notification, investigation and reporting of actual and near miss incidents, including those associated with the environment or the community. This protocol will be implemented at the mine.

If an exceedance of the goals/limits/performance criteria in the consent is detected, or an incident causing (or threatening to cause) material harm to the environment is identified, the process outlined below will be followed.

4.4.1 Non-compliances

Non-compliances will be reported to the DPIE and EPA within seven days of becoming aware of the noncompliance, in accordance with Part D, Condition D10 of the consent.

The notification must be in writing through the Department's Major Projects Website and identify the development (including the development application number and name), set out the condition of this consent that the development is non-compliant with, why 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.

4.4.2 Incidents

Incidents will be immediately reported to DPIE in accordance with Part D, Condition D9 of the consent. The notification will be in writing through DPIE's Major Projects Website and will identify the development (including the development application number and name) and set out the location and nature of the incident.

An incident is defined in the consent as "An occurrence or set of circumstances that causes or threatens to cause material harm and which may or may not be or cause a non-compliance".

Under Part 5.7A of the POEO Act, the PIRMP also requires immediate reporting of incidents. The PIRMP outlines incidents that have the potential to cause material harm and therefore the actions to prevent and manage such incidents.

The POEO Act requires:

- Identifying and risk assessing the likelihood of hazards.
- Actions for preventing and responding to incidents.
- A site specific inventory of all potential pollutants.
- Equipment to be used in an incident response.
- Plan to minimise environmental and human harm by the implementation of actions to be taken during or immediately after a pollution incident.
- Consideration of how an incident may impact neighbours.
- Immediate reporting and ongoing communication of an incident to regulatory authorities and neighbours.
- Staff training on their roles and responsibilities under the PIRMP.
- Annual testing and review of the PIRMP.

The site manager (or nominated Boral authority) has the responsibility of ensuring all PIRMP reviews, revisions, training, testing and internal and external notifications are undertaken in compliance with POEO Act requirements.

The DPIE and EPA representatives will be advised of incidents as per the detail in the PIRMP.

Boral also maintains a safety and environmental incident reporting system. Any incidents relating to air quality will be entered into this system. All logged incidents are dealt with internally and, if necessary, through a NSW regulatory authority. Following reporting, all incidents are investigated and appropriate management recommendations are implemented.

4.5 Annual review

By the end of July each year after the commencement of development, or other timeframe agreed by the Planning Secretary, a report will be submitted to DPIE in accordance with Part D, conditions D11 and D12 reviewing the environmental performance of the development, to the satisfaction of the Planning Secretary.

4.6 Management review

The Boral HSEQ MS is reviewed on a regular basis.

This EMS is reviewed as required in response to:

- Changes to site activities or processes (including environmental controls, rehabilitation, incidents and non-compliances).
- Changes in environmental requirements through legislation, policy or best practice guidelines.
- An independent environmental audit.
- Recommendations or directives from DPIE or other regulatory authorities.
- Changes to the Boral HSEQ MS standards as part of its continual improvement objectives.

This EMS is to be reviewed in accordance with Part D, Condition D7 of the consent which requires a review within 3 months of:

- a. the submission of an incident report under Condition D9;
- b. the submission of an annual review under Condition D11;
- c. the submission of an independent environmental review under Condition D12;
- d. the approval of any modification of the conditions of this approval (unless the conditions require otherwise); or
- e. notification of a change in project stage under Condition A15.

5 REFERENCES

This EMS has been prepared with consideration to:

- Boral integrated Health Safety, Environment and Quality Management System (HSEQ MS) as outlined in GRP-HSEQ-1-01 Management System Framework and Operational Control.
- ISO-14001.

APPENDIX A

Boral Environmental Policy

Environmental Policy

JULY 2020

At Boral we own and operate a diverse range of businesses in a number of countries and within many different ecosystems. We acknowledge that the very nature of our operations means there will be impacts on the environment.

We are committed to our goal of zero harm and work to eliminate adverse environmental impacts.

Where elimination is not possible, we seek to minimise any harmful effects from our operations which may mean we target better performance than environmental laws require. Wherever practicable, we will secure improved environmental outcomes.

Specifically, Boral will:

- Reduce waste in all its forms, by application of LEAN manufacturing principles, leading to:
 - efficient use of energy, including reuse of waste energy
 - conservation of water
 - minimisation and recycling of waste production materials and energy
 - prevention of pollution; and
 - effective use of virgin and recovered resources and supplemental materials.
- Reduce greenhouse gas emissions from our processes, operations and facilities, including appropriate use of alternative fuels
- Protect and where practicable enhance biodiversity values at and around our facilities.
- Openly and constructively engage with communities surrounding our operations.
- Through communication and training, encourage and assist our employees to enhance Boral's environmental performance.
- Comply with environmental legislation, regulations, standards and codes of practice relevant to the particular business, as a minimum, and
- Allocate sufficient resources to meet the commitments of this Policy:

This policy is delivered through the implementation of Boral's integrated Health Safety Environment and Quality (HSEQ) Management System and related strategies, improvement plans and programs.

A handwritten signature in blue ink, appearing to read "Zlatko Todorcevski".

Zlatko Todorcevski
CEO & Managing Director

APPENDIX B

Development Consent (SSD 7009)

Development Consent

Section 4.36 of the Environmental Planning and Assessment Act 1979

As delegate of the Minister for Planning and Public Spaces under delegation executed on 26 April 2021, I approve the Development Application referred to in Schedule 1, subject to the conditions specified in Schedule 2.

These conditions are required to:

- prevent, minimise, or offset adverse environmental impacts;
- set standards and performance measures for acceptable environmental performance;
- require regular monitoring and reporting; and
- provide for the ongoing environmental management of the development.



**Executive Director
Energy, Resources and Industry Assessments
As delegate for the Minister for Planning and Public Spaces**

Sydney

19 August 2021

SCHEDULE 1

Application Number:	SSD 7009
Applicant:	Boral Cement Limited
Consent Authority:	Minister for Planning and Public Spaces
Site:	The land defined in Appendix 1
Development:	Marulan South Limestone Mine Continued Operations Project

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DEFINITIONS

Aboriginal object	Has the same meaning as the definition of the term in section 5 of the NP&W Act
Aboriginal place	Has the same meaning as the definition of the term in section 5 of the NP&W Act
Annual Review	The review required by condition D11
Applicant	Boral Cement Limited, or any person carrying out any development under this consent
Approved disturbance area	The area identified as such on the Development Layout
ARI	Average Recurrence Interval
BCA	Building Code of Australia
BC Act	<i>Biodiversity Conservation Act 2016</i>
BCD	Biodiversity & Conservation Division within the Department
BCT	NSW Biodiversity Conservation Trust
Biodiversity Offset Strategy	The Biodiversity Offset Strategy for the development as described in the document/s listed in condition A2(c) and shown conceptually in Appendix 4
Blast misfire	The failure of one or more holes in a blast pattern to initiate
CCC	Community Consultative Committee required by condition A24
Clay/Shale	Includes both Clay/Shale and White Clay
Conditions of this consent	Conditions contained in Schedule 2
Construction	All physical works to enable mining operations to be carried out, including demolition and removal of buildings or works, and erection of buildings and other infrastructure permitted by this consent
Council	Goulburn Mulwaree Council
Date of commencement	The date notified to the Department by the Applicant under condition A17
Day	The period from 7.00 am to 6.00 pm on Monday to Saturday, and 8.00 am to 6.00 pm on Sundays and Public Holidays
Decommissioning	The deconstruction or demolition and removal of works installed as part of the development
Demolition	The deconstruction and removal of buildings, sheds and other structures on the site
Department	NSW Department of Planning, Industry and Environment
Development	The development described in the documents listed in condition A2(c), as modified by the conditions of this consent
Development Layout	The plans in Appendix 2 of this consent
DPIE Crown Lands	Crown Lands Group within the Department
DPIE Water	Water Group within the Department
CEEC	Critically endangered ecological community, as defined under the EPBC Act
EIS	The Environmental Impact Statement titled <i>Marulan South Limestone Mine Continued Operations State Significant Development Application Environmental Impact Statement</i> , prepared by Element Environment, dated March 2019, submitted with the application for consent for the development, including the Applicant's Response to Submissions and additional information provided by the Applicant dated 6 November 2019, 19 February 2020, 7 May 2020, 6 July 2020, 27 July 2020, 23 March 2021, 22 April 2021, May 2021, 18 June 2021, 6 July 2021 and 23 July 2021
Environment	Includes all aspects of the surroundings of humans, whether affecting any human as an individual or in his or her social groupings
EPA	NSW Environment Protection Authority

EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EP&A Regulation	<i>Environmental Planning and Assessment Regulation 2000</i>
EPBC Act	<i>Commonwealth Environment Protection and Biodiversity Conservation Act 1999</i>
EPL	Environment Protection Licence under the POEO Act
Evening	The period from 6 pm to 10 pm
Feasible	Means what is possible and practical in the circumstances
Financial Year	A period of 12 months from 1 July to 30 June
Fisheries NSW	Fisheries Branch of the Primary Industries Group within the Department
Heritage NSW	Heritage Branch of the Department of Premier and Cabinet
Heritage item	<p>An Aboriginal object, an Aboriginal place, or a place, building, work, relic, moveable object, tree or precinct of heritage significance, that is listed under any of the following:</p> <ul style="list-style-type: none"> • the State Heritage Register under the <i>Heritage Act 1977</i>; • a state agency heritage and conservation register under section 170 of the <i>Heritage Act 1977</i>; • a Local Environmental Plan under the EP&A Act; • the World Heritage List; • the National Heritage List or Commonwealth Heritage List under the EPBC Act; or • anything identified as a heritage item under the conditions of this consent
Incident	An occurrence or set of circumstances that causes or threatens to cause material harm and which may or may not be or cause a non-compliance
Laden trains	Trains transporting mining or quarry products from the site
Laden trucks	Trucks transporting mining or quarry products from the site
Land	Has the same meaning as the definition of the term in section 1.4 the EP&A Act, except for where the term is used in the noise and air quality conditions in PART B of this consent where it is defined to mean the whole of a lot, or contiguous lots owned by the same landowner, in a current plan registered at the Land Titles Office at the date of this consent
Material harm	<p>Is harm to the environment that:</p> <ul style="list-style-type: none"> • involves actual or potential harm to the health or safety of human beings or to the environment that is not trivial, or • results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding \$10,000 (such loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment) <p>This definition excludes “harm” that is authorised under either this consent or any other statutory approval</p>
MEG	Mining, Exploration and Geoscience
Mine-Owned Land	Land owned by a mining, petroleum or extractive industry company (or its subsidiary or related party)
Mine closure	Decommissioning and final rehabilitation of the site following the cessation of mining operations
Mine water	Water that accumulates within, or drains from, active mining and infrastructure areas and any other areas where runoff may have come into contact with carbonaceous or saline material
Minimise	Implement all reasonable and feasible mitigation measures to reduce the impacts of the development
Mining operations	The carrying out of mining, including the extraction, processing, stockpiling and transportation of mineral ore and extractive materials on the site and the associated removal, storage and/or emplacement of vegetation, topsoil, overburden, tailings and reject material
Mining products	Includes all saleable mining products produced at the site, but excludes tailings and other wastes and rehabilitation material
Minister	NSW Minister for Planning and Public Spaces, or delegate
Minor	Not very large, important or serious

Mitigation	Activities associated with reducing the impacts of the development
Negligible	Small and unimportant, such as to be not worth considering
Night	The period from 10pm to 7am on Monday to Saturday, and 10pm to 8am on Sundays and Public Holidays
Noise sensitive areas	Areas where mining operations are being carried out that have potential to lead to increased noise at privately-owned residences, such as elevated areas or areas near the boundary of the site
Non-compliance	An occurrence, set of circumstances or development that is a breach of this consent
‘Non-road’ mobile diesel equipment	Mobile equipment used in mining operations that is fitted with a diesel engine with a capacity >30 litres and that is self-propelled or transportable and primarily designed for off-road use
NP&W Act	<i>National Parks and Wildlife Act 1974</i>
NRAR	NSW Natural Resources Access Regulator
Offset areas	Means the areas shown conceptually in Appendix 4
Peppertree Quarry	Quarrying operations permitted under MP 06_0074 or any subsequent development consent for extractive industry at the Peppertree Quarry granted by the Minister (or delegate) or the Independent Planning Commission of NSW
Planning Secretary	Planning Secretary under the EP&A Act, or nominee
POEO Act	<i>Protection of the Environment Operations Act 1997</i>
Privately-owned land	Land that is not owned by a public agency or a mining, petroleum or extractive industry company (or its subsidiary or related party)
Public infrastructure	Linear and related infrastructure that provides services to the general public, such as roads, railways, water supply, drainage, sewerage, gas supply, electricity, telephone, telecommunications, etc.
Quarry products	Includes all saleable quarry products produced at the Peppertree Quarry, but excludes tailings and other wastes and rehabilitation material
Reasonable	Means applying judgement in arriving at a decision, taking into account: mitigation benefits, cost of mitigation versus benefits provided, community views and the nature and extent of potential improvements
Registered Aboriginal Parties	As described in the <i>National Parks and Wildlife Regulation 2009</i>
Rehabilitation	The restoration of land disturbed by the development to a good condition, to ensure it is safe, stable and non-polluting
Residence	Existing or approved dwelling at the date of grant of this consent
Resources Regulator	NSW Resources Regulator
RFS	NSW Rural Fire Service
Site	The land defined in Appendix 1
SOE	Southern Overburden Emplacement as shown in Figure 1 in Appendix 2
TfNSW	Transport for NSW
TSS	Total suspended solids
WOE	Western Overburden Emplacement as shown in Figure 1 in Appendix 2

SCHEDULE 2

PART A ADMINISTRATIVE CONDITIONS

OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT

- A1. In addition to meeting the specific performance measures and criteria established under this consent, the Applicant must implement all reasonable and feasible measures to prevent, and if prevention is not reasonable and feasible, minimise, any material harm to the environment that may result from the construction and operation of the development, and any rehabilitation required under this consent.

TERMS OF CONSENT

- A2. The development may only be carried out:
- (a) in compliance with the conditions of this consent;
 - (b) in accordance with all written directions of the Planning Secretary;
 - (c) generally in accordance with the EIS; and
 - (d) generally in accordance with the Development Layout in Appendix 2.
- A3. If there is any inconsistency between the above documents, the most recent document must prevail to the extent of the inconsistency. However, the conditions of this consent must prevail to the extent of any inconsistency.
- A4. The Applicant must comply with any requirement/s of the Planning Secretary arising from the Department's assessment of:
- (a) any strategies, plans or correspondence that are submitted in accordance with this consent;
 - (b) any reports, reviews or audits commissioned by the Department regarding compliance with this consent; and
 - (c) the implementation of any actions or measures contained in these documents.

LIMITS OF CONSENT

Mining operations

- A5. Mining operations may be carried out on the site, within the approved disturbance area, until 31 August 2051.

Notes:

- *Under this consent, the Applicant is required to decommission and rehabilitate the site and carry out other requirements in relation to mining operations. Consequently, this consent will continue to apply in all respects other than to permit the carrying out of mining operations until the rehabilitation of the site and other requirements have been carried out to the required standard.*
- *Mining operations and rehabilitation are also regulated under the Mining Act 1992.*

Extraction and Transportation

- A6. A maximum of 4 million tonnes of limestone may be extracted from the site in any financial year.
- A7. A maximum of 200,000 tonnes of clay/shale may be extracted from the site in any financial year.
- A8. A maximum of 4.2 million tonnes of limestone and clay/shale (combined) may be processed on the site in any financial year.
- A9. A maximum of 1 million tonnes of manufactured sand may be transported to Peppertree Quarry in any financial year.
- A10. A maximum of 150,000 tonnes of quarry products may be transported from Peppertree Quarry to the shared road sales stockpiling area^a in any financial year.
- ^a *The shared road sales stockpiling area is shown in Figure 1 in Appendix 2.*
- A11. A maximum of 720,000 tonnes of limestone, clay/shale and quarry products (combined) may be transported from the site by road in any financial year.
- A12. A maximum of 133 laden trucks may be dispatched from the site^{a,b} in any 24-hour period.
- ^a *Excludes any truck movements to or from the Peppertree Quarry authorised under conditions A9 and A10 or for the transportation of overburden as described in the EIS*
- ^b *Excludes any truck movements which may be authorised under separate development consent/s for the Peppertree Quarry*
- A13. A maximum of six laden trains may leave the site in any 24-hour period.

Hours of Operation

- A14. The Applicant may undertake mining operations 24 hours a day, 7 days a week.

Notes:

- *For limitations on blasting operations see condition B13.*

Mining Depth

A15. The Applicant must not carry out any extraction or excavation below 335 m AHD.

Identification of Approved Disturbance Area

A16. Within three months of commencement of development under this consent, or other timeframe agreed by the Planning Secretary, the Applicant must provide to the Department a survey plan of the boundaries of the approved disturbance areas.

NOTIFICATION OF COMMENCEMENT

A17. The date of commencement of each of the following phases of the development must be notified to the Department in writing, at least two weeks before that date:

- (a) commencement of development under the consent;
- (b) commencement of construction under the consent;
- (c) commencement of mining operations under the consent;
- (d) cessation of mining operations (i.e. mine closure); and
- (e) any period of suspension of mining operations (i.e. care and maintenance).

A18. If the phases of the development are to be further staged, the Department must be notified in writing at least two weeks prior to the commencement of each stage, of the date of commencement and the development to be carried out in that stage.

SURRENDER OF EXISTING CONSENTS OR APPROVALS

A19. Within 12 months of the date of commencement of development under this consent, or other timeframe agreed by the Planning Secretary, the Applicant must surrender the existing development consents dated 21 February 1972, 16 October 1974, 13 February 1995 and 22 May 1997, April 2008, 20 June 2006 and 1 March 2012 as detailed in Section 3.3.4 of the EIS, and any existing or continuing use rights for the site, in accordance with the EP&A Regulation.

A20. Upon the commencement of development under this consent, and before the surrender of existing development consents required under condition A19, the conditions of this consent prevail to the extent of any inconsistency with the conditions of those consents or approvals.

Note: *This requirement does not extend to the surrender of construction and occupation certificates for existing and proposed building works under the former Part 4A of the EP&A Act or Part 6 of the EP&A Act as applies from 1 September 2018. The surrender should not be understood as implying that works legally constructed under a valid consent or approval can no longer be legally maintained or used.*

DIVISION 7.1 CONTRIBUTIONS TO COUNCIL

A21. Under section 7.11 of the EP&A Act, an annual financial contribution must be paid to Council to be put toward the maintenance of Marulan South Road used for haulage of mining and quarry products. The contribution is to be calculated in accordance with the *Goulburn Mulwaree Section 94 Development Contributions Plan 2009* or its latest version (adjusted on a quarterly basis to account for movements in the Australian Bureau of Statistics Consumer Price Index – Building Construction (NSW)).

A22. The contribution must be paid to Council within 12 months of the date notified for the commencement of development under this consent and in the same month each year and be reported in the Annual Review required under condition D11.

A23. With the approval of the Planning Secretary, the contribution required under condition A21 may be waived or reduced in lieu of road upgrading works, or other means, as may be agreed by Council.

COMMUNITY CONSULTATIVE COMMITTEE

A24. Before the commencement of development under this consent, a Community Consultative Committee (CCC) must be established for the development in accordance with the Department's *Community Consultative Committee Guidelines: State Significant Projects* (2019). The CCC must continue to operate during the life of the development, or other timeframe agreed by the Planning Secretary.

Notes:

- *The CCC is an advisory committee only.*
- *In accordance with the Guidelines, the Committee should comprise an independent chair and appropriate representation from the Applicant, Council and the local community.*

A25. With the approval of the Planning Secretary, the Applicant may combine the CCC required by this consent with any similar CCC required by a consent or approval for any adjoining mine or quarry subject to common, shared or related ownership or management.

EVIDENCE OF CONSULTATION

- A26. Where conditions of this consent require consultation with an identified party, the Applicant must:
- (a) consult with the relevant party prior to submitting the subject document; and
 - (b) provide details of the consultation undertaken, including:
 - (i) the outcome of that consultation, matters resolved and unresolved; and
 - (ii) details of any disagreement remaining between the party consulted and the Applicant and how the Applicant has addressed the matters not resolved.

STAGING, COMBINING AND UPDATING STRATEGIES, PLANS OR PROGRAMS

- A27. With the approval of the Planning Secretary, the Applicant may:
- (a) prepare and submit any strategy, plan or program required by this consent on a staged basis (if a clear description is provided as to the specific stage and scope of the development to which the strategy, plan or program applies, the relationship of the stage to any future stages and the trigger for updating the strategy, plan or program);
 - (b) combine any strategy, plan or program required by this consent (if a clear relationship is demonstrated between the strategies, plans or programs that are proposed to be combined);
 - (c) update any strategy, plan or program required by this consent (to ensure the strategies, plans and programs required under this consent are updated on a regular basis and incorporate additional measures or amendments to improve the environmental performance of the development); and
 - (d) combine any strategy, plan or program required by this consent with any similar strategy, plan or program required by an adjoining mining consent or approval, in common ownership or management.
- A28. If the Planning Secretary agrees, a strategy, plan or program may be staged or updated without consultation being undertaken with all parties required to be consulted in the relevant condition in this consent.
- A29. If the Planning Secretary agrees, a strategy, plan or program may be staged without addressing particular requirements of the relevant condition of this consent if those requirements are not applicable to the particular stage.

PROTECTION OF PUBLIC INFRASTRUCTURE

- A30. Unless the Applicant and the applicable authority agree otherwise, the Applicant must:
- (a) repair, or pay the full costs associated with repairing, any public infrastructure^a that is damaged by carrying out the development; and
 - (b) relocate, or pay the full costs associated with relocating, any public infrastructure^a that needs to be relocated as a result of the development.

^a This condition does not apply to any damage to roads caused as a result of general road usage or otherwise addressed by contributions required by condition A21 or to damage that has been compensated under the Mining Act 1992.

DEMOLITION

- A31. All demolition must be carried out in accordance with *Australian Standard AS 2601-2001 The Demolition of Structures* (Standards Australia, 2001).

STRUCTURAL ADEQUACY

- A32. All new buildings and structures, and any alterations or additions to existing buildings and structures, that are part of the development, must be constructed in accordance with the relevant requirements of the BCA.

Notes:

- Under Part 6 of the EP&A Act, the Applicant is required to obtain construction and occupation certificates for the proposed building works.
- Part 8 of the EP&A Regulation sets out the requirements for the certification of the development.

OPERATION OF PLANT AND EQUIPMENT

- A33. All plant and equipment used on site, or to monitor the performance of the development must be:
- (a) maintained in a proper and efficient condition; and
 - (b) operated in a proper and efficient manner.

COMPLIANCE

- A34. The Applicant must ensure that all of its employees, contractors (and their sub-contractors) are made aware of, and are instructed to comply with, the conditions of this consent relevant to activities they carry out in respect of the development.

APPLICABILITY OF GUIDELINES

- A35. References in the conditions of this consent to any guideline, protocol, Australian Standard or policy are to such guidelines, protocols, Standards or policies in the form they are in as at the date of inclusion (or later update) in the condition.
- A36. However, consistent with the conditions of this consent and without altering any limits or criteria in this consent, the Planning Secretary may, in respect of ongoing monitoring and management obligations, agree to or require compliance with an updated or revised version of such a guideline, protocol, Standard or policy, or a replacement of them.

CROWN LAND

- A37. The Applicant must consult with DPIE – Crown Lands prior to undertaking any development on Crown Land or Crown Roads.

Notes:

- *Under section 265 of the Mining Act 1992, the Applicant is required to enter into a compensation agreement with DPIE – Crown Lands prior to undertaking any mining operations or related activities on Crown land or Crown roads within a mining lease.*
- *Under section 141 of the Mining Act 1992, the Applicant is required to enter into an access arrangement with DPIE – Crown Lands prior to undertaking any prospecting operations on Crown land or Crown roads within an exploration licence.*

PART B SPECIFIC ENVIRONMENTAL CONDITIONS

NOISE

Noise Criteria

- B1. The Applicant must ensure that the noise generated by the development does not exceed the criteria in Table 1 at any residence on privately-owned land.

Table 1: Noise criteria dB(A)

Noise Assessment Location ^a	Day <i>L_{Aeq}</i> (15 min)	Evening <i>L_{Aeq}</i> (15 min)	Night <i>L_{Aeq}</i> (15 min)	Night <i>L_{AFmax}</i>
R9	40	36	36	52
Other privately-owned residences	40	35	35	52

^aThe Noise Assessment Locations referred to in Table 1, are shown in Appendix 3.

- B2. Noise generated by the development must be monitored and measured in accordance with the relevant procedures and exemptions (including certain meteorological conditions) of the *NSW Noise Policy for Industry* (EPA, 2017).
- B3. The noise criteria in Table 1 do not apply if the Applicant has an agreement with the owner/s of the relevant residence or land to exceed the noise criteria, and the Applicant has advised the Department in writing of the terms of this agreement.

Temporary Construction Noise Limits

- B4. With the written agreement of the Planning Secretary, the Applicant may seek temporary construction noise limits above the noise criteria in Table 1, including for construction works outside of standard hours. In order to seek a temporary construction noise limit, the Applicant must develop a Construction Noise Protocol to the satisfaction of the Planning Secretary. This protocol must:
- be prepared in consultation with the EPA and any residents who may be affected by the noise generated by these works;
 - specify the construction works to which the temporary construction noise limits would apply and provide justification for these limits; and
 - address the relevant requirements of the *Interim Construction Noise Guideline* (DECC, 2009).
- B5. The Applicant must continue to operate in accordance with the noise criteria in Table 1 until and unless a Construction Noise Protocol for the specified construction works is approved by the Planning Secretary.
- B6. The Applicant must implement any Construction Noise Protocol approved by the Planning Secretary.

Noise Operating Conditions

- B7. The Applicant must:
- take all reasonable steps to minimise noise from construction and operational activities, including low frequency noise and other audible characteristics, as well as road and on-site rail noise associated with the development;
 - implement reasonable and feasible noise attenuation measures on all plant and equipment that will operate in noise sensitive areas;
 - take all reasonable steps to minimise the noise impacts of the development in noise sensitive areas during the evening and night;
 - operate a noise management system to guide the day to day planning of mining operations, and the implementation of both proactive and reactive noise mitigation measures to ensure compliance with the relevant conditions of this consent;
 - take all reasonable steps to minimise the noise impacts of the development during noise-enhancing meteorological conditions;
 - only use locomotives and rolling stock that are approved to operate on the NSW rail network in accordance with the noise limits in any relevant rolling stock operator's EPL and use reasonable endeavours to ensure that rolling stock is selected to minimise noise;
 - carry out regular attended noise monitoring (at least once a month, unless otherwise agreed by the Planning Secretary) to determine whether the development is complying with the relevant conditions of this consent; and

- (h) regularly assess the noise monitoring data and modify operations on the site to ensure compliance with the relevant conditions of this consent.

Noise Management Plan

- B8. The Applicant must prepare a Noise Management Plan for the development to the satisfaction of the Planning Secretary. This plan must:
- (a) be prepared by a suitably qualified and experienced person/s whose appointment has been endorsed by the Planning Secretary;
 - (b) describe the measures to be implemented to ensure:
 - (i) compliance with the noise criteria and operating conditions of this consent;
 - (ii) best practice management is being employed; and
 - (iii) noise impacts of the development are minimised during noise-enhancing meteorological conditions;
 - (c) describe the measures to minimise development related road traffic noise generated on public roads;
 - (d) describe the noise management system in detail; and
 - (e) include a monitoring program that:
 - (i) uses a combination of attended and unattended monitoring to evaluate the performance of the development;
 - (ii) monitors noise at locations representative of the most affected residences;
 - (iii) adequately supports the noise management system;
 - (iv) includes a protocol for distinguishing noise emissions of the development from any neighbouring developments; and
 - (v) includes a protocol for identifying any noise-related exceedance, incident or non-compliance and for notifying the Department and relevant stakeholders of any such event.
- B9. The Noise Management Plan must be approved by the Planning Secretary within 3 months of the date of this consent, unless otherwise agreed by the Planning Secretary.
- B10. The Applicant must implement the Noise Management Plan as approved by the Planning Secretary.

BLASTING

Blasting Criteria

- B11. The Applicant must ensure that blasting on the site does not cause exceedances of the criteria at the locations in Table 2.

Table 2: *Blasting criteria*

Location	Airblast overpressure (dB(Lin Peak))	Ground vibration (mm/s)	Allowable exceedance
Residence on privately-owned land ^a	120	10	0%
	115	5	5% of the total number of blasts over a financial year
Commercial receiver ^a	133	25	0%
Electricity Transmission Lines		50	0%
Public Roads		100	0%
All other infrastructure		50 (or a limit determined by the structural design methodology in AS 2187.2 - 2006, or its latest version, or other alternative limit for public infrastructure, to the satisfaction of the Planning Secretary)	0%

^a The locations referred to in Table 2 are shown in Appendix 3.

- B12. The blasting criteria in Table 2 do not apply if the Applicant has an agreement with the owner/s of the relevant residence or infrastructure to exceed the blasting criteria, and the Applicant has advised the Department in writing of the terms of this agreement.

Blasting Hours

- B13. The Applicant must only carry out blasting on the site between 9 am and 5 pm (Monday to Friday inclusive). No blasting is allowed on weekends, public holidays or any other time without the prior written approval of the Planning Secretary.

Blasting Frequency

- B14. The Applicant may carry out a maximum of 1 single blast event^a per day.
- B15. Condition B14 does not apply to single blast events^a that generate ground vibration of 0.5 mm/s or less at any residence on privately-owned land, or to blast misfires or blasts required to ensure the safety of the mine, its workers or the general public.

^a Within conditions B14 and B15, 'single blast event' means a blast which involves either a single detonation or a number of individual blasts fired in quick succession in a discrete area of the development. Should an additional blast be required after a blast misfire, this additional blast and the blast misfire are counted as a single blast event.

Property Inspections

- B16. If the Applicant receives a written request from the owner of any privately-owned land within 2 kilometres of any approved open cut mining pit on the site for a property inspection to establish the baseline condition of any buildings and structures on their land, or to have a previous property inspection updated, then within 2 months of receiving this request the Applicant must:
- (a) commission a suitably qualified, experienced and independent person, whose appointment is acceptable to both parties to:
 - (i) establish the baseline condition of any buildings and other structures on the land, or update the previous property inspection report; and
 - (ii) identify measures that should be implemented to minimise the potential blasting impacts of the development on these buildings and structures; and
 - (b) give the landowner a copy of the new or updated property inspection report.
- B17. If there is a dispute over the selection of the suitably qualified, experienced and independent person, or the Applicant or the landowner disagrees with the findings of the property inspection report, either party may refer the matter to the Planning Secretary for resolution.

Property Investigations

- B18. If the owner of any privately-owned land within 2 kilometres of any approved open cut mining pit on the site or any other landowner where the Planning Secretary is satisfied an investigation is warranted, claims in writing that buildings or structures on their land have been damaged as a result of blasting on the site, then within 2 months of receiving this written claim the Applicant must:
- (a) commission a suitably qualified, experienced and independent person, whose appointment is acceptable to both parties to investigate the claim; and
 - (b) give the landowner a copy of the property investigation report.
- B19. If this independent property investigation confirms the landowner's claim, and both parties agree with these findings, then the Applicant must repair the damage to the satisfaction of the Planning Secretary.
- B20. If there is a dispute over the selection of the suitably qualified, experienced and independent person, or the Applicant or the landowner disagrees with the findings of the independent property investigation, then either party may refer the matter to the Planning Secretary for resolution.

Blast Operating Conditions

- B21. The Applicant must:
- (a) take all reasonable steps to:
 - (i) ensure the safety of people and livestock from blasting impacts of the development;
 - (ii) protect public and private infrastructure and property in the vicinity of the site from blasting damage associated with the development; and
 - (iii) minimise blast-related dust and fume emissions;
 - (b) ensure that blasting on the site does not damage heritage items^a, except in accordance with predictions in the document/s listed in condition A2(c), and develop specific measures to protect heritage items from any blasting damage associated with the development;

- (c) operate a comprehensive blast management system that uses a combination of meteorological forecasts and predictive blast modelling to guide the planning of blasts to minimise blasting impacts;
- (d) operate a suitable system to enable interested members of the public to get up-to-date information on the proposed blasting schedule on the site and any associated road closures, including notification via SMS message of the blasting schedule and any variations to that schedule;
- (e) use all reasonable efforts to co-ordinate the timing of blasting at the site with Peppertree Quarry to minimise cumulative blasting impacts; and
- (f) carry out regular blast monitoring to determine whether the development is complying with the relevant conditions of this consent.

^aThe locations of the heritage items referred to in paragraph (b) are shown in Appendix 5.

B22. The Applicant must not undertake blasting on the site within 500 metres of any public road or any land outside the site not owned by the Applicant, unless the Applicant has:

- (a) a written agreement with the relevant infrastructure owner or landowner to allow blasting to be carried out closer to the public road or land, and the Applicant has advised the Department in writing of the terms of this agreement; or
- (b) demonstrated, to the satisfaction of the Planning Secretary, that the blasting can be carried out closer to the public road or land without compromising the safety of people or livestock or damaging the road or other buildings and structures, and updated the Blast Management Plan to include specific mitigation measures to be implemented while blasting is being carried out within 500 metres of the road or land.

Blast Management Plan

B23. The Applicant must prepare a Blast Management Plan for the development to the satisfaction of the Planning Secretary. This plan must:

- (a) be prepared by a suitably qualified and experienced person/s whose appointment has been endorsed by the Planning Secretary;
- (b) describe the blast management system and the measures that will be implemented to ensure compliance with the blasting criteria and conditions of this consent;
- (c) include a Blast Fume Management Strategy for:
 - (i) minimising blast fume emissions;
 - (ii) rating and recording blast fume events; and
 - (iii) reporting significant blast fume events to the Department and the EPA;
- (d) identify any agreed alternative ground vibration limits for public or private infrastructure in the vicinity of the site (if relevant);
- (e) include a strategy to monitor, mitigate and manage the effects of blasting on heritage items^a;
- (f) include a monitoring program for evaluating and reporting on compliance with the relevant conditions of this consent;
- (g) include a protocol for identifying any blast-related exceedance, incident or non-compliance and for notifying the Department, the EPA and relevant stakeholders of these events;
- (h) include public notification procedures to enable members of the public, particularly surrounding residents, to get up-to-date information on the proposed blasting schedule; and
- (i) include a protocol for investigating and responding to blast-related complaints.

^aThe locations of the heritage items are shown in Appendix 5.

B24. The Applicant must not undertake any blasting under this consent until the Blast Management Plan is approved by the Planning Secretary.

B25. The Applicant must implement the Blast Management Plan as approved by the Planning Secretary.

AIR QUALITY AND GREENHOUSE GAS

Odour

B26. The Applicant must ensure that no offensive odours, as defined under the POEO Act, are emitted from the site.

Air Quality Criteria

B27. The Applicant must ensure that all reasonable and feasible avoidance and mitigation measures are employed so that particulate matter emissions generated by the development do not cause exceedances of the criteria listed in Table 3 at any residence on privately-owned land.

Table 3: Air quality criteria

Pollutant	Averaging period	Criterion
Particulate matter < 10 µm (PM ₁₀)	Annual	^{a, c} 25 µg/m ³
	24 hour	^b 50 µg/m ³
Particulate matter < 2.5 µm (PM _{2.5})	Annual	^{a, c} 8 µg/m ³
	24 hour	^b 25 µg/m ³
Total suspended particulate (TSP) matter	Annual	^{a, c} 90 µg/m ³

Notes:

^a Total impact (i.e. incremental increase in concentrations due to the development plus background concentrations due to all other sources).

^b Incremental impact (i.e. incremental increase in concentrations due to the development on its own).

^c Excludes extraordinary events such as bushfires, prescribed burning, dust storms, fire incidents or any other activity agreed by the Planning Secretary.

- B28. The air quality criteria in Table 3 do not apply if the Applicant has an agreement with the owner/s of the relevant residence or land to exceed the air quality criteria, and the Applicant has advised the Department in writing of the terms of this agreement.

Mine-owned Land

- B29. Particulate matter emissions generated by the development must not exceed the criteria listed in Table 3 at any occupied residence on mine-owned land (including land owned by another mining or quarry company) unless:
- the tenant and landowner (if the residence is owned by another mining or quarry company) have been notified of any health risks associated with such exceedances in accordance with the notification requirements under PART C of this consent;
 - the tenant of any land owned by the Applicant can terminate their tenancy agreement without penalty at any time, subject to giving 14 days' notice;
 - air quality monitoring is regularly undertaken to inform the tenant and landowner (if the residence is owned by another mining company) of the likely particulate matter emissions at the residence; and
 - data from this monitoring is presented to the tenant and landowner in an appropriate format for a medical practitioner to assist the tenant and landowner in making informed decisions on the health risks associated with occupying the property.

Air Quality Operating Conditions

- B30. The Applicant must:

- take all reasonable steps to:
 - minimise odour, fume and particulate matter (including PM₁₀ and PM_{2.5}) emissions of the development, paying particular attention to minimising wheel-generated haul road emissions;
 - improve energy efficiency and reduce greenhouse gas emissions of the development;
 - minimise any visible off-site air pollution generated by the development; and
 - minimise the extent of potential dust generating surfaces exposed on the site at any given point in time;
- ensure that all 'non-road' mobile diesel equipment used in undertaking the development includes reasonable and feasible diesel emissions reduction technology;
- operate an air quality management system to guide the day to day planning of mining operations and implementation of both proactive and reactive air quality mitigation measures to ensure compliance with the relevant conditions of this consent;
- minimise the air quality impacts of the development during adverse meteorological conditions and extraordinary events (see Note c to Table 3 above);
- use all reasonable efforts to co-ordinate air quality management on the site with the air quality management at Peppertree Quarry to minimise cumulative air quality impacts;
- carry out regular air quality monitoring to determine whether the development is complying with the relevant conditions of this consent; and
- regularly assess meteorological and air quality monitoring data, and modify operations on the site to ensure compliance with the relevant conditions of this consent.

Air Quality and Greenhouse Gas Management Plan

- B31. The Applicant must prepare an Air Quality and Greenhouse Gas Management Plan for the development to the satisfaction of the Planning Secretary. This plan must:
- (a) be prepared by a suitably qualified and experienced person/s whose appointment has been endorsed by the Planning Secretary;
 - (b) be prepared in consultation with the EPA;
 - (c) describe the measures to be implemented to ensure:
 - (i) compliance with the air quality criteria and operating conditions of this consent;
 - (ii) best practice management is being employed to:
 - minimise the development's air quality impacts;
 - minimise the development's Scope 1 and 2 greenhouse gas emissions; and
 - improve the development's energy efficiency; and
 - (iii) the air quality impacts of the development are minimised during adverse meteorological conditions and extraordinary events;
 - (d) describe the air quality management system in detail; and
 - (e) include an air quality monitoring program, undertaken in accordance with the *Approved Methods for Sampling and Analysis of Air Pollutants in New South Wales* (DEC, 2007), that:
 - (i) uses monitors to evaluate the performance of the development against the air quality criteria in this consent and to guide day to day planning of mining operations;
 - (ii) adequately supports the air quality management system; and
 - (iii) includes a protocol for identifying any air quality-related exceedance, incident or non-compliance and for notifying the Department and relevant stakeholders of these events.
- B32. The Air Quality and Greenhouse Gas Management Plan must be approved by the Planning Secretary within 3 months of the date of this consent, unless otherwise agreed by the Planning Secretary.
- B33. The Applicant must implement the Air Quality and Greenhouse Gas Management Plan as approved by the Planning Secretary.

METEOROLOGICAL MONITORING

- B34. Prior to the commencement of development under this consent, and for the life of the development, the Applicant must ensure that there is a suitable meteorological station operating in the vicinity of the site that:
- (a) complies with the requirements in the *Approved Methods for Sampling and Analysis of Air Pollutants in New South Wales* (DEC, 2007); and
 - (b) is capable of measuring meteorological conditions in accordance with the *NSW Noise Policy for Industry* (EPA, 2017),
- unless a suitable alternative is approved by the Planning Secretary following consultation with the EPA.

WATER

Water Supply

- B35. The Applicant must ensure that it has sufficient water for all stages of the development, and if necessary, adjust the scale of the development to match its available water supply.
- B36. The Applicant must report on water extracted from the site each year (direct and indirect) in the Annual Review, including water taken under each water licence.

Note: Under the Water Act 1912 and/or the Water Management Act 2000, the Applicant is required to obtain all necessary water licences for the development, including during rehabilitation and post mine closure.

Compensatory Water Supply

- B37. The Applicant must provide a compensatory water supply to any landowner of privately-owned land whose rightful water supply is adversely and directly impacted (other than an impact that is minor or negligible) as a result of the development, in consultation with DPIE Water, and to the satisfaction of the Planning Secretary.
- B38. The compensatory water supply measures must provide an alternative long-term supply of water that is equivalent, in quality and volume, to the loss attributable to the development. Equivalent water supply should be provided (at least on an interim basis) as soon as practicable after the loss is identified, unless otherwise agreed with the landowner.

- B39. If the Applicant and the landowner cannot agree on whether the loss of water is attributed to the development or the measures to be implemented, or there is a dispute about the implementation of these measures, then either party may refer the matter to the Planning Secretary for resolution.
- B40. If the Applicant is unable to provide an alternative long-term supply of water, then the Applicant must provide compensation, to the satisfaction of the Planning Secretary.

Notes:

- The Water Management Plan (see condition B45) is required to include trigger levels for investigating potentially adverse impacts on water supplies.

Water Discharges

- B41. The Applicant must ensure that all surface discharges from the site comply with:
- discharge limits (both volume and quality) set for the development in any EPL; or
 - relevant provisions of the POEO Act.

Groundwater Management

- B42. Within 12 months of the commencement of development under this consent, or other timeframe as agreed by the Planning Secretary, the Applicant must install a groundwater level and quality monitoring network within and adjacent to the Mt Frome Middle Limestone, or a suitable alternative location, in consultation with DPIE Water and to the satisfaction of the Planning Secretary.

Water Management Performance Measures

- B43. The Applicant must ensure that the development complies with the performance measures in Table 4.

Table 4: Water management performance measures

Feature	Performance Measure
Water management – General	<ul style="list-style-type: none"> • Maintain separation between clean, dirty (i.e. sediment-laden) and mine water management systems • Minimise the use of clean and potable water on the site • Maximise water recycling, reuse and sharing opportunities • Minimise the use of make-up water from external sources • Design, install, operate and maintain water management systems in a proper and efficient manner • Minimise risks to the receiving environment and downstream water users
Barbers Creek, Bungonia Creek and Shoalhaven River alluvial aquifers	<ul style="list-style-type: none"> • Negligible impacts to alluvial aquifers as a result of the development, beyond those predicted in the document/s listed in condition A2(c), including: <ul style="list-style-type: none"> – negligible change in groundwater levels; – negligible change in groundwater quality; and – negligible impact to other groundwater users
Groundwater springs	<ul style="list-style-type: none"> • Negligible impacts to groundwater springs as a result of the development, beyond those predicted in the document/s listed in condition A2(c), including: <ul style="list-style-type: none"> – negligible change in groundwater supply; and – negligible change in groundwater quality
Aquatic and riparian ecosystems	<ul style="list-style-type: none"> • Negligible environmental consequences beyond those predicted in the document/s listed in condition A2(c) • Negligible decline in baseline channel stability • Develop site-specific in-stream water quality objectives in accordance with the <i>Australian and New Zealand Guidelines for Fresh and Marine Water Quality</i> (ANZECC & ARMCANZ, 2000) and <i>Using the ANZECC Guidelines and Water Quality Objectives in NSW</i> (DEC, 2006)
Marulan Creek Dam	<ul style="list-style-type: none"> • Negligible impacts on the quality and quantity of downstream flows and geomorphic processes in Marulan Creek and Barbers Creek as a result of the development, beyond those predicted in the document/s listed in condition A2(c) • Design, install and maintain dam infrastructure in accordance with the guidance series for <i>Controlled Activities on Waterfront Land</i> (DPI Water, 2012)

Feature	Performance Measure
Erosion and sediment control works	<ul style="list-style-type: none"> Design, install and maintain erosion and sediment controls in accordance with the guidance series <i>Managing Urban Stormwater: Soils and Construction</i> including <i>Volume 1: Blue Book</i> (Landcom, 2004), <i>Volume 2A: Installation of Services</i> (DECC, 2008), <i>Volume 2C: Unsealed Roads</i> (DECC, 2008), <i>Volume 2D: Main Road Construction</i> (DECC, 2008) and <i>Volume 2E: Mines and Quarries</i> (DECC, 2008) Design, install and maintain any creek crossings in accordance with the <i>Fisheries NSW Policy and Guidelines for Fish Habitat Conservation and Management</i> (DPI, 2013) and <i>Why Do Fish Need To Cross The Road? Fish Passage Requirements for Waterway Crossings</i> (NSW Fisheries 2003) Design, install and maintain any new infrastructure within 40 metres of watercourses in accordance with the guidance series for <i>Controlled Activities on Waterfront Land</i> (DPI Water, 2012)
Clean water diversions and storage infrastructure	<ul style="list-style-type: none"> Design, install and maintain the clean water system to capture and convey the 100 year ARI flood Maximise, as far as reasonable, the diversion of clean water around disturbed areas on the site, except where clean water is captured for use on the site
Sediment dams	<ul style="list-style-type: none"> Design, install and maintain sediment dams in accordance with the guidance series <i>Managing Urban Stormwater: Soils and Construction – Volume 1</i> (Landcom, 2004) and <i>2E Mines and Quarries</i> (DECC, 2008) and the requirements under the POEO Act
Chemical and hydrocarbon storage	<ul style="list-style-type: none"> Chemical and hydrocarbon products to be stored in bunded areas in accordance with the relevant Australian Standard
Overburden emplacements	<ul style="list-style-type: none"> Design, install and maintain emplacements to encapsulate and prevent migration of acid forming and potentially acid forming materials, and saline and sodic material Design, install and maintain out-of-pit emplacements to prevent and/or manage long term saline seepage

B44. The performance measures in Table 4 do not apply to water management structures which were lawfully constructed prior to the commencement of development under this consent.

Water Management Plan

B45. The Applicant must prepare a Water Management Plan for the development to the satisfaction of the Planning Secretary. This plan must:

- (a) be prepared by a suitably qualified and experienced person/s whose appointment has been endorsed by the Planning Secretary;
- (b) be prepared in consultation with WaterNSW, DPIE Water, Fisheries NSW and the EPA;
- (c) describe the measures to be implemented to ensure that the Applicant complies with the water management performance measures (see Table 4);
- (d) utilise existing local data and build on existing monitoring programs, where practicable;
- (e) include a:
 - (i) **Site Water Balance** that includes details of:
 - predicted annual inflows to and outflows from the site;
 - sources and security of water supply for the life of the development (including authorised entitlements and licences);
 - water storage capacity;
 - water use and management on the site, including any water transfers or sharing with neighbouring mines;
 - licensed discharge points and limits; and
 - reporting procedures, including the annual preparation of an updated site water balance;
 - (ii) **Erosion and Sediment Control Plan** that:
 - is consistent with the requirements of *Managing Urban Stormwater: Soils and Construction - Volume 1: Blue Book* (Landcom, 2004) and *Volume 2E: Mines and Quarries* (DECC, 2008);
 - identifies activities that could cause soil erosion, generate sediment or affect flooding;
 - includes a program to periodically review sheet, rill and gully erosion risks, particularly in relation to emplacement areas;

- includes a program to monitor the geomorphological stability of emplacement areas, in consultation with WaterNSW;
 - describes measures to minimise soil erosion and the potential for the transport of sediment to downstream waters, and manage flood risk;
 - describes the location, function, and capacity of erosion and sediment control structures; and
 - describes what measures would be implemented to maintain (and if necessary decommission) the structures over time;
- (iii) **Surface Water Management Plan** that includes:
- detailed baseline data on surface water flows and quality of watercourses and/or water bodies potentially impacted by the development, including:
 - stream and riparian vegetation health;
 - channel stability (geomorphology); and
 - water supply for other surface water users;
 - a detailed description of the surface water management system, including consideration of mitigation measures to manage downstream risks associated with alkalinity, TSS and settling agents;
 - details of the water licensing requirements for all water storages (i.e. exempt, harvestable rights or licenced);
 - detailed plans, design objectives and performance criteria for water management infrastructure, including:
 - water run-off diversions and catch drains;
 - water storages (excluding Marulan Creek Dam) and sediment dams;
 - emplacement areas; and
 - backfilled pits and any final voids for the development;
 - surface water performance criteria, including trigger levels for identifying and investigating any potentially adverse impacts (or trends) associated with the development, for:
 - water supply for other water users;
 - downstream surface water flows and quality, including (but not limited to) specific trigger levels for TSS, metals, alkalinity, bicarbonate alkalinity and settling agents, which are informed by baseline data, having regard to the sensitivity of downstream waters;
 - downstream flooding impacts;
 - stream and riparian vegetation health; and
 - post-mining water pollution from rehabilitated areas of the site;
 - a program to monitor and evaluate:
 - compliance with the relevant performance measures listed in Table 4 and the performance criteria in this plan;
 - controlled and uncontrolled discharges and seepage/leachate from the site;
 - impacts on water supply for other water users;
 - surface water inflows, outflows and storage volumes, to inform the Site Water Balance; and
 - the effectiveness of the surface water management system and the measures in the Erosion and Sediment Control Plan;
 - reporting procedures for the results of the monitoring program, including notifying other water users of any elevated results; and
 - a trigger action response plan to respond to any exceedances of the relevant performance measures or performance criteria, and repair, mitigate and/or offset any adverse surface water impacts of the development;
- (iv) **Marulan Creek Dam Management Plan** that includes:
- detailed plans, design objectives and performance criteria for the dam infrastructure;
 - detailed measures to ensure compliance with the relevant performance measures in Table 4;
 - performance criteria, including trigger levels for identifying and investigating any potentially adverse impacts (or trends) associated with the development with respect to:
 - downstream geomorphic processes;
 - sediment transmission;
 - ecological function; and

- water quality;
- a program to monitor and evaluate compliance with the relevant performance measures in Table 4, including justification for proposed monitoring frequencies and parameters;
- reporting procedures for the results of the monitoring program;
- a remediation and rehabilitation strategy for areas of Marulan Creek both above and below the dam up to the entry to the Barber's Creek gorge, which has been prepared by a suitably qualified and experienced fluvial geomorphologist, having regard to *A Rehabilitation Manual for Australian Streams* (Land and Water Resources Research and Development Corporation, 2000); and
- a trigger action response plan to respond to any exceedances of the relevant performance measures or performance criteria, and repair, mitigate and/or offset any adverse impacts on downstream flows and/or ecological processes;

(v) **Groundwater Management Plan** that includes:

- detailed baseline data of groundwater levels, yield and quality for groundwater resources and groundwater dependent ecosystems potentially impacted by the development, including groundwater supply for other water users;
- a detailed description of the groundwater management system;
- groundwater performance criteria, including trigger levels for identifying and investigating any potentially adverse groundwater impacts (or trends) associated with the development, on:
 - regional and local aquifers (alluvial and hardrock);
 - groundwater springs; and
 - groundwater supply for other water users such as licensed privately-owned groundwater bores;
- a program to monitor and evaluate:
 - compliance with the relevant performance measures listed in Table 4 and the performance criteria in this plan;
 - water loss/seepage from water storages into the groundwater system, including from any final voids;
 - groundwater inflows, outflows and storage volumes, to inform the Site Water Balance;
 - the hydrogeological setting of any nearby alluvial aquifers and the likelihood of any indirect impacts from the development;
 - impacts on groundwater dependent ecosystems;
 - impacts on groundwater supply for other water users;
 - the effectiveness of the groundwater management system;
- reporting procedures for the results of the monitoring program, including notifying other water users of any elevated results;
- a trigger action response plan to respond to any exceedances of the relevant performance measures and groundwater performance criteria, and repair, mitigate and/or offset any adverse groundwater impacts of the development;
- a program to periodically validate the groundwater model for the development, including an independent review of the model every 3 years (unless otherwise agreed by the Planning Secretary), and comparison of monitoring results with modelled predictions; and

(vi) a protocol to report on the measures, monitoring results and performance criteria identified above, in the Annual Review referred to in condition D11.

B46. The Water Management Plan must be approved by the Planning Secretary within 3 months from the date of this consent, unless otherwise agreed by the Planning Secretary.

B47. The Applicant must implement the Water Management Plan as approved by the Planning Secretary.

B48. The Applicant must commission an independent audit of the long-term geomorphological stability of the WOE and SOE. This audit must:

- (a) be conducted by a suitably qualified and experienced person/s whose appointment has been endorsed by the Planning Secretary;
- (b) be carried out in consultation with WaterNSW;
- (c) be undertaken within three months of the completion of the surface water management systems for the WOE and SOE in Stage 4 of the development, or other timeframe agreed by the Planning Secretary;
- (d) assess whether the surface water management system has been constructed in accordance with the conditions of this consent and is geomorphologically stable;

- (e) recommend appropriate measures or actions to ensure the long-term stability of the WOE and SOE (if required); and
- (f) be conducted and reported to the satisfaction of the Planning Secretary.

B49. Within three months of commissioning the independent audit required under condition B48, or other timeframe agreed by the Planning Secretary, the Applicant must submit a copy of the Audit Report to the Planning Secretary and to WaterNSW, together with its response to any recommendations contained in the audit report and a timetable for the implementation of its recommendations.

B50. The Applicant must implement the recommendations of the Audit Report to the satisfaction of the Planning Secretary.

BIODIVERSITY

Biodiversity Credits Required

B51. Prior to commencing construction under this consent, or other timeframe agreed by the Planning Secretary, the Applicant must retire the biodiversity credits specified in **Table 5**. The retirement of credits must be carried out in consultation with BCD and in accordance with the Biodiversity Offsets Scheme of the BCT Act, to the satisfaction of the BCT.

B52. The retirement of credits must be carried out in consultation with BCD and in accordance with the Biodiversity Offsets Scheme of the BC Act, to the satisfaction of the BCT.

Table 5: Biodiversity credit requirements

Credit Type	Credits Required
Ecosystem Credits	
PCT 1334 Yellow Box – Blakely's Red Gum grassy woodland on the tablelands, South Eastern Highlands ^{a, b}	1,038
PCT 778 Coast Grey Box – stringybark dry woodland on slopes of the Shoalhaven Gorges – Southern Sydney Basin	885
PCT 1150 – Silvertop Ash – Blue-leaved Stringybark shrubby open forest on ridges, north east South Eastern Highlands Bioregion	260
PCT 731 Broad-leaved Peppermint – Red Stringybark grassy open forest on undulating hills, South Eastern Highlands Bioregion	325
Species Credits	
<i>Solanum celatum</i>	2
Koala ^b	2,454
Large-eared Pied Bat ^b	3,836

^a Commensurate with White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland CEEC under the EPBC Act

^b Under clause 6.6A of the Biodiversity Conservation Regulation 2017, variation rules do not apply to the identified species or community and the required credits must be retired on a like-for-like basis

B53. The Applicant must implement the Biodiversity Offset Strategy in consultation with BCD, the BCT and MEG.^a

^a Consultation with MEG is only required in respect of land-based biodiversity offsets

Biodiversity Management Plan

B54. The Applicant must prepare a Biodiversity Management Plan to the satisfaction of the Planning Secretary. This plan must:

- (a) be prepared by a suitably qualified and experienced person/s whose appointment has been endorsed by the Planning Secretary;
- (b) be prepared in consultation with BCD;
- (c) describe the short, medium, and long-term measures to be undertaken to manage the remnant vegetation and fauna habitat on the site and within the offset areas;
- (d) describe how biodiversity management would be integrated with similar measures within other management plans, including the Rehabilitation Management Plan referred to in condition B82;

- (e) include detailed performance and completion criteria for evaluating the performance of the Biodiversity Offset Strategy and include triggers for remedial action, where these performance or completion criteria are not met;
- (f) describe how the Biodiversity Offset Strategy will be implemented and secured;
- (g) describe the measures to be implemented within the approved disturbance areas to:
 - (i) minimise the amount of clearing;
 - (ii) minimise impacts on fauna, including undertaking pre-clearance surveys and measures to minimise the risk of vehicle strike;
 - (iii) provide for the salvage, transplanting and/or propagation of any threatened flora found during pre-clearance surveys, in accordance with the *Guidelines for the Translocation of Threatened Plants in Australia* (Vallee et al., 2004); and
 - (iv) maximise the salvage of resources, including tree hollows, vegetation and soil resources, for beneficial reuse, including fauna habitat enhancement;
- (h) describe the measures to be implemented on the site to:
 - (i) minimise impacts to *White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland CEEC* including potential edge effects within identified buffer zones, and contribute to conservation strategies for this CEEC;
 - (ii) minimise impacts on fauna habitat resources such as hunting and foraging areas, habitat trees, fallen timber and hollow-bearing trees;
 - (iii) enhance the quality of vegetation, vegetation connectivity and wildlife corridors including through the assisted regeneration and/or targeted revegetation of appropriate canopy, sub-canopy, understorey and ground strata;
 - (iv) introduce naturally scarce fauna habitat features such as nest boxes and salvaged tree hollows and promote the use of these introduced habitat features by threatened fauna species;
 - (v) manage any potential conflicts with Aboriginal heritage values;
 - (vi) protect vegetation and fauna habitat outside of the approved disturbance areas;
 - (vii) manage the collection and propagation of seed from the local area;
 - (viii) control weeds, including measures to avoid and mitigate the spread of weeds;
 - (ix) control feral pests and diseases with consideration of actions identified in relevant threat abatement plans;
 - (x) control erosion;
 - (xi) manage any grazing and agriculture;
 - (xii) control access to vegetated or revegetated areas; and
 - (xiii) manage bushfire hazards;
- (i) include a seasonally-based program to monitor and report on the effectiveness of the above measures, progress against the detailed performance indicators and completion criteria, and identify improvements that could be implemented to improve biodiversity outcomes;
- (j) identify the potential risks to the successful implementation of the Biodiversity Management Plan, and include a description of the contingency measures to be implemented to mitigate against these risks; and
- (k) include details of who would be responsible for monitoring, reviewing, and implementing the plan.

B55. The Applicant must not clear any vegetation described in the document/s listed in condition A2(c) until the Biodiversity Management Plan is approved by the Planning Secretary.

B56. The Applicant must implement the Biodiversity Management Plan as approved by the Planning Secretary.

HERITAGE

Protection of Aboriginal Heritage

B57. The Applicant must ensure that the development does not cause any direct or indirect impact on any identified heritage items located outside the approved disturbance area, beyond those predicted in the document/s listed in condition A2(c).

Note: Identified heritage items are shown in the figures in Appendix 5.

B58. If suspected human remains are discovered on the site, then all work surrounding the area must cease, and the area must be secured. The Applicant must immediately notify NSW Police Force and Heritage NSW, and work must not recommence in the area until authorised by NSW Police Force and Heritage NSW.

B59. The Applicant must ensure that all known Aboriginal objects or Aboriginal places on the site and within the offset areas are properly recorded, and those records are kept up to date, in the Aboriginal Heritage Information Management System (AHIMS) Register.

Aboriginal Cultural Heritage Management Plan

- B60. The Applicant must prepare an Aboriginal Cultural Heritage Management Plan for the development. The plan must:
- (a) be prepared by suitably qualified and experienced persons whose appointment has been endorsed by the Planning Secretary;
 - (b) be prepared in consultation with Heritage NSW and Registered Aboriginal Parties;
 - (c) describe the measures to be implemented on the site or within the offset areas to:
 - (i) comply with the heritage-related operating conditions of this consent;
 - (ii) ensure all workers receive suitable Aboriginal cultural heritage training/inductions prior to carrying out any activities which may cause impacts to Aboriginal objects or Aboriginal places, and that suitable records are kept of these inductions;
 - (iii) protect, monitor and manage identified Aboriginal objects and Aboriginal places (including any proposed archaeological investigation of potential subsurface objects, collection and salvage of objects within the approved disturbance area) in accordance with the commitments made in the document/s listed in condition A2(c);
 - (iv) protect Aboriginal objects and Aboriginal places located outside the approved disturbance area from impacts of the development;
 - (v) manage the discovery of suspected human remains and any new Aboriginal objects or Aboriginal places, including provisions for burials, over the life of the development;
 - (vi) maintain and manage reasonable access for relevant Aboriginal stakeholders to Aboriginal objects and Aboriginal places (outside of the approved disturbance area); and
 - (vii) facilitate ongoing consultation and involvement of Registered Aboriginal Parties in the conservation and management of Aboriginal cultural heritage on the site;
 - (d) include a strategy for the care, control and storage of Aboriginal objects salvaged on the site, both during the life of the development and in the long term; and
 - (e) in relation to the women's cultural heritage site along Marulan Creek, include:
 - (i) an assessment of the potential impacts of the Marulan Creek dam and associated flow regime on the site, prepared by an intangible cultural heritage specialist in consultation with the identified knowledge holders; and
 - (ii) assessment of whether mitigation to any negative impacts should occur through periodic cultural flows.
- B61. The Applicant must not disturb any heritage item until the Aboriginal Cultural Heritage Management Plan is approved by the Planning Secretary.
- B62. The Applicant must implement the Aboriginal Cultural Heritage Management Plan approved by the Planning Secretary.

Historic Heritage Management Plan

- B63. The Applicant must prepare a Historic Heritage Management Plan for the development, in respect of all non-Aboriginal cultural heritage items, to the satisfaction of the Planning Secretary. This plan must:
- (a) be prepared by a suitably qualified and experienced person/s whose appointment has been endorsed by the Planning Secretary;
 - (b) be prepared in consultation with Council and in accordance with the relevant Heritage NSW guidelines;
 - (c) describe how the historic heritage values of the site would be recorded and preserved;
 - (d) identify all heritage items in the vicinity of the site and include a statement of significance for each item;
 - (e) describe the measures to be implemented on the site or within the offset areas to:
 - (i) ensure all workers on the site receive suitable heritage training/inductions prior to carrying out any activities which may cause impacts to historic heritage, and that suitable records are kept of these inductions;
 - (ii) protect heritage items located outside the approved disturbance area from impacts of the development, beyond those predicted in the document/s listed in condition A2(c);
 - (iii) undertake photographic/archival recording of any items of heritage significance predicted to be impacted by the development, prior to disturbance; and
 - (iv) manage any new heritage items discovered during the life of the development; and
 - (f) include a strategy for the care, control and storage of heritage relics salvaged from the site.
- B64. The Applicant must not disturb any heritage item until the Historic Heritage Management Plan is approved by the Planning Secretary.
- B65. The Applicant must implement the Historic Heritage Management Plan as approved by the Planning Secretary.

VISUAL

Visual Amenity and Lighting

- B66. The Applicant must:
- (a) take all reasonable steps to minimise the visual and off-site lighting impacts of the development;
 - (b) take all reasonable steps to minimise views of mining operations and associated equipment from privately-owned residences, public roads and the Bungonia Lookdown;
 - (c) ensure no fixed outdoor lights shine directly above the horizontal or above the building line or any illuminated structure;
 - (d) ensure no in-pit mobile lighting rigs shine directly above the pit wall and other mobile lighting rigs do not shine directly above the horizontal (except where required for emergency safety purposes);
 - (e) ensure that all external lighting associated with the development complies with relevant Australian Standards including the latest version of *Australian Standard AS4282 (INT) 1997 – Control of Obtrusive Effects of Outdoor Lighting*;
 - (f) ensure that the visual appearance of any new buildings, structures, facilities or works (including paint colours and specifications) is aimed at blending as far as possible with the surrounding landscape.
- B67. The Applicant must take all reasonable steps to minimise the night lighting impacts associated with road transport along Marulan South Road. This may include, but not be limited to, the construction of earth bunds within the realigned Marulan South Road reserve, in consultation with Council.

WASTE

- B68. The Applicant must:
- (a) take all reasonable steps to minimise the waste generated by the development;
 - (b) classify all waste in accordance with the *Waste Classification Guidelines* (EPA, 2014);
 - (c) dispose of all waste at appropriately licensed waste facilities;
 - (d) manage on-site sewage treatment and disposal in accordance with the requirements of Council; and
 - (e) monitor and report on the effectiveness of the waste minimisation and management measures in the Annual Review referred to in condition D11.
- B69. Except as expressly permitted in an applicable EPL, specific resource recovery order or exemption under the *Protection of the Environment Operations (Waste) Regulation 2014*, the Applicant must not receive waste at the site for storage, treatment, processing, reprocessing or disposal.
- B70. Prior to commencing development under this consent, the Applicant must prepare a Contaminated Materials Protocol to the satisfaction of the Planning Secretary. This protocol must describe the procedures to be implemented in the event that potentially contaminated material is identified during construction, including:
- (a) procedures for the testing, removal and disposal of potentially contaminated material; and
 - (b) measures to ensure compliance with the requirements of SafeWork NSW and relevant guidelines.
- B71. The Applicant must implement the Contaminated Materials Protocol as approved by the Planning Secretary.

DANGEROUS GOODS

- B72. The Applicant must ensure that the storage, handling, and transport of:
- (a) dangerous goods is done in accordance with the relevant Australian Standards, particularly *AS1940* and *AS1596*, and the *Dangerous Goods Code*; and
 - (b) explosives are managed in accordance with the requirements of the Resources Regulator.

BUSHFIRE MANAGEMENT

- B73. The Applicant must:
- (a) ensure that the development:
 - (i) provides for asset protection in accordance with the relevant requirements in *the Planning for Bushfire Protection* (RFS, 2019) guideline; and
 - (ii) ensure that there is suitable equipment to respond to any fires on the site; and
 - (b) assist the RFS and emergency services to the extent practicable if there is a fire in the vicinity of the site.
- B74. Prior to commencing development under this consent, the Applicant must prepare a Bushfire Management Plan for the development, in consultation with RFS. This plan must include a:
- (a) contact person and 24-hour contact phone number;
 - (b) schedule and description of proposed bushfire mitigation works, including:

- (i) location of managed and unmanaged vegetation within the site;
- (ii) location of water supply; and
- (iii) internal access roads;
- (c) plan identifying the location and storage of bulk flammable liquids and materials;
- (d) 'hot works' management plan, including:
 - (i) circumstances when 'hot works' are limited or prohibited; and
 - (ii) safety measures to be implemented when 'hot works' are being conducted; and
- (e) emergency/evacuation plan in accordance with the *Guidelines for the Preparation of Emergency/Evacuation Plans* (RFS) and Australian Standard AS3745 *Planning for Emergencies in Facilities*.

B75. The Applicant must implement the Bushfire Management Plan in consultation with RFS.

REHABILITATION

Rehabilitation Objectives

B76. The Applicant must rehabilitate the site in accordance with the conditions imposed on the mining lease(s) associated with the development under the *Mining Act 1992*. This rehabilitation must be generally consistent with the proposed rehabilitation strategy described in documents listed in condition A2(c) and shown in Appendix 6, and must comply with the objectives in Table 6.

Table 6: Rehabilitation objectives

Feature	Objective
All areas of the site affected by the development	<ul style="list-style-type: none"> Safe, stable and non-polluting Fit for the intended post-mining land use/s Establish the final landform and post-mining land use/s as soon as practicable after cessation of mining operations Minimise post-mining environmental impacts
Areas proposed for native ecosystem re-establishment	<ul style="list-style-type: none"> Establish/restore self-sustaining native woodland ecosystems Establish local plant community types, with a particular focus on species commensurate with <i>White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland CEEC</i> Establish: <ul style="list-style-type: none"> riparian habitat within any retained water features; habitat, feed and foraging resources for threatened fauna species (including the Koala); and vegetation connectivity and wildlife corridors, as far as is reasonable and feasible
Final Landform	<ul style="list-style-type: none"> Stable and sustainable for the intended post-mining land use/s Integrated with surrounding natural landforms and other mine rehabilitated landforms, to the greatest extent practicable Incorporate micro-relief and drainage features that mimic natural topography and mitigate erosion, to the greatest extent practicable Maximise surface water drainage to the natural environment i.e. free draining (excluding final void catchment) Minimise visual impacts, where practicable
Final void	<ul style="list-style-type: none"> Designed as long term groundwater sink to prevent the release of saline water into the surrounding environment, unless further mine planning and final landform design processes identify a more suitable outcome for the final void (see condition B79) Minimise to the greatest extent practicable: <ul style="list-style-type: none"> the size and depth; the drainage catchment; any high wall instability risk; and the risk of flood interaction Maximise potential for beneficial reuse, where practicable
Surface infrastructure of the development (excluding Marulan Creek Dam)	<ul style="list-style-type: none"> To be decommissioned, removed and rehabilitated, unless the Resources Regulator agrees otherwise
Water quality	<ul style="list-style-type: none"> Water retained on the site is fit for the intended post-mining land use/s Water discharged from the site is suitable for receiving waters and fit for aquatic ecology and riparian vegetation

Feature	Objective
Community	<ul style="list-style-type: none"> • Ensure public safety • Minimise adverse socio-economic effects associated with mine closure

B77. The rehabilitation objectives in Table 6 apply to the entire site, including all landforms which were lawfully constructed prior to the commencement of development under this consent. The Applicant is not required to retrospectively incorporate micro-relief and drainage features that mimic natural topography and mitigate erosion on landforms that have been approved and constructed under the previous consents, however, further erosion control works may be required to these landforms to address long term stability issues (if identified).

Progressive Rehabilitation

B78. The Applicant must rehabilitate^a the site progressively, that is, as soon as reasonably practicable following disturbance. All reasonable steps must be taken to minimise the total area exposed at any time. Interim stabilisation and temporary vegetation strategies must be employed when areas prone to dust generation, soil erosion and weed incursion cannot be permanently rehabilitated.

^a*This condition does not prevent further disturbance at some later stage of the development of areas that have been rehabilitated.*

Rehabilitation Strategy

B79. The Applicant must prepare a Rehabilitation Strategy for all land disturbed by the development to the satisfaction of the Planning Secretary. This strategy must:

- (a) be prepared by a suitably qualified and experienced person/s whose appointment has been endorsed by the Planning Secretary;
- (b) be prepared in consultation with DPIE Water, BCD, Resources Regulator and Council;
- (c) build upon the Rehabilitation Objectives in Table 6, describe the overall rehabilitation outcomes for the site, and address all aspects of rehabilitation including mine closure, final landform (including final voids), post-mining land use/s and water management;
- (d) align with strategic rehabilitation and mine closure objectives and address the principles of the *Strategic Framework for Mine Closure* (ANZMEC and MCA, 2000);
- (e) describe how the rehabilitation measures would be integrated with the measures in the Biodiversity Management Plan referred to in condition B54;
- (f) describe how rehabilitation will be integrated with the mine planning process, including a plan to address premature or temporary mine closure;
- (g) include indicative mine plans and scheduling for life-of-mine rehabilitation showing each rehabilitation domain;
- (h) include details of target vegetation communities and species to be established within the proposed revegetation areas;
- (i) investigate opportunities to refine and improve the final landform and final void outcomes over time;
- (j) include a post-mining land use strategy to investigate and facilitate post-mining beneficial land uses for the site (including the final void), that:
 - (i) align with regional and local strategic land use planning objectives and outcomes;
 - (ii) support a sustainable future for the local community;
 - (iii) utilise existing mining infrastructure, where practicable; and
 - (iv) avoid disturbing self-sustaining native ecosystems, where practicable;
- (k) include a stakeholder engagement plan to guide rehabilitation and mine closure planning processes and outcomes;
- (l) investigate ways to minimise adverse socio-economic effects associated with rehabilitation and mine closure; and
- (m) include a program to periodically review and update this strategy at least every three years.

B80. The Rehabilitation Strategy must be approved by the Planning Secretary within 6 months from the date of this consent, unless otherwise agreed by the Planning Secretary .

B81. The Applicant must implement the Rehabilitation Strategy approved by the Planning Secretary.

Rehabilitation Management Plan

B82. The Applicant must prepare a Rehabilitation Management Plan for the development, in accordance with the conditions imposed on the mining lease(s) associated with the development under the *Mining Act 1992*. This plan must:

- (a) be prepared in consultation with the Department and Council;

- (b) be prepared in accordance with any relevant Resources Regulator Guidelines;
- (c) include detailed performance indicators and completion criteria for each rehabilitation domain, and triggers for remedial actions;
- (d) include an overview of the identified risks to achieving successful rehabilitation;
- (e) describe the measures to be implemented on the site to achieve the Rehabilitation Objectives in Table 6, the requirements of the Rehabilitation Strategy referred to in condition B79 and the criteria in paragraph (c);
- (f) include detailed mine plans and scheduling for progressive rehabilitation to be initiated, undertaken and/or completed over the next three years, or other suitable time period as agreed with the Resources Regulator;
- (g) include a program to monitor, independently audit and report on progress against the criteria in paragraph (c) and the effectiveness of the measures in paragraph (e);
- (h) describe any further studies, work, research or consultation that will be undertaken to expand the site-specific rehabilitation knowledge base, reduce uncertainty and improve rehabilitation outcomes; and
- (i) outline intervention and adaptive management techniques to ensure rehabilitation remains on a trajectory of achieving the Rehabilitation Objectives, Rehabilitation Completion Criteria and the Final Landform in the Rehabilitation Management Plan as soon as reasonably practical.

TRANSPORT

Monitoring of Product Transport

B83. The Applicant must:

- (a) keep accurate records^a of the:
 - (i) amount of mining products and quarry products transported from the site (on a daily basis); and
 - (ii) date and time of each laden train and truck movement generated by the development; and
- (b) publish these records in the Annual Review.

^a Records must contain sufficient details to demonstrate compliance with conditions A6 to A13 of this consent.

Transport Operating Conditions

B84. Until such time as the eastern end of Marulan South Road is de-proclaimed, the Applicant must:

- (a) make suitable arrangements to ensure the safety of public road users (including traffic signals, signage or other traffic control measures), to the satisfaction of Council; and
- (b) ensure that any traffic signals on public roads are designed, installed and operated to the satisfaction of TfNSW.

B85. The Applicant must:

- (a) ensure that all laden trucks entering or exiting the site have their loads covered;
- (b) ensure that all laden trucks exiting the site are cleaned of material that may fall from vehicles, before leaving the site;
- (c) take all reasonable steps to minimise traffic safety issues and disruption to local road users; and
- (d) take all reasonable steps to ensure that appropriate signage is displayed on all trucks used to transport quarry products from the development so they can be easily identified by other road users.

Road Realignment

B86. Unless otherwise agreed by Council, the Applicant must construct the new alignment of Marulan South Road as described in the documents listed in A2 (c), to the following standard:

- (a) 7 m wide sealed carriageway, comprising two 3.5 m wide travel lanes;
- (b) 1.5 m wide shoulders (1 m sealed) on both sides of the road;
- (c) 3 m wide cleared zone; and
- (d) Wide Centre Line Treatment, with retroreflective pavement markers, edge-line markers and guideposts as agreed by Council,

in accordance with relevant Austroads guidelines and to the satisfaction of Council.

Notes:

- The upgrade works identified above include all road furniture and safety requirements required to meet relevant road standards, to the satisfaction of the relevant roads authority.
- If there is a dispute between the relevant parties about the implementation of this condition, then any party may refer the matter to the Planning Secretary for resolution.

B87. The Applicant must ensure that public access is maintained along the existing alignment of Marulan South Road until the new alignment (as required under condition B86) is constructed and dedicated to Council.

Road Restrictions

B88. Unless otherwise agreed by Council, the Applicant must not dispatch more than 75 laden trucks per day or 5 laden trucks per hour from the site, until Marulan South Road is upgraded as described in the documents listed in A2 (c), to the following standard:

- (a) 7 m wide sealed carriageway, comprising two 3.5 m wide travel lanes;
- (b) 1.5 m wide shoulders (1 m sealed) on both sides of the road;
- (c) 3 m wide cleared zone; and
- (d) Wide Centre Line Treatment, with retroreflective pavement markers, edge-line markers and guideposts as agreed by Council,

in accordance with relevant Austroads guidelines and to the satisfaction of Council. The requirements of condition B88 do not apply to the section of road which is to be realigned under condition B86 above.

Notes:

- *The upgrade works identified above include all road furniture and safety requirements required to meet relevant road standards, to the satisfaction of the relevant roads authorities.*
- *If there is a dispute between the relevant parties about the implementation of this condition, then any party may refer the matter to the Planning Secretary for resolution.*

B89. The design standard required under condition B88 may be varied with the agreement of Council.

Traffic Management Plan

B90. The Applicant must prepare a Traffic Management Plan for the development to the satisfaction of the Planning Secretary. This plan must:

- (a) be prepared by suitably qualified and experienced person/s whose appointment has been endorsed by the Planning Secretary;
- (b) be prepared in consultation with TfNSW and Council;
- (c) include details of all transport routes and traffic types to be used for development-related traffic;
- (d) describe the measures to be implemented to ensure compliance with conditions B84 and B85 above;
- (e) include details of the measures to be implemented to minimise traffic safety issues and disruption to local road users, including minimising potential for conflict with school buses and stock movements;
- (f) include a Drivers' Code of Conduct that includes procedures to ensure that drivers:
 - (i) adhere to posted speed limits or other required travelling speeds;
 - (ii) adhere to designated transport routes; and
 - (iii) implement safe and quiet driving practices;
- (g) describe the measures to be put in place to ensure compliance with the Drivers' Code of Conduct; and
- (h) propose measures to minimise the transmission of dust and tracking of material onto the surface of public roads from vehicles exiting the site.

B91. The Traffic Management Plan must be approved by the Planning Secretary within 3 months from the date of this consent, unless otherwise agreed by the Planning Secretary.

B92. The Applicant must implement the Traffic Management Plan as approved by the Planning Secretary.

PART C ADDITIONAL PROCEDURES

NOTIFICATION OF LANDOWNERS/TENANTS

- C1. Within one month of the date of this consent, the Applicant must:
- (a) notify in writing the owner of any privately-owned land within 2 kilometres of any approved open cut mining pit on the site that they are entitled to ask the Applicant for an inspection to establish the baseline condition of any buildings or structures on their land, or to have a previous property inspection report updated;
 - (b) notify the tenants of any mine-owned land of their rights under this consent; and
 - (c) send a copy of the fact sheet entitled "*Mine Dust and You*" (NSW Health, 2017) to the owners and/or existing tenants of any land (including mine-owned land) where the predictions in the document/s listed in condition A2(c) identify that dust emissions generated by the development are likely to be greater than the relevant air quality criteria identified in condition B27 at any time during the life of the development.
- C2. Prior to entering into any tenancy agreement for any land owned by the Applicant that is predicted to experience exceedances of the recommended dust and/or noise criteria, the Applicant must:
- (a) advise the prospective tenants of the potential health and amenity impacts associated with living on the land, and give them a copy of the fact sheet entitled "*Mine Dust and You*" (NSW Health, 2017); and
 - (b) advise the prospective tenants of the rights they would have under this consent,
- to the satisfaction of the Planning Secretary.

NOTIFICATION OF EXCEEDANCES

- C3. As soon as practicable and no longer than 7 days after obtaining monitoring results showing an exceedance of any noise, blasting or air quality criterion in PART B of this consent, the Applicant must provide the details of the exceedance to any affected landowners, tenants and the CCC.
- C4. For any exceedance of any air quality criterion in PART B of this consent, the Applicant must also provide to any affected land owners and/or tenants a copy of the fact sheet entitled "*Mine Dust and You*" (NSW Health, 2017).

INDEPENDENT REVIEW

- C5. If a landowner considers the development to be exceeding any relevant noise, blasting or air quality criterion in PART B of this consent, they may ask the Planning Secretary in writing for an independent review of the impacts of the development on their residence or land.
- C6. If the Planning Secretary is not satisfied that an independent review is warranted, the Planning Secretary will notify the landowner in writing of that decision, and the reasons for that decision, within 21 days of the request for a review.
- C7. If the Planning Secretary is satisfied that an independent review is warranted, within 3 months, or other timeframe agreed by the Planning Secretary and the landowner, of the Planning Secretary's decision, the Applicant must:
- (a) commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Planning Secretary, to:
 - (i) consult with the landowner to determine their concerns;
 - (ii) conduct monitoring to determine whether the development is complying with the relevant criterion in PART B of this consent; and
 - (iii) if the development is not complying with the relevant criterion, identify measures that could be implemented to ensure compliance with the relevant criterion; and
 - (b) give the Planning Secretary and landowner a copy of the independent review; and
 - (c) comply with any written requests made by the Planning Secretary to implement any findings of the review.

PART D ENVIRONMENTAL MANAGEMENT, REPORTING AND AUDITING

ENVIRONMENTAL MANAGEMENT

Environmental Management Strategy

- D1. The Applicant must prepare an Environmental Management Strategy for the development to the satisfaction of the Planning Secretary. This strategy must:
- (a) provide the strategic framework for environmental management of the development;
 - (b) identify the statutory approvals that apply to the development;
 - (c) set out the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the development;
 - (d) set out the procedures to be implemented to:
 - (i) keep the local community and relevant agencies informed about the operation and environmental performance of the development;
 - (ii) receive record, handle and respond to complaints;
 - (iii) resolve any disputes that may arise during the course of the development;
 - (iv) respond to any non-compliance and any incident;
 - (v) respond to emergencies; and
 - (e) include:
 - (i) references to any strategies, plans and programs approved under the conditions of this consent; and
 - (ii) a clear plan depicting all the monitoring to be carried out under the conditions of this consent.
- D2. The Environmental Management Strategy must be approved by the Planning Secretary within 3 months from the date of this consent, unless otherwise agreed by the Planning Secretary
- D3. The Applicant must implement the Environmental Management Strategy as approved by the Planning Secretary.

Adaptive Management

- D4. The Applicant must assess and manage development-related risks to ensure that there are no exceedances of the criteria and performance measures in this consent. Any exceedance of these criteria or performance measures constitutes a breach of this consent and may be subject to penalty or offence provisions under the EP&A Act or EP&A Regulation.

Where any exceedance of these criteria or performance measures has occurred, the Applicant must, at the earliest opportunity:

- (a) take all reasonable and feasible steps to ensure that the exceedance ceases and does not recur;
- (b) consider all reasonable and feasible options for remediation (where relevant) and submit a report to the Department describing those options and any preferred remediation measures or other course of action; and
- (c) implement reasonable remediation measures as directed by the Planning Secretary.

Management Plan Requirements

- D5. Management plans required under this consent must be prepared in accordance with relevant guidelines, and include:
- (a) summary of relevant background or baseline data;
 - (b) details of:
 - (i) the relevant statutory requirements (including any relevant approval, licence or lease conditions);
 - (ii) any relevant limits or performance measures and criteria; and
 - (iii) the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the development or any management measures;
 - (c) any relevant commitments or recommendations identified in the document/s listed in condition A2(c);
 - (d) a description of the measures to be implemented to comply with the relevant statutory requirements, limits, or performance measures and criteria;
 - (e) a program to monitor and report on the:
 - (i) impacts and environmental performance of the development; and
 - (ii) effectiveness of the management measures set out pursuant to condition D4(c);
 - (f) a contingency plan to manage any unpredicted impacts and their consequences and to ensure that ongoing impacts reduce to levels below relevant impact assessment criteria as quickly as possible;
 - (g) a program to investigate and implement ways to improve the environmental performance of the development over time;

- (h) a protocol for managing and reporting any:
 - (i) incident, non-compliance or exceedance of any impact assessment criterion or performance criterion);
 - (ii) complaint; or
 - (iii) failure to comply with other statutory requirements;
- (i) public sources of information and data to assist stakeholders in understanding environmental impacts of the development; and
- (j) a protocol for periodic review of the plan.

Note: *The Planning Secretary may waive some of these requirements if they are unnecessary or unwarranted for particular management plans.*

- D6. The Applicant must ensure that management plans prepared for the development are consistent with the conditions of this consent and any EPL issued for the site.

REVISION OF STRATEGIES, PLANS AND PROGRAMS

- D7. Within three months of:
- (a) the submission of an incident report under condition D9;
 - (b) the submission of an Annual Review under condition D11;
 - (c) the submission of an Independent Environmental Audit under condition D12;
 - (d) the approval of any modification of the conditions of this consent (unless the conditions require otherwise); or
 - (e) notification of a change in development phase under condition A17;

the suitability of existing strategies, plans and programs required under this consent must be reviewed by the Applicant.

- D8. If necessary, to either improve the environmental performance of the development, cater for a modification or comply with a direction, the strategies, plans and programs required under this consent must be revised, to the satisfaction of the Planning Secretary. Where revisions are required, the revised document must be submitted to the Planning Secretary for approval within six weeks of the review.

Note: *This is to ensure strategies, plans and programs are updated on a regular basis and to incorporate any recommended measures to improve the environmental performance of the development.*

REPORTING AND AUDITING

Incident Notification

- D9. The Applicant must immediately notify the Department and any other relevant agencies immediately after it becomes aware of an incident. The notification must be in writing through the Department's Major Projects Website and identify the development (including the development application number and name) and set out the location and nature of the incident.

Non-Compliance Notification

- D10. Within seven days of becoming aware of a non-compliance, the Applicant must notify the Department of the non-compliance. The notification must be in writing through the Department's Major Projects Website and identify the development (including the development application number and name), set out the condition of this consent that the development is non-compliant with, why 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.

Note: *A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.*

Annual Review

- D11. By the end of July each year after the commencement of development, or other timeframe agreed by the Planning Secretary, a report must be submitted to the Department reviewing the environmental performance of the development, to the satisfaction of the Planning Secretary. This review must:
- (a) describe the development (including any rehabilitation) that was carried out in the previous financial year, and the development that is proposed to be carried out over the current financial year;
 - (b) include a comprehensive review of the monitoring results and complaints records of the development over the previous financial year, including a comparison of these results against the:
 - (i) relevant statutory requirements, limits or performance measures/criteria;
 - (ii) requirements of any plan or program required under this consent;
 - (iii) monitoring results of previous years; and
 - (iv) relevant predictions in the document/s listed in condition A2(c);
 - (c) identify any non-compliance or incident which occurred in the previous financial year, and describe what actions were (or are being) taken to rectify the non-compliance and avoid reoccurrence;

- (d) evaluate and report on:
 - (i) the effectiveness of the noise and air quality management systems; and
 - (ii) compliance with the performance measures, criteria and operating conditions of this consent;
- (e) identify any trends in the monitoring data over the life of the development;
- (f) identify any discrepancies between the predicted and actual impacts of the development, and analyse the potential cause of any significant discrepancies; and
- (g) describe what measures will be implemented over the next financial year to improve the environmental performance of the development.

D12. Copies of the Annual Review must be submitted to Council and made available to the CCC and any interested person upon request.

Independent Environmental Audit

- D13. Within one year of commencement of development under this consent, and every three years after, unless the Planning Secretary directs otherwise, the Applicant must commission and pay the full cost of an Independent Environmental Audit of the development. The audit must:
- (a) be led by a suitably qualified, experienced and independent auditor whose appointment has been endorsed by the Planning Secretary;
 - (b) be conducted by a suitably qualified, experienced and independent team of experts (including any expert in field/s specified by the Planning Secretary) whose appointment has been endorsed by the Planning Secretary;
 - (c) be carried out in consultation with the relevant agencies and the CCC;
 - (d) assess the environmental performance of the development and whether it is complying with the relevant requirements in this consent, water licences and mining leases for the development (including any assessment, strategy, plan or program required under these approvals);
 - (e) review the adequacy of any approved strategy, plan or program required under the abovementioned approvals and this consent;
 - (f) recommend appropriate measures or actions to improve the environmental performance of the development and any assessment, strategy, plan or program required under the abovementioned approvals and this consent; and
 - (g) be conducted and reported to the satisfaction of the Planning Secretary.
- D14. Within three months of commencing an Independent Environmental Audit, or other timeframe agreed by the Planning Secretary, the Applicant must submit a copy of the audit report to the Planning Secretary, and any other NSW agency that requests it, together with its response to any recommendations contained in the audit report, and a timetable for the implementation of the recommendations. The recommendations must be implemented to the satisfaction of the Planning Secretary.

Monitoring and Environmental Audits

- D15. Any condition of this consent that requires the carrying out of monitoring or an environmental audit, whether directly or by way of a plan, strategy or program, is taken to be a condition requiring monitoring or an environmental audit under Division 9.4 of Part 9 of the EP&A Act. This includes conditions in respect of incident notification, reporting and response, non-compliance notification, compliance report and independent audit.

For the purposes of this condition, as set out in the EP&A Act, "monitoring" is monitoring of the development to provide data on compliance with the consent or on the environmental impact of the development, and an "environmental audit" is a periodic or particular documented evaluation of the development to provide information on compliance with the consent or the environmental management or impact of the development.

- D16. Noise, blast and/or air quality monitoring under this consent may be undertaken at suitable representative monitoring locations instead of at privately-owned residences or other locations listed in Part B, providing that these representative monitoring locations are set out in the respective management plan/s.

ACCESS TO INFORMATION

- D17. Before the commencement of development under this consent until the completion of all rehabilitation required under this consent, the Applicant must:
- (a) make the following information and documents (as they are obtained, approved or as otherwise stipulated within the conditions of this consent) publicly available on its website:
 - (i) the documents listed in condition A2(c);
 - (ii) all current statutory approvals for the development;
 - (iii) all approved strategies, plans and programs required under the conditions of this consent;
 - (iv) minutes of CCC meetings;

- (v) regular reporting on the environmental performance of the development in accordance with the reporting requirements in any plans or programs approved under the conditions of this consent;
 - (vi) a comprehensive summary of the monitoring results of the development, reported in accordance with the specifications in any conditions of this consent, or any approved plans and programs;
 - (vii) a summary of the current phase and progress of the development;
 - (viii) contact details to enquire about the development or to make a complaint;
 - (ix) a complaints register, updated monthly;
 - (x) the Annual Reviews of the development;
 - (xi) audit reports prepared as part of any Independent Environmental Audit of the development and the Applicant's response to the recommendations in any audit report; and
 - (xii) any other matter required by the Planning Secretary; and
- (b) keep such information up to date, to the satisfaction of the Planning Secretary.

APPENDIX 1 SCHEDULE OF LAND

Lot	DP	Tenure	Landowner
1	1124189	Freehold	Boral Cement Limited
2	1124189	Freehold	Boral Cement Limited
12	881240	Freehold	Boral Resources (NSW) Pty Ltd
23	867667	Freehold	Boral Resources (NSW) Pty Ltd
3	203290	Freehold	Boral Resources (NSW) Pty Ltd
4	203290	Freehold	Boral Resources (NSW) Pty Ltd
282	750029	Crown	Crown Land
24	867667	Freehold	Boral Resources (NSW) Pty Ltd
22	867667	Freehold	Boral Limited
1	261615	Freehold	Boral Cement Limited
1	860561	Freehold	Boral Cement Limited
2	860561	Freehold	Boral Cement Limited
1	106569	Freehold	Boral Cement Limited
2	527500	Freehold	Boral Cement Limited
1	527500	Freehold	Boral Cement Limited
2	106569	Freehold	Boral Cement Limited
100	1064794	Freehold	Boral Cement Limited
12	570616	Freehold	Boral Resources (NSW) Pty Ltd
16	111641	Freehold	Boral Cement Limited
14	111641	Freehold	Boral Cement Limited
15	111641	Freehold	Boral Cement Limited
7	111641	Freehold	Boral Cement Limited
6	111641	Freehold	Boral Cement Limited
111	830458	Freehold	Boral Resources (NSW) Pty Ltd
114	830458	Freehold	Boral Limited
112	830458	Freehold	Boral Cement Limited
113	830458	Freehold	Boral Cement Limited
2	1186554	Freehold	Boral Cement Limited
1	617992	Freehold	Boral Cement Limited
9	111645	Freehold	Boral Cement Limited
1	132244	Freehold	Boral Cement Limited
2	132244	Freehold	Boral Cement Limited
3	106569	Freehold	Boral Cement Limited
3	527501	Freehold	Boral Cement Limited
4	106569	Freehold	Boral Cement Limited
21	657523	Freehold	Boral Resources (NSW) Pty Ltd
3	617992	Freehold	Boral Cement Limited
114	750029	Freehold	Boral Cement Limited
82	750029	Freehold	Boral Cement Limited
32	750029	Freehold	Boral Cement Limited
7300	1149129	Crown	Crown Land
165	750029	Freehold	Boral Cement Limited
193	750029	Freehold	Boral Cement Limited
115	750029	Freehold	Boral Cement Limited
131	750029	Freehold	Boral Cement Limited
154	750029	Freehold	Boral Cement Limited
186	750029	Freehold	Boral Cement Limited
179	750029	Freehold	Boral Cement Limited
156	750029	Freehold	Boral Cement Limited
197	750029	Freehold	Boral Cement Limited
83	750029	Freehold	Boral Cement Limited
155	750029	Freehold	Boral Cement Limited
87	750029	Freehold	Boral Cement Limited
1701	610507	Freehold	Boral Cement Limited
1702	610507	Freehold	Boral Cement Limited
98	750029	Crown	Crown Land
187	750029	Freehold	Boral Cement Limited
191	750029	Freehold	Boral Cement Limited
7302	1149129	Crown	Crown Land
7301	1149129	Crown	Crown Land
7303	1149129	Crown	Crown Land

APPENDIX 2 DEVELOPMENT LAYOUT PLANS

Figure 4.10
The Project

MARULAN SOUTH LIMESTONE MINE CONTINUED OPERATIONS - SSD APPLICATION
ENVIRONMENTAL IMPACT STATEMENT

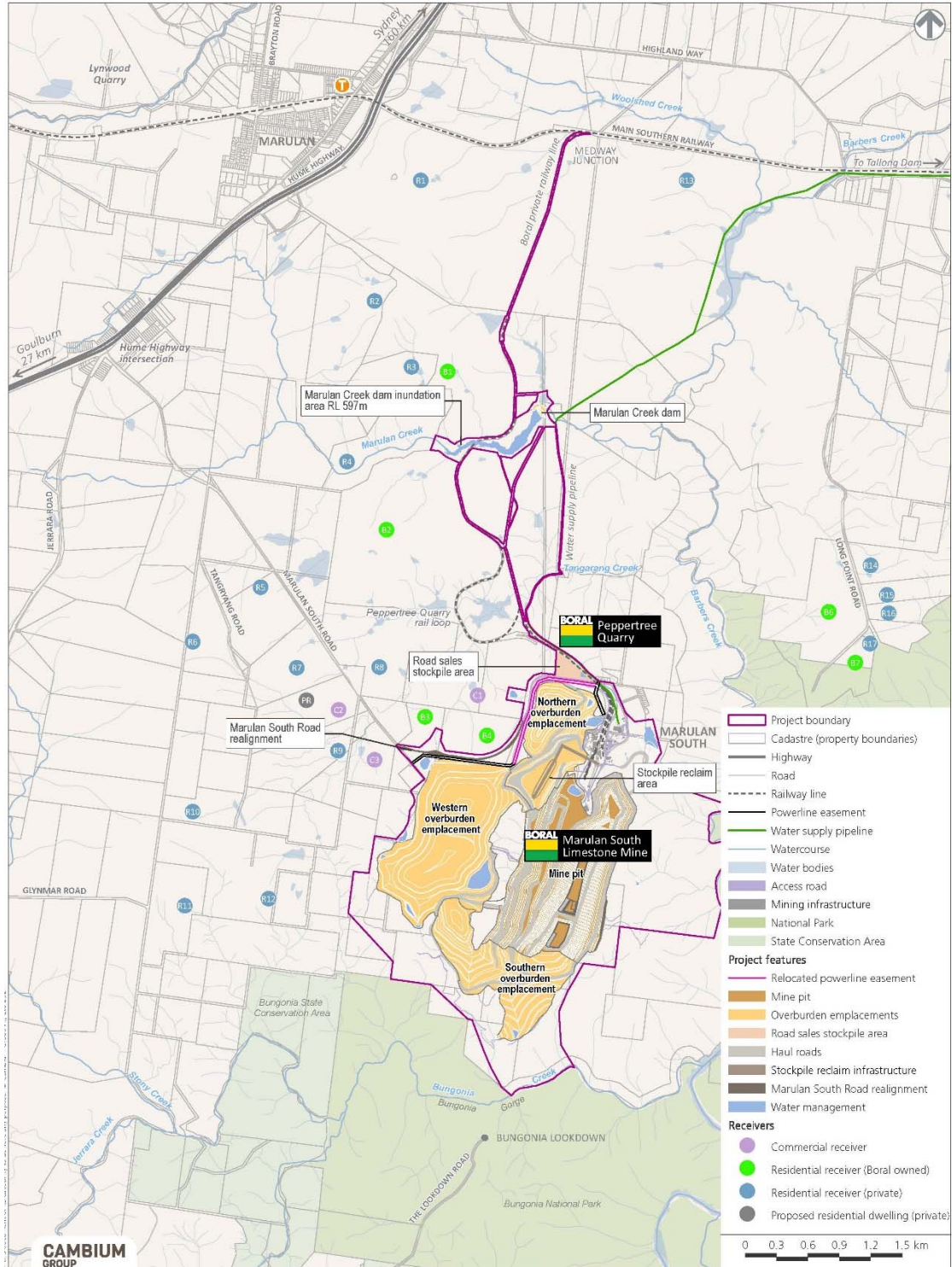


Figure 1: Development Layout Plan

Figure 4.11
The Project (Marulan Creek Dam)

MARULAN SOUTH LIMESTONE MINE CONTINUED OPERATIONS - SSD APPLICATION
SURFACE WATER ASSESSMENT

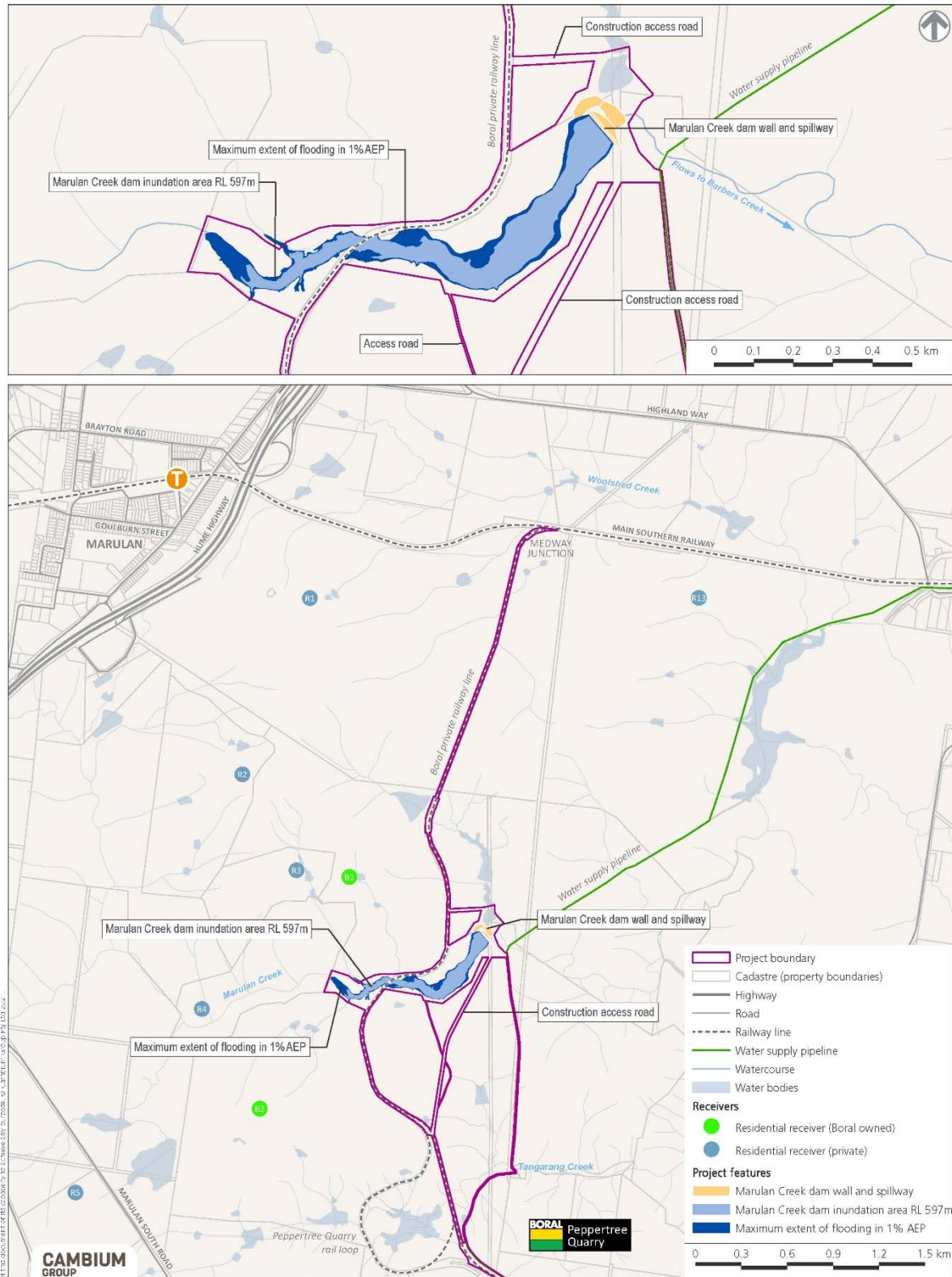
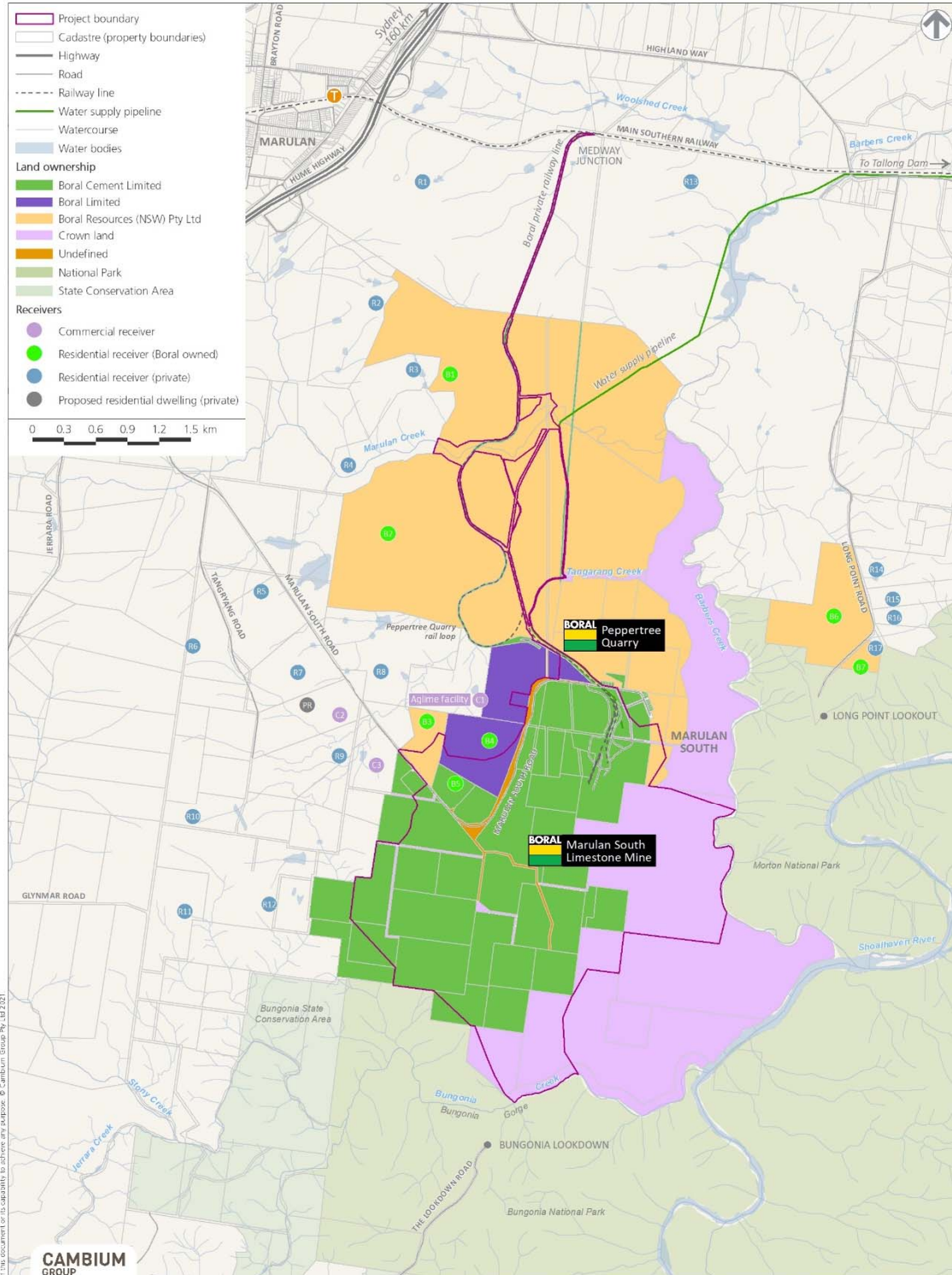


Figure 2: Marulan Creek Dam Layout

element.

MARULAN SOUTH LIMESTONE MINE CONTINUED OPERATIONS - SSD APPLICATION
ENVIRONMENTAL IMPACT STATEMENT

NSW Government
Department of Planning, Industry and Environment

APPENDIX 4 BIODIVERSITY OFFSET STRATEGY

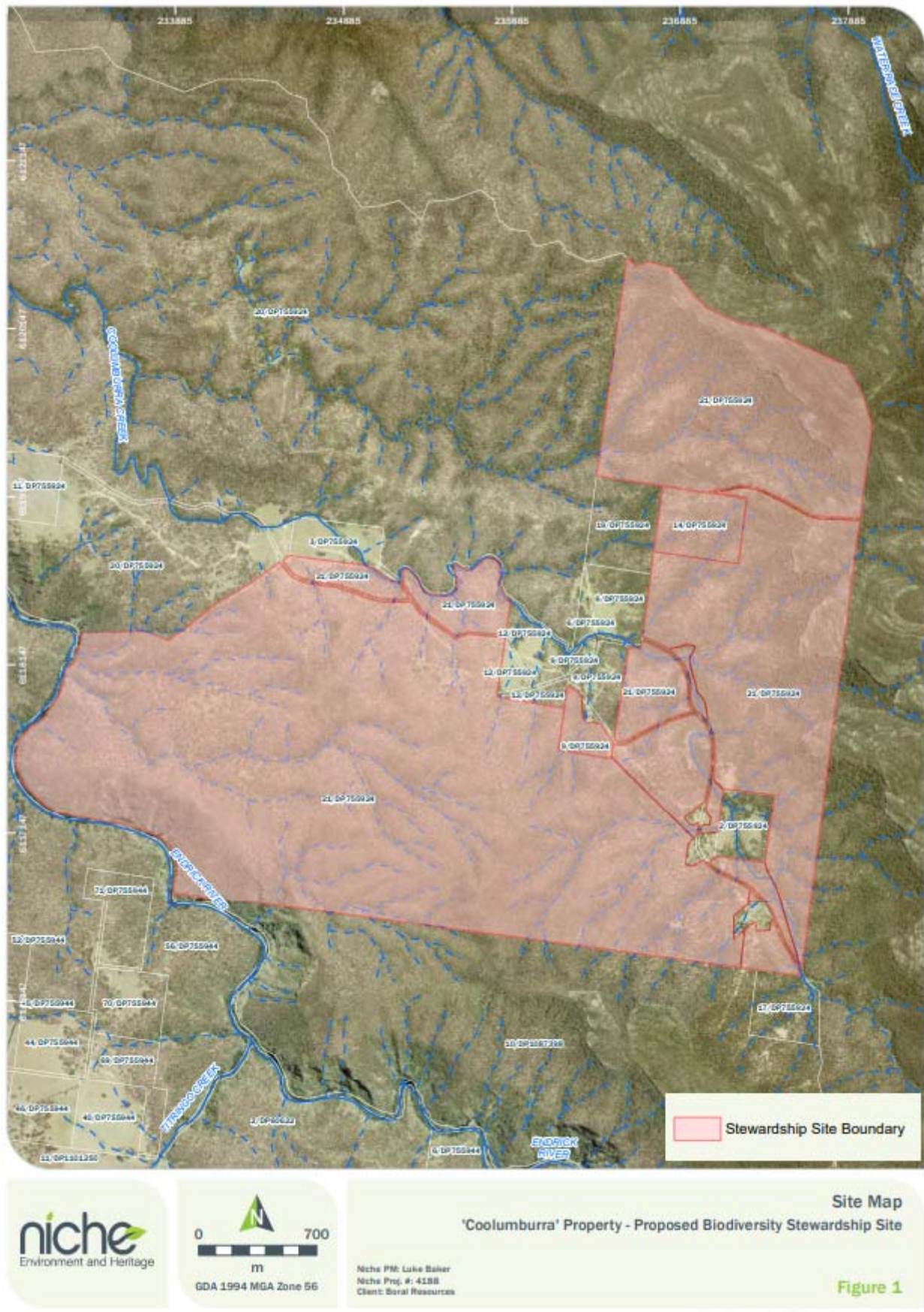
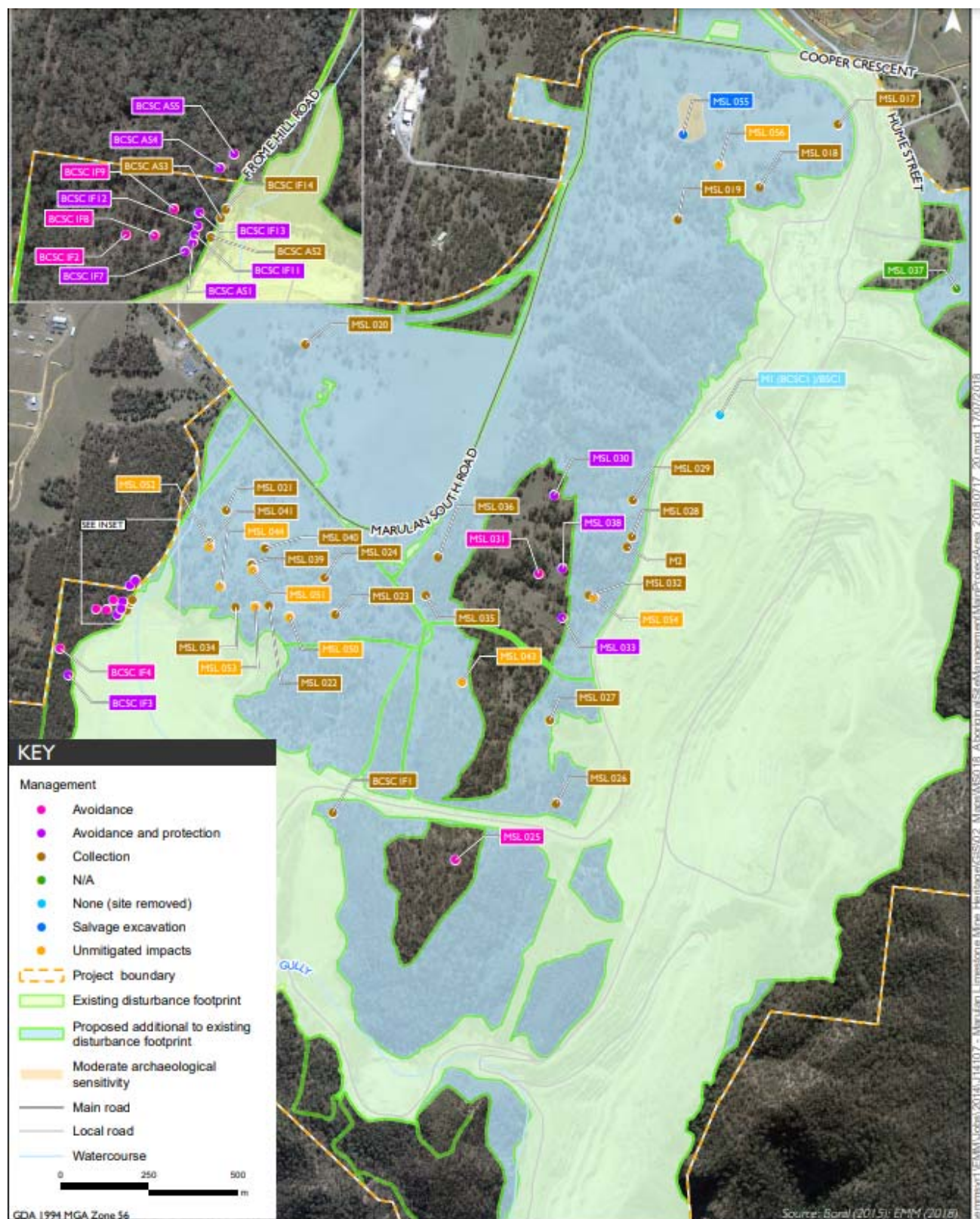


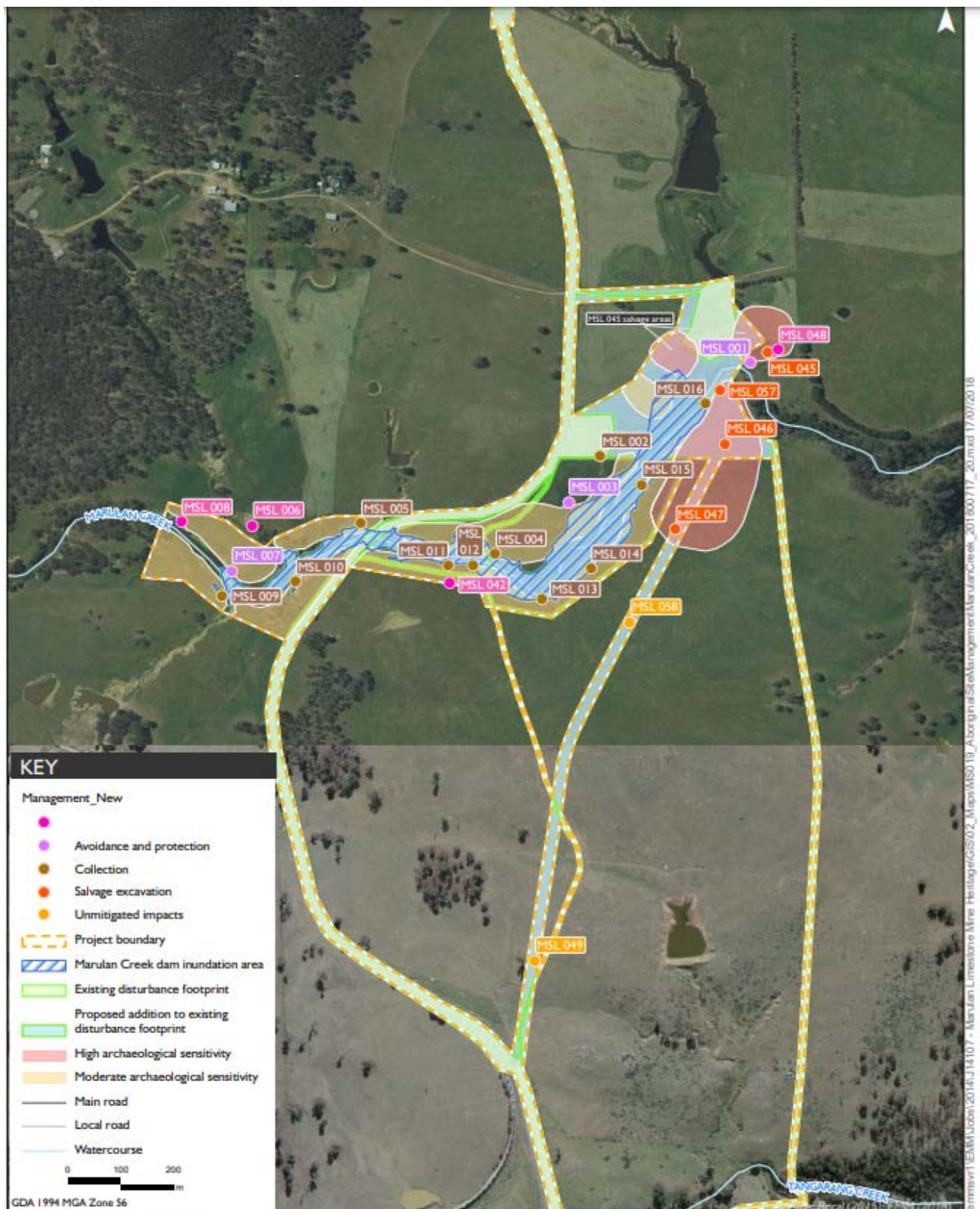
Figure 4: Biodiversity offset area

APPENDIX 5 HERITAGE ITEMS



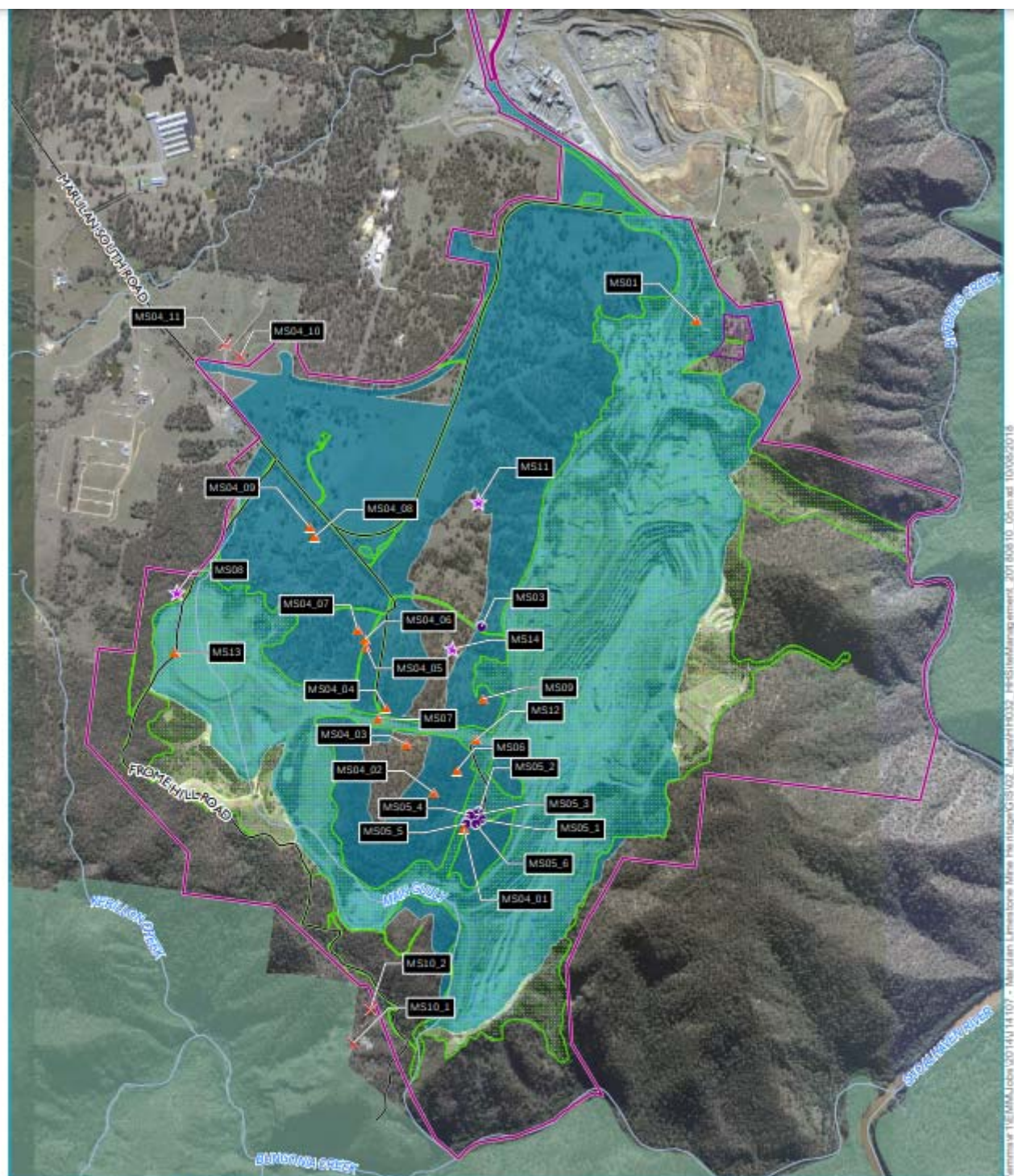
Aboriginal site management at main Project site
Marulan South Limestone Mine Continued Operations Project
Aboriginal Cultural Heritage Assessment
Figure 11.1

Figure 5: Aboriginal Heritage Sites



Aboriginal site management at Marulan Creek
 Marulan South Limestone Mine Continued Operations Project
 Aboriginal Cultural Heritage Assessment
 Figure 11.2

Figure 6: Aboriginal Heritage Sites (Marulan Creek Dam)



Source: EMM (2018); Boral (2018); DFSI (2017); LPMA (2011)

KEY

— RoadClipped_01p_LPMA_20150709

— Watercourse

■ Bungonia National Park

Site management measures

▲ Photographic archival recording; topographic survey

★ Photographic archival recording; topographic survey

● Photographic archival recording; topographic survey;

archaeological excavation sample

✗ Not in project site (no management required)

■ Project boundary

■ Project (SSD) disturbance footprint

■ Historical disturbance footprint (pre-SSD)

■ Additional historic area of disturbance (pre-SSD)

Historic heritage
management measures

Marulan South Continued Operations Project
Historical heritage assessment and SoHI

Figure 7.1



Figure 7: Historic Heritage Sites

APPENDIX 6 REHABILITATION PLANS



Figure 4.21
The Project - Final landform

MARULAN SOUTH LIMESTONE MINE CONTINUED OPERATIONS - SSD APPLICATION
ENVIRONMENTAL IMPACT STATEMENT

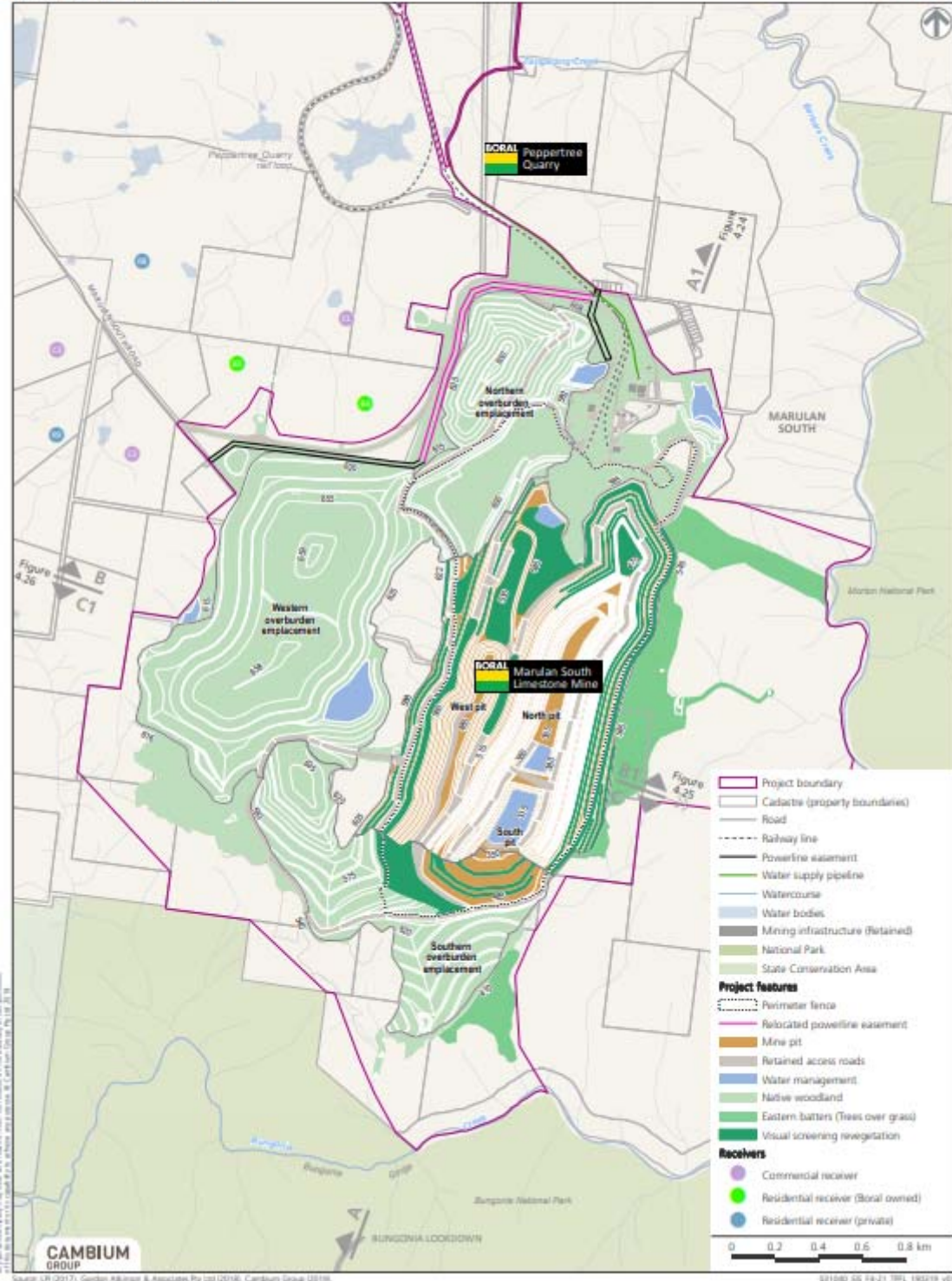


Figure 8: Conceptual Final Landform

Figure 4.23
The Project - Final landform (Marulan Creek Dam)

MARULAN SOUTH LIMESTONE MINE CONTINUED OPERATIONS - SSD APPLICATION
ENVIRONMENTAL IMPACT STATEMENT

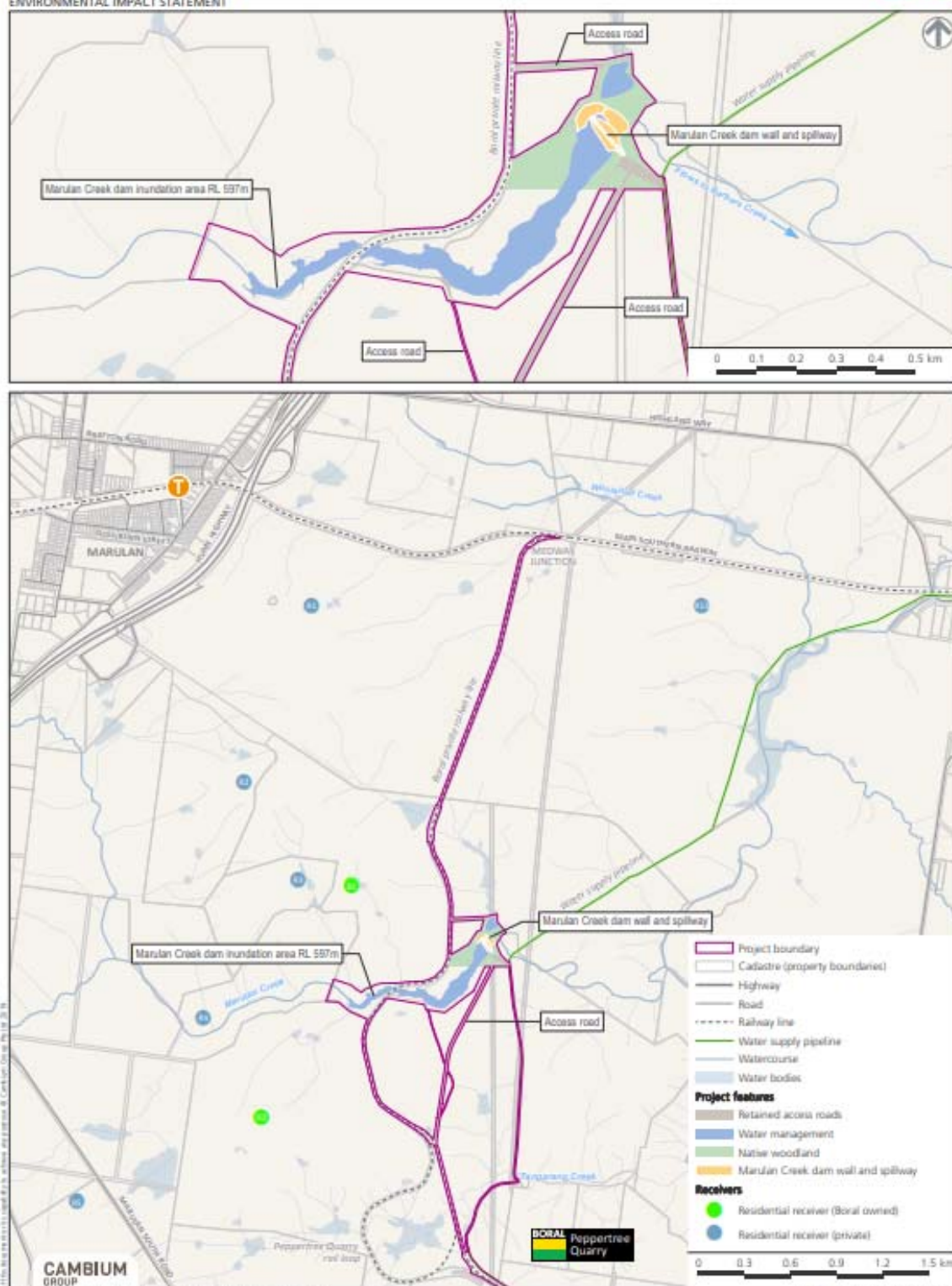


Figure 9: Conceptual Final Landform (Marulan Creek Dam)

APPENDIX C

EPBC Act Approval (EPBC 2015/7521)



APPROVAL

Marulan South Limestone Mine Extension Project, Marulan South, NSW (EPBC 2015/7521)

This decision is made under sections 130(1) and 133(1) of the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (the EPBC Act). Note that section 134(1A) of the EPBC Act applies to this approval, which provides in general terms that if the approval holder authorises another person to undertake any part of the action, the approval holder must take all reasonable steps to ensure that the other person is informed of any conditions attached to this approval, and that the other person complies with any such condition.

Details

Person to whom the approval is granted (approval holder)	Boral Cement Limited
ACN or ABN of approval holder	008 528 523
Action	To expand an existing limestone and clay mining operation (Consolidated Mining Lease No. 16) and construct and operate mine-related infrastructure, for up to 30 years in Marulan South, 10 kilometres southeast of Marulan Village [See EPBC Act referral 2015/7521, subject to the variation request received on 22 September 2021].

Approval decision

My decision on whether or not to approve the taking of the action for the purposes of the controlling provision for the action is as follows.

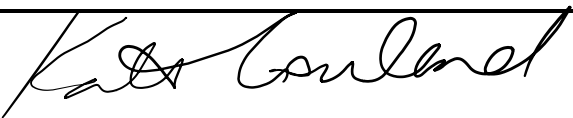
Controlling Provisions

Listed Threatened Species and Communities	
Section 18	Approve
Section 18A	Approve

Period for which the approval has effect

This approval has effect until 31 August 2071.

Decision-maker

Name and position	Kate Gowland, Acting Assistant Secretary, Environment Assessments (NSW, ACT) Branch
Signature	
Date of decision	7/10/2021

Conditions of approval

This approval is subject to the conditions under the EPBC Act as set out in ANNEXURE A.

ANNEXURE A – CONDITIONS OF APPROVAL

Part A – Conditions specific to the action

Listed threatened species and ecological communities

The objective of conditions 1, 2 and 3 is to minimise and compensate for the impacts of the action on **protected matters**.

1. Within the **development footprint**, the approval holder must not **clear** more than:
 - a. 80.7 hectares of **White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland**;
 - b. 132.4 hectares of **Koala habitat**; or
 - c. 140.3 hectares of **Large-eared Pied Bat habitat**.

Clearing may only

be undertaken where shown within the **development footprint** as '**White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland**' on the map at Attachment 2, where shown within the **development footprint** as '**Koala habitat**' on the map at Attachment 3, and where shown within the **development footprint** as '**Large-eared Pied Bat habitat**' on the map at Attachment 4.

2. To compensate for the **clearance** of **White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland**, **Koala habitat** and **Large-eared Pied Bat habitat**, the approval holder must **retire credits** prior to the **commencement of the action**, as specified:
 - a. 935 ecosystem **credits** for **White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland**;
 - b. 2,454 species **credits** for **Koala**; and
 - c. 3,836 species **credits** for **Large-eared Pied Bat**.
3. The approval holder must comply with the **State development consent** conditions A2, A5, B51, B52, B53, B54, B55, B56, B76, B78, B79, B80, B81 and B82.

Part B – Standard administrative conditions

Notification of date of commencement of the action

4. The approval holder must notify the **Department** in writing of the date of **commencement of the action** within 10 **business days** after the date of **commencement of the action**.
5. If the **commencement of the action** does not occur within 5 years from the date of this approval, then the approval holder must not **commence the action** without the prior written agreement of the **Minister**.

Compliance records

6. The approval holder must maintain accurate and complete **compliance records**.

7. If the **Department** makes a request in writing, the approval holder must provide electronic copies of **compliance records** to the **Department** within the timeframe specified in the request.

Note: **Compliance records** may be subject to audit by the **Department** or an independent auditor in accordance with section 458 of the **EPBC Act**, and or used to verify compliance with the conditions. Summaries of the result of an audit may be published on the **Department's** website or through the general media.

Annual compliance reporting

8. The approval holder must prepare a **compliance report** for each 12 month period following the date of **commencement of the action**, or as otherwise agreed in writing by the **Minister**. The approval holder must:
 - a. publish each **compliance report** on the **website** within 60 **business days** following the relevant 12 month period
 - b. notify the **Department** by email that a **compliance report** has been published on the **website** and provide the weblink for the **compliance report** within 5 **business days** of the date of publication
 - c. keep all **compliance reports** publicly available on the **website** until this approval expires
 - d. exclude or redact **sensitive ecological data** from **compliance reports** published on the **website**
 - e. where any **sensitive ecological data** has been excluded from the version published, submit the full **compliance report** to the **Department** within 5 **business days** of publication.

Note: **Compliance reports** may be published on the **Department's** website.

Reporting non-compliance

9. The approval holder must notify the **Department** in writing of any: **incident** or non-compliance with the conditions. The notification must be given as soon as practicable, and no later than 2 **business days** after becoming aware of the **incident** or non-compliance. The notification must specify:
 - a. any condition which is or may be in breach
 - b. a short description of the **incident** and/or non-compliance
 - c. the location (including co-ordinates), date, and time of the **incident** and/or non-compliance. In the event the exact information cannot be provided, provide the best information available.
10. The approval holder must provide to the **Department** the details of any **incident** or non-compliance with the conditions or commitments made in **plans** as soon as practicable and no later than 10 **business days** after becoming aware of the **incident** or non-compliance, specifying:
 - a. any corrective action or investigation which the approval holder has already taken or intends to take in the immediate future
 - b. the potential impacts of the **incident** or non-compliance
 - c. the method and timing of any remedial action that will be undertaken by the approval holder.

Independent audit

11. The approval holder must ensure that **independent audits** of compliance with the conditions are conducted as requested in writing by the **Minister**.
12. For each **independent audit**, the approval holder must:
 - a. provide the name and qualifications of the independent auditor and the draft audit criteria to the **Department**

- b. only commence the **independent audit** once the audit criteria have been approved in writing by the **Department**
 - c. submit an audit report to the **Department** within the timeframe specified in the approved audit criteria.
13. The approval holder must publish the audit report on the **website** within 10 **business days** of receiving the **Department's** approval of the audit report and keep the audit report published on the **website** until the end date of this approval.

Completion of the action

14. Within 20 **business days** after the **completion of the action**, the approval holder must notify the **Department** in writing and provide **completion data**.

Changes to State development consent

15. The approval holder must notify the **Department** in writing of any proposed change to the **State development consent** conditions referred to in these conditions within 10 **business days** of formally proposing a change or becoming aware of any proposed change where the proposed change would or is likely to alter or increase the impacts of the action on **protected matters**.
16. The approval holder must notify the **Department** in writing of any change to the conditions of the **State development consent** referred to in these conditions, for which notice was required to be given in accordance with condition 15 above, within 10 **business days** of a change to conditions being finalised.

Part C - Definitions

In these conditions, except where contrary intention is expressed, the following definitions are used:

Business day means a day that is not a Saturday, a Sunday or a public holiday in the state or territory of the action.

Clear/cleared/clearance/cleaning means the cutting down, felling, thinning, logging, removing, killing, destroying, poisoning, ringbarking, uprooting or burning of vegetation (but not including weeds – see the *Australian weeds strategy 2017 to 2027* for further guidance).

Commence the action/Commencement of the action means the first instance of any specified activity associated with the action including **clearing** and **construction**. **Commencement of the action** does not include minor physical disturbance necessary to:

- i. undertake pre-clearance surveys or monitoring programs
- ii. install signage and /or temporary fencing to prevent unapproved use of the project area
- iii. protect environmental and property assets from fire, weeds and pests, including installation of temporary fencing, and maintenance of existing surface access tracks
- iv. install temporary site facilities for persons undertaking pre-commencement activities so long as these are located where they have no impact on the **protected matters**
- v. undertaking geotechnical investigations if it causes only minor physical disturbance and is required well in advance of most site works to inform design.

Completion data means an environmental report and spatial data clearly detailing how the conditions of this approval have been met. The **Department's** preferred spatial data format is **shapefile**.

Completion of the action means the date on which all specified activities associated with the action have permanently ceased.

Compliance records means all documentation or other material in whatever form required to demonstrate compliance with the conditions of approval in the approval holder's possession or that are within the approval holder's power to obtain lawfully.

Compliance reports means written reports:

- i. providing accurate and complete details of compliance, **incidents**, and non-compliance with the conditions and the **plans**;
- ii. consistent with the **Department's Annual Compliance Report Guidelines (2014)**;
- iii. include a **shapefile** of any clearance of any **protected matters**, or their habitat, undertaken within the relevant 12 month period; and
- iv. annexing a schedule of all **plans** prepared and in existence in relation to the conditions during the relevant 12 month period.

Credit(s) means biodiversity credits under the *Biodiversity Conservation Act 2016 (NSW)*.

Construction means the erection of a building or structure that is or is to be fixed to the ground and wholly or partially fabricated on-site; the alteration, maintenance, repair or demolition of any building or structure; preliminary site preparation work which involves breaking of the ground (including pile driving); the laying of pipes and other prefabricated materials in the ground, and any associated excavation work; but excluding the installation of temporary fences and signage.

Department means the Australian Government agency responsible for administering the **EPBC Act**.

Development footprint means the area represented in the maps at Attachments 1a, 1b and 1c by the zones marked with black hatching and described in the legend as *The Project - Disturbance footprint*.

EPBC Act means the *Environment Protection and Biodiversity Conservation Act 1999 (Cth)*.

Impact (verb) means to cause any measurable direct or indirect disturbance or harmful change as a result of any activity associated with the action. **Impact** (noun) means any measurable direct or indirect disturbance or harmful change as a result of any activity associated with the action.

Incident means any event which has the potential to, or does, impact on one or more **protected matter(s)** other than as authorised by this approval decision.

Independent audit: means an audit conducted by an independent and **suitably qualified person** as detailed in the *Environment Protection and Biodiversity Conservation Act 1999 Independent Audit and Audit Report Guidelines (2019)*.

Koala means the animal species (*Phascolarctos cinereus* - combined populations of QLD, NSW and the ACT), listed as threatened under the **EPBC Act**.

Koala habitat means the area of habitat on the map at Attachment 3, which is represented by three colours coded as *Koala habitat - High, Moderate and Poor* as described in the map legend, and which overlaps with the hatched area defined in the map legend as *The Project - Disturbance footprint*.

Large-eared Pied Bat means the animal species (*Chalinolobus dwyeri*), listed as threatened under the **EPBC Act**.

Large-eared Pied Bat habitat means the area of habitat represented on the map at Attachment 4 by polygons of all the three colours designated in the map legend as *Large-eared Pied Bat habitat (High, Moderate and Poor)*.

Listed threatened species and ecological communities means threatened species and/or ecological communities listed under the **EPBC Act**.

Minister means the Australian Government Minister administering the **EPBC Act** including any delegate thereof.

Plan(s) means any of the documents required to be prepared, approved by the **Minister**, implemented by the approval holder and/or published on the **website** in accordance with these conditions (includes action management plans and/or strategies).

Protected matter(s) means a matter protected under a controlling provision in Part 3 of the **EPBC Act** for which this approval has effect.

Retire/retired/retirement – means to change the status of a **credit** such that the **credit** can no longer be bought or sold (*Biodiversity Conservation Act 2016* (NSW)).

Sensitive ecological data means data as defined in the Australian Government Department of the Environment (2016) *Sensitive Ecological Data – Access and Management Policy V1.0*.

Shapefile means location and attribute information of the action provided in an Esri shapefile format. Shapefiles must contain '.shp', '.shx', '.dbf' files and a '.prj' file that specifies the projection/geographic coordinate system used. Shapefiles must also include an '.xml' metadata file that describes the shapefile for discovery and identification purposes.

State development consent means the NSW State development consent for the application number SSD 7009 approved on 19 August 2021.

Suitably qualified person means a person who has professional qualifications, training, skills and/or experience related to the nominated subject matter and can give authoritative independent assessment, advice and analysis on performance relative to the subject matter using the relevant protocols, standards, methods and/or literature.

Website means a set of related web pages located under a single domain name attributed to the approval holder and available to the public.

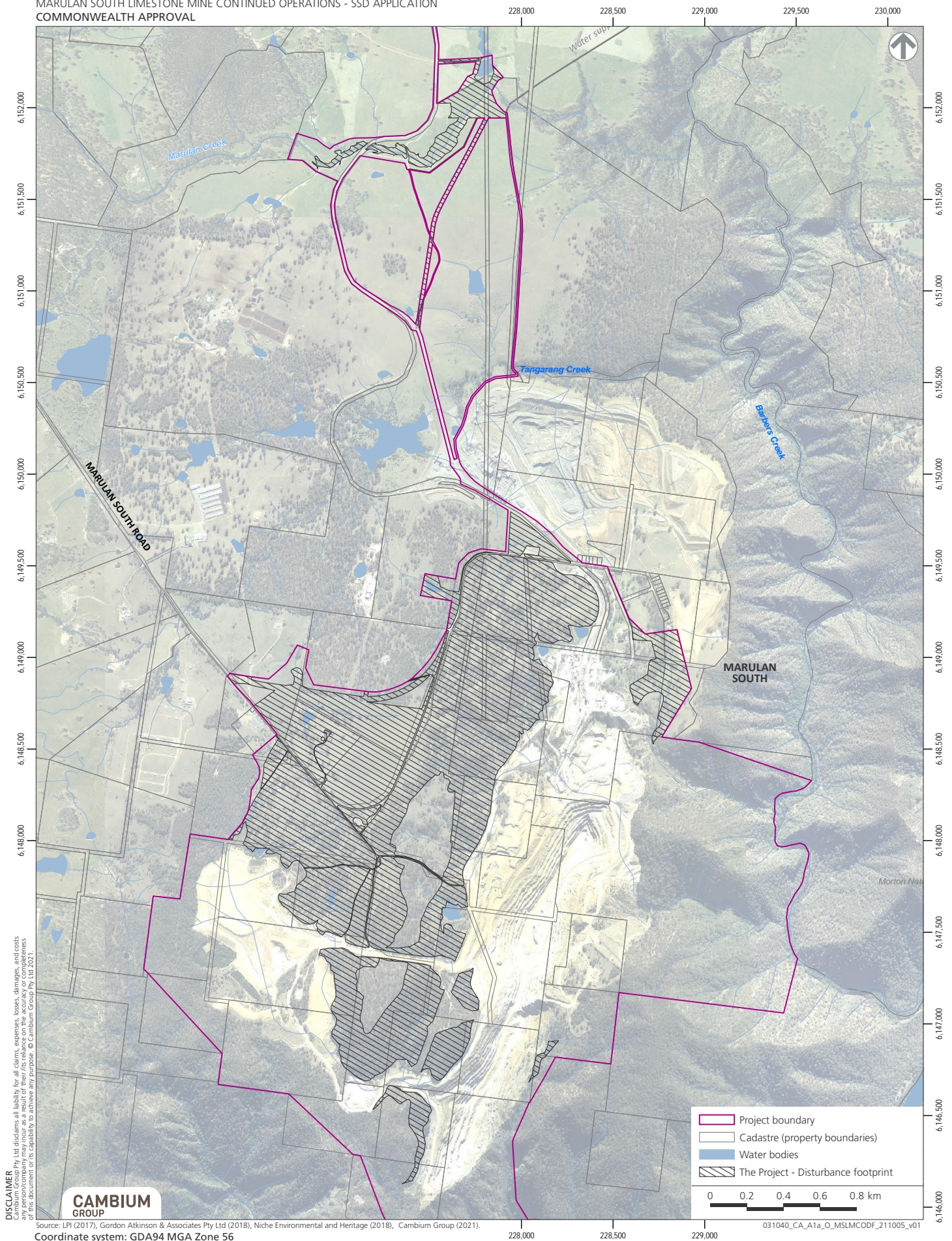
White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland means the ecological community of that name listed as critically endangered under the **EPBC Act**.

Attachment 1a

Overview - Marulan South limestone mine continued operations development footprint



MARULAN SOUTH LIMESTONE MINE CONTINUED OPERATIONS - SSD APPLICATION
COMMONWEALTH APPROVAL



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Attachment 1b

Marulan South limestone mine continued operations development footprint



MARULAN SOUTH LIMESTONE MINE CONTINUED OPERATIONS - SSD APPLICATION
COMMONWEALTH APPROVAL

227,500

228,000

228,500

229,000

6,150,000

6,149,500

6,149,000

6,148,500

6,148,000

6,147,500

6,147,000

6,146,500

6,146,000

6,150,000

6,149,500

6,149,000

6,148,500

6,148,000

6,147,500

6,147,000

6,146,500

6,146,000

MARULAN SOUTH ROAD



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Source: LPI (2017), Gordon Atkinson & Associates Pty Ltd (2018), Niche Environmental and Heritage (2018), Cambium Group (2021).

Coordinate system: GDA94 MGA Zone 56

- Project boundary
- Cadastre (property boundaries)
- Water bodies
- The Project - Disturbance footprint

0 0.1 0.2 0.3 0.4 0.5 km

031040_CA_A1b_MSLMDF_211005_v01

228,000

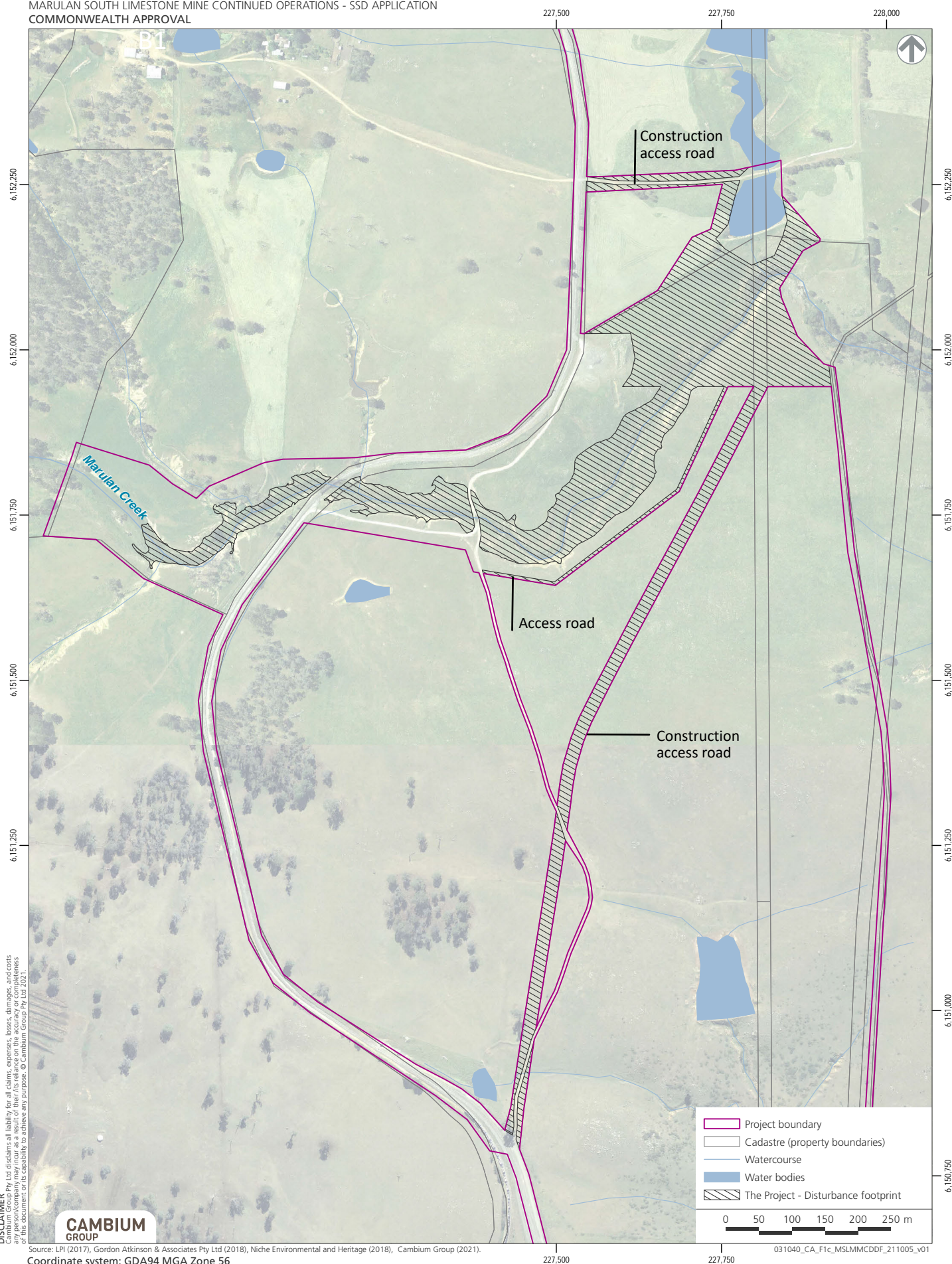
228,500

Attachment 1c

Marulan South limestone mine continued operations Marulan Creek development footprint



MARULAN SOUTH LIMESTONE MINE CONTINUED OPERATIONS - SSD APPLICATION
COMMONWEALTH APPROVAL



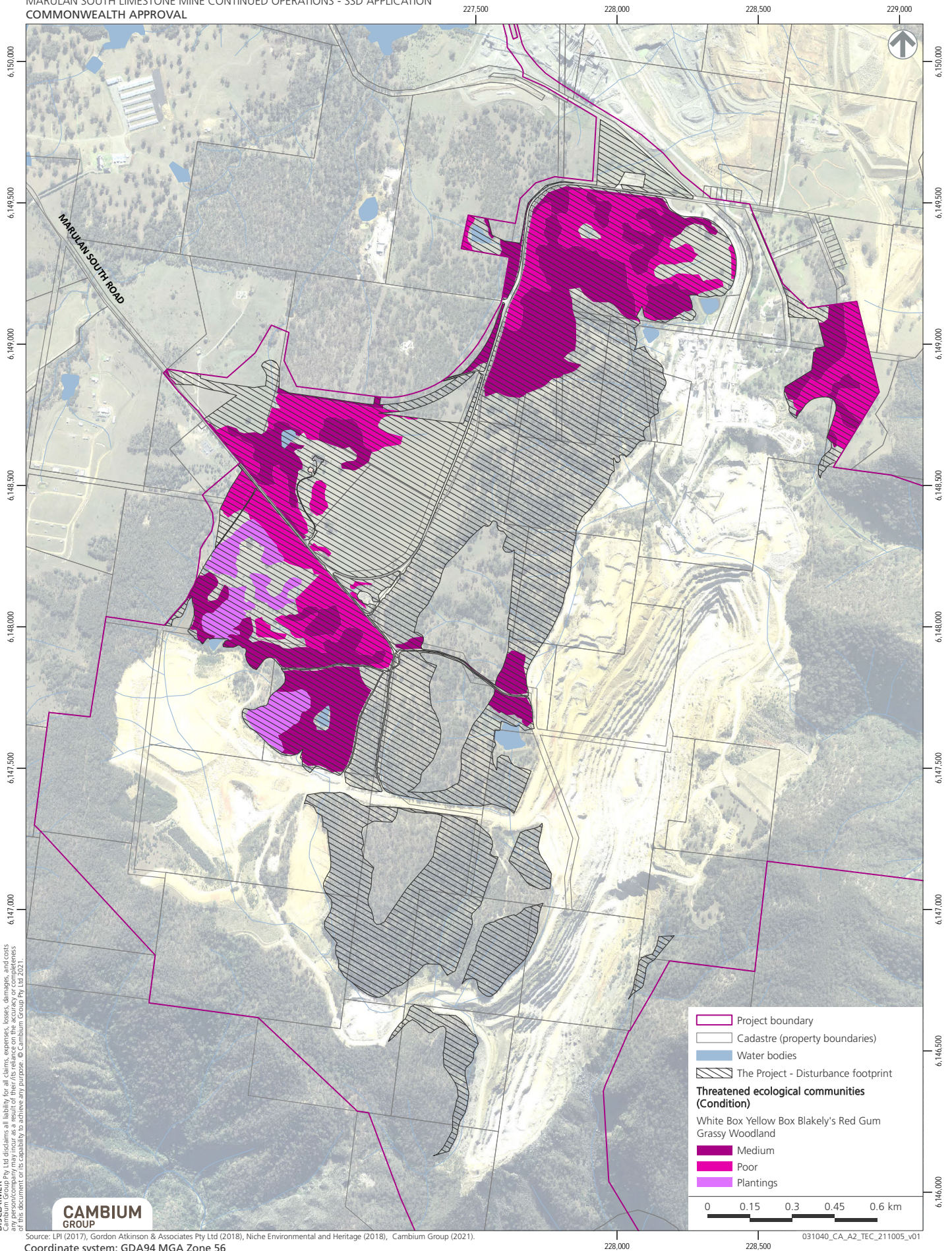
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Attachment 2

Location of the White Box Yellow box Blakely's Red Gum Woodland and derived native grasslands in the development footprint

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COMMONWEALTH APPROVAL



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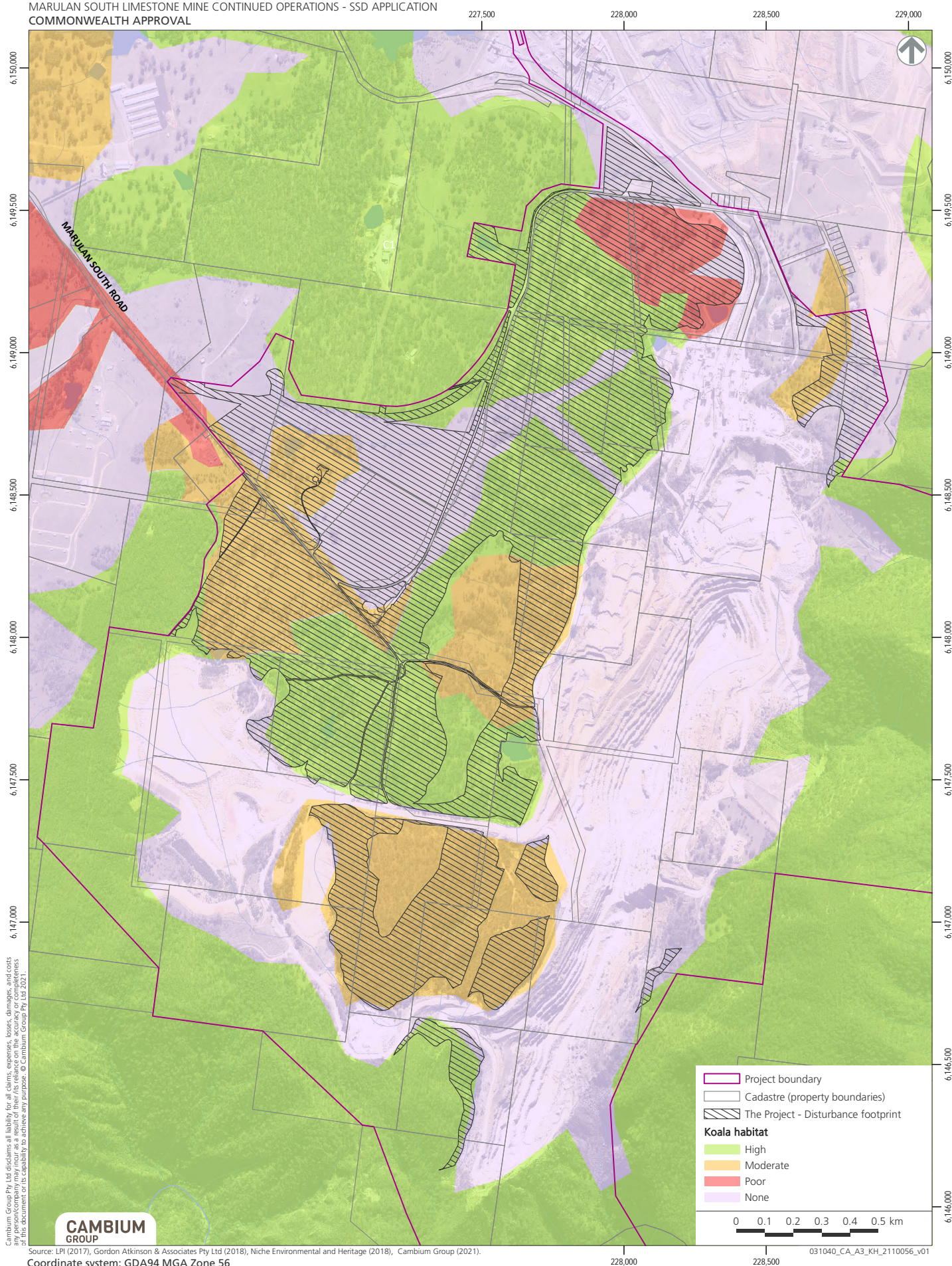
Source: LPI (2017), Gordon Atkinson & Associates Pty Ltd (2018), Niche Environmental and Heritage (2018), Cambium Group (2021).
Coordinate system: GDA94 MGA Zone 56

031040_CA_A2_TEC_211005_v01

Attachment 3 **Location of Koala habitat in the development footprint**



MARULAN SOUTH LIMESTONE MINE CONTINUED OPERATIONS - SSD APPLICATION
COMMONWEALTH APPROVAL



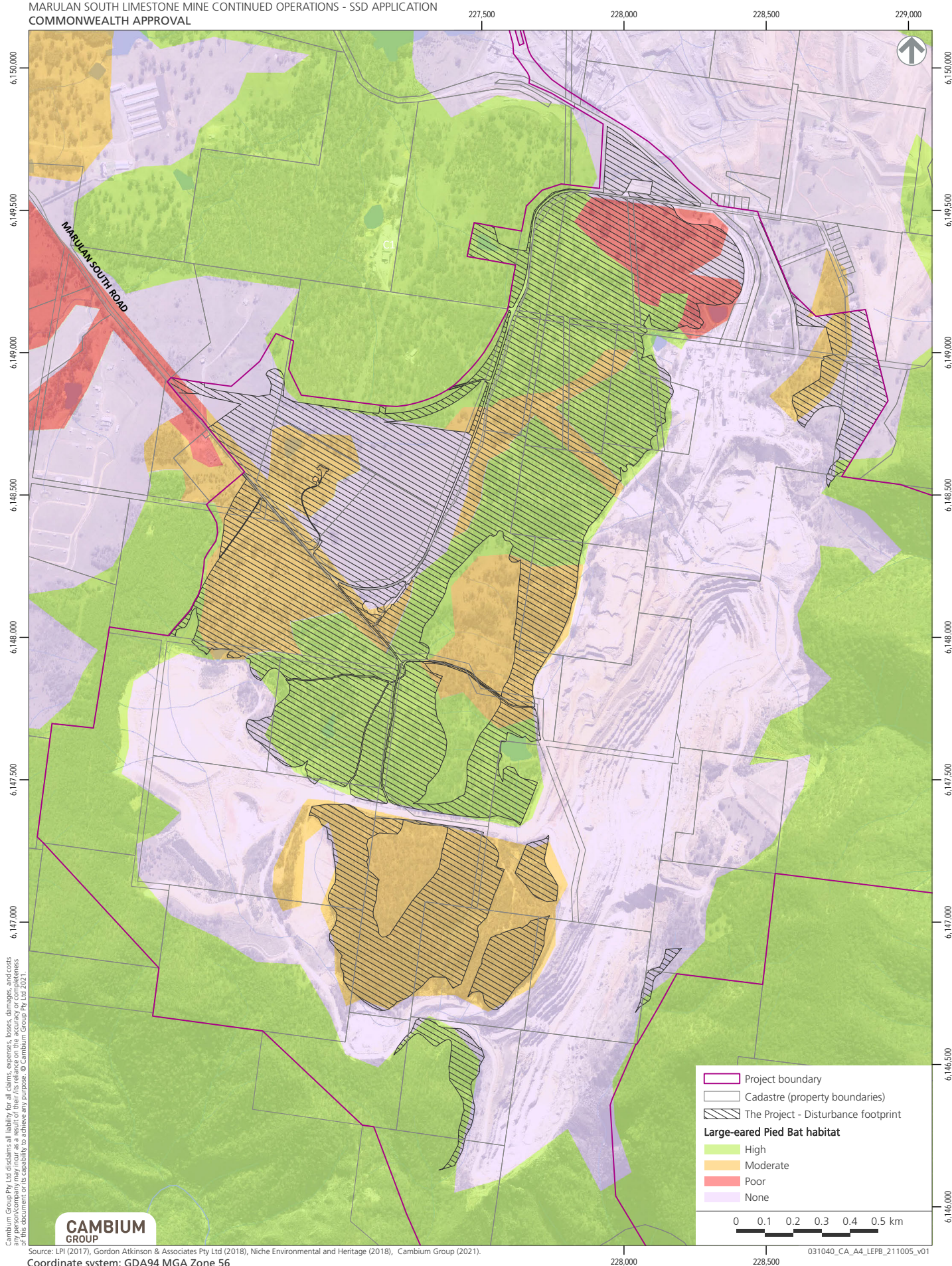
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Attachment 4 Location of Large-eared Pied Bat habitat in the development footprint



MARULAN SOUTH LIMESTONE MINE CONTINUED OPERATIONS - SSD APPLICATION
COMMONWEALTH APPROVAL



APPENDIX D

Noise Management Plan

APPENDIX E

Blast Management Plan

APPENDIX F

Air Quality and Greenhouse Gas Management Plan

APPENDIX G

Water Management Plan (including Groundwater Management Plan)

APPENDIX H

Biodiversity Management Plan

APPENDIX I

Aboriginal Cultural Heritage Management Plan

APPENDIX J

Historic Heritage Management Plan

APPENDIX K

Contaminated Materials Protocol

APPENDIX L

Bushfire Management Plan

APPENDIX M

Rehabilitation Strategy

APPENDIX N

Traffic Management Plan

APPENDIX O

Emergency Response Procedure

Emergency Response Plan

BORAL CEMENT MARULAN MINE & LIME PLANT

Main Contact number: 02 48 203 000

Production Control: 02 48 203 028

Lime Plant Control: 02 48 203 029

Les Longhurst, Site Manager: 02 4820 3061 / 0401 895 032

Frank Murnane, Lime Manager: 02 4820 3047 / 0401 894 066

Address: 5 Hume Street, Marulan South NSW 2579

Cross Street: Marulan South Road (Cooper Crescent)

8.5kms from Jerrara Rd / Marulan South Rd /

Hume Highway Overpass

In case of an emergency and external assistance is required the Chief Warden (or their delegate) or Emergency Coordinator will call emergency services:

Emergency – telephone

Dial 000 (remember 0 for an outside line) Mobile use 112

They will ask for the emergency service required? (Police, Fire, Ambulance)

Answer questions about location – Marulan South NSW 2579. Then follow with Boral Cement Limestone Mine, 5 Hume St, Marulan. Nearest cross street – Marulan South Road (becomes Cooper Crescent over railway line) – 8.5 kms SE from Jerrara Rd / Marulan South Road / Hume Highway overpass.

Coordinates: Latitude: S 34° 45' 43" Longitude: E 150° 2' 4"

When connected to the emergency service, stay on the line, speak clearly and answer the questions.

Don't hang up until the operator tells you to do so

Control Sheet

Document Information

Document Name:	MAR-MNGT-PLAN-0007 Emergency Response Plan
Document Filename / Location:	White Folder / G:Drive 15

Document Owner

The Owner of this Document is:	WHS Business Partner
---------------------------------------	----------------------

Version History (Template)

Version	Date	By Whom	Description of Changes
1	26/08/05	Robert Paterson	Developed
2	12/9/06	Steven Gallop	Reviewed and up dated
3	24/2/07	Robert Patterson	Updated as result of powerlines incident
4	12/4/07	Robert Patterson	Include Electrical Duty card and update Incident Controller Card to secure incident scene
5	19/07/07	Steven Gallop	Reviewed and updated
6	13/9/07	Rob Patterson	Update rail incident duty card
7	12/2/08	Steven Gallop	Reviewed and updates included
8	27/8/08	Steven Gallop	Include copy of Mine Plan and Drill Register
9	5/09/08	Steve Gallop	Review and update
10	13/11/08	Steven Gallop	Updates entered
11	24/05/09	Steven Gallop	Personnel updates entered
12	21/08/09	Steven Gallop	Personnel updates entered
13	26/11/09	Steven Gallop	Personnel updates entered
14	10/6/10	Rob Lasker	Updates entered
15	18/01/11	Brooke Chapman & Rob Lasker	Format Update and updates entered
16	20/2/13	Jody Oakley & Rob Lasker	Format update and update personnel and contact numbers. New Asbestos incident Duty Card
17	1/12/14	Jody Oakley and Rob Lasker	Update contact people and Numbers. 3 new Duty Cards. (Confined Space, Fall in Harness & Extreme Weather Event) Update Rail Incident duty card
18	1/11/15	Jody Oakley and Rob Lasker	Add Bushfire management plan, add emergency coordinator duty card, weighbridge evac card, update names and contacts.
19	31/8/16	Jody Oakley and Robert Lasker	Update contact names and numbers, update DPI notification guide and number, update site map.
20	4/1/17	Jody Oakley and Robert Lasker	Add Rail incident Matrix, add new incident matrix and add wet weather SOP.
21	17/11/17	Jody Oakley and Rob Lasker	Modify ECO structure to add planners office area wardens, update copy distribution table and update personnel changes, update fire extinguishers list, update first aider list. Add evac procedure for Reclaim/fuel farm.
22	8/2/18	Jody Oakley and Rob Lasker	Change to environmental notification table.
23	19/12/18	Jody Oakley and Rob Lasker	Changes to the "Extreme Weather Event-Action Checklist" following PIRMP test. Personnel changes, change to hazardous materials map, update of PIRMP plan, update first aiders

24	1/5/19	Jody Oakley and Rob Lasker	Update contact people and Numbers, add new incident matrix, and update Chief Warden's Duty Card - post April emergency tabletop exercise
25	31/1/2020	Jody Oakley and Rob Lasker	Change front page following use of EMP for injured worker, update first aider list, update personnel and contact numbers. Added duty cards (Bushfire, Mental Health Issues, Fluid Injection Injuries, Immersion of person/vehicle, Engulfment/Entrapment (crush injury) Incidents, Civil Disorder, Aircraft Crash, Radiation Accidents). Added a Bomb Threat Checklist. Added First Aiders, Electricians, Water Cart operators and site personnel duty cards, updated Emergency flowchart. Added first aid fact sheets. Updated site maps. Updated Bushfire Management Plan. Updated Fire Extinguisher list. Updated notification of incidents to Resources Regulator guidance. Added Who's On Location OPL.
26	27/10/20	Jody Oakley	Change to Dangerous goods list and map (no longer hold any explosives on site). Personnel Changes. Update Explosives duty cards
27	1/6/2021	Jody Oakley	Personnel changes and changes to dangerous goods.
28	1/5/2022	Jody Oakley	Personnel updates, add electric Shock protocol, update dangerous goods list and map, update PIRMP and BMP, update services location map, Add coal fire to Kiln duty card, changed all duty cards that sentry is to wait for emergency services at the aglime/Marulan South Rd Intersection, updated fire extinguisher list, updated notification guides, phone list and critical incident sheet

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1. General Information

1.1 Introduction to Boral Cement Marulan

Currently limestone and shale mining operations within the Boral Cement Marulan South Consolidated Mining Lease (CML) No. 16 supply the essential raw materials for major NSW industry including lime and cement manufacture, steel making and agriculture.

Limestone and clay/shale mining and overburden removal currently uses conventional open-cut hard rock drill and blast techniques with loading and hauling conducted using traditional rubber tyred and tracked, diesel powered earth moving equipment, Auxiliary mobile plant maintain haul roads and carry out operational works as required.

Limestone processing facilities include primary and secondary crushing, screening, conveying and stockpiling plant and equipment located in the northern section of the North Pit and extending to the tertiary crushing, screening, sand plant, bin storage and despatch (rail and road) systems. Kiln stone grade limestone is also processed on site through the existing lime plant comprising kiln stone stockpiles, rotary lime kiln, hydration plant and associated auxiliary conveying, processing, storage, despatch plant and equipment.

The mine is located approximately 34kms/23minutes from the nearest city of Goulburn which provides all emergency services including Fire and Rescue, Ambulance, Police, Police Rescue, SES, NSW RFS and Hospital Emergency Department.

1.2 Hours of Operation

Up to 100 full time personnel are currently employed at the Marulan South Limestone Mine.

To service the 24 hour, 7 days per week operation, personnel are employed to operate on a series of 8, 10, 12 hour rosters to cover limestone mining, overburden removal, limestone processing, despatch and maintenance. In addition mechanical and electrical trade apprentices are employed. Casual personnel and contractors are employed on a needs basis.

Typical hours of operation include the following:

- Mining and dispatch 24 hours / day 7 days 4 x 12 hour shifts and 8 hour day shifts (Monday – Friday)
- Lime Manufacture 2 x 12 hour shifts 7 days a week
- Blasting daylight weekdays (not including public holidays)

1.3 Emergency Response Plan Objectives

The aim of these procedures is to ensure that personnel are capable of coping with any emergency situation. The primary concern is for the safety of employees, visitors, contractors and the community. Vital records, property and other assets should also be protected.

Area Wardens must ensure that these procedures are kept in a prominent position and that all personnel are made aware of the contents. It is also essential that this document is amended when there are site or personnel changes that impact on the procedures herein.

All personnel must make themselves aware of the location of all emergency alarms, exits and fire appliances within or near their work area and the location of the Emergency Assembly Areas.

The effectiveness of these procedures depends on the willingness of all personnel to make themselves aware of the immediate actions they must take in an emergency so that they are capable of acting promptly, calmly and efficiently.

This plan takes into account the relatively close proximity to emergency services and the type of surface mining operations conducted.

Please note that since September 2012 incident response obligations in NSW in relation to pollution incidents have increased over and above the typical emergency response activities. These have been flagged as appropriate in the document and explained in detail in the Pollution Incident Response Management Plan.

1.4 Scope

The Emergency Management Plan outlines Boral Cement Ltd Marulan South's emergency management procedures for the Limestone Mine and Lime Processing facilities. The Emergency Management Plan forms part of Boral Cement Ltd Marulan South's Safety Management System currently in place at the mine.

1.5 Emergency Response

A risk assessment of the site at Hume Street Marulan South was done and identified a number of potential emergency situations for the site. Risk Assessment Identification number MAR-MNGT-RISK-0017.

1.6 Emergency Management Plan Review

The Emergency Management Plan shall be reviewed annually when a drill is performed and must be reviewed after an incident has occurred and when the Safety Management System is reviewed.

1.7 Emergency Preparedness Checklist

Checks of emergency preparedness must be undertaken using the HSEQ-7-08-F03 General Workplace Safety Inspection Checklist, which checks for emergency lighting, fire extinguishers, flammable materials, spill kits, etc.

1.8 Emergency Response Plan Auditing

The Emergency Response Plan will be audited according to GRP-HSEQ-MP-3-03 Performance Assessments and Audits standard and the yearly audit schedule for the site.

1.9 Incident Response Classification

Emergencies will be classified into five levels depending on the severity of real and potential impact and the extent of response required to manage the event and to achieve resumption of normal operations. These can be found on the Incident Reporting, Investigation and Action Management matrix in section 3 of this document.

1.10 Withdrawal of Personnel in Case of Danger

Where a hazard is considered not to be under control, and as a result an unacceptable risk may exist, the affected part of the site is considered to be at risk. In such circumstances, the following actions shall be taken:

- All persons exposed to the hazard are withdrawn to a place of safety.
- If personnel are competent and safely able to eliminate or reduce the risk, they must take the action necessary to do so.
- If personnel are not competent or safely able to eliminate or reduce the risk, they must:
 - Take reasonable measures to prevent immediate risk to them or others; and

- Immediately report the situation to the relevant supervisor.
- Competent personnel shall be appointed to assess the risk which resulted in the withdrawal of persons and to develop a response plan to deal with the situation.
- When it is considered safe to do so, competent person(s) shall take action to reduce the risk to an acceptable level, provided that adequate safeguards are taken.
- The Mine Manager shall make a report in the site record on the withdrawal of persons and any remedial action taken.
- A person shall not be permitted into that part of the site, until the risk is at an acceptable level.
- The Mine Manager will notify the Resources Regulator of such actions immediately after the action is taken.

1.11 Emergency Communications Systems

1.11.1 Two Way Radio and Emergency Phone Line

Wherever possible, emergencies should be initiated through the two way radio system or via the internal Emergency phone line 209 – this will ensure that all possible resources will respond to the emergency in the shortest possible time.

1.11.2 Power Failure

If power is lost to the telephone system, use any of the mobile phones – these are available with the Supervisors and Managers. The site PABX system has battery backup for approximately 30 minutes.

1.11.3 Emergency Siren in an Event of Emergency

The emergency siren may be activated by activating any of the red emergency buttons / breaking any of the “FIRE - Break Glass” panels located at various points around the site.

1.12 References

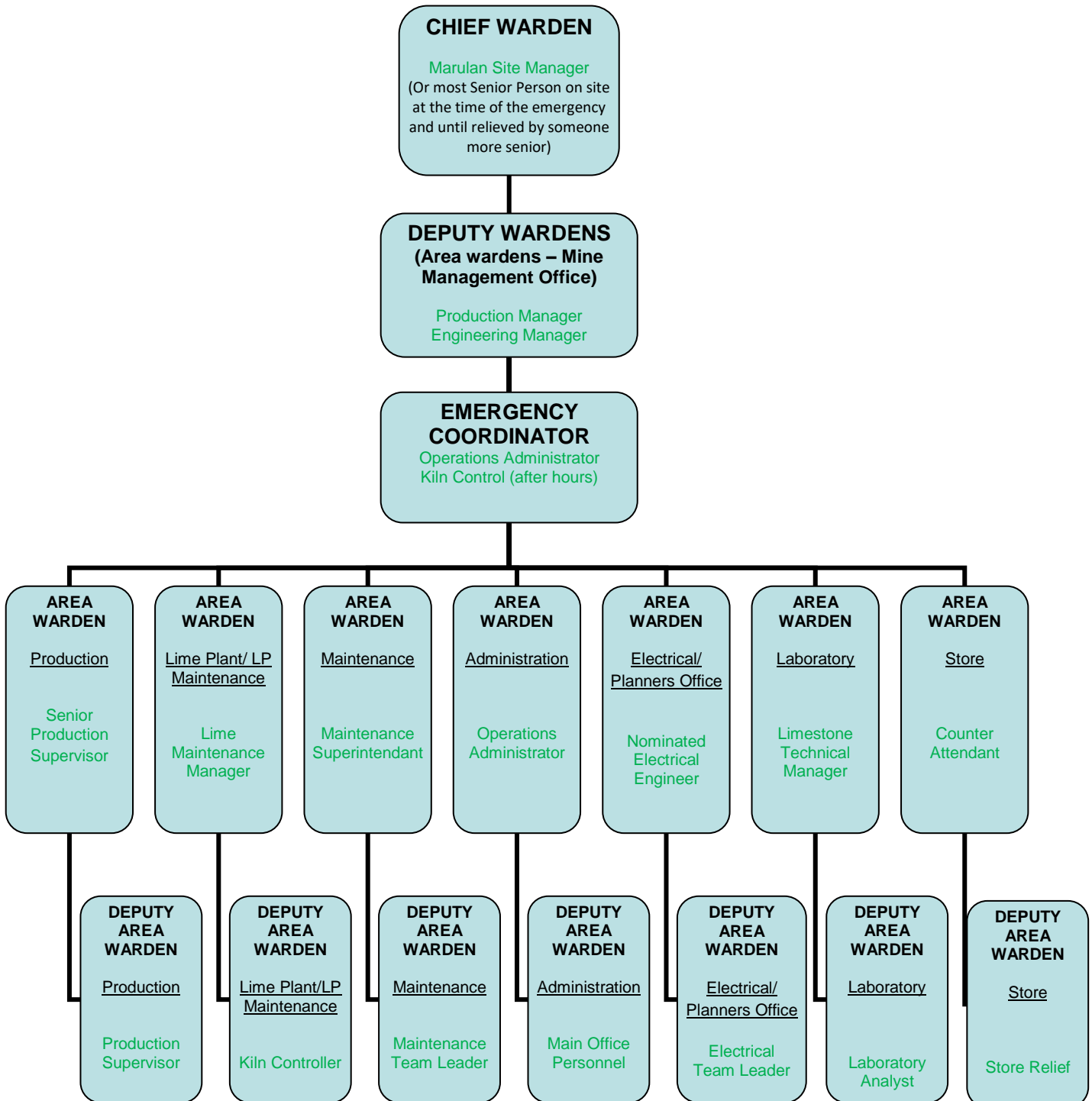
- GRP-HSEQ-MP-2-09 Emergency Preparedness and Response and related forms/templates
- GRP-HSEQ-3-02 Incident Reporting, Investigation and Action Management
- GRP-HSEQ-2-10 Crisis Management
- Trade and Investment Mine Safety NSW Code of Practice – *Emergency Planning For Mines*
- Work Health and Safety (Mines and Petroleum Sites) Act 2013
- Work Health and Safety (Mines and Petroleum Sites) Regulation 2014, particularly Schedule 7

1.13 Definitions

A full list of definitions can be found in Boral's HSEQ system HSEQ-1-A01 Glossary of Terms and Definitions

2. Control and Coordination

2.1 Control Organisation



2.2 Site Copy Register

Name	Location	Folder	Assigned to
1	Site Manager	Chief Warden	Office
2	Production Manager	Deputy Chief Warden	Office
3	Engineering Manager	Deputy Chief Warden	Office
4	Lime Maintenance Manager	Lime Plant	Office
5	WHS Business Partner	Chief Warden	Office
6	Administration	Emergency Coordinator	Front Desk
7	Kiln Control Room	Emergency Coordinator	Kiln Control Room
8	Production Crib Room	Production	Production Crib Room
9	Lab	Lab/ Store	Lab
10	Limestone Technical Manager	Lab/Store	Office
11	Store	Lab/Store	Store
12	Mine Workshop	Maintenance	Mine Workshop
13	Production Supervisors Office	Production	Production Supervisor
14	Senior Production Supervisors Office	Production	Senior Production Supervisors
15	Truck Weighbridge Office	Weighbridge	Weighbridge Attendant
16	Rail Weighbridge	Weighbridge	Despatchers
17	Electrical Engineer	Deputy Chief warden	Office
18	Planners Office	Electrical / Planners Office	Office
19	Shotfirers Office	Shotfirer	Office
20	Hazchem box – Front Gate		Front Gate

2.3 Main Control Staff and Wardens

ECO Appointment	Emergency Assembly	Warden	Deputy Warden
Chief Warden	Area A	Site Manager	Production Manager Engineering Manager
Emergency Coordinator		Operations Administrator	Main Office Personnel Kiln Control (after hours)
Area Warden (Production)	Area C	Senior Production Supervisor	Production Supervisor
Area Warden (Lime Plant)	Area B & D (Kiln Workshop)	Lime Operations Manager Lime Maintenance Supervisor	Kiln Controller
Area Warden (Maintenance)	Area C	Maintenance Superintendent	Maintenance Team Leader
Area Warden (Store)	Area A	Counter Attendant	Stores Relief
Area Warden (Lab)	Area A	Limestone Technical Manager	Laboratory Analyst
Area Warden (Administration)	Area A	Operations Administrator	Main Office Personnel
Area Warden (Mine Mgt Building)	Area A	Chief Warden	Deputy Chief Warden
Area Warden (Elect/Planners Office)	Area A	Electrical Engineer	Electrical Team Leader

2.3.1 Main Control Staff and Wardens Contact List

ECO Appointment	Name	Title	Phone #	AH Contact #
Chief Warden	Les Longhurst	Site Manager	261	0401895032
Deputy Wardens	Cameron Atkinson	Engineering Manager	206	0401896346
	Jamie Whittaker	Production Manager	201	0401895212
Emergency Coordinator	Jody Oakley	Operations Administrator	209/203	
	Kiln Control	After Hours Emergency Coordinator	209/229	
Area Wardens Production	Adrian Smith	Senior Production Supervisor (Plant)	260	0401893247
	Darryl Young	Senior Production Supervisor (Pit)	202	0428104983
Deputy Area Warden Production	Production Supervisors	Production Supervisor	222	
Area Warden Lime Plant	Frank Murnane Sam Kariyawasam	Lime Operations Manager Lime Maintenance Manager	217 252	0401894066 0401893851
Deputy Area Warden Lime Plant	Kiln Controller	Kiln Control Room Operator	229	
Area Warden Maintenance	James Esson	Maintenance Superitendant	224	
Deputy Area Warden Maintenance	Maintenance Team Leaders	Maintenance Team Leaders	220 / 225	
Area Warden Store	Counter Attendant	Store Counter Attendant	232	
Deputy Area Warden Store	Kristy Hedges	Weighbridge / Store	213	
Area Warden Lab	Garth Nagle	Limestone Technical Manager	275	0401895737
Deputy Area Warden Lab	Laboratory Analyst	Laboratory Analyst	230	
Area Warden Administration	Jody Oakley	Operations Administrator	203	
Area Warden Electrical/Planners Offices	Pete Randazzo	Electrical Engineer	219	0401896998
Deputy Area Warden Electrical/Planners Offices	Matt Brook	Electrical Team Leader	240	0401895576

2.3.2 First Aider Contacts

Name	Location	Site Ext.	Expiry Date
Les Longhurst	Site Manager	261 / 231	13/12/24
Jody Oakley	Main Administration Office	203	13/12/24
Andrew Hillier	Maintenance planning Dept	242	26/11/22
James Esson	Maintenance Superintendent	220	10/12/23
Bagaskara Ariza	Maintenance Workshop	220	10/12/23
Garry Bell	Maintenance workshop	220	25/11/22
Glen Bell	Maintenance Workshop	220	26/11/22
David Brown	Maintenance workshop	220	10/12/23
Steve Downey	Maintenance workshop	220	14/12/24
Rodney Latham	Maintenance workshop	220	14/12/24
Greg Murdoch	Maintenance workshop	220	10/12/23
Robert Steward	Maintenance workshop	220	25/11/22
Pete Randazzo	Electrical Engineer	219	26/11/22
David Meyers	Electrical Workshop	233	14/12/24
Luke Charnock	Electrical Workshop	238	25/11/22
Flynn Griffiths	Electrical Workshop	233	14/12/24
Brad Muddiman	Electrical Workshop	233	10/12/23
Thomas Ostridge	Electrical Workshop	233	21/8/23
Darryl Young	Senior Production Supervisor (Pit)	202	25/11/22
Adrian Smith	Senioer Production Supervisor (Plant)	260	13/12/24
Craig Chapman	Shot Firer	228	25/11/22
Brian Croker	Production	222	13/12/24
Tony Hassett	Dispatcher	216	25/11/22
Jonno O'Brien	Production	228	10/12/23
Patrick Lenane	Production	228	25/11/22
Ian Phelps	Production	228	26/11/22
Matt Skelly	Production	228	8/11/22
Wira Te Whare	Production	228	7/12/23
Steve Wilson	Dispatcher	216	26/11/22
Don Wagner	Store	228	14/12/24
Josh Allan	Lime Plant	229	26/11/22
Alex Fernandez	Lime Plant	229	25/11/22
Trent Bryant	Lime Plant	229	13/3/23
Scott Gorman	Lime Plant	229	26/11/22
Michael Octaviano	Lime Plant	229	14/12/24
Dean Worldon	Lime Plant	229	25/11/22
Josh Daniel	Lime Plant Maintenance	251	10/12/23

Name	Location	Site Ext.	Expiry Date
Rodney Bell	Lime Plant Electrician	251	26/11/22
Jeremy Harrison	Lime Plant Maintenance	251	26/11/22
Paul Young	Lime Plant Maintenance	251	14/12/24
Sean McNeilage	Lab Analyst	230	26/11/22
Rodney Byrne	Operator Maintainer	244	17/1/25
Kristy Hedges	Production	213	13/12/24

2.3.3 Resources Site Based

LOCATION	EQUIPMENT LIST	CAPACITY IF APPLICABLE
Transport around site – ie First Aiders, Emergency Resources	Unit 6 – Isuzu 250 Crew	6 pax
	Unit 4 – Dual Cab Ford Ranger	5 pax
	Electrical Ute, Shotfirers Ute	2 pax
	All-Terrain Vehicles x 2	2 Pax
Communication Devices	Site Two Way Radios	
	Internal and External telephones	
	Various Mobile Phones (managers / supervisors)	
	Evacuation Alarm System	
Marulan Mine Site	Water Truck with water cannon	80,000L
	Iveco Water Truck	8,000L
	Haul Trucks x 7	
	Loaders x 5	
	Excavator x 3	
	Bob cat x 2	
	Backhoe	
	Dozer	
	Grader	
	Franner Crane	
	Scissor Lift	7.79m
	Self Propelled Elevated Work Platform	17.59m
	Service Truck – Diesel and Oil	
	Lighting Towers x 4	
	Fire Extinguishers – see Attachment 9.5 for listing	
	Spill Kits (Refer to Pollution Incident Response Plan for locations)	
	Chemical spill kit - Laboratory	

Main Administration Building Mine Operations Office Planners Office Laboratory Store Electrical Workshop Lime Plant Weighbridge Lime Maintenance Workshop Lime Plant Truck Drivers Meal Room Jaw Crusher Control x 2 Maintenance Workshop	First Aid kits Trauma First Aid Kit (Jaw Crusher Control) Diphoterine for Hydrated Lime injuries (Lime Plant)	
Maintenance Workshop	Gotcha (Working at Heights) 50 Rescue Kit	
	2.7m Heavy Duty Tripod 15m and 30m retracting lifeline / recovery Devices Dynavac Rescue Winch	
	Various Harnesses, Slings, Hoists and Chain Blocks	
	Gas Detectors and calibration unit – Confined Spaces Rescue Jupiter Air Respirators	
Electrical Switchrooms LC02, LC04, LC08, LC09, LC07, LC11, LC12, LC13, LC14, LC18, LC20, LC22, Sandplant MCC	Low Voltage Rescue kits	
Kiln Control Room Production Control Room First Aid Room Truck Drivers Meal Room	Defibrillators x 4	

Where applicable resources are maintained/inspected regularly by appropriately skilled / qualified personnel and scheduled in Maximo.

2.4 Important Notes:

- i) Principal Control Staff must take charge of their designated responsibilities when on site.
- ii) Stand-in Control Staff must take charge of their designated responsibilities when the Principal Control Staff are not on site.
- iii) It is imperative that all personnel are aware of the immediate actions they must take in a Fire/Smoke and Cardiac Arrest/Medical Emergency.

2.5 Site Plan

Boral Cement Marulan Limestone Mine Visitor Access Guide

Visitors must use walkways as indicated by Boral Employees.
PPE must be worn at all times





1. Jaw Crusher
2. Machine Shop
3. Production Control / Supervisors
4. Change Rooms
5. Production Secondary Crusher
6. Aggregate / Aglime Loading
7. Surge Bin
8. Viewing Platform
9. Spares
10. Store
11. Planners Office
12. Kin Stockpile
13. Shale Loading Area
14. Laboratory
15. Railway Overpass
16. Mine Management
17. Sand Plant
18. Kin Maintenance
19. Kin Control Room
20. Kin
21. Administration and Training
22. Truck Wash
23. Services
24. Truck Weighbridge
25. Truck Turnaround Area

Emergency Assembly Areas:

- Emergency Assembly Area A
- Emergency Assembly Area B
- Emergency Assembly Area C
- Emergency Assembly Area D

Other Labels:

- Quarry
- Dump Road
- Rail Crossing
- Main Gate
- Kiln Road Gate
- Railway Line
- To Lime Plant
- To Perpetua Quarry
- Helped

In case of an Emergency, follow instructions from Boral personnel.

Internal Emergency Number: 209

Immediately report any incidents / injuries.

FIRST AID

General Speed Limit 40km/h. Speed limit around Fixed Plant 15km/h

Heavy Mobile Equipment have right away.

50 metre rule applies around all HME.

PARKING

2.6 Hazardous and Dangerous Goods

Depot Number	Type	Capacity	UN Number	Class
4	Cylinder Store	Compressed Gas	1953	2.3
8	Aboveground Tank	Diesel 92,000l	00C1	C1

Boral Cement Marulan South Limestone Mine Site Layout

Dangerous Goods July 2022

Hume St Marulan South NSW 2579

Depot 4—Machine Shop
Cylinder Store
(300L Compressed Gas, Toxic,
Flammable)



Depot 8—Refuelling Depot
Above Ground tank
(Diesel up to 92000L)



- Key:
- A,B,C,D Emergency Evacuation Points
 - ⊕ Main Administration Office
Manifest Location
 - 💧 Emergency Water Sources
 - ⊕ Main Electrical HV Power Station

Key Contacts

2.6.1 Emergency Services Contacts:

Emergency Service	Location	Contact Numbers	Who Contacts
Site Emergency Line		209	Any Person At Risk
First Aid Room	Laboratory	243	
NSW Fire Brigade		000	Chief or Deputy Warden
NSW Rural Fire Service	Southern Tablelands RFS Operations Firecom - Yass Marulan RFS Station – UHF16 Marulan Captain Bungonia Captain – UHF 16 Windellama Captain – UHF 21	4822 2900 6226 3100 4841 1555 0407 227 047 0408 223 380 4844 5359	Chief or Deputy Warden
Police	Goulburn (rescue) Police Assistance Line (Non-Emergency calls)	000 131 444	Chief or Deputy Warden
Ambulance Helicopter	Goulburn Southern Highlands South Care Canberra Care Flight (Sydney)	000 Coordinates: Latitude: -34° 45' 43" Longitude: 150° 2' 4"	Chief or Deputy Warden or Senior First Aider
SES	Goulburn	132 500	Chief or Deputy Warden
Poisons Information	NSW	13 11 26	Chief or Deputy Warden or Senior First aider
Orica	Explosives Emergency Response Service, Marulan	1800 033 111 48 411 363	Chief or Deputy Warden
Electricity	Essential Energy	13 20 80	Chief or Deputy Warden
Gas	Actew AGL	13 19 09	Chief or Deputy Warden
Goulburn Base Hospital	Goulburn	(02) 4825 4000	Chief or Deputy Warden
Resources Regulator	84 Crown St Wollongong NSW 2500	1300 814 609	Mine Manager or their delegate
ONRSR National Rail Safety Regulator	occurrences@onrsr.com.au Level 22, 201 Elizabeth Street Sydney NSW 2000	1800 430 888 (Category A) 1800 572 077	Mine Manager or their delegate

2.6.2 Immediate notification numbers for Pollution Incidents:

Government Authority - Compulsory Notifications	Emergency notification phone number
EPA – Environment Line	131 555
Fire & Rescue NSW	1300 729 579
Goulburn Mulwaree Council	02 4823 4444 A/H 02 4823 4500
Public Health Unit (Sydney South West) – Camperdown Office	BH: 02 9515 9420 AH: 02 9515 6111 Ask for Public Health Officer on call
Safework NSW	131050 Company ABN asked: 62 008 528 523

Compulsory Regulatory Authorities must be contacted *IMMEDIATELY* in case of a Pollution Incident requiring such notification. See further details in Attachment 8.1.

2.6.3 Site Personnel Contacts

After contacting any of the emergency services above contact the appropriate personnel listed below: (As a minimum Manager, Supervisor, HR and WHS Business Partner)

Name	Position	Site Ext.	Mobile
Les Longhurst	Site Manager and Nominated Quarry Manager	261 / 231	0401 895 032
Jamie Whittaker	Production Manager	201	0401 895 212
Adrian Smith	Senior Production Supervisor (Plant)	260	0401 895 319
Darryl Young	Senior Production Supervisor (Pit)	202	0428 104 983
Garth Nagle	Limestone Mine Technical Manager	248	0401 895 737
Frank Murnane	Lime Operations Manager	247	0401 894 066
Sam Kariyawasam	Lime Maintenance Manager	252	0401 896 937
Cameron Atkinson	Engineering Manager	206	0401 896 346
Pete Randazzo	Nominated Electrical Engineer	219	0401 896 998
Jessica Seiffert	WHS Business Partner		0401 895 449
Greg Johnson	Sustainability Manager	9033 4916	0401 893 420
Rajeev Ramankutty	EGM Boral Cement		0419 355 502
Girish Yadwad	National GM – Operations Cement	02 9033 4035	0401 895 035
	Boral Workfit Team	1300 753 486	AH 1300 031 057

2.6.4 Marulan Mine Neighbours

DIRECTION	NEIGHBOURS	ADDRESS	EMERGENCY NOTIFICATION	METHOD
North/East	Peppertree Quarry	843 Marulan South Road	02 48 411 701	Phone/Door knock
	Steve Wilson	5 Hume St Marulan South	0431359 688	Phone/Door knock
West	Dean Beltrame	683 Marulan South Road	0401 896 979	Phone
	Foti Fireworks	452 Marulan South Road	0418 242 406	Phone/Door knock
	Aglime Fertilisers	709 Marulan South Road	02 4841 1528	Phone/Door knock
	Rob and Robyn Steward	565 Marulan South Road	0437 831 540	Phone/Door knock
	Steve and Annette Pace	381 Marulan South Road	02 4841 1116	Phone/Door knock
	Barry Armit	357 Marulan South Road	02 4841 1547	Phone/Door knock
	Peppertree Quarry Shift Employees	505 Marulan South Road	02 4841 1701	Phone
	Pat and Bridgette Mulligan	400 Marulan South Road	02 4841 1399	Phone/Door knock
	Steven Lichtenberger	270 Glynmar Road	02 4841 1299	Phone/Door knock
	Bungonia State Recreation Area	838 Lookdown Road, Bungonia	02 4827 4700	Phone
South				

2.7 External Assistance – Site Location

External assistance from fire, police or ambulance will assume overall control of an emergency once on site.

In case of an emergency and external assistance is required the Chief Warden (or their delegate) or Emergency Coordinator will call emergency services, see directions below:

Emergency – telephone dial 000 (remember 0 for an outside line) Mobile use 112

They will ask for the emergency service required? (Police, Fire, Ambulance)

Answer questions about location – Marulan South NSW 2579. Then follow with Boral Cement Limestone Mine, 5 Hume St, Marulan. Nearest cross street – Marulan South Road (becomes Cooper Crescent over railway line) – 8.5 kms SE from Jerrara Rd / Hume Highway overpass.

Coordinates: Latitude: South -34° 45' 43" Longitude: East 150° 2' 4"

When connected to the emergency service, stay on the line, speak clearly and answer the questions.

Don't hang up until the operator tells you to do so

2.7.1 Helicopter Rescue

If a helicopter is required to attend the scene, the following GPS coordinates and landing rules apply:

Note: The NSW Ambulance service is responsible for tasking the helicopter. The Chief Warden may be required to pass on any site information such as UHF radio channel, mobile contact.

Designated Landing Area

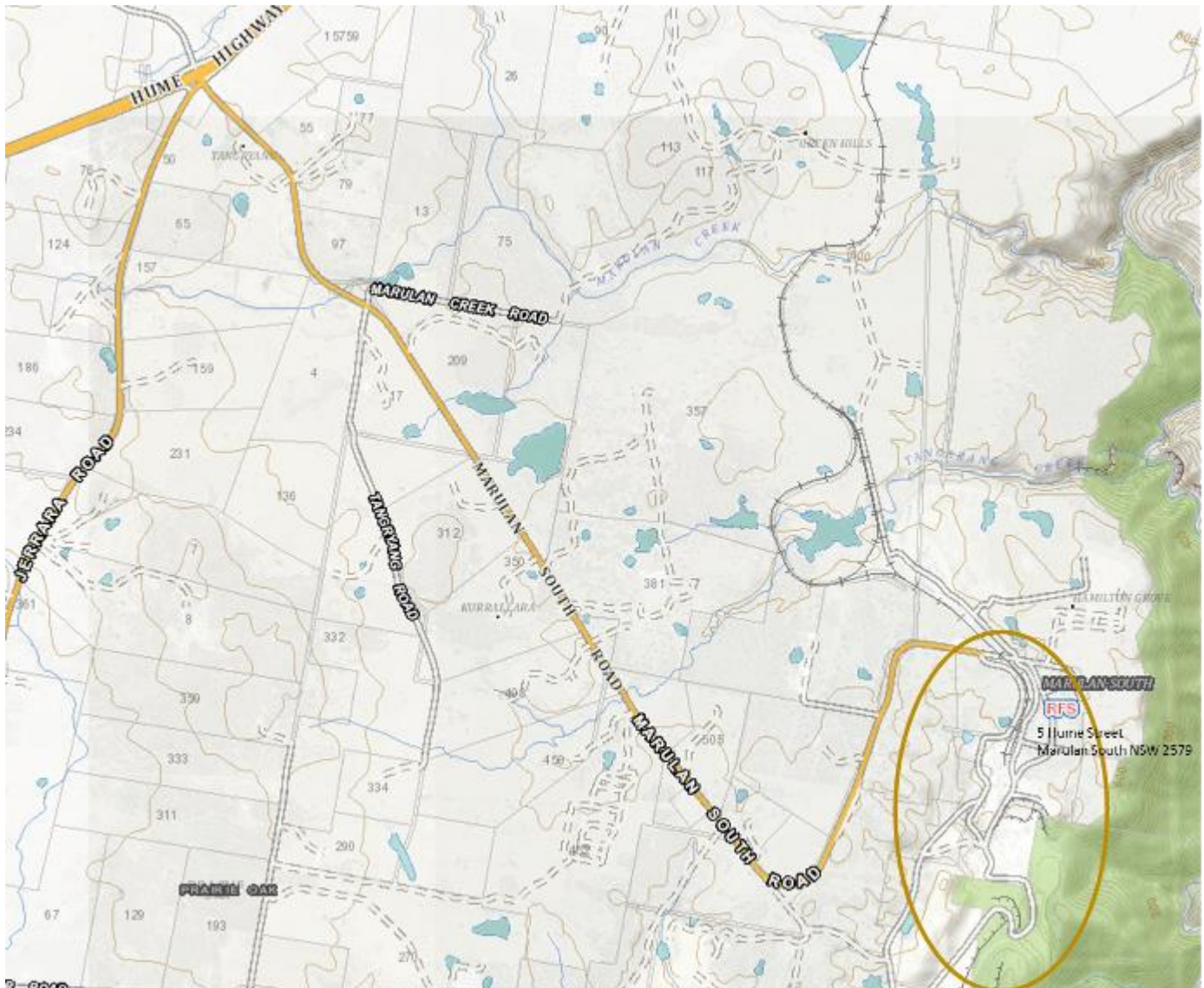
The GPS coordinates of the designated helicopter landing area is: S -34° 45' 46" Longitude: E150° 2' 7"

General Rules for Landing GPS location

1. An area 50 m radius cleared of trees and overhead wires is required for the helicopter to land; 30 m is the absolute minimum area required cleared for landing.
2. Any loose objects in the landing area should be removed and if possible, the area should be watered to minimise dust (if required).
3. Access to the area shall be strictly controlled and delineated.
4. Personnel must not approach the Helicopter unless directed by the pilot or crewman.
5. Do not provide any assistance for landing or taking off other than keeping any unauthorised personnel / public clear of the designated landing area.

2.7.2 Site Location Maps





3. Incident Management Matrix

TABLE 1: Consequence – Choose ONE		
Level	Descriptor	What is the worst credible outcome?
1	Incidental	<p>Health: Illness or effect with limited or no impact on ability to function – no treatment necessary.</p> <p>Safety: Injury that does not require any treatment.</p> <p>Environment: No discernible impact on or measurable impairment of habitat, species or natural environment (air, water, land).</p> <p>Property Damage: Very minor damage akin to 'fair wear and tear' - not requiring rectification for ongoing use.</p> <p>Regulatory: No risk of penalising actions, for example regulatory site visit where all observation where rectified immediately with no formal outcome.</p> <p>Community/Reputation: Isolated complaint from a local individual.</p> <p>Quality: Minor incident with no resulting impact on the customer.</p>
2	Minor	<p>Health: Mild illness or health effect and/or some functional impairment that needs some treatment but is usually easily managed, medically.</p> <p>Safety: Injuries requiring competent first aid, treatment by a medical professional or as a hospital outpatient and typically no time lost (i.e. FAIs and most MTIs).</p> <p>Environment: Minor and measurable impact on habitat, species or natural environment.</p> <p>Property Damage: Minor damage which does not impede serviceability but requires repair.</p> <p>Regulatory: Low risk of penalising action and any intervention is limited to a non-binding observation or written inspection report.</p> <p>Community/Reputation: Multiple complaints at a local level.</p> <p>Quality: A customer complaint or incident resulting in a potential or actual claim (or rework) under AUD5K (e.g. credit note or product reject).</p>
3	Moderate	<p>Health: Illness or significant adverse health effect needing a high level of medical treatment or management.</p> <p>Safety: One or more injuries that are serious enough to result in lost time, non-permanent disabling injuries or an injury that may require non-emergency hospitalisation as an inpatient.</p> <p>Environment: Localised and measurable short-term impact on habitat, species or natural environment.</p> <p>Property Damage: Moderate damage requiring repairs before equipment can return to full service. Light Vehicle could be written off and HV/HME sustains enough damage to be unusable but able to be economically repaired.</p> <p>Regulatory: Formal intervention e.g. issuing a warning, an Improvement Notice (or similar) at a site but unlikely to escalate if complied with.</p> <p>Community/Reputation: Ongoing and sustained local complaints, broader stakeholder interest and risk of local media coverage.</p> <p>Quality: Incident that results in a potential or actual claim (or rework) of up to AUD100K and can be resolved internally (i.e. without external expert support).</p>

Level	Descriptor	What is the worst credible outcome?
4	Major	<p>Health*: Illness or chronic exposure resulting in significant life-impacting effects.</p> <p>Safety*: Serious injuries, requiring immediate emergency hospital treatment as an inpatient, resulting in significant permanent disabling injury e.g. reduced mobility, loss of fingers or extended temporary impairment and/or extended hospitalisation. Serious/dangerous incident/occurrence (as per regulatory reporting definition).</p> <p>Environment*: Localised and measurable medium-term impact on habitat, species, or natural environment.</p> <p>Property Damage: Major damage to capital infrastructure – equipment inoperable or made unsafe for use requiring replacement or major overhaul. Shut-down of smaller site may be necessary, or HV/HME written off.</p> <p>Regulatory*: Formal, higher level intervention (including a PIN, prohibition notice or similar) with risk of further intervention at a site and risk of further interventions at other sites. Material risk of regulatory investigation or prosecution.</p> <p>Community/Reputation: Coordinated community and stakeholder action at a local and/or regional level including media coverage.</p> <p>Quality: Incident that results in a potential or actual claim (or rework) in excess of AUD100K and that generally requires external engineering or legal support.</p>
5	Severe	<p>Health*: Severe illness or chronic exposure resulting in fatality or significant life- shortening effects.</p> <p>Safety*: Fatality or life threatening injuries, or resulting in substantial life changing permanent disability e.g. blindness, loss of hand(s), limbs or use of limbs.</p> <p>Environment*: Extensive and measurable medium to long-term impact on habitat, species, or natural environment.</p> <p>Property Damage: Severe damage to capital infrastructure – multiple equipment requiring replacement or requiring a shutdown and overhaul of a major site.</p> <p>Regulatory*: Formal, higher level intervention (e.g. prohibition notice or stop work order) at a site and risk of further interventions at other sites. Prosecution or material risk of prosecution.</p> <p>Community/Reputation: Widespread community and stakeholder opposition and/or significant negative state or national media coverage.</p> <p>Quality: Incident that may result in significant erosion of share market value or loss of reputation.</p>

Note *: Events which have or could result in Level 4 or 5 health and safety consequences are further categorised as a 'Serious Harm Event' for reporting and management purposes.

4. General Emergency Requirements

In the event of an emergency the process to follow shall include:

- Make area safe - Move people in immediate danger to safety, and ensure their continued safety and care
- If safe to do so, provide assistance to injured persons. Conduct a risk assessment.
- Consider providing an escort for Emergency Services
- Report details to the Chief Warden or Area Warden immediately.
- In case of pollution incidents, nominated personnel are to immediately notify all Regulatory Authorities listed in Section 2.8.2 (see Attachment 8.1 for further details).
- Notify site manager/supervisor
- Shut down or switch off appliances. **LEAVE LIGHTS ON.**
- Restrict access to the area.
- Await further instructions

The main concern is the safeguarding of life and immediate treatment of injured people. If safe to do so, vital records and equipment should also be protected.

5. Emergency Response

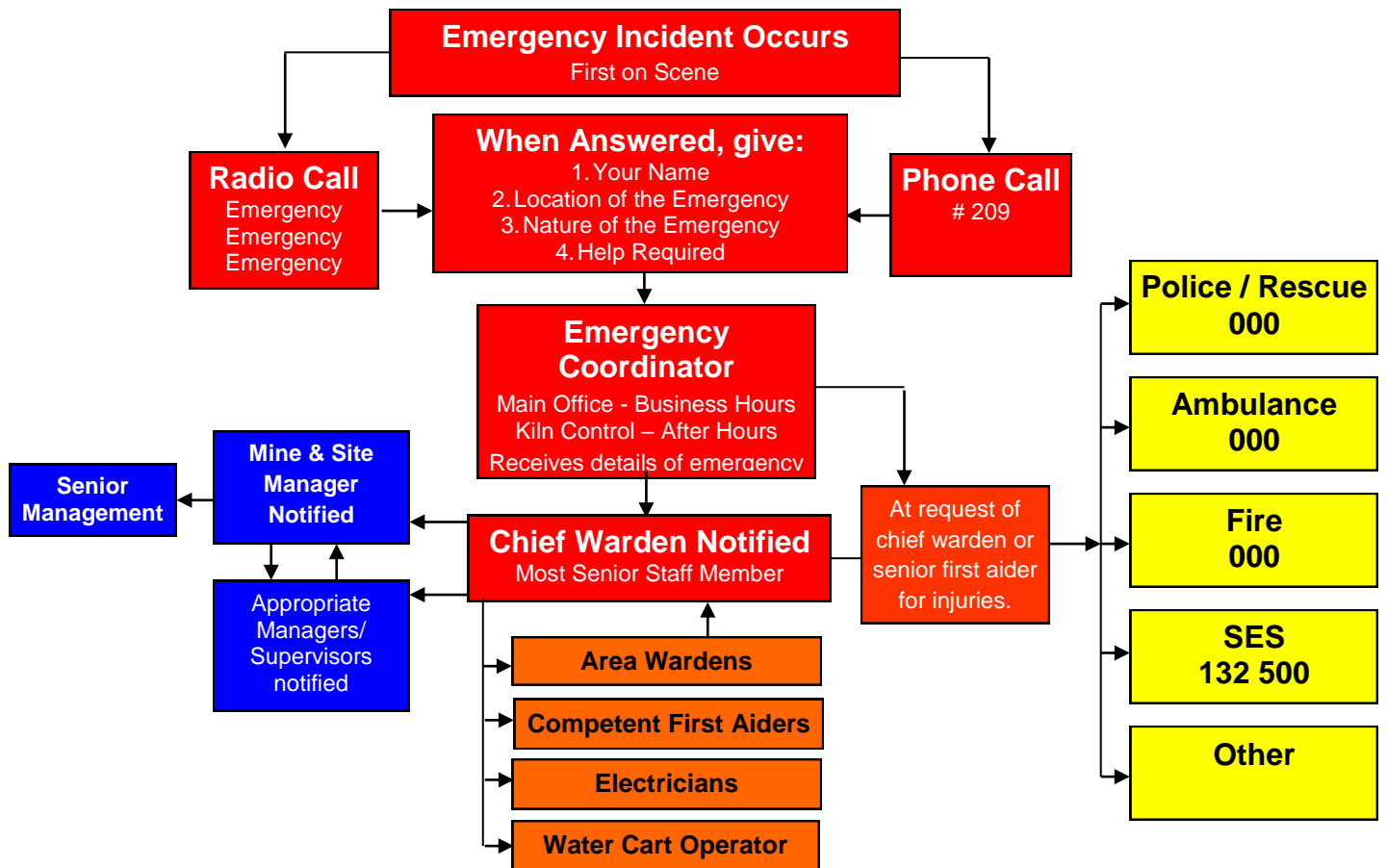
5.1 Emergency Response Initiation

EMERGENCY RESPONSE INITIATION
<p>WHO:</p> <p>FIRST ON SCENE</p>
<p>HOW:</p> <p>MAKE AN EMERGENCY CALL OVER THE RADIO</p> <p>EMERGENCY, EMERGENCY, EMERGENCY</p> <p>OR A CALL OVER THE PHONE (EXT 209)</p> <p>REPEAT UNTIL ANSWERED</p> <p>When Answered, give:</p> <ol style="list-style-type: none"> 1. Your Name 2. Location of the Emergency 3. Nature of the Emergency 4. Help required <p>Answer any questions asked then stand-by</p>
<p>Check for DANGER, then provide assistance to your level of competence. DO NOT put yourself at unnecessary risk. Follow instructions of the Chief Warden / Area Warden.</p>
<p>Maintain radio silence. An evacuation call will be issued through the radio network if required. If you did not hear the radio call and do not know what is happening, ask.</p>
<p>Evacuate quickly and calmly to the designated Assembly Point</p> <p>when advised to do so.</p>
<p>DO NOT RE-ENTER THE AREA UNTIL INSTRUCTED TO DO SO BY</p> <p>THE CHIEF WARDEN</p>

Emergency Coordinator – Emergency Response Initiation

EMERGENCY RESPONSE INITIATION – Upon receiving the emergency call the Emergency Coordinator will:
Log the information from the emergency call on the call record page.
Notify the Chief Warden by radio or phone (if they are unaware of the situation). Call Emergency, Emergency, Emergency by radio and ask for the Chief Warden (Channel 1 for the Mine, 3 for the Kiln).
Follow the Chief Wardens instructions.
Follow the Emergency Coordinators Duty Card

5.2 Marulan EMP Flow Chart



Upon being notified of an Emergency		Upon hearing an emergency call, or being notified (Refer to appropriate Duty Cards)				
Chief Warden	Emergency Coordinator	Area Wardens	Competent First Aiders	Electricians	Water Cart Operator	Site Personnel
Receive the call, assess the situation, decide what response is required. Secure the scene.	Log the emergency call information and call for the Chief Warden	Oversee Evacuation of personnel, as required	Prepare To mobilise	Prepare To mobilise	Prepare to mobilise - Check Water Level and advise Chief Warden when ready	Cease operations as directed and adhere to radio silence.
Evacuate or withdraw personnel from danger as necessary. Use appropriate Duty Cards for the emergency	Follow Chief Wardens Instructions. Log all incoming and outgoing communications	Conduct sweep of area and account for personnel	If required, travel to emergency scene to assist and report to the Chief Warden upon arrival.	Travel to emergency scene to disconnect / isolate power – if directed to do so	If required, travel to emergency scene to assist - report to the Chief Warden upon arrival.	Evacuate quickly and calmly to designated Assembly Point when advised to do so.
Delegate a deputy to activate Emergency Services as required. Dispatch a guide to gate	Confirm with each assembly point personnel present and any missing personnel	Report missing persons to Emergency Coordinator	Stand-by and await further instructions	Stand-by and await further instructions	Stand-by and await further instructions	Control Room Operators – Prepare to shutdown plant if requested
Call and mobilise on site resources as required. Make appropriate notifications to management	Advise the Chief Warden of Missing Personnel and when all personnel have been accounted for	Remain at the Emergency Assembly Area until the emergency is declared over.				Stand-by and await all-clear before resuming operations
Coordinate with Emergency Coordinator on missing personnel.	Provide information via the radio to the Chief Warden.					
Handover to more Senior staff member/emergency services as required	Follow instructions from the Chief Warden until all clear is given.					
Secure scene and advise site when emergency is declared over						

Once Emergency is declared over, a post incident review / debrief should be conducted. Consider counselling for those involved.

5.3 Emergency Coordinator Duty Card

EMERGENCY COORDINATORS DUTY CARD	
THE EMERGENCY COORDINATOR WILL BE THE MAIN OFFICE ADMINISTRATION OR THE KILN CONTROLLER ON BACK SHIFTS AND WEEKEND	
ACTION	
1.	Receive the radio or phone call notification of the emergency. Log the Information from the call on the Initial Call record sheet.
2.	Notify the Chief Warden by radio or phone. Call Emergency, Emergency, Emergency by radio and ask for the Chief Warden (Channel 1 for the Mine, 3 for the Kiln).
3.	Follow the Chief Wardens instructions
4.	Log all incoming and outgoing communications on the Emergency Communications Log
5.	Print 6 copies of the Kronos Employees On Site Report and print evacuation report out of Who's On Location (6 copies) and give to the Chief Warden who will delegate distribution to Area Wardens
6.	Confirm with each assembly point the following (via radio): <ul style="list-style-type: none"> • That personnel are accounted for in that area • Personnel that are not normally at their designated emergency evacuation point and • Missing people – fill out missing persons form
7.	Advise the Chief Warden of Missing Personnel and when all personnel have been accounted for
8.	Provide information via the radio to the Chief Warden and his delegate regarding the situation
9.	Follow instructions as given to you by the Chief Warden until all clear is given.
IMPORTANT INFORMATION FOR THE EMERGENCY COORDINATOR	
Do Not give information to unauthorised persons. E.g. to the press or families	
Statements are only to be made by the responsible manager	
Do Not tie up phones lines with calls not related to the emergency	
Follow Instructions as given to you by the chief warden.	

5.4 Information to Obtain from the Initial Call and Record

INFORMATION OF INITIAL CALL AND RECORD

INFORMATION REQUIRED	DETAILS
Name of call receiver (your name)	
Date	
Time	
Name of Caller	
Location of the caller	
Location of the incident	
WHAT IS THE SITUATION??? Any Immediate DANGER? Obtain a brief description! (e.g.; Serious Injury, Fire, Chemical Spillage, Environmental, Fatality, Explosion, Bomb Threat, Natural Disaster, etc.)	
Names of any Casualties (not over the radio)	
Details of Injuries/Casualty Condition	
Number of Persons Missing and Names (no names over radio)	
If Chemicals or Explosives are involved <i>Give details if possible</i>	
Action Taken so far??? Ensure that the integrity of the scene is maintained, (as near as reasonably practicable), for post incident investigation. E.g.; barricading etc.	

REPEAT INFORMATION BACK TO CALLER FOR VERIFICATION

NOTE: LOG ALL CALLS IN AND OUT

5.5 Emergency Communications Log

[illegible]

5.6 Missing Persons Sheet

MISSING PERSONS SHEET			
Date:			
Area Warden:			
Time Completed:			
Check:	<input type="checkbox"/> Kronos Report <input type="checkbox"/> Who's On Location Report <input type="checkbox"/> Work Permits <input type="checkbox"/> Attendance records		
NAME	OTHER ID	WORKPLACE	LAST KNOWN LOCATION

Signature: _____ Date: _____

5.7 Chief Warden Duty Card and Action List

CHIEF WARDEN DUTY CARD AND ACTION LIST

THE CHIEF WARDEN WILL BE THE MOST SENIOR BORAL CEMENT LTD MEMBER ONSITE AT THE TIME

USE THIS DUTY CARD AND ACTION LIST IN CONJUNCTION WITH ALL OTHER DUTY CARDS. THIS DUTY CARD AND ACTION LIST CAN BE USED BY THE CHIEF WARDEN OR DELEGATED TO ANOTHER PERSON. **C = CRITICAL ACTIONS**

EMERGENCY ACTION PLAN

Survey the Scene	What happened?
	How many casualties are there?
	Are there any bystanders that can assist?
	Is the scene safe – yourself / bystanders/ casualty?
	Is evacuation of the area / site necessary?
	Are first aiders required?
Call Emergency Services	Listen carefully, give exact location, give call back number, give incident details and casualty condition (if possible delegate to bystander)
	Post a sentry to escort emergency services
Get an assessment on Life Threatening injuries	Response, Airway, Breathing, Severe Bleeding (from bystanders, first aiders on scene)
Follow Up	Is the scene secure?
	Have all relevant people/ regulators been notified?
	Has a debrief taken place?

ACTION

1. Receive the radio or phone call notification of the emergency.
2. **C** Assess the situation, if the situation and information you receive warrants immediate action you must decide:

DOES THE INCIDENT AFFECT THE WHOLE SITE?

IF YES CALL PRODUCTION /LIME PLANT MANAGER IMMEDIATELY

IF NO CONTACT, THE RELEVANT AREA WARDEN/S

YOU ARE IN CHARGE UNTIL RELIEVED BY MORE SENIOR STAFF

IF YOU NEED MORE INFORMATION THEN:

 - ◆ Check the situation in person or contact people at the emergency site
 - ◆ Then decide whether to implement the full emergency procedures;

Or a variation of them depending on the situation.

<p>3.</p> <p>C</p>	<p>Evacuate / withdraw personnel as necessary</p> <p>If evacuation procedures are activated call area wardens</p> <p>Activate the Evacuation Alarm (if required). Notification by Radio Channel, (1 Mine and 3 Kiln).</p> <p>Note: Evacuation Alarm can be activated from various locations including mine office</p> <table border="1"> <tr> <td> <p>Radio Call:</p> </td><td> <p><i>Name of Department/s (or if site) that need to evacuate then “Evacuate, Evacuate, Evacuate”</i></p> <p>Repeat Message 2 Times & Activate Evacuation Alarm</p> </td></tr> </table>	<p>Radio Call:</p>	<p><i>Name of Department/s (or if site) that need to evacuate then “Evacuate, Evacuate, Evacuate”</i></p> <p>Repeat Message 2 Times & Activate Evacuation Alarm</p>
<p>Radio Call:</p>	<p><i>Name of Department/s (or if site) that need to evacuate then “Evacuate, Evacuate, Evacuate”</i></p> <p>Repeat Message 2 Times & Activate Evacuation Alarm</p>		
<p>4.</p>	<p>Consider the evacuation of houses/people beyond the mine site, if required.</p>		
<p>5.</p> <p>C</p>	<p>Secure the scene - post sentries at entries and exits to isolate affected areas/sections.</p>		
<p>6.</p>	<p>Consider using the Administration Building Training Room as a communication/resource base for major emergencies.</p> <p>DELEGATE PEOPLE TO PHONES AND RECORD KEEPING.</p>		
<p>7.</p> <p>C</p>	<p>Delegate a deputy to activate Emergency Services as required Ring 000</p> <p>Fire Brigade. (For fires and chemical spills).</p> <p>Ambulance (If there are persons injured or missing).</p> <p>Police (For emergency road control and escort, etc. Or, if there are any fatalities or serious injuries).</p> <p>And give:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Location <input type="checkbox"/> Your Name <input type="checkbox"/> Nature of Emergency <input type="checkbox"/> Number of Casualties <p>If Chemicals or Explosives are involved give:</p> <ul style="list-style-type: none"> ◆ Hazchem Number ◆ UN Number ◆ Name of Substance ◆ Obtain SDS from Chemaalert <p>Call the Services Required. Depending on the circumstances, e.g., Fire, Rock fall, Vehicle accident, refer to the other sections of the Emergency Plan. Consider Police Rescue for vehicle entrapment. Telephone via Police on 000.</p>		
<p>5.</p> <p>C</p>	<p>Dispatch a guide to the Aglime/ Marulan South Rd Intersection for immediate allocation of outside Emergency Services to the affected areas.</p>		

6.	<p>Mobilise onsite resources as required –</p> <p>Check what First Aiders are on site by calling on radio. They need to assemble at the First Aid Room, (Ph. 243), for immediate task allocations if required.</p> <p>Contact Electricians and Water Cart Operators if required at emergency scene.</p> <p>Use available personnel as required to remove a hazard, stabilise or control the emergency situation.</p> <p>NOTE: DO NOT expose any personnel to unnecessary risks.</p>
7. C	<p>Contact the Site Manager, WHS Business Partner, Production and Lime Plant Managers</p>
8.	<p>Security: Do not allow visitors or press onto the mine site. (Post person at front gate, Sand Plant and Lime Plant gates)</p>
9.	<p>Nominate somebody to distribute copy of Kronos Report and Who's On Location Report to each assembly area.</p>
10.	<p>Coordinate with the Emergency Coordinator on missing personnel and for numbers or discrepancies of personnel.</p>
7.	<p>Use the appropriate Duty Cards for the emergency.</p> <p>NOTE: You may have to use more than one Duty Card e.g.; fire involving serious injury. Consider delegating Duty Cards to other people who may be present and on standby.</p>
9.	<p>YOU MUST make continuous assessments of the;</p> <ul style="list-style-type: none"> ◆ Emergency situation. ◆ Teams activities. ◆ Associated risks/hazards – Environmental and Safety. <p>Any changes or developments.</p>
11.	<p>You are in control until relieved by a more senior staff member (or emergency services at their request)</p> <p>Make sure that the area where the Incident/Accident occurred is not disturbed. Tape off the area to keep unauthorised personnel out.</p>
12.	<p>When the emergency is over, inform all personnel involved in the emergency response. (Use the radio or any other communication means to complete this action. e.g.; attention all personnel, the emergency is over!).</p>
13.	<p>Consider counselling for those involved in incident.</p> <p>Offer Boral Employee Assistance Program 1300 00BEAP</p>
14.	<p>Arrange suitable date and time for debrief of incident.</p> <p>Did the Emergency Response Plan and associated resources adequately meet the needs identified during the emergency? Identify deficiencies and plan to address them.</p>

5.8 Competent First Aiders Duty Card

COMPETENT FIRST AIDERS DUTY CARD	
Upon hearing an emergency call, or being notified, competent First Aiders will:	
	ACTION
1.	As far as is practical, establish the location and severity of the emergency event
2.	Check first aid supplies at hand and remain in contact
3.	Prepare to mobilise
4.	If required, travel to emergency scene to assist and report to the Chief Warden upon arrival.
6.	Check for DANGER to self and others before responding at the scene.
7.	Respond as requested by the Chief Warden and/or the Emergency Coordinator.
8.	Assist with injured persons and First Aid as necessary.

5.9 Electricians Duty Card

ELECTRICIANS DUTY CARD	
The role of Electricians in an emergency is to manage electrical hazards at the emergency scene by disconnecting, isolating and testing for zero potential.	
Upon hearing an emergency call, or being notified, electricians will:	
	ACTION
1.	As far as is practical, establish the location and severity of the emergency event
2.	Check electrical protective and test equipment at hand and remain in contact.
3.	Prepare to mobilise
4.	If required, travel to emergency scene to assist and report to the Chief Warden upon arrival.
6.	Check for DANGER to self and others before responding at the scene.
7.	Assist with disconnection/isolation of electrical equipment as necessary.
8.	Respond as requested by the Chief Warden and/or the Emergency Coordinator.
9.	Assist with injured persons and First Aid as necessary.

5.10 Water Truck Operators Duty Card

WATER TRUCK OPERATOR DUTY CARD

The role of an authorised Water Truck Operator in an emergency is to attend incidents where bulk water may be required for: firefighting/control, dust suppression or clean-up activities.

Upon hearing an emergency call, or being notified, the Water Truck Operator will:

	ACTION
1.	As far as is practical, establish the location and severity of the emergency event
2.	Check water level and advise Chief Warden when ready.
3.	Prepare to mobilise
4.	If required, travel to emergency scene to assist and report to the Chief Warden upon arrival.
6.	Check for DANGER to self and others before responding at the scene.
7.	Respond as requested by the Chief Warden and/or the Emergency Coordinator.
8.	Provide assistance in Fire Fighting, dust suppression or clean-up activities. IF ELECTRICAL FIRE – DO NOT attempt to apply water to fire unless Electrician has verified power disconnected. If HEAVY EQUIPMENT FIRE – DO NOT attempt to approach fire unless the Chief Warden has verified tyres are not heated or on fire.

5.11 Site Personnel Duty Card

SITE PERSONNEL DUTY CARD

The role of Site Personnel in an emergency is to adhere to emergency procedures, maintain radio silence, and evacuate as necessary to nearest Emergency Assembly Area.

Upon hearing an emergency call, or being notified, the Site Personnel will:

	ACTION
1.	Cease operations as directed and adhere to radio silence.
2.	If evacuation is required: <ul style="list-style-type: none"> Follow instructions of the Warden or Supervisor; Evacuate to nearest Emergency Assembly Area; and Remain there until the 'all clear' is given. Assist with the emergency response, but only if requested.
3.	Control Room Operators – Prepare to shutdown plant if requested
4.	Standby and await instructions from Chief Warden before resuming operations

6. Evacuation

The first responsibility of all personnel is to quickly move anyone in immediate danger to safety and ensure that they are accounted for by the Warden.

When in doubt ... EVACUATE

STAGES OF EVACUATION

Stage 1 – Immediate Move away from immediate danger

Stage 2 – Total Total evacuation of the premises

Assessment to evacuate is done by the Chief Warden in consultation with Area Wardens.

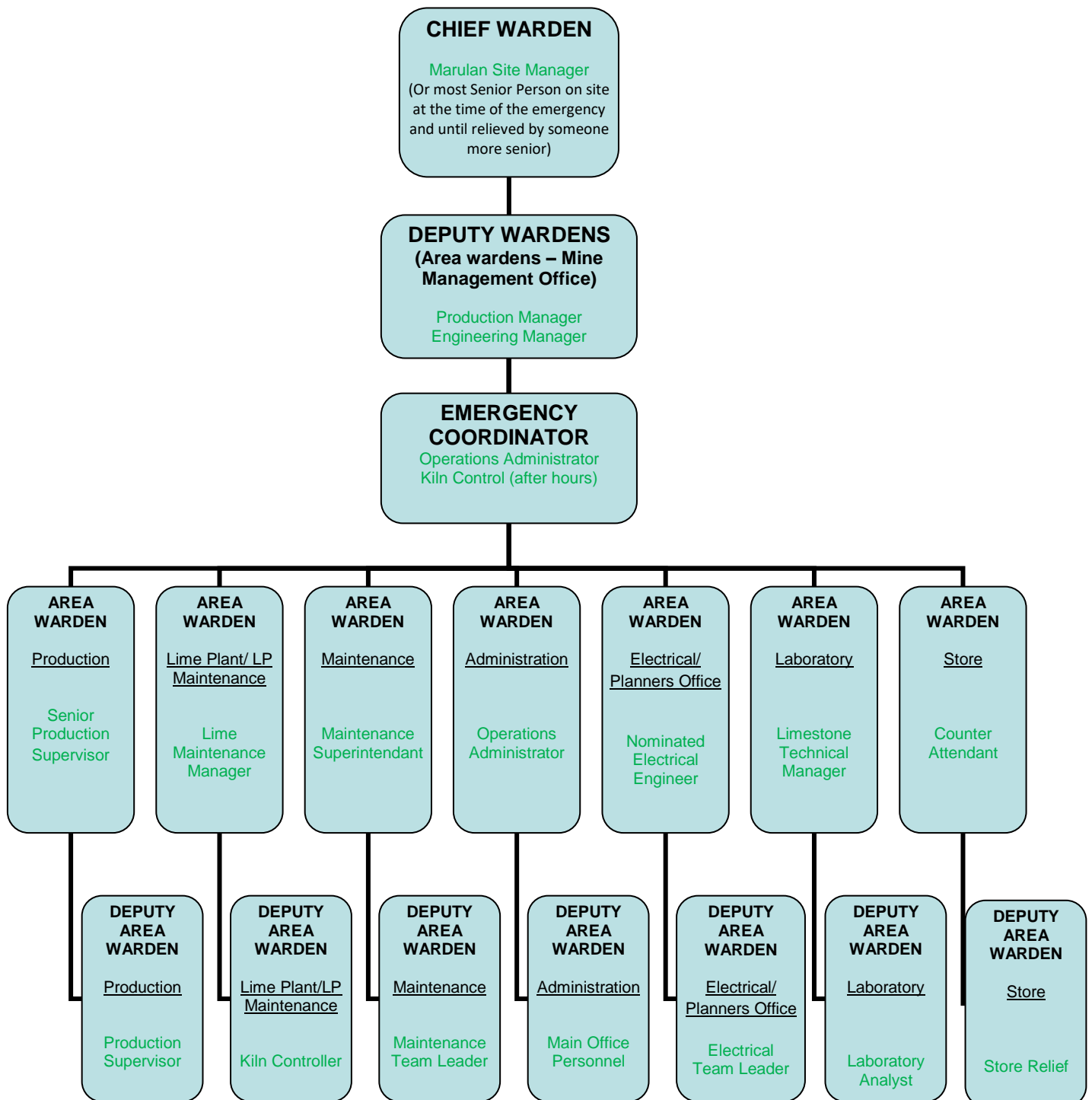
Factors which must be immediately considered to determine stages and priorities are as follows:

- a) Location and extent of the emergency.
- b) The proximity of flammable gases, liquids and other flammable materials or suspect item (in the case of a bomb threat).
- c) If there has been a toxic emission, evacuation must be kept away from direction of emission and wind.
- d) Whether it is safe to try to extinguish the fire or block off smoke, or whether the initial attack on the fire looks like it will be successful.
- e) The nature and type of any injuries sustained by people in the danger area and whether those present are capable of evacuating all people in danger.
- f) The nearest safe exit route.

EVACUATION ALL-CLEAR

Entry or re-entry is strictly forbidden until authorised by the Officer-in-Charge of the attending emergency authority. If no emergency authority is in attendance, entry or re-entry is forbidden until the Incident Controller gives the all clear and the Site/Operations Manager authorises re-entry.

6.1 Area Wardens



Area Warden Duty Card

AREA WARDEN DUTY CARD	
Remember that the Chief Warden is in charge until the emergency is over or relieved by a more senior official.	
	ACTION
1.	<p>On the request to evacuate the area from the Chief Warden, you should take the following things to the "Assembly Point":</p> <ul style="list-style-type: none"> a. Employee Evacuation Checklist (in this plan) b. Kronos Report and Who's On Location Report – these will be distributed through the Chief Warden <p>ONLY COLLECT THIS INFORMATION IF IT IS SAFE TO DO SO</p>
2.	Nominate someone to check Meal Room, Change Rooms, Offices and Toilets
3.	Direct all people to the nearest assembly area and conduct a final check to make sure the area is clear.
4.	Advise the Chief Warden that the area has been evacuated.
6.	Check off all people at the Assembly Point on the employee evacuation checklist
7.	Advise and report any extra people that are not normally at their designated emergency evacuation point and missing people to the Emergency Coordinator
8.	All Area Wardens will advise if anyone on the "Missing Persons List" has responded to the First Aid Room call, are assisting at the scene or are at another evacuation point
10.	Remain at the Emergency Assembly Area until the emergency is declared over. Do not allow anyone to return into the affected area until all clear is given by the Chief Warden

6.2 Evacuation Checklist

EMPLOYEE EVACUATION CHECKLIST						
Area Warden:						
Date:			Time:			
Evacuation Point A	Present	Evacuation Point B & D	Present	Evacuation Point C	Present	Evacuation Point C Cont.
Store		Lime Plant		C1		Maintenance
Wagner Don		Murnane Frank		Brooker Keith		
		Allan Josh		Cushan Matt		Ariza Bagaskara
		Bryant Trent		Friend Shayne		Bell Garry
Prod /Weighbridge		Chalhoub Joe		Hassett Tony		Bell Glen
Hedges Kristy		Downey Phil		Hancock Roger		Brown Dave
		Fernandez Alex		King Michael		Downey Steve
		Gorman Scott		Redman Josh		Esson James
		Hartin Jake		Thornhill Rodney		Jackson Peter
Lab		Phillips Tony		Toohey Marisa		Latham Rod
McNeillage Sean		Parlett Paul		Turner Noel		McDonald Steve
Octaviano Michael		Pompei Paul		C2		Murdoch Greg
		Targa James		Baxter Jeff		O'Connell Dalton
Administration		Worldon Dean		Dixon Mick		Peden Steve
				Fagan Kain		Steward Rob
Oakley Jody		Lime Plant Maint.		Gagin Paul		Sellers Blake
Smith Mark		Kariyawasam Sam		Moorby Anthony		
Nagle Garth		Daniel Josh		Squires Bruce		
Hadjia Therese		Harrison Jeremy		Swan Brad		
		Touma Rohan		Watts Keegan		
Mine Admin		Young Paul		Young Nathan		
Smith AJ		Bell Rodney		C3		
Atkinson Cameron				Brown Angus		
Longhurst Les		Truck Weighbridge		Evans Daniel		Contractors and Visitors
Young Darryl		McCarthy Rodney		Hill Shane		
Whittaker Jamie				Holgate Steve		
Andrew Hillier				Napier Keiran		
		Production Day		O'Brien Jonno		
		Byrne Rod		Phelps Ian		
Planners/Elect Office		Croker Brian		Poka Barry		
Randazzo Pete		Chapman Craig		Skelly Matt		
Brook Matt		Lenane Paddy		Te Whare Wira		
Charnock Luke		Phelps Mark		C4		
				Chandler Luke		
Electrical				Chapman Matt		
Griffiths Flynn				Croker Adrian		
Griffiths Benn				Gibson Mark		
Muddiman Brad				Redman Mick		
Meyers David				Rice Greg		
Ostridge Thomas				Taylor Ricky		
				Wilson Steve		

6.3 Evacuation Procedure – Administration

EVACUATION PROCEDURE ADMINISTRATION

Area Wardens	Main Administration Building:	Operations Administrator / Main Office Personnel
	Mine Management Building:	Chief Warden/ Deputy Warden

Responsibilities: Co-ordinate Evacuation Area and follow the Actions on the Area Warden's Duty Card.

If an evacuation is called the site evacuation system will be activated, do the following:

- ♦ **The people raising the alarm notify** the control room or main office via radio or ext. 209.
- ♦ **Chief Warden** notified and an Area Warden appointed
- ♦ **The Area Wardens' are listed above.**
- ♦ **Area Warden** will then commence evacuation of the site.
- ♦ **Area Warden will call "EVACUATE EVACUATE EVACUATE" repeated 2 times**
- ♦ **The Area Warden** is to nominate someone to check the Kitchen, Offices, Meeting Rooms and Toilets.

All personnel will:

- ♦ **Evacuate** through the nearest Exit.
- ♦ **Proceed** quickly and calmly to the designated Assembly Point.

***"PRIMARY ASSEMBLY POINT "A" – GRASSED AREA
OPPOSITE MINE MANAGEMENT BUILDING***

DO NOT RE-ENTER AREA AFFECTED BY FIRE OR SMOKE

- ♦ Investigate the whereabouts of missing personnel immediately.
- ♦ If unable to locate missing personnel the chief warden is to be notified immediately.

***DO NOT RE-ENTER THE BUILDING UNTIL INSTRUCTED
TO DO SO BY THE CHIEF WARDEN***

6.4 Evacuation Procedure – Lime Plant

EVACUATION PROCEDURE LIME PLANT / LIME PLANT MAINTENANCE

Area Wardens	Lime Plant	Lime Maintenance Manager/Kiln Controller
	Covers Kiln, Lime Dispatch Plant and Lime Storage Area	

Responsibilities: Co-ordinate Evacuation Area and follow the Actions on the Area Warden's Duty Card.

If an evacuation is called the site evacuation system will be activated, do the following:

- ♦ **The people raising the alarm** notify the control room or main office via radio or ext. 209.
- ♦ **Chief Warden notified** and an Area Warden appointed
- ♦ **The Area Wardens are listed above.**
- ♦ **Area Warden** will then commence evacuation of the site.
- ♦ **Area Warden will call "EVACUATE EVACUATE EVACUATE" repeated 2 times**
- ♦ **The Area Warden** is to nominate someone to check the Meal Room, Change Rooms and Toilets.

The Area warden will instruct all Lime truck drivers in the area to immediately stop loading and evacuate to either assembly point B or D on UHF Channel 17

***"PRIMARY ASSEMBLY POINTS "B & D" –
NEAR KILN DAM, ADJACENT TO LIME PLANT WORKSHOP"***

NOTE: If the **emergency/incident is not in the lime plant and there is no immediate danger**, the **Kiln Controller** is required to **stay in the control room and monitor the kiln condition only.**

They must keep in constant radio contact with the Lime Plant Area Warden

AVOID: SMOKE, FUMES, MISTS, CHEMICAL SPILLS & DUSTS

- ♦ Investigate the whereabouts of missing personnel immediately.
- ♦ If unable to locate missing personnel the chief warden is to be notified immediately.

***DO NOT RE-ENTER THE BUILDING UNTIL INSTRUCTED
TO DO SO BY THE CHIEF WARDEN***

6.5 Evacuation Procedure – Pit Area

EVACUATION PROCEDURE PIT AREA

Area Wardens	Pit Area:	Senior Production Supervisor / Production Supervisor
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Responsibilities: Co-ordinate Evacuation Area and follow the Actions on the Area Warden's Duty Card.

If an evacuation is called the site evacuation system will be activated, do the following:

- ♦ **The people raising the alarm** notify the control room or main office via radio or ext. 209.
- ♦ **Chief Warden notified** and an Area Warden appointed
- ♦ **The Area Wardens are listed above.**
- ♦ **Area Warden** will then commence evacuation of the site.
- ♦ **Area Warden will call "EVACUATE EVACUATE EVACUATE" repeated 2 times**

All personnel will:

- ♦ **Maintain radio silence.** An evacuation call will be issued through the radio network. If you did not hear the radio call and do not know what is happening, ask.
- ♦ Move to the centre of the pit away from all walls and benches
- ♦ Make communication with the Area Warden and state your name and location.
- ♦ **Evacuate** to the designated Assembly Point when advised to do so.

"PRIMARY ASSEMBLY POINT "C"– BEHIND CRUSHER CONTROL ROOM"

AVOID: SMOKE, FUMES, MISTS, CHEMICAL SPILLS & DUSTS

- ♦ Investigate the whereabouts of missing personnel immediately.
- ♦ If unable to locate missing personnel the chief warden is to be notified immediately.

***DO NOT RE-ENTER THE AREA UNTIL INSTRUCTED
TO DO SO BY THE CHIEF WARDEN***

6.6 Evacuation Procedure – Reclaim / Diesel Fuel Bay Area

EVACUATION PROCEDURE TEMPORARY DIESEL FUEL BAY AREA

Area Wardens	Reclaim	Senior Production Supervisor / Production Supervisor
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Responsibilities: Co-ordinate Evacuation Area and follow the Actions on the Area Warden's Duty Card.

If an evacuation is called the site evacuation system will be activated, do the following:

- ♦ **The people raising the alarm** notify the control room or main office via radio or ext. 209.
- ♦ **Chief Warden notified** and an Area Warden appointed
- ♦ **The Area Wardens are listed above.**
- ♦ **Area Warden** will then commence evacuation of the site.
- ♦ **Area Warden will call "EVACUATE EVACUATE EVACUATE" repeated 2 times**

All personnel will:

- ♦ **Maintain radio silence.** An evacuation call will be issued through the radio network. If you did not hear the radio call and do not know what is happening, ask.
- ♦ **Evacuate** through the nearest Exit.
- ♦ **Proceed** quickly and calmly to the designated Assembly Point.

"PRIMARY ASSEMBLY POINT "C"– BEHIND CRUSHER CONTROL ROOM"

AVOID: SMOKE, FUMES, MISTS, CHEMICAL SPILLS & DUSTS

- ♦ Investigate the whereabouts of missing personnel immediately.
- ♦ If unable to locate missing personnel the chief warden is to be notified immediately.

***DO NOT RE-ENTER THE AREA UNTIL INSTRUCTED
TO DO SO BY THE CHIEF WARDEN***

6.7 Evacuation Procedure – Workshop

EVACUATION PROCEDURE WORKSHOP

Area Wardens

Workshop

Maintenance Superintendant / Maintenance Team Leaders

Responsibilities: Co-ordinate Evacuation Area and follow the Actions on the Area Warden's Duty Card.

If an evacuation is called the site evacuation system will be activated, do the following:

- ♦ **The people raising the alarm notify** the control room or main office via radio or ext. 209.
- ♦ **Chief Warden** notified and an Area Warden appointed
- ♦ **The Area Wardens' are listed above.**
- ♦ **Area Warden** will then commence evacuation of the site.
- ♦ **Area Warden will call "EVACUATE EVACUATE EVACUATE" repeated 2 times**
- ♦ **The Area Warden** is to nominate someone to check the Meal Room, Change Rooms and Toilets.

All personnel will:

- ♦ **Maintain radio silence.** An evacuation call will be issued through the radio network. If you did not hear the radio call and do not know what is happening, ask.
- ♦ **Evacuate** through the nearest Exit.
- ♦ **Proceed** quickly and calmly to the designated Assembly Point.

***"PRIMARY ASSEMBLY POINT "C"– BEHIND CRUSHER
CONTROL ROOM"***

AVOID: SMOKE, FUMES, MISTS, CHEMICAL SPILLS & DUSTS

- ♦ Investigate the whereabouts of missing personnel immediately.
- ♦ If unable to locate missing personnel the chief warden is to be notified immediately.

***DO NOT RE-ENTER THE AREA UNTIL INSTRUCTED
TO DO SO BY THE CHIEF WARDEN***

6.8 Evacuation Procedure – Truck and Rail Weighbridges

EVACUATION PROCEDURE TRUCK AND RAIL WEIGHBRIDGES

Area Wardens	Rail Weighbridge	Rail Dispatcher
	Truck Weighbridge	Weighbridge Attendant / Kiln Control

Responsibilities: Co-ordinate Evacuation Area and follow the Actions on the Area Warden's Duty Card.

If an evacuation is called the site evacuation system will be activated, do the following:

- ♦ **The people raising the alarm** notify the control room or main office via radio or ext. 209.
- ♦ **Chief Warden** notified and an Area Warden appointed
- ♦ **The Area Wardens' are listed above.**
- ♦ **Area Warden** will then commence evacuation of the site.
- ♦ **Area Warden will call "EVACUATE EVACUATE EVACUATE" repeated 2 times**
- ♦ **The Truck Weighbridge Area Warden** will instruct all truck drivers (via UHF Channel 10) in the area to immediately evacuate to the primary assembly area near the Kiln Dam and ensure all drivers on site are accounted for.
- ♦ **The Rail Weighbridge Area Warden** will instruct the PN train drivers (via the rail radios) in the Medway Quarry Yard to immediately evacuate to the primary assembly area A opposite Mine Management Building

All personnel will:

- ♦ **Maintain radio silence.** An evacuation call will be issued through the radio network. If you did not hear the radio call and do not know what is happening, ask.
- ♦ **Evacuate** through the nearest Exit.
- ♦ **Proceed** quickly and calmly to the designated Assembly Point.

"TRUCK WEIGHBRIDGE: PRIMARY ASSEMBLY POINTS "B" – NEAR KILN DAM"

"RAIL WEIGHBRIDGE: PRIMARY ASSEMBLY POINT "A" – GRASSED AREA OPPOSITE MINE MANAGEMENT BUILDING"

AVOID: SMOKE, FUMES, MISTS, CHEMICAL SPILLS & DUSTS

- ♦ Investigate the whereabouts of missing personnel immediately.
- ♦ If unable to locate missing personnel the chief warden is to be notified immediately.

**DO NOT RE-ENTER THE AREA UNTIL INSTRUCTED
TO DO SO BY THE CHIEF WARDEN**

6.9 Evacuation Procedure – Store / Lab

EVACUATION PROCEDURE STORE / LABORATORY/ ELECTRICAL OFFICES

Area Wardens	Store	Counter Attendant / Stores Accounts
	Laboratory	Limestone Technical Manager / Lab Analyst
	Electrical Offices	Electrical Engineer / Electrical Team Leader

Responsibilities: Co-ordinate Evacuation Area and follow the Actions on the Area Warden's Duty Card.

If an evacuation is called the site evacuation system will be activated, do the following:

- ♦ **The people raising the alarm** notify the control room or main office via radio or ext. 209.
- ♦ **Chief Warden** notified and an Area Warden appointed
- ♦ The **Area Wardens' are listed above**.
- ♦ **Area Warden** will then commence evacuation of the site.
- ♦ **Area Warden will call "EVACUATE EVACUATE EVACUATE" repeated 2 times**
- ♦ **The Area Warden** is to nominate someone to check the Meal Room, Change Rooms and Toilets.

All personnel will:

- ♦ **Maintain radio silence.** An evacuation call will be issued through the radio network. If you did not hear the radio call and do not know what is happening, ask.
- ♦ **Evacuate** through the nearest Exit.
- ♦ **Proceed** quickly and calmly to the designated Assembly Point.

**PRIMARY ASSEMBLY POINT "A" – GRASSED AREA OPPOSITE
MINE MANAGEMENT BUILDING"**

**DO NOT RE-ENTER AREA AFFECTED BY FIRE OR SMOKE
AVOID: SMOKE, FUMES, MISTS, CHEMICAL SPILLS & DUSTS**

- ♦ Investigate the whereabouts of missing personnel immediately.
- ♦ If unable to locate missing personnel the chief warden is to be notified immediately.

**DO NOT RE-ENTER THE AREA UNTIL INSTRUCTED
TO DO SO BY THE CHIEF WARDEN**

7. Fire and Smoke

7.1 Fire and Smoke

FIRE AND SMOKE – CHIEF WARDEN RESPONSIBILITIES

When notified of emergency and location:

- Proceed to the danger area and assess the situation.
- Where deemed necessary, evacuate personnel from the site.
- Initiate the evacuation by sounding the siren.
- For evacuation, confirm that all personnel are being moved to the Safe Assembly Points.
- Advise the emergency services and neighbouring properties as necessary.
- If safe to do so, try to extinguish the fire.
- Ensure that all other immediate and follow-up actions have been taken or are in progress.
- Ensure that 'NO ENTRY' signs are positioned correctly.
- Ensure that Chief Fire Officer is met on arrival at site.
- Hand the situations over to the Chief Fire Officer on arrival, and advise them of:
 - any unaccounted-for personnel
 - the latest situation and actions taken.
- Await instructions from the Chief Fire Officer.

FIRE AND SMOKE – AREA WARDEN RESPONSIBILITIES

- Advise the Chief Warden of any smoke or fire you have been alerted to, and its location.
- Ensure a 'sweep' of your designated area is completed and that all personnel are moved to the Safe Assembly Point.
- The Area Warden must also do a check of the toilets and lunch rooms.
- Confirm that all doors, windows and hatches have been closed to contain fire and block off smoke.
- Confirm that the alarm has been activated and that emergency services have been advised of details and location.
- Conduct a roll call of all employees and visitors. Note any unaccounted-for personnel and initiate a search (where safe to do so).
- Nominated Area Wardens must ensure that 'NO ENTRY' signs are positioned correctly.
- Report any personnel not accounted for to the Chief Warden.

IF SAFE TO DO SO AND AS DIRECTED BY CHIEF WARDEN

- Assist in extinguishing fires.
- Shut down or switch off gas, air conditioning, machines and appliances.
- Leave lights on

7.2 Fire Duty Card

Emergency Procedure	Fire (General) Duty Card	
What happened?	<i>Building / Infrastructure / Vehicle / Grass fire</i>	
Immediate response	<ol style="list-style-type: none"> 1. Ensure safety of those in the vicinity of the area. 2. Advise the supervisor or area warden immediately of the fire or smoke and where it is on site 3. First response Firefighting (extinguishers / fire suppression systems) – if safe to do so. Either fight the fire or evacuate to safety – using the correct extinguisher. 4. Shut down any machines, appliances, valves or switches if it is safe to do so. Close any doors to contain fire if it is safe to do so. 5. Mobilise electrician if electrical risk to disconnect / isolate power 6. Mobilise water truck and other resources if safe to do so 7. Call Fire Brigade on 000 8. Stay upwind from fire – be aware that toxic fumes are given off by some fires. 9. For tyre fires. Walk in the opposite direction from the tyre fire in case it explodes. See Section 8.12 for further details. 10. Follow emergency evacuation procedure to EAA, if safe to do so. 11. Post sentries to stop unauthorised people from entering the area. 	
Further response	<ol style="list-style-type: none"> 1. Make sure that the fire area is isolated and not disturbed when it is extinguished. The person who extinguished the fire should remain alert until the fire brigade have taken control in case the fire reignites. Try to evacuate site, if possible, if not find a safe place for all personnel. 2. Wait for emergency services. Post sentry at Aglime/Marulan South Rd Intersection to guide emergency services 3. Tape off the area to keep unauthorised personnel out. 4. Secure scene for incident investigation 	
Who is in charge?	The Chief Warden is in charge until the emergency is over or until relieved Emergency Services	
Who to call <i>Upon identifying this type of emergency, urgently contact.</i> <i>Follow incident matrix for further notifications</i>	Name Chief Warden / Deputy Warden Emergency Services Mine Management Team – Site Manager, Plant Manager, Pit Manager, Lime Manager, Mine Manager, WHS Business Partner Resources Regulator	Contact no: Two way radio Dial 209 000 Various 1300 814 609
Emergency equipment required	<ul style="list-style-type: none"> ● Site firefighting equipment such as extinguishers, water truck ● First aid kit ● Site communication devices 	
Resuming operations	<ul style="list-style-type: none"> ● Clearance to be obtained from emergency services ● Area made safe. ● This type of incident may require regulator notification and regulatory approval before resuming operations, to be determined by WHS Business Partner and Site Manager. Prevent access to areas involved in the incident until the scene is released. 	

7.3 Bushfire Duty Card

Emergency Procedure	<i>Bush Fire Duty Card</i>
What happened?	<i>Bush Fire in surrounding bushland</i>
Immediate response	<ol style="list-style-type: none"> 1. Assess the situation, listen to the local radio station, check the "Fires Near Me" app and contact the RFS Captain for an update. 2. Use bushfire Trigger action plan to establish if evacuation is possible or if shelter is to be taken. 3. Advise the supervisors and / or area warden immediately of the fire or smoke and where it is on site/ or in what direction it is approaching the site and what action will be taken – evacuate or shelter. 4. Shut down any machines, appliances, valves or switches if it is safe to do so. 5. Park HME in North Pit Extension at least 30m apart, if time permits and it is safe to do so 6. Close any doors or windows in buildings / equipment 7. Kiln – refer to kiln emergency shut down duty card. 8. Consider using site firefighting equipment for protection of life and protection of hazardous substances (such as the fuel farm area, the gas cyclinder storage and Store) if it is safe to do so. Either fight the fire or evacuate to safety – using the correct extinguisher/appliances. 9. Do not attempt to stay and defend against Extreme and Catastrophic rated bushfires 10. Stay upwind from fire – be aware that toxic fumes are given off by some fires
Further response	<p>Evacuation (if safe to do so):</p> <ul style="list-style-type: none"> ● Supervisor or Area Warden to coordinate evacuations in their work area and ensure all personnel are accounted for and they have transport to leave the site and all areas have been checked to ensure no personnel remain ● Chief Warden to post a sentry on both gates to check that all personnel have left site and allow access for emergency services as required. ● If evacuating leave Bulk Water Truck near store for RFS to fill up from. ● Chief Warden to advise Local Emergency Services that the site has been evacuated and await their instructions ● Only re-enter site once the bushfire threat has passed and the site is deemed safe by emergency services. <p>Shelter (when it is no longer safe to evacuate): Supervisor / Area Warden to coordinate all personnel on site to the safest designated shelter (based on risk assessment).</p> <ul style="list-style-type: none"> ● Ensure all personnel are accounted for in the designated shelter area ● Have enough vehicles in the vicinity of the designated shelter in case further refuge needs to be sought ● Consider taking extra drinking water, site communication devices, portable firefighting equipment and first aid kits to the designated shelter area ● Chief Warden to advise Local Emergency services that personnel are sheltering on site, how many and where. Ensure gates are all propped open. ● Designated shelters: Machine Shop, Production Meal room, Peppertree Administration building and North Pit (last resort) ● Maintain situational awareness through radio, NSW RFS apps/websites (if possible) and local firefighting resources. ● Two persons to make regular exterior visual inspections (wearing appropriate PPE) of the shelter for embers and extinguish where possible or call 000.

Emergency Procedure	Bush Fire Duty Card	
	<ul style="list-style-type: none"> When bushfire threat has passed the area and the area and access/ egress to site is deemed safe by emergency services, account for all personnel and risk assess if operations will continue or if personnel will be sent home. Contact relevant Managers advising them when the emergency is declared over. 5. Tape off the area to keep unauthorised personnel out. 6. Secure scene for incident investigation	
Who is in charge?	The site Chief Warden is in charge of this type of incident until relieved by the Emergency Services	
Who to call <i>Upon identifying this type of emergency, urgently contact.</i> <i>Follow incident matrix for further notifications</i>	Name Chief Warden / Deputy Warden Emergency Services Mine Management Team – Site Manager, Plant Manager, Pit Manager, Mine Manager, WHS Partner Resources Regulator Cement National Operations GM Cement WHS Manager	Contact no: Two way radio Dial 209 000 Various – refer to contact list 1300 814 609
Emergency equipment required	<ul style="list-style-type: none"> Site firefighting equipment such as extinguishers, water truck First aid kit Site communication devices 	
Resuming operations	<ul style="list-style-type: none"> Clearance to be obtained from emergency services This type of incident may require regulator notification and regulatory approval before resuming operations, to be determined by WHS Business Partner and Site Manager. Prevent access to areas involved in the incident until the scene is released. Commence internal incident investigation Equipment damaged in the incident will require inspection by a suitably qualified person after repair and before returning to service. Risk assessments of equipment involved in the incident will require review prior to returning the equipment to service. Critically damaged equipment may require replacement. Fire extinguishers and fire suppression systems will need to be replaced and or recharged if they have been activated. Consider incident debrief based on the severity of the incident. 	

8. Duty Card's

8.1 Bomb Threat Duty Card

Emergency Procedure	<i>Bomb Threat / Firearm/ Weapon Duty Card</i>
What happened?	<i>Firearm, Weapon or Bomb threat received by telephone / mail or in person also includes personal threat</i>
Immediate response	<p style="text-align: center;">WARNING</p> <p style="text-align: center;">SWITCH OFF RADIOS, MOBILE PHONES, PAGERS OR ANY OTHER RADIO TRANSMITTING DEVICES</p> <p style="text-align: center;">USE LINE TELEPHONES ONLY</p> <ol style="list-style-type: none"> 1. Use the Action List and the Communication Log Sheets to check that the appropriate resources have been mobilised. 2. Advise the supervisor or area warden immediately of threat if safe to do so 3. SUSPICIOUS OBJECTS, ITEMS OR PARCELS – IMMEDIATE ACTION Where an object, item or parcel is found and because of its location, size, and shape or for other reasons it is considered suspicious, the area should be evacuated immediately and the Chief Warden informed. 4. BOMB THREATS BY TELEPHONE – IMMEDIATE ACTION <ul style="list-style-type: none"> ● Record all information on paper – bomb threat checklist ● Let caller finish the message; do not interrupt. ● If asked for a response, keep your answer to one or two words. ● Try to attract the attention of people near you. ● Be sympathetic (do not abuse the caller). ● Claim that you cannot hear the caller. ● Ask for the caller to repeat parts of the conversation. ● Do not hang up. 5. IMMEDIATELY AFTER THE CALLER HANGS UP <ul style="list-style-type: none"> ● Report to the Chief Warden. ● Await further instructions. 6. BOMB THREATS BY MAIL – IMMEDIATE ACTION <ul style="list-style-type: none"> ● Take careful note of the time and method of receipt. ● Retain the item but limit handling to a minimum and handle by edges only. ● Notify the Chief Warden and provide details. ● Do not discuss details of the threat with any other person. ● Await further instructions. 7. BOMB THREATS IN PERSON – IMMEDIATE ACTION <ul style="list-style-type: none"> ● Evaluate the person making the threat: <ul style="list-style-type: none"> ○ Has the person made a complaint against your organisation? ○ Did they appear to be under the influence of alcohol or drugs? ○ Was the threat made in a facetious or joking manner? ● Make note of the appearance of the person(s) making the threat. ● When the person has departed, report the threat to Chief Warden.

Emergency Procedure	Bomb Threat / Firearm/ Weapon Duty Card	
	<ul style="list-style-type: none"> ● Remain with the Chief Warden for interview by Police. ● Do not discuss details of the threat with the media or any other person. ● Await further instructions. <p>8. PERSONAL THREAT MAY INCLUDE, THREAT OF ASSAULT, ASSAULT, ARMED HOLDUP, OR ROBBERY.</p> <ul style="list-style-type: none"> ● Remain calm ● Alert someone to the threat if possible ● Remove yourself to a safe area if possible ● Contact police/ambulance. ● Observe offenders characteristics ● Record as many details as possible once the threat has been removed 	
Further response	<p>9. BOMB THREAT – CHIEF WARDEN RESPONSIBILITIES</p> <ul style="list-style-type: none"> ● Assess information from the recipient of the threat. ● Initiate an evacuation of the premises, if deemed necessary. ● Ensure that the Police have been advised of details. ● Ensure that the recipient has written down details and is standing by for interview. ● If directed by the Crisis Team, initiate Area Warden searches and ensure that search results are reported to Chief Warden. ● Commence an evacuation as necessary: <ul style="list-style-type: none"> ○ Ensure that all personnel are evacuated and accounted for, and that 'NO ENTRY' signs are positioned correctly. ● Stand by for further advice from the Crisis Team and Police. <p>NOTE: Do not attempt to check or move a suspected explosive device.</p>	
Who is in charge?	The Chief Warden is in charge until the emergency is over or until relieved Emergency Services	
Who to call <i>Upon identifying this type of emergency, urgently contact.</i> <i>Follow incident matrix for further notifications</i>	Name Chief Warden / Deputy Warden Emergency Services Mine Management Team – Site Manager, Plant Manager, Pit Manager, Lime Manager, Mine Manager, WHS Business Partner Resources Regulator	Contact no: Two way radio Dial 209 000 Various 1300 814 609
Emergency equipment required	<ul style="list-style-type: none"> ● Site landlines 	
Resuming operations	<ul style="list-style-type: none"> ● Do not return to the area until given the all clear by the Police. ● This type of incident may require regulator notification and regulatory approval before resuming operations, to be determined by WHS Business Partner and Site Manager. Prevent access to areas involved in the incident until the scene is released. ● BEAP Counselling shall be offered (if necessary). 	

Bomb Threat Checklist – Remember to keep calm – DO NOT hang up

Who received the call	Name:		Signature:	
	Date:		Time:	
Telephone No. called:				
General questions to ask caller:				
What is it?				
When is the bomb to explode or substance be released?				
Where did you put it?				
What does it look like?				
When was it put there?				
How will the bomb explode or how will the substance be released?				
Did you put it there?				
Why did you put it there?				
Bomb Threat Questions				
What type of bomb is it?				
What is in the bomb?				
What will make the bomb explode?				
Chemical / Biological Threat Questions				
What kind of substance is it?				
How much substance is there?				
How will the substance be released?				
Is the substance liquid, powder or gas?				
Exact Wording of Threat:				
Analysis of Callers Threat				
Sex:	Male / Female / unsure			
Accent:	Australian / American / Middle Eastern / British / Irish / Asian / European / Other _____			
Voice:	Angry / Calm / Obscene / Child / Loud / Soft / Giggling / Other _____			
Speech	Fast / Slow / Slurred / Distinct / Muffled / Stutter / Lisp / Distorted / Clear / Other _____			
Threat Language	Well Spoken / Irrational / Abusive / Incoherent / Taped / Message read by caller / Other _____			
Background Noise	None / TV/Radio / Train / Traffic / Music / Construction / Sirens / Aircraft / Voices / Other _____			
Duration of Call:		Estimated Age:		
Did the caller appear to be familiar with the Area?	Yes / No			
Comments from person receiving call:				

8.2 Fatal Incident Duty Card

Emergency Procedure	<i>Fatal Incident Duty Card</i>	
What happened?	<i>Fatal Incident has occurred on site</i>	
Immediate response	<ol style="list-style-type: none"> 1. Assess the scene. Ensure safety of those in the vicinity of the area. 2. Advise the Chief Warden as soon as possible 3. Call emergency services - The police must be notified of any life threatening serious injuries or fatalities and the Mine Manager must also be informed as soon as possible. 4. Preserve and secure the area: <ol style="list-style-type: none"> a. Make sure that the area where the Injury/Incident/Fatality occurred is not disturbed. b. Do not move any deceased personnel - take action to respect the body of any deceased persons by moving others away and/or shielding the body or scene c. Tape off the area to keep unauthorised personnel out. d. Take pictures of the area if possible. 5. Ensure that the relevant people have been informed of the situation. <ol style="list-style-type: none"> a. Site Manager, HR Manager, NGM-Operations Cement, WHS Business Partner, Production Managers immediately b. EGM Boral Cement within two hours c. EGM Boral Cement informs the CEO, HSE Director and General Counsel within two hours d. Mines Inspector and the NSW Police / Coroner immediately 	
Further response	<ol style="list-style-type: none"> 7. Wait for emergency services. Post sentry at Aglime/Marulan South Rd Intersection to guide emergency services 8. Provide assistance to injured or traumatised people if safe to do so 9. Complete a HSEQ-2-09-F06 Critical Incident Description template. 10. Do not give out information to unauthorised persons e.g., the press or families. Information given, outside the immediate emergency response group, can only be given with the authorisation of the Executive General Manager. 11. The EGM or delegated officer must contact the next of kin after the authorities have confirmed this step can proceed. 	
Who is in charge?	The Chief Warden is in charge until the emergency is over or until relieved Emergency Services	
Who to call <i>Upon identifying this type of emergency, urgently contact. Follow incident matrix for further notifications</i>	Name Chief Warden / Deputy Warden Emergency Services NSW Representative of the Coroner (Goulburn) Mine Management Team – Site Manager, Plant Manager, Pit Manager, Lime Manager, Mine Manager, WHS Business Partner Resources Regulator ONRSR (National Safety Rail Regulator) for Rail fatalities	Contact no: Two way radio Dial 209 000 (02) 4824 0799 Various 1300 814 609 1800 430 888
Emergency equipment required	<ul style="list-style-type: none"> ● First aid kit ● Site communication devices 	
Resuming operations	<ul style="list-style-type: none"> ● Clearance to be obtained from emergency services ● Area made safe. ● This type of incident will require regulator notification and regulatory approval before resuming operations, to be determined by WHS Business Partner and Site Manager. Prevent access to areas involved in the incident until the scene is released. ● BEAP counselling shall be offered (if necessary) 	

8.3 Medical Emergency / Serious Injury Duty Card

Emergency Procedure	<i>Serious Injury / Medical Emergency</i>	
What happened?	<i>A serious injury / medical emergency which requires emergency treatment.</i>	
Immediate response	<ol style="list-style-type: none"> 1. Assess the scene: What appears to have happened? Is there risk of escalation (e.g. further injury to the patient or rescuers)? 2. Make the scene safe (e.g. shutdown and isolate equipment, stop traffic etc.). 3. Once safe, approach and provide assistance (e.g. provide first aid, assist people in moving out of the incident scene) and determine if emergency services are required. 4. As soon as practicable, report the details to the Chief Warden and/or Deputy Warden. Advise what resources are required to manage the emergency, including emergency services, if necessary. <ol style="list-style-type: none"> a. Any person receiving or suspected of receiving an electric shock MUST be transported to hospital via Ambulance for assessment b. The police must be notified of any life threatening serious injuries or fatalities and the Mine Manager must also be informed as soon as possible. <p>Refer to Attachment 13 for basic first aid fact sheets for common emergency situations including bites and stings.</p>	
Further response	<ol style="list-style-type: none"> 5. Keep the person calm. 6. The Chief Warden will send additional site emergency resources to the incident scene. 7. The Chief Warden will send a person to Aglime/Marulan South Rd Intersection to meet and direct Emergency Services. 8. Provide additional standard first aid, as required. The patient shall be treated / monitored by a first aider until the ambulance arrives. 9. A line manager is required to accompany the injured worker either by driving the injured worker to a medical practitioner (for minor injuries) or accompanying the ambulance (for serious injuries). Follow Injury Management Flowchart for management of injury process. 10. Preserve the area: Make sure that the area where the Injury/Incident/Fatality occurred is not disturbed, tape off the area to keep unauthorised personnel out, take pictures of the area if possible. 11. Do not give out information to unauthorised persons e.g., the press or families. 12. Information given, outside the immediate emergency response group, can only be given with the authorisation of the Executive General Manager. 	
Who is in charge?	The site Chief Warden is in charge of this type of incident until relieved by Emergency Services.	
Who to call <i>Upon identifying this type of emergency, urgently contact. Follow incident matrix for further notifications</i>	Name Chief Warden / Deputy Warden Emergency Services Mine Management Team – Site Manager, Plant Manager, Pit Manager, Lime Manager, Mine Manager, WHS Business Partner Resources Regulator Boral Workfit Advisor (for all work related injuries)	Contact no: Two way radio Dial 209 000 Various 1300 814 609 1300 753 486

Emergency Procedure	<i>Serious Injury / Medical Emergency</i>
Emergency equipment required	<ul style="list-style-type: none"> • Portable first aid kit(s) • Site communication devices
Resuming operations	<ul style="list-style-type: none"> • This type of incident will require regulator notification and regulatory approval before resuming operations, to be determined by WHS Business Partner and Site Manager. Prevent access to areas involved in the incident until the scene is released. • Commence internal incident investigation. • BEAP counselling shall be offered (if required).

8.4 Mental Health Issues

Emergency Procedure	<i>Mental Health Issues</i>	
What happened?	<i>Any incident involving a person's mental health, including but not limited to mental breakdown, psychosis, self-harm, attempted suicide.</i>	
Immediate response	<ol style="list-style-type: none"> 1. If there is an immediate threat to you, or someone else. Contact the Police directly (it is appropriate to use the emergency number "000"). The Mental Health Service can attend in these situations, but if there is a high risk of violence they are required to work with the Police. 2. If there is an immediate risk to the physical health of a person: If emergency medical attention is required contact the ambulance service directly. This may include situations where the person has caused or is threatening to cause severe physical harm to themselves (e.g. overdose). It is appropriate to use the emergency number "000". 	
Further response	3. Where there is potential for disruption of operations, or where operations may inflame situation, arrangement should be made with all other stakeholders.	
Who is in charge?	The site Chief Warden is in charge of this type of incident.	
Who to call <i>Upon identifying this type of emergency, urgently contact.</i> <i>Follow incident matrix for further notifications</i>	Name Chief Warden / Deputy Warden Emergency Services	Contact no: Two way radio Dial 209 000
Emergency equipment required	<ul style="list-style-type: none"> ● Portable first aid kit(s) ● Site communication devices 	
Resuming operations	<ul style="list-style-type: none"> ● Clearance to be obtained from emergency services ● Area made safe. 	

8.5 Fluid Injection Injuries

Emergency Procedure	Fluid Injection Injury	
What happened?	<p><i>A high pressure injection of a fluid such as hydraulic oil, grease or paint constitutes a medical and surgical emergency. Without adequate and timely treatment there is a high risk of amputation or even death.</i></p> <p>The point of entry may look very small and may not bleed. Initially the patient may not complain of pain but may have a feeling of numbness or increased pressure within the affected part. The affected part will progressively become increasingly irritated and they may complain of a throbbing pain.</p>	
Immediate response	<ol style="list-style-type: none"> 1. Assess the scene: What appears to have happened? Is there risk of escalation (e.g. further injury to the patient or rescuers)? 2. Make the scene safe (e.g. shutdown and isolate equipment, stop traffic etc.). 3. As soon as practicable, report the details to the Chief Warden and/or Deputy Warden. Advise them that it is a fluid injection injury and immediately call an Ambulance. <p>First Aid Treatment:</p> <ol style="list-style-type: none"> 4. Gently clean the injured part 5. Immobilise and elevate affected limb to a comfortable position 6. Rest the patient and keep them calm 7. DO NOT give fluids or food as they must remain fasted in anticipation for surgery. 8. Monitor the patient until the ambulance arrives 9. The person should not be left alone or allowed to drive themselves to hospital 	
Further response	<ol style="list-style-type: none"> 10. The Chief Warden will send a person to the Aglime/Marulan South Rd Intersection to meet and direct Emergency Services. 11. A line manager should follow the ambulance to hospital with a copy of the SDS of the fluid injected. Follow Injury Management Flowchart for management of injury process. 12. Preserve the area: Make sure that the area where the Injury occurred is not disturbed, tape off the area to keep unauthorised personnel out, take pictures of the area if possible. 	
Who is in charge?	The site Chief Warden is in charge of this type of incident until relieved by Emergency Services.	
Who to call <i>Upon identifying this type of emergency, urgently contact.</i> <i>Follow incident matrix for further notifications</i>	Name Chief Warden / Deputy Warden Emergency Services Mine Management Team – Site Manager, Plant Manager, Pit Manager, Lime Manager, Mine Manager, WHS Business Partner Resources Regulator Boral Workfit Advisor (for all work related injuries)	Contact no: Two way radio Dial 209 000 Various 1300 814 609 1300 753 486
Emergency equipment required	<ul style="list-style-type: none"> ● Portable first aid kit(s) ● Site communication devices 	
Resuming operations	<ul style="list-style-type: none"> ● This type of incident will require regulator notification and regulatory approval before resuming operations, to be determined by WHS Business Partner and Site Manager. Prevent access to areas involved in the incident until the scene is released. ● Commence internal incident investigation. ● BEAP counselling shall be offered (if required). 	

8.6 Ground Instability Incident

Emergency Procedure	Ground Instability Incident	
What happened?	<i>Pit Wall Collapses or Open Voids in Pit, any incident involving stockpile slumping, engulfing persons or plant containing persons, any incident involving vehicles being submerged or in a roll over due to ground instability.</i>	
Immediate response	<ol style="list-style-type: none"> Any operator observing an imminent or occurring wall collapse or void opening must immediately report the incident to the Production Supervisor by calling Emergency Emergency Emergency over the radio Notify Chief Warden. Advise what resources are required to manage the emergency, including fire brigade, ambulance etc. For any type of collapse or void opening the Chief Warden must enact the Emergency Management Plan. Assess the scene and call for first aiders and emergency services (if required). Immediately evacuate all pit personnel (if incident is in the pit) if safe to do so, If unsafe move pit crew to a safe location <ol style="list-style-type: none"> Check if any personnel are missing – Area Warden to advise If no personnel are missing secure the site If personnel are missing and safe to do so conduct primary check to try and locate Check for hazards including further stockpile undercutting and further pit wall collapse prior to rescue Retrieve personnel if alive and safe to do so, retrieve engulfed persons using hand tools. If vehicle/HME involved and personnel are unable to exit the vehicle safely, operator should be instructed to remain in cabin with seatbelt on until help arrives. All operations to cease to allow free passage of emergency vehicles to incident location Do not remove deceased persons If unable to locate personnel or personnel require rescue, advise Police Rescue 	
Further response	<ol style="list-style-type: none"> Conduct first aid on personal once removed The Chief Warden will send a site person to the Aglime/Marulan South Rd Intersection to meet and direct the Ambulance, if applicable. The Emergency Coordinator will advise all other persons to stay clear of the scene via Two way radio. Consider calling Mining Engineer for specialist advice Secure Site once all personnel have been evacuated 	
Who is in charge?	The site Chief Warden is in charge of this type of incident until relieved by Emergency Services.	
Who to call <i>Upon identifying this type of emergency, urgently contact.</i> <i>Follow incident matrix for further notifications</i>	Name Chief Warden / Deputy Warden Emergency Services Mine Management Team – Site Manager, Plant Manager, Pit Manager, Lime Manager, Mine Manager, WHS Business Partner Resources Regulator	Contact no: Two way radio Dial 209 000 Various 1300 814 609

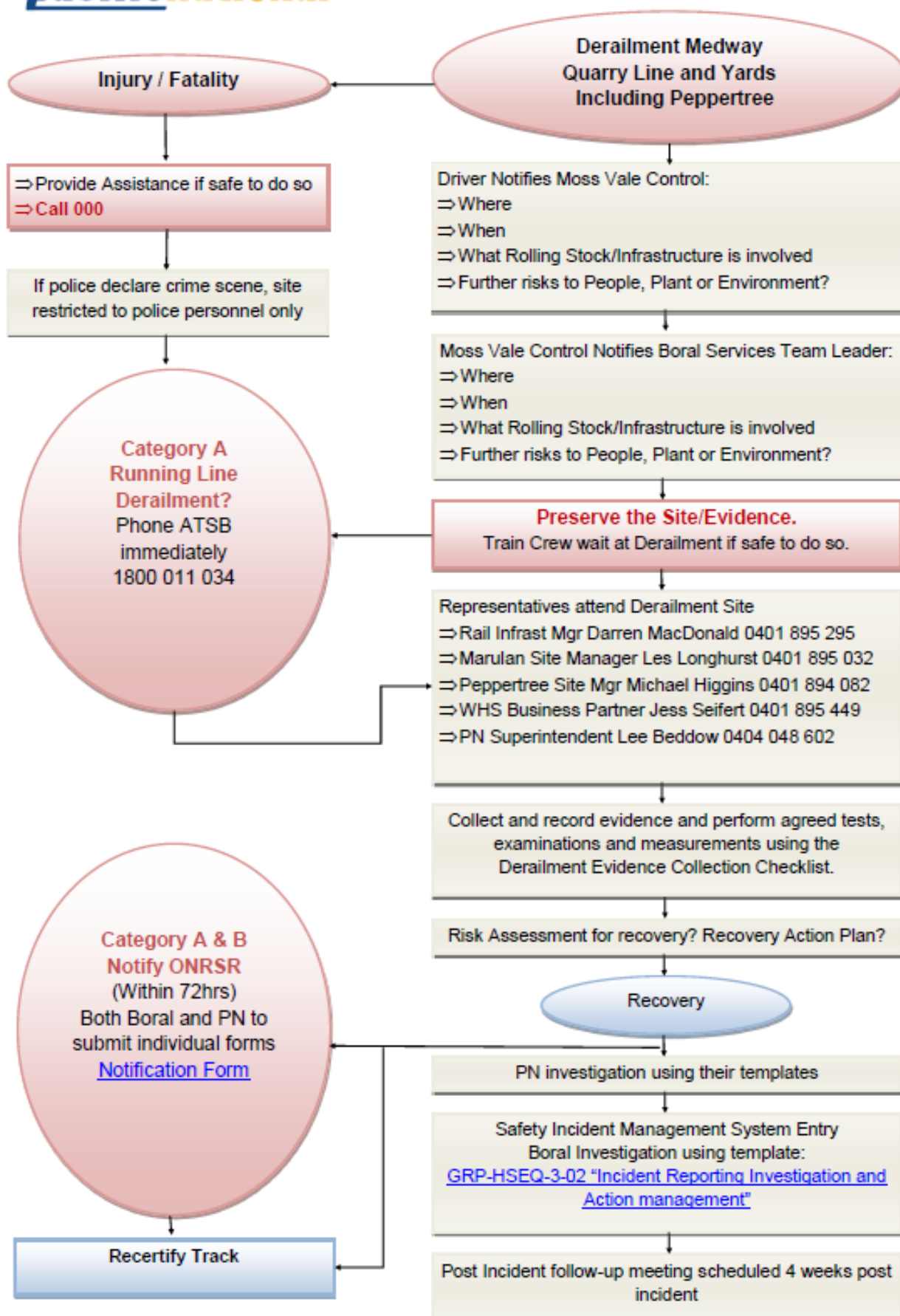
Emergency Procedure	<i>Ground Instability Incident</i>
Emergency equipment required	<ul style="list-style-type: none"> • Portable first aid kit(s) • Site communication devices • Portable firefighting equipment • Isolation equipment (e.g. locks) • Hand tools for digging
Resuming operations	<p>This type of incident will require regulator notification and regulatory approval before resuming operations, to be determined by WHS Business Partner and Site Manager. Prevent access to areas involved in the incident until the scene is released.</p> <ul style="list-style-type: none"> • Commence internal incident investigation. • Equipment damaged by the incident will require inspection by a suitably qualified person after repair and before returning it to service. • Risk assessments of equipment involved in the incident will require review prior to returning the equipment to service. • Critically damaged equipment may require replacement.

8.7 Railway Incident Duty Card

Emergency Procedure	<i>Railway Incident</i>	
What happened?	<i>Any railway incident in the Medway Siding including derailment, vehicle / train collision, train collisions etc. . . .</i>	
Immediate response	<ol style="list-style-type: none"> 1. Assess the scene: What appears to have happened? Is there risk of escalation (e.g. fire, explosion, further roll over or people being struck)? 2. As soon as practicable, report the details to the Chief Warden and advise what resources are required to manage the emergency, including emergency services, if necessary. 3. If safe to do so, approach and provide assistance (e.g. provide first aid, assist people in climbing out of vehicles/wagons, assist in firefighting, and determine if emergency services are required). 4. If area is unsafe evacuate everyone to a safe location <ol style="list-style-type: none"> a. Check if any personnel are missing – Area Warden to advise b. If no personnel are missing secure the site c. If personnel are missing and safe to do so conduct primary check to try and locate d. Consider electricity if Locomotive is involved & still running. 5. Retrieve personnel if alive and safe to do so. Do not remove deceased persons 6. Have rail system shut down if necessary 7. Report incident to Moss Vale control centre Immediately , call 02 4869 6907 8. Conduct first aid as required until arrival of emergency services 	
Further response	<ol style="list-style-type: none"> 9. The Chief Warden will send a person to the Aglime/Marulan South Rd Intersection to meet and direct Emergency Services. 10. Contain any spillages 11. Secure Site once all personnel have been evacuated 12. Carryout Drug & Alcohol testing of any employee if involved. (Urine test for Drugs. Initial positive for alcohol requires further testing at a Police Station) 13. For derailments use the Medway Derailment Flowchart as part of the investigation. 	
Who is in charge?	The site Chief Warden is in charge of this type of incident until relieved by Emergency Services.	
Who to call <i>Upon identifying this type of emergency, urgently contact. Follow incident matrix for further notifications</i>	Name Chief Warden / Deputy Warden Emergency Services Mine Management Team – Site Manager, Plant Manager, Pit Manager, Lime Manager, Mine Manager, WHS Business Partner Resources Regulator Report serious incidents to Office of National Rail Safety Regulator (immediately for Category A incidents) on 1800 011 034 & File report within 72 hours to ONRSR	Contact no: Two way radio Dial 209 000 Various 1300 814 609 1800 011 034
Emergency equipment required	<ul style="list-style-type: none"> ● Portable first aid kit(s) ● Site communication devices ● Portable firefighting equipment ● Isolation equipment (e.g. locks) 	

Emergency Procedure	<i>Railway Incident</i>
Resuming operations	<p>This type of incident will require regulator notification and regulatory approval before resuming operations, to be determined by WHS Business Partner and Site Manager. Prevent access to areas involved in the incident until the scene is released.</p> <ul style="list-style-type: none"> • Commence internal incident investigation. • Equipment damaged by the incident will require inspection by a suitably qualified person after repair and before returning it to service. • Risk assessments of equipment involved in the incident will require review prior to returning the equipment to service. • Critically damaged equipment may require replacement.

Medway Derailment Action Flowchart



8.8 Extreme Weather Event – including Flood / Earthquake / Storm Duty Card

Emergency Procedure	<i>Extreme Weather Events</i>
What happened?	<i>Cyclone, earthquake, Hail, Lightning, Storm, Dust Storm, Flooding, heat stress/stroke</i>
Immediate response	<p>STORM – LIGHTNING / HAIL / DUST STORM</p> <ul style="list-style-type: none"> Take shelter in nearby secure dwelling Supervisors / Managers to monitor weather alerts from Bureau of Meteorology and maintain contact with local emergency services for updates http://www.bom.gov.au Consider evacuation should situation require it. If there is evidence of atmospheric and electrical activity or dust storm approaching all explosives and detonators shall be returned to the explosives vehicles / trailer and locked by authorised personnel and the all personnel withdrawn from the immediate vicinity of explosive storage areas. <p>FLOOD -</p> <ul style="list-style-type: none"> In the event of a flood move calmly and quickly to the nearest high ground. If possible move equipment to higher ground Do not walk or drive through fast-flowing water. Contact the State Emergency Service through the Police (000). Contact the Technical Manager and refer to the Environmental Duty Card (page 91) <p>EARTHQUAKE</p> <ul style="list-style-type: none"> Either get under a table or stand in a doorway to reduce the chance of object and debris falling on you. When it is safe to do so evacuate all buildings and pit areas. Post sentries at entrances to buildings and the pit area to prevent the entry of unauthorised personnel. Shut down Kiln and turn off natural gas supply A geophysical inspection may be required before re-entering the pit and buildings may also need inspecting before entry. <p>HEAT WAVE/HEAT STROKE</p> <ul style="list-style-type: none"> A heat wave is when you experience five days in a row, each with a daily maximum temperature five or more degrees centigrade higher than the average maximum temperature Heat related disorders can occur when the body fails to cope with the stresses of excessive heat. This is known as “Heat Stress”. Heat stress can affect the heart, kidneys, muscles and the brain. Severe cases may lead to Heat Stroke which can result in death. An individual suffering from heat stroke may suffer the following symptoms; <ul style="list-style-type: none"> General weakness Deep, then shallow breaths Rapid pulse Dilated pupils Dry hot skin

Emergency Procedure	Extreme Weather Events	
	<ul style="list-style-type: none"> ○ May stop sweating ○ Loss of consciousness ● Remove casualty from hot environment ● Call for medical assistance ● Offer sips of water if conscious ● Monitor the casualty's breathing and apply CPR if required 	
Further response	<ol style="list-style-type: none"> 1. Ensure safety of those in the vicinity of the area. 2. Call emergency services, as required 3. Follow emergency evacuation Procedure to EAA, if safe to do so and is required 4. If emergency evacuation area unsafe, take shelter in a nearby secure dwelling. This secondary shelter must be chosen on the basis of the emergency at hand. 5. Monitor weather alerts from Bureau of meteorology and maintain contact with local emergency services for updates. http://www.bom.gov.au/ 6. Protect the area around as best as possible. 7. If the situation warrants it, try to evacuate site, if possible, if not find a safe place for all personnel. 8. Wait for emergency services. 	
Who is in charge?	The site Chief Warden is in charge of this type of incident until relieved by the Emergency Services or emergency is declared over.	
Who to call <i>Upon identifying this type of emergency, urgently contact.</i> <i>Follow incident matrix for further notifications</i>	Name Chief Warden / Deputy Warden Emergency Services Mine Management Team – Site Manager, Plant Manager, Pit Manager, Lime Manager, Mine Manager, WHS Business Partner Resources Regulator (as required)	Contact no: Two way radio Dial 209 000 Various 1300 814 609
Emergency equipment required	<ul style="list-style-type: none"> ● Site firefighting equipment such as extinguishers ● First aid kit ● Emergency supplies, such as drinking water ● Site communication devices 	
Resuming operations	<ul style="list-style-type: none"> ● Clearance to be obtained from emergency services ● Area made safe. 	

8.9 Extreme Weather Event Checklist

EXTREME WEATHER EVENT – ACTION CHECKLIST

Remember that the Chief Warden is in charge until the emergency is over
Refer to Extreme Weather Event SOP for further Information

Trigger: Heavy rain of **100mm** or rain considered to be **1 in 5 year** event is expected at site.
 This will be identified from **weather zone** and warning sent out
 48 hours before hand to the site management team.

	ACTION	Complete
Pre-Storm: Limestone Operations Preparations		
1.	Mine Pit Area <ul style="list-style-type: none"> ⇒ Ensure all HME/mine equipment is removed from the pit floor, if required. ⇒ Ensure all mobile lights are removed from the pit floor. ⇒ Visually check storm water drainage and report any hazards identified to the Production Team Leader. ⇒ Visually check bench walls and main face conditions e.g.: oversized rock being dislodged through the rain event and condition of the haul roads. ⇒ A Trigger Action Response Plan (TARP) has been developed for impending lightning storms when drilling and Blasting at Boral Cement Marulan, reference the Blast Management Plan section 10.3.1 	
2.	Production Fixed Plant <ul style="list-style-type: none"> ⇒ Plantman to conduct a pre-wet weather plant check ensure CO01 sump pump is operational and free of material build-up, Plantman to reference the fixed plant wet weather checklist. ⇒ Check bunding is in place around the western side of the Jaw Crusher building to prevent water running into CO01 tail drum. ⇒ Ensure there are back up water pumps available in the high risk areas of the fixed plant. ⇒ Ensure the storm water drain on the western side of the Gyratory building is free of build-up to prevent flooding in CO01 switch room and power station. ⇒ Check sumps and environmental traps (oil, grease, fuel) been cleaned out to eliminate or minimise ground contamination should the trap or sump overflow. ⇒ Check all recycled water sumps are operational and all overflow paths/drains are free of hazards ⇒ Check all sites structures are stable - no loose roofing/wall iron. ⇒ Ensure the critical safety systems are followed and items available e.g.: eyewash, fire hoses, radio repeater/s, phones and alarms etc. ⇒ If available, ensure site's power back-up system has been checked and ready for operation in case of site blackouts. ⇒ Ensure equipment is operational and manned for post-storm clean-up. ⇒ Visual check on the rail weighbridges for material build-up and rail sump is operational under Bins 7 & 8. 	

Pre-Storm: Lime Operations preparations

3. Lime Operations

- ⇒ LPA to conduct a pre-wet weather plant check to ensure all sump pumps are operational and free of material build-up.
- ⇒ Ensure there are back up water pumps available in the high risk areas of the fixed plant.
- ⇒ Check the concrete sump are operational and all overflow paths/drains are free of hazards
- ⇒ Check all sites structures are stable - no loose roofing/wall iron.
- ⇒ Ensure the site's power back-up system been checked and ready for operation in case of site blackouts.
- ⇒ Ensure equipment is operational and manned for post-storm clean-up.
- ⇒ Ensure all downpipes are not blocked.
- ⇒ Visual inspection of the putty dam water level and it is free of material build-up.
- ⇒ Visual inspection of the water level and that material build-up in the Main Dam 2 has not significantly reduced its capacity to prevent water entering the creek.
- ⇒ Visual check on the storm water ponds and drain path to the creek is free of lime material.
- ⇒ Ensure the water pump at the Main Dam 2 is operational.

Storm: Limestone Operations Department

4. Mine Production Department

- ⇒ Production Team Leader to consistently complete site pit inspections with a special focus on identifying any areas where water is ponding, Bench wall and main face conditions and water is running freely into and along the water drains.
- ⇒ Plant personnel to ensure CO01 pump is turned on and operational and water levels checked every hour.
- ⇒ Ensure the re-cycle water sump pumps are operational and checked consistently. (Fuel Farm, CO26 & 27, Screens 8 & 9)
- ⇒ Operators to consistently check the fuel station drain and sump is not overflowing.
- ⇒ Jaw Crusher Operator to monitor moisture in the raw feed material and fixed plant blockages if blockages are consistently bogging down the fixed plant discuss with the Production Team Leader to shut down the fixed plant.
- ⇒ If it is considered safe for Haul truck operations, lift the truck body to empty water before commencing the task.
- ⇒ Tasks being considered during a storm event must be subject to a thorough risk assessment process.

5. Mine Maintenance Department

- ⇒ Consistently check the recycled oil sump levels and ensure the pump is operational.
- ⇒ Consistently check the water drain is not overflowing along the eastern side of the maintenance crib room.

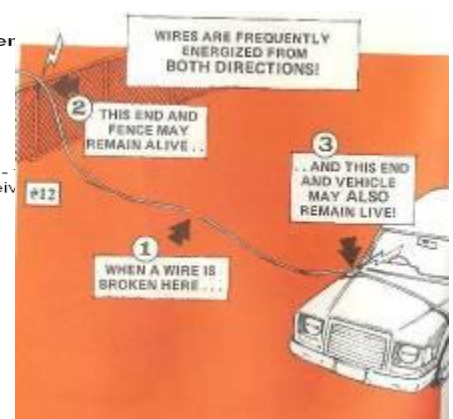
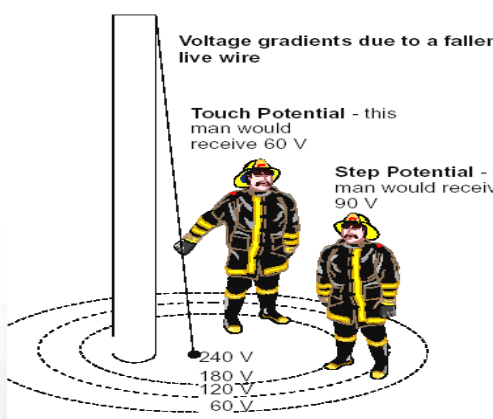
6.	Mine Electrical Department. Lime and Limestone <ul style="list-style-type: none"> ⇒ To consistently check the sites switch room for water build-up on the floors and material build up around the building. ⇒ To consistently check the sites Transformer buildings for water build-up and material build up around the stations. ⇒ Visually check cable tray from the switch room to the Gyratory building for water build-up. 	
Storm: Lime Operations Department		
7.	Lime Operations <ul style="list-style-type: none"> ⇒ Ensure all downpipes are flowing. ⇒ Consistent visual checks of the putty dam check water levels and monitor of lime material in the water flow. ⇒ Consistent visual checks of the water level in the Main Dam 2 to prevent overflow to the creek. ⇒ Consistent checks on the water pump at the Main Dam 2 if it is being utilised. Ensure that the water is being directed into the Kiln Dam. 	
Post Storm: Limestone Operations Department		
8.	Mine Production Department <ul style="list-style-type: none"> ⇒ Plant personnel to conduct a post-wet weather plant check, referring to the fixed plant wet weather checklist. ⇒ Visually inspect CO01 tail drum area is free of water and material build-up before plant starts up. ⇒ Assess the bunding isn't damaged around the western side of the Jaw Crusher building. ⇒ If back up water pumps are used, pack up the pumps and return to their designated area. ⇒ Visually inspect condition of the storm water drain on the western side of the Gyratory building ⇒ Visually inspect sumps and environmental traps (oil, grease, fuel) if overflow has occurred and causing ground contamination if so report to the relevant personnel eg: Production Team leader, Environment officer and Pit Production Manager. ⇒ Operators to visually inspect the fuel station drain and sump is not overflowing causing environmental issues and floor area for trip, slip and fall hazards. ⇒ Visually inspect all recycled water sumps material build up and overflow paths/drains are free of any hazards. ⇒ Visually inspect all sites structures are stable no loose roofing/wall iron. ⇒ Visually inspect the site for any fallen trees or branches that may have fallen on powerlines and/or structure or have the potential to fall causing injury or damage to plant/structure ⇒ If available, ensure the site's power back-up system is in place and working in case of a site blackout. Critical spares are packed away and return to their designated area. ⇒ Assess and prioritise critical areas for equipment to start post-storm clean-up tasks eg: haul roads, bench walls or main loading face maintenance. ⇒ Visually inspect the rail weighbridges under Bins 7 & 8 for material build-up, water levels and that the rail sump is operational. 	

9.	Mine Maintenance Department <ul style="list-style-type: none"> ⇒ Visually inspect recycle oil sump, if overflow has occurred and causing ground contamination report to the relevant personnel eg: Fixed Plant Maintenance Supervisor, Environment officer and Pit Production /Fixed plant Manager. ⇒ Visually inspect the water drain is not blocked causing overflowing issues along the eastern side of the maintenance crib room. 	
10.	Mine Electrical Department. Lime and Limestone <ul style="list-style-type: none"> ⇒ Visually inspect the sites switch rooms floor condition. ⇒ Visually inspect the sites Transformer buildings for base condition eg: water or material build up. ⇒ Visually inspect cable tray from the switch room to the Gyratory building for water build-up. 	
Post Storm Lime Operations Department		
11.	Lime Operations <ul style="list-style-type: none"> ⇒ Visually inspect all drainage for blockages and water is still flowing through the downpipes. ⇒ Visual check of the putty dam check water levels and monitor if lime material is in the water flow. ⇒ Visual inspection of the water level and material build-up in the Main Dam 2. ⇒ If lime material is identified either in the drain path or creek bed report this to the Lime Operations Manager, Environment Manager and/or Site Manager. ⇒ Visually inspect the water pump at the Main Dam 2 is operational and not damaged. If the pump is being utilised ensure the water is being directed to the Kiln Dam. 	

8.10 Electrical Incident Duty Card

Emergency Procedure	<i>Electrical Incident</i>
What happened?	<i>Any incident involving an electricity, regardless of the size (LV and HV) and vehicle contact with Overhead powerlines</i>
Immediate response	<ol style="list-style-type: none"> 1. Report the details to the Chief Warden. Advise what resources are required to manage the emergency, including emergency services 2. Assess the scene: Where is the source of electricity? Is it Low Voltage / high voltage? Do not enter the incident scene until you have confirmed that the power has been isolated / disconnected. 3. Advise the operator to not touch anything and remain calm, do not attempt rescue. 4. Evacuate all people from immediate area, no person to go within 10 metres of any fallen power wire/cable. Establish a safe exclusion area. 5. Notify Essential Energy and advise of situation, if low voltage contact Site Electrical Engineer <415v <p>LOW VOLTAGE RESCUE (FOR TRAINED PERSONNEL)</p> <ul style="list-style-type: none"> ● Put on insulated gloves ● Isolate electricity and place sign on isolator. Do not enter the incident scene until you have confirmed that the power has been isolated / disconnected. Contact Energy supplier if required to isolate power to the site ● Use crook to separate person from power source ● Once safe provide assistance (e.g. first aid, firefighting, additional electrical isolation). <p>HV ELECTRIC SHOCK</p> <ul style="list-style-type: none"> ● Call '000' ● Contact Energy supplier if required to isolate power to the site ● Once safe provide assistance (e.g. first aid, firefighting, additional electrical isolation). ● Any person who suffered an electric shock must be transported to medical facilities via ambulance for ECG and assessment/medical treatment. <p>VEHICLE / MOBILE PLANT CONTACT WITH OVERHEAD POWERLINES</p> <ul style="list-style-type: none"> ● Do not leave cabin, or change the position of controls until the all clear has been given by an electrician or the Chief Warden. ● Whilst remaining within the cabin of the mobile plant the operator will need to avoid touch with metallic surfaces. If possible to isolate mobile plant from within cabin, do so ● Chief Warden to warn persons to secure the area to a minimum of 10 metres around the accident scene. ● Where the operator has no option but to leave the mobile plant (ie vehicle is on fire) they are to avoid touching both the ground and the mobile plant at the same time. Get the operator to jump well clear with both feet together and then bunny hop 10 metres away with both feet remaining together (ONLY AS LAST RESORT) ● Consider possibility of tyre fire (if vehicle has split rims) evacuate 300m radius, operator to leave vehicle from front or back only (DO NOT APPROACH VEHICLE FROM SIDES) – If not safe to do so have operator recovered by a utilising suitable equipment ● Immediately evacuate all persons a minimum of 300 metres of vehicle – See Heavy Equipment Tyre Fire / Overheating Duty Card (Page 66)

Emergency Procedure	Electrical Incident	
Further response	6. The Chief Warden will organise for additional isolation / disconnection. 7. The Chief Warden will send a person to the Aglime/Marulan South Rd intersection to meet and direct Emergency Services. 8. Any person who is considered to have had the potential to receive an Electric Shock must be transported to Hospital via Ambulance for assessment (except in the case of extra low voltage, not exceeding 50volts AC or 120Volts DC ripple free) 9. Tyres can explode several hours after electrification of vehicle – maintain an exclusion zone and quarantine machine for 24hours.	
Who is in charge?	The site Chief Warden is in charge of this type of incident.	
Who to call <i>Upon identifying this type of emergency, urgently contact.</i> <i>Follow incident matrix for further notifications</i>	Name Chief Warden / Deputy Warden Electrical Engineer Essential energy – Emergency Essential energy – Operations Centre Emergency Services Mine Management Team – Site Manager, Plant Manager, Pit Manager, Lime Manager, Mine Manager, WHS Business Partner Resources Regulator (as required)	Contact no: Two way radio Dial 209 Dial 219 13 20 80 02 6122 3007 000 Various 1300 814 609
Emergency equipment required	<ul style="list-style-type: none"> • Portable first aid kit(s) • LV Rescue Kit • Site communication devices • Portable firefighting equipment • Isolation equipment (e.g. locks) 	
Resuming operations	This type of incident will require regulator notification and regulatory approval before resuming operations, to be determined by WHS Business Partner and Site Manager. Prevent access to areas involved in the incident until the scene is released. <ul style="list-style-type: none"> • Commence internal incident investigation. • Equipment damaged by the incident will require inspection by a suitably qualified person after repair and before returning it to service. • Risk assessments of equipment involved in the incident will require review prior to returning the equipment to service. • Critically damaged equipment may require replacement. 	



Emergency Procedure	<i>Electric Shock Protocol</i>
What happened?	<p>A person suspected of receiving an electric shock may sustain delayed effects to their health and welfare from irregular heart beat (delayed ventricular arrhythmias). Potential delayed effects from electric shock, which could be hours, days or weeks, after receiving an electric shock could affect the health and welfare of the victim.</p> <p>The following detailed Electric Shock Protocol is designed to:</p> <ul style="list-style-type: none"> ● Provide guidance for site management and employees to follow in the event that a person(s) is suspected of receiving an electric shock from a source voltage above extra low source voltage. ● Identify a minimum level of treatment and medical diagnosis. <p>This protocol applies to any person receiving an electric shock, regardless of how minor the contact may appear.</p> <p>This protocol applies to all people (employee, contractor or visitor) at the site.</p> <p>Note: The source voltage is to be treated as greater than extra low volts until the actual source voltage has been positively identified. Priority is to be given to the treatment of the victim which should not be withheld while the level of source voltage is being determined.</p>
Immediate response	<p>Step 1: Establish a Safe Area.</p> <ol style="list-style-type: none"> If the victim is in contact with live apparatus the electric power source must be isolated before attempting to attend the victim. The site is to be secured to prevent injury to other people. <p>Step 2: Assess Condition and Stabilise Victim.</p> <ol style="list-style-type: none"> The victim is to be assessed and rendered the necessary first aid treatment. Where required, apply basic life support: <ul style="list-style-type: none"> Danger Responsive Send for help Airway Breaths Compressions Defibrillator If no pulse is detected, CPR should be continued until qualified personnel arrive or signs of life return. <p>Note: The site shall make available clear directions on basic life support in the form of CPR signs posted at all electrical switchrooms and other relevant locations. For information on these signage requirements refer to the Australian Resuscitation Council for further information.</p>

Emergency Procedure	Electric Shock Protocol	
	<p>Step 3: Arrange Transport to the Nearest Medical Facility.</p> <ul style="list-style-type: none"> a) If the severity of the incident is deemed necessary, an ambulance shall be called to allow professional assessment and transportation to hospital, otherwise b) The supervisor is to arrange for transportation to a medical facility. c) The victim must not be left alone or allowed to drive to the medical facility. d) The supervisor is to notify the Plant Controller of any transport plans. <p>Step 4: Record Relevant Details of the Incident.</p> <p>The supervisor is to obtain the relevant information relating to the electrical shock incident and record it using the electrical shock protocol form (see next page)</p> <p>Step 5: Notify the Medical Facility</p> <p>The supervisor is to contact the medical facility and advise the facility of the incident and transport arrangements.</p> <p>Step 6: Provide Incident Information to the Medical Facility Reception.</p> <p>If the victim is not transported by ambulance, the supervisor upon arriving at the medical facility the following information is to be provided</p> <ul style="list-style-type: none"> a) The victim was attending (name of the operation) where (name of the victim) received an electric shock and that the details b) Note: At this time, a 12 lead ECG is to be requested for the victim. c) The person escorting the victim should clarify whether the medical facility or the escort is to advise the site management of the situation. <p>Step 7: Return to Work.</p> <ul style="list-style-type: none"> a) Where the victim is released from the medical facility for return to work, the site shall arrange transportation. b) Upon arrival back at the site the person shall report to the supervisor and advise of the results of the tests. c) The supervisor is to notify the site HSEQ Manager and/or Site Manger. 	
Who is in charge?	The site Chief Warden is in charge of this type of incident.	
Who to call <i>Upon identifying this type of emergency, urgently contact.</i> <i>Follow incident matrix for further notifications</i>	Name Chief Warden / Deputy Warden Electrical Engineer Essential energy – Emergency Essential energy – Operations Centre Emergency Services Mine Management Team – Site Manager, Plant Manager, Pit Manager, Lime Manager, Mine Manager, WHS Business Partner Resources Regulator (as required)	Contact no: Two way radio Dial 209 Dial 219 13 20 80 02 6122 3007 000 Various 1300 814 609
Emergency equipment required	<ul style="list-style-type: none"> ● Portable first aid kit(s) ● LV Rescue Kit ● Site communication devices ● Portable firefighting equipment 	

Emergency Procedure	<i>Electric Shock Protocol</i>
	<ul style="list-style-type: none"> Isolation equipment (e.g. locks)
Resuming operations	<p>This type of incident will require regulator notification and regulatory approval before resuming operations, to be determined by WHS Business Partner and Site Manager. Prevent access to areas involved in the incident until the scene is released.</p> <ul style="list-style-type: none"> Commence internal incident investigation. Equipment damaged by the incident will require inspection by a suitably qualified person after repair and before returning it to service. Risk assessments of equipment involved in the incident will require review prior to returning the equipment to service. Critically damaged equipment may require replacement.

ELECTRIC SHOCK PROTOCOL FORM

Dear Doctor,

.....
(Print victim's name)

Of

.....
(Victim's address) is reported to have received an electric shock.

Our company medical policy is that any employee who reports receiving an electric shock are provided medical assessment and a request for a 12-lead ECG to be performed.

Time Electric Shock Occurred: - _____

Date Electric Shock Occurred: - _____

Location Electric Shock Occurred: - _____

Source voltage: _____ volts

Record patient's pulse rate after incident: - _____ beats/minute

The victim **did** / **did not** lose consciousness.

The victim has been unconscious from (time) to (time). _____

The victim has suffered burns, other injuries as follows: _____

Any additional symptoms: -

Brief Description of Incident: -

Signed: - _____ Name: _____

Position: _____ Contact number: _____

8.11 Heavy Equipment Tyre Overheating or Fire Duty Card

Emergency Procedure	Heavy Equipment Tyre Overheating or Fire	
What happened?	<i>HME Tyre Overheating or fire</i>	
Immediate response	<ol style="list-style-type: none"> Any operator suspecting a tyre fire or noticing an overheating tyre must immediately report the incident to the Mine or Production Manager through the main office or kiln control room by calling Emergency Emergency Emergency over the radio or by calling 209. Notify the operator immediately if the vehicle is being operated Notify Chief Warden. Advise what resources are required to manage the emergency, including fire brigade, Operator to initiate an emergency shutdown once the machine has been safely parked. Equipment must not be driven any distance (5 – 10 metres maximum) The operator must vacate the equipment on the opposite side of the effected tyre. Do not approach equipment from sides 	
Further response	<ol style="list-style-type: none"> For any overheating tyre, locate the equipment in a secluded area and isolate for 24 hours to allow the tyre to cool Evacuate all persons with a minimum of 300 metre radius Under no circumstances is anyone to approach the equipment within the 24 hours period. 	
Who is in charge?	The site Chief Warden is in charge of this type of incident until relieved by Emergency Services.	
Who to call <i>Upon identifying this type of emergency, urgently contact. Follow incident matrix for further notifications</i>	Name Chief Warden / Deputy Warden Emergency Services Mine Management Team – Site Manager, Plant Manager, Pit Manager, Lime Manager, Mine Manager, WHS Business Partner Resources Regulator	Contact no: Two way radio Dial 209 000 Various 1300 814 609
Emergency equipment required	<ul style="list-style-type: none"> Portable first aid kit(s) Site communication devices Portable firefighting equipment Isolation equipment (e.g. locks) 	
Resuming operations	<p>This type of incident will require regulator notification and regulatory approval before resuming operations, to be determined by WHS Business Partner and Site Manager. Prevent access to areas involved in the incident until the scene is released.</p> <ul style="list-style-type: none"> Commence internal incident investigation. Equipment damaged by the incident will require inspection by a suitably qualified person after repair and before returning it to service. Risk assessments of equipment involved in the incident will require review prior to returning the equipment to service. Critically damaged equipment may require replacement. 	

8.12 Any Vehicle Collision or Rollover Duty Card

Emergency Procedure	<i>Any Vehicle Collision or Rollover Duty Card</i>	
What happened?	<i>Any on-site vehicle / HME / mobile plant collision incidents, including single vehicle, vehicle to vehicle, vehicle to pedestrian and rollover</i>	
Immediate response	<ol style="list-style-type: none"> Any operator observing or involved in vehicle collision or rollover must immediately report the incident to the their Supervisor by calling Emergency Emergency Emergency over the radio Assess the scene: What appears to have happened? Is there risk of escalation (e.g. fire, explosion, further roll over or people being struck by other vehicles)? As soon as practicable, report the details to the Chief Warden and/or Deputy Warden. Advise what resources are required to manage the emergency, including emergency services, if necessary. Consider calling emergency services on 000, consider calling police rescue if any personnel are trapped If safe to do so, approach and provide assistance (e.g. provide first aid, assist people in climbing out of vehicle(s), assist in firefighting, can the battery be disconnected / isolated, determine if emergency services are required). If safe to do so switch off the ignition, apply park brakes/wheel chocks Check for casualties – <ul style="list-style-type: none"> Arrange rescue of trapped personnel Apply first aid/medical treatment if required Do not move any deceased personnel (follow the fatal incident duty card) 	
Further response	<ol style="list-style-type: none"> The Chief Warden will send additional first aid or other resources to the incident scene. Evacuate the area of all unnecessary personnel and control traffic around the incident site The Chief Warden will send an appropriate person to the Aglime/Marulan South Rd Intersection to meet and direct Emergency Services. Watch for environmental problems such as fuel spillage (enact the pollution incident response management plan if required) Secure Site once all personnel have been evacuated from the area 	
Who is in charge?	The site Chief Warden is in charge of this type of incident until relieved by Emergency Services (if required).	
Who to call <i>Upon identifying this type of emergency, urgently contact.</i> <i>Follow incident matrix for further notifications</i>	Name Chief Warden / Deputy Warden Emergency Services Mine Management Team – Site Manager, Plant Manager, Pit Manager, Lime Manager, Mine Manager, WHS Business Partner Resources Regulator	Contact no: Two way radio Dial 209 000 Various 1300 814 609
Emergency equipment required	<ul style="list-style-type: none"> Portable first aid kit(s) Site communication devices On board and portable firefighting equipment Hi-visibility clothing 	

Emergency Procedure	<i>Any Vehicle Collision or Rollover Duty Card</i>
Resuming operations	<p>This type of incident will require regulator notification and regulatory approval before resuming operations, to be determined by WHS Business Partner and Site Manager. Prevent access to areas involved in the incident until the scene is released.</p> <p>The following actions must be carried out in accordance with the requirements of the Site SMS, including those defined in the site Traffic Management Plan and controls identified through risk assessment.</p> <ul style="list-style-type: none"> ● Commence internal incident investigation. ● Equipment damaged by the incident will require inspection by a suitably qualified person after repair and before returning it to service. ● Risk assessments of equipment involved in the incident will require review prior to returning the equipment to service. ● Critically damaged equipment may require replacement. ● BEAP counselling shall be offered (if required). ● The Site Manager may approve temporary alternate traffic flows. ● Vehicles may require retrieval / recovery

8.13 Emergencies Involving Explosives Duty Card

Emergency Procedure	Explosives Emergency - Mining
What happened?	<p><i>Emergencies involving Explosives:</i></p> <ul style="list-style-type: none"> • Fire in direct contact with Shot • Fire in the Vicinity of Shot Areas • Major Spillages of Explosives or Ingredients • Electrical Storm approaching Loaded Shot
<p style="text-align: center;">Where fire involves explosives or explosives vehicle And <u>no</u> life is in danger</p> <p style="text-align: center;">Seriously consider evacuating area and allowing fire to burn out</p> <p style="text-align: center;">Where <u>life</u> is in danger consider snatch and grab and take above action</p>	
Immediate response	<ol style="list-style-type: none"> 1. Any person observing or becoming aware of an emergency involving explosives must immediately report the incident by calling “Emergency Emergency Emergency” on the radio or by dialling 209 2. Assess whether there is an immediate potential for explosion – is there a fire or ignition source within or close by the explosive? 3. If there is trouble assessing if the area is safe or not – immediately evacuate the area within 1000m of the emergency. 4. Notify Emergency Services - Advise them of the quantity and type of explosives (using MSDS and / or Chemaalert). 5. Secure Site once all personnel have been evacuated from the area
Response to particular emergency	<p>FIRE IN DIRECT CONTACT WITH EXPLOSIVES VEHICLES OR SHOT:</p> <ul style="list-style-type: none"> • Do not attempt to fight the fire it may cause an explosion at any time. • Immediately evacuate the area. • Raise emergency response by calling the Chief Warden. Tell them location, nature of fire and the immediate need to evacuate the area. • Remove all people from the area to a distance of 1 km (this would be the far side of the helipad oval from the closest shot in the North Pit) • Divert all traffic away from the area, including on Marulan South Rd within the 1km limit. <p>Allow the fire to burn and keep area isolated for at least 6 hours after all fire and explosions have ceased</p> <p>FIRE IN VICINTY OF EXPLOSIVE VEHICLES OR SHOT – <u>NOT</u> IN DIRECT CONTACT WITH EXPLOSIVES:</p> <ul style="list-style-type: none"> • Assess if there is any immediate likelihood of the fire reaching any explosives. • Raise emergency response by calling the Chief Warden. Tell them location and the nature of the fire and if there is any likelihood of explosion. • Remove all non-essential people from the area. • Divert all traffic away from the area. • Attempt to extinguish fire with dry powder, water or foam extinguisher. • If fire cannot be contained, treat as a ‘direct contact with explosives fire’ •

Emergency Procedure	Explosives Emergency - Mining		
	MAJOR SPILLAGES OF EXPLOSIVES OR INGREDIENTS: Ammonium Nitrate or ANFO <ul style="list-style-type: none">If no threat of explosion, barricade area, clean up and disposal by Explosives Contractor.If threat of explosion, treat as for fire in an explosive. Diesel <ul style="list-style-type: none">Prevent as far as practicable cross contamination with Ammonium Nitrate.If there is cross contamination, assess explosive potential.Clean up in accordance with mine environmental procedure. Emulsion <ul style="list-style-type: none">Treat as an explosive.If there are no heat or ignition sources, barricade area, clean up and dispose of taking due care. ELECTRICAL STORMS APPROACHING A LOADED SHOT <ul style="list-style-type: none">As a minimum, the site shall be evacuated in accordance with the exclusion zone distance until the storm passes.Refer to Blast Management Plan Lightning Trigger Action Response Plan		
Who is in charge?	At all times the Shot Firer and Blast Supervisor are in control of all emergency responses involving explosives and will work with the Chief Warden to respond to the situation. Note: These Explosives Emergency Response Procedures are to be compared against the explosives supplier's procedures, and the higher standard is to be applied.		
Who to call: Upon identifying this type of emergency, urgently contact. Follow incident matrix for further notifications	Name Chief Warden / Deputy Warden Orica Emergency Team Emergency Services Mine Management Team – Site Manager, Plant Manager, Pit Manager, Lime Manager, Mine Manager, WHS Business Partner Resources Regulator		Contact no: Two way radio Dial 209 1800 033 111 000 Various 1300 814 609
Who to call (Other Explosives Emergencies)	Upon identifying this type of emergency, urgently contact.	Name Mine Manager - Blast Supervisor - Orica (Emergency Team) Emergency Services Ambulance (if necessary)	Contact no: Two way radio Two way radio 1800 033 111 000 000
Emergency equipment required	<ul style="list-style-type: none">Portable first aid kit(s)Site communication devicesPortable firefighting equipmentBlast Management Signage		
Resuming operations	This type of incident may require regulator notification and regulatory approval before resuming operations, to be determined by WHS Business Partner and Site Manager. Prevent access to areas involved in the incident until the scene is released. <ul style="list-style-type: none">Commence internal incident investigation.Equipment damaged by the incident will require inspection by a suitably qualified person after repair and before returning it to service.Risk assessments of equipment involved in the incident will require review prior to returning the equipment to service.Critically damaged equipment may require replacement.		

8.14 Emergencies Involving Explosives Vehicles

Emergency Procedure	<i>Emergencies Involving Explosives Vehicles</i>
What happened?	<p><i>Emergencies involving Explosives Vehicles:</i></p> <ul style="list-style-type: none"> • Fire in Cargo • Tyre Fire • Truck Body Fire • Engine Cab Fire • Vehicle Collision • Major spillage of load (rollover)
<p style="text-align: center;">Where fire involves explosives or explosives vehicle And <u>no life</u> is in danger Seriously consider evacuating area and allowing fire to burn out Where <u>life is</u> in danger consider snatch and grab and take above action</p>	
Immediate response	<ol style="list-style-type: none"> 1. Any person observing or becoming aware of an emergency involving explosives must immediately report the incident by calling “Emergency Emergency Emergency” on the radio or by dialling 209 2. Assess whether there is an immediate potential for explosion – is there a fire or ignition source within or close by the explosive? 3. If there is trouble assessing if the area is safe or not – immediately evacuate the area within 1000m of the emergency. 4. Notify Emergency Services - Advise them of the quantity and type of explosives (using MSDS and / or Chemalert). 5. Secure Site once all personnel have been evacuated from the area
Response to particular emergency	<p>FIRE IN CARGO</p> <ul style="list-style-type: none"> • Do not fight fire when fire reaches cargo. The cargo may explode. • Raise emergency response by calling the Chief Warden. Tell them location, material in load and quantity. • Remove all people from the area to a distance of 1000 m. • Divert all traffic away from the area, including on Marulan South Road. • Allow the cargo to burn and keep area isolated for at least 4 - 6 hours after all fire and explosions have ceased. <p>TYRE FIRE:</p> <ul style="list-style-type: none"> • Do not fight fire when fire reaches cargo. The cargo may explode. • Raise emergency response by calling the Chief Warden. Tell them location, material in load and quantity. • Stop vehicle and assess the risk of the fire spreading to the cargo. • Expect the tyre to explode. Take all precaution to ensure that no person is in a position to be injured. • Flood tyre with water if available. If water is not available, use dry powder or foam extinguisher, dirt or other means. • After extinguishing, remove tyre from vehicle and place well away from vehicle as it may re-ignite.

Emergency Procedure	<i>Emergencies Involving Explosives Vehicles</i>
	<ul style="list-style-type: none"> ● If fire cannot be extinguished using one fire extinguisher, treat as cargo fire. <p>TRUCK BODY FIRE</p> <ul style="list-style-type: none"> ● Do not fight fire when fire reaches cargo. The cargo may explode. ● Raise emergency response by calling the Chief Warden. Tell them location, material in load and quantity. ● Assess the risk of the fire spreading to the cargo. ● Remove all people from the area. ● Divert all traffic away from the area. ● Attempt to extinguish fire with dry powder, water or foam extinguisher. ● If fire cannot be contained, treat as cargo fire. <p>ENGINE OR CAB FIRE</p> <ul style="list-style-type: none"> ● Do not fight fire when fire reaches cargo. The cargo may explode. ● Raise emergency response by calling the Chief Warden. Tell them location, material in load and quantity. ● Assess the risk of the fire spreading to the cargo. ● Shut down engine. Isolate electricity with battery isolation switch or by disconnecting a battery cable ● Attempt to extinguish fire with dry powder, water or foam extinguisher. ● Caution: Fire may erupt if the bonnet is raised; attack through any available opening without raising bonnet. ● If fire cannot be contained, treat as cargo fire <p>VEHICLE ACCIDENT</p> <ul style="list-style-type: none"> ● Do not fight fire when fire reaches cargo. The cargo may explode. ● Raise emergency response by calling the Chief Warden. Tell them location, material in load and quantity. ● Check for fire, spills, leaks or movement of cargo ● Do not disentangle or move vehicles without specialist advice. <p>MAJOR SPILLAGE OF LOAD (ROLL OVER):</p> <ul style="list-style-type: none"> ● Raise emergency response by calling the Chief Warden. Tell them location, material in load and quantity. ● Chief Warden contact Explosives supplier to arrange material recovery. ● Isolate area from unauthorised access. ● Eliminate all sources of ignition (no smoking, sparks or flames). ● Do not touch or walk through spilled material. ● Do not clean up or dispose of, except under supervision of a specialist. ● Contractor. ● If threat of explosion, treat as for fire in an explosive.
Who is in charge?	<p>At all times the Shot Firer and Blast Supervisor are in control of all emergency responses involving explosives and will work with the Chief Warden to respond to the situation.</p> <p>Note: These Explosives Emergency Response Procedures are to be compared against the explosives supplier's procedures, and the higher standard is to be applied.</p>

Emergency Procedure	Emergencies Involving Explosives Vehicles		
Who to call: <i>Upon identifying this type of emergency, urgently contact.</i> <i>Follow incident matrix for further notifications</i>	Name Chief Warden / Deputy Warden Orica Emergency Team Emergency Services Mine Management Team – Site Manager, Plant Manager, Pit Manager, Lime Manager, Mine Manager, WHS Business Partner Resources Regulator		Contact no: Two way radio Dial 209 1800 033 111 000 Various 1300 814 609
Who to call (Other Explosives Emergencies)	<i>Upon identifying this type of emergency, urgently contact.</i>	Name Mine Manager - Blast Supervisor - Orica (Emergency Team) Emergency Services Ambulance (if necessary)	Contact no: Two way radio Two way radio 1800 033 111 000 000
Emergency equipment required	<ul style="list-style-type: none">● Portable first aid kit(s)● Site communication devices● Portable firefighting equipment● Blast Management Signage		
Resuming operations	<p>This type of incident may require regulator notification and regulatory approval before resuming operations, to be determined by WHS Business Partner and Site Manager. Prevent access to areas involved in the incident until the scene is released.</p> <ul style="list-style-type: none">● Commence internal incident investigation.● Equipment damaged by the incident will require inspection by a suitably qualified person after repair and before returning it to service.● Risk assessments of equipment involved in the incident will require review prior to returning the equipment to service.● Critically damaged equipment may require replacement.		

8.15 Emergencies Involving Premature Detonation of Explosives

Emergency Procedure	<i>Emergencies Involving Premature Detonation of Explosives</i>
What happened?	<p><i>Emergencies involving Premature Detonation of Explosives:</i></p> <ul style="list-style-type: none"> • <i>Premature Detonation in Shots, Storage or Transport</i> • <i>Detonation of holes</i> • <i>Detonation caused by hot or reactive ground</i> • <i>Detonation in vehicles or magazines</i> • <i>Unclear cause of detonation</i>
Immediate response	<ol style="list-style-type: none"> 1. Any person observing or becoming aware of an emergency involving explosives must immediately report the incident by calling “Emergency Emergency Emergency” on the radio or by dialling 209 2. If there is trouble assessing if the area is safe or not – immediately evacuate the area within 1000m of the emergency. 3. Notify Emergency Services - Advise them of the quantity and type of explosives (using MSDS and / or Chemalet). 4. Secure Site once all personnel have been evacuated from the area
Response to particular emergency	<p>PREMATURE DETONATION IN SHOTS, STORAGE OR TRANSPORT:</p> <ul style="list-style-type: none"> • Immediately evacuate the area. • Raise emergency response by calling the Chief Warden. Tell them location, nature of the premature detonation and the immediate need to evacuate the area. • Remove all people from the area to a distance of 1 km. • Divert all traffic away from the area, including any public roads within the 1km limit. • If life is not threatened, the Mine Manager (or authorised Blast Supervisor) shall secure the area and notify statutory authorities. • If life is under threat, a risk assessment shall be completed which considers: <ul style="list-style-type: none"> ○ the amount of explosives involved ○ the most likely cause of the premature detonation, before determining if rescue will be possible. • A Shotfirer may approach the accident scene within 200 metres (if safe to do so) to determine the likely cause of the premature detonation, and to assess explosive stability of the accident scene and the possibility of further explosions if a rescue is carried out <p>DETONATION OF HOLES</p> <ul style="list-style-type: none"> • A detonation of holes that has occurred due to mishap may present a stable situation and allow rescue to occur quickly. In this situation, a Shotfirer may determine if a rescue is appropriate. • If the detonation was caused by a lightning strike, the rescue shall not proceed until all electrical activity has ceased <p>DETONATIONS CAUSED BY HOT OR REACTIVE GROUND</p> <ul style="list-style-type: none"> • Identifying the cause of detonation shall take place at a safe distance from the detonated, fuming or reacting blast holes. • Prior to rescue, the number of detonated, fuming or reacting blast holes should be assessed where possible. • Access to the shot is prohibited until all signs of chemical activity have completely ceased or when an explosives expert determines that it is safe for rescue activities to

Emergency Procedure	Emergencies Involving Premature Detonation of Explosives		
	<p>proceed.</p> <p>DETONATION IN VEHICLES OR MAGAZINES</p> <ul style="list-style-type: none">If fire is still evident in any explosives vehicle, no rescue can be carried out until six hours after fire and explosions have ceased, or when an explosives expert determines that it is safe for rescue activities to proceed. <p>UNCLEAR CAUSES OF DETONATION</p> <ul style="list-style-type: none">Where the cause of detonation is unclear, personnel shall treat the incident as caused by hot or reactive ground.An explosive expert shall be engaged as part of the rescue planning. <p>RESCUE ACTIVITIES</p> <ul style="list-style-type: none">If live surface connector leads are present where holes have prematurely detonated, a team shall disconnect leads and remove them as they proceed to injured parties.No rescue vehicles are allowed within the bunded shot boundary due to the possibility of running over down lines. If a rescue is necessary, the Shotfirer shall ensure that all surface leads are removed and down lines are coiled and secured prior to escorting the rescue vehicles onto the shot.		
Who is in charge?	<p>At all times the Shot Firer and Blast Supervisor are in control of all emergency responses involving explosives and will work with the Chief Warden to respond to the situation.</p> <p>Note: These Explosives Emergency Response Procedures are to be compared against the explosives supplier's procedures, and the higher standard is to be applied.</p>		
Who to call: <i>Upon identifying this type of emergency, urgently contact.</i> <i>Follow incident matrix for further notifications</i>	<p>Name Chief Warden / Deputy Warden</p> <p>Orica Emergency Team Emergency Services Mine Management Team – Site Manager, Plant Manager, Pit Manager, Lime Manager, Mine Manager, WHS Business Partner Resources Regulator</p>		<p>Contact no: Two way radio Dial 209 1800 033 111 000 Various 1300 814 609</p>
Who to call (Other Explosives Emergencies)	<p><i>Upon identifying this type of emergency, urgently contact.</i></p>	<p>Name Mine Manager - Blast Supervisor - Orica (Emergency Team) Emergency Services Ambulance (if necessary)</p>	<p>Contact no: Two way radio Two way radio 1800 033 111 000 000</p>
Emergency equipment required	<ul style="list-style-type: none">Portable first aid kit(s)Site communication devicesPortable firefighting equipmentBlast Management Signage		
Resuming operations	<p>This type of incident may require regulator notification and regulatory approval before resuming operations, to be determined by WHS Business Partner and Site Manager. Prevent access to areas involved in the incident until the scene is released.</p> <ul style="list-style-type: none">Commence internal incident investigation.Equipment damaged by the incident will require inspection by a suitably qualified person after repair and before returning it to service.Risk assessments of equipment involved in the incident will require review prior to returning the equipment to service.Critically damaged equipment may require replacement.		

8.16 Falling In Harness Rescue

Emergency Procedure	Falling in Harness Rescue	
What happened?	<p>Any incident involving the arrest of someone's fall using a harness.</p> <p>(Note: A task-specific rescue plan shall be developed and reviewed before issuing the High Risk Permit for any work at heights which involves the use of a fall arrest set up. This duty card is meant to complement these specific plans.)</p>	
Immediate response	<ol style="list-style-type: none"> 1. Initiate the task-specific rescue plan. Additional personnel can assist the team in following the specific rescue plan. 2. Immediately report the details to the Chief Warden and/or Deputy Warden and request additional first aid support. 3. Call emergency services immediately including Police Rescue (timely rescue and expert care is vital in avoiding suspension trauma). If on site rescue is successful, external rescue services can be cancelled. 	
Further response	<ol style="list-style-type: none"> 4. Unless rescue is immediate, attempts must be made to avoid blood pooling in the victims legs and preventing oxygen circulation. If the suspended person is conscious encourage them to: <ul style="list-style-type: none"> ● Move into a sitting position if possible. Use a trauma strap if fitted to move in the harness ● Move their legs and use their legs muscles to stimulate blood flow ● Remain calm and avoid strenuous activity as this creates a higher oxygen demand and may result in fainting 5. If the person is unconscious and rescue activities are delayed, efforts should be made to raise their knees into a sitting position by looping rope, or equivalent, under their knees. 6. If possible, to assist in the person's rescue use a ladder, an elevating work platform (EWP), or crane work platform to rescue/reach the suspended person. 7. Trained personnel can attempt rescue using the onsite Gotcha Rescue Kit 8. Once rescued, standard first aid shall be provided. The person shall be treated / monitored by a first aider until the ambulance arrives. 9. Secure Site once all personnel have been evacuated from the area 	
Who is in charge?	The site Chief Warden is in charge of this type of incident until relieved by emergency services.	
Who to call <i>Upon identifying this type of emergency, urgently contact.</i> <i>Follow incident matrix for further notifications</i>	Name Chief Warden / Deputy Warden Emergency Services Mine Management Team – Site Manager, Plant Manager, Pit Manager, Lime Manager, Mine Manager, WHS Business Partner Resources Regulator	Contact no: Two way radio Dial 209 000 Various 1300 814 609
Emergency equipment required	<ul style="list-style-type: none"> ● Predetermined rescue equipment ● Portable first aid kit(s) ● Site communication devices 	

Emergency Procedure	<i>Falling in Harness Rescue</i>
Resuming operations	<p>This type of incident will require regulator notification and regulatory approval before resuming operations, to be determined by WHS Business Partner and Site Manager. Prevent access to areas involved in the incident until the scene is released.</p> <ul style="list-style-type: none"> • Commence internal incident investigation. • The harness and other fall arrest equipment shall be permanently taken out of service (but not initially destroyed, until approved by external investigators). • The anchor point used shall be taken out of service until certified as fit for reuse.

8.17 Confined Space Rescue

Emergency Procedure	Confined space rescue	
What happened?	<p><i>Person in confined space has collapsed or injured themselves and requires rescue</i></p> <p><i>(Note: A task-specific rescue plan shall be developed and reviewed before issuing the High Risk Permit for any confined spaces work. This duty card is meant to complement these specific plans.)</i></p>	
Immediate response	<ol style="list-style-type: none"> 1. Initiate the task-specific rescue plan ASAP (that was developed and reviewed before the Confined Space Permit was issued) 2. Notify the Chief Warden – advise of the confined space and what resources will be required 3. Assess the scene Contact Emergency Services if rescue plan is unsuccessful or if there are casualties 4. Rescue should only be attempted by trained personnel. 5. Only attempt a rescue if area can be made safe. 6. DO NOT enter a confined space unless fitted with a self-contained breathing apparatus, a communication device to the standby person, a torch and are tethered. A qualified Confined Space Rescue Standby Person must be present 7. Retrieve injured person using lifeline or harness 	
Further response	<ol style="list-style-type: none"> 1. Conduct first aid on person once removed. The person shall be treated/monitored by a first aider until the ambulance arrives. 2. The Chief Warden will send a Site person to the Aglime/Marulan South Rd Intersection to meet and direct the Ambulance, if applicable. 3. Secure Site once all personnel have been evacuated from the area 	
Who is in charge?	The site Chief Warden is in charge of this type of incident until relieved by the Ambulance officers	
Who to call <i>Upon identifying this type of emergency, urgently contact.</i> <i>Follow incident matrix for further notifications</i>	Name Chief Warden / Deputy Warden Emergency Services Mine Management Team – Site Manager, Plant Manager, Pit Manager, Lime Manager, Mine Manager, WHS Business Partner Resources Regulator	Contact no: Two way radio Dial 209 000 Various 1300 814 609
Emergency equipment required	<ul style="list-style-type: none"> ● Lifeline or harness retrieval equipment ● Self-contained breathing apparatus ● Means to ventilate area before entering if required ● O₂ monitor ● Site communication devices ● Torch 	
Resuming operations	<p>This type of incident will require regulator notification and regulatory approval before resuming operations, to be determined by WHS Business Partner and Site Manager. Prevent access to areas involved in the incident until the scene is released</p> <ul style="list-style-type: none"> ● Commence internal incident investigation. ● Area to be made safe before entering. 	

8.18 Immersion of Person or Vehicle

Emergency Procedure	<i>Immersion of Person or Vehicle</i>	
What happened?	<i>Any incident involving a person / vehicle being immersed in a water source on site</i>	
Immediate response	<ol style="list-style-type: none"> 1. Assess the scene: What appears to have happened? Is there risk of escalation (further immersion)? 2. If safe to do so, approach and provide assistance. Where possible, use a rope, a pole or other means of rescuing the person without entering the water yourself. Note: Panicking swimmers can accidentally drown their rescuers 3. Consider – does the vehicle require stabilising to avoid further immersion? 4. If the person is conscious, help them to relax 5. If they are unconscious, commence CPR in accordance with your training or under direction from 000 and have someone call for help 6. As soon as practicable, report the details to the Chief Warden and/or Deputy Warden. Advise what resources are required to manage the emergency. 	
Further response	<ol style="list-style-type: none"> 1. The Chief Warden will send additional first aid or other resources to the incident scene. 2. The Chief Warden will send a person to the Aglime/Marulan South Rd Intersection to meet and direct Emergency Services. 3. Any person who has potentially inhaled water shall be transported to medical facilities for assessment / monitoring. First aid treatment / monitoring is required until the ambulance arrives. 	
Who is in charge?	The site Chief Warden is in charge of this type of incident.	
Who to call <i>Upon identifying this type of emergency, urgently contact.</i> <i>Follow incident matrix for further notifications</i>	Name Chief Warden / Deputy Warden Emergency Services Mine Management Team – Site Manager, Plant Manager, Pit Manager, Lime Manager, Mine Manager, WHS Business Partner Resources Regulator	Contact no: Two way radio Dial 209 000 Various 1300 814 609
Emergency equipment required	<ul style="list-style-type: none"> ● Portable first aid kit(s) ● Rescue ring, rope, pole or another device that could be utilised to rescue the person 	
Resuming operations	This type of incident may require regulator notification and regulatory approval before resuming operations, to be determined by WHS Business Partner and Site Manager. Prevent access to areas involved in the incident until the scene is released <ul style="list-style-type: none"> ● Commence internal incident investigation. ● BEAP counselling shall be offered (if required). ● The structure of the water source (e.g. damn walls) may require inspection by a suitably qualified person prior to returning it to service. ● Risk assessments of drowning will require review prior to returning the water source to service. 	

8.19 Engulfment / Entrapment (Crush Injury) Incidents

Emergency Procedure	<i>Engulfment / Entrapment Incidents</i>
What happened?	<i>Any incidents involving a person either being crushed under or between something or engulfed in a bin or by material</i>
Immediate response	<ol style="list-style-type: none"> Any operator observing or involved in an incident engulfment or entrapment must immediately report the incident to the Supervisor in charge by calling Emergency Emergency Emergency over the radio Immediately report the details to the Chief Warden and/or Deputy Warden and request Call emergency services immediately including Police Rescue (timely rescue and expert care is vital in avoiding Crush Injury Syndrome). If on site rescue is successful, external rescue services can be cancelled. Is there risk of further harm? Does any equipment require stabilising / isolation to avoid uncontrolled movement? <p>Engulfment</p> <ol style="list-style-type: none"> Check for hazards including further stockpile undercutting and further pit wall collapse, further material entering bin prior to rescue etc. Retrieve personnel if alive and safe to do so, retrieve engulfed persons using hand tools. If vehicle/HME involved and personnel are unable to exit the vehicle safely, operator should be instructed to remain in cabin with seatbelt on until help arrives. Do not remove deceased persons <p>Entrapment</p> <p>If possible and it is safe to do so – immediately remove the crushing force – if not follow below</p> <p>Managing Crush Injuries</p> <p>A crush injury can be complicated by a condition known as crush syndrome, which occurs when there is a prolonged delay in removing the crushing force from the casualty. Harmful toxins are produced by the crushed muscle tissue after a period of time, and are prevented from being released into the body while the crushing force remains on the casualty.</p> <p>When the force is removed after a prolonged period, harmful toxins can swiftly inundate areas of the body and cause severe shock and renal failure in the casualty.</p> <ol style="list-style-type: none"> Call 000 for an ambulance. If it is safe and physically possible, all crushing forces should be removed as soon as possible If the crushing force is to the head, neck or torso, it must be removed immediately If the crushing force to a limb cannot be removed or has been in place for 30 minutes or longer, do not remove it. Remain with the casualty and wait for assistance of emergency services Rest and reassure the casualty, keep them as comfortable as possible Treat the casualty for shock Keep the casualty calm until emergency services arrive

Emergency Procedure	Engulfment / Entrapment Incidents	
Further response	16. Conduct first aid on person once removed / or during entrapment 17. A victim with a crush injury may not complain of pain, and there may be no external signs of injury. All victims who have been subjected to crush injury, including from their own body weight, should be taken to hospital for immediate investigation 18. The Chief Warden will send a Site person to the Aglime/Marulan South Rd Intersection to meet and direct the Ambulance, if applicable.	
Who is in charge?	The site Chief Warden is in charge of this type of incident until relieved by the Ambulance officers	
Who to call <i>Upon identifying this type of emergency, urgently contact. Follow incident matrix for further notifications</i>	Name Chief Warden / Deputy Warden Emergency Services Mine Management Team – Site Manager, Plant Manager, Pit Manager, Lime Manager, Mine Manager, WHS Business Partner Resources Regulator	Contact no: Two way radio Dial 209 000 Various 1300 814 609
Emergency equipment required	<ul style="list-style-type: none"> ● Lifeline or harness retrieval equipment ● Site communication devices ● Isolation equipment ● Hand Tools for digging 	
Resuming operations	This type of incident will require regulator notification and regulatory approval before resuming operations, to be determined by WHS Business Partner and Site Manager. Prevent access to areas involved in the incident until the scene is released <ul style="list-style-type: none"> ● Commence internal incident investigation. ● Area to be made safe before entering. 	

8.20 Laboratory Emergency – Chemical Spills / General Exposure to Chemicals

Emergency Procedure	Laboratory Emergency – Chemical spills / General Exposure to Chemicals
What happened?	<i>Laboratory emergency – chemical spills and person exposed to chemicals; on their skin, inhalation, ingestion</i>
Immediate response	<p>LABORATORY EMERGENCY - CHEMICAL SPILL</p> <ol style="list-style-type: none"> 1. Advise the Technical Manager – Limestone immediately 2. Evacuate the affected site and surrounding area. 3. Lock all doors except the front door – area warden to be stationed at the door 4. Do not let unauthorised personnel enter the building 5. Switch off air-conditioning at external power points <p>If there are no injured personnel (for injured personnel refer to general exposure to chemicals below):</p> <ul style="list-style-type: none"> ● Refer to SDS on Chemaalert ● Contain spill to prevent spreading – mini boom if spreading ● Apply absorbent pads to acid – you can check compatibility with 3M information (appended). ● The absorbent pads are suitable for all acid % concentrations except 32% Hydrochloric Acid (use BDH Chemical Spill X Powder to neutralize 32% Hydrochloric Acid stored in green wall cabinet adj. titrate area of laboratory). ● Do not dilute with water as it will cause a larger spill and in the case of Nitric Acid will react violently. <p>When using Spill X pour powder around the spill to encircle it. Avoid splashing using scraper from BDH kit to mix. Pour powder evenly over the spill:</p> <ul style="list-style-type: none"> ● If spill X has been used check pH with test kit in green wall cabinet. Appropriate PPE is to be worn when checking pH. If required add more spill x to complete neutralization. ● Once neutralisation is complete place resultant chromate salt in bag provided – correctly label and store ready for disposal. ● Avoid touching the salt. The Supervisor will arrange for the disposal of the salt residue. Indicate on bag final pH of waste residue. Dispose of following Boral and authority guidelines. <p>Where absorbent materials have been used collect and store in waste bag. Supervisor to arrange disposal.</p> <p>GENERAL EXPOSURE TO CHEMICALS</p> <ol style="list-style-type: none"> 1. Remove person from chemical source if safe to do so (follow SDS if unsure) 2. Contact ambulance 3. For skin exposure – put person under continuous stream of cool water, or safety shower, for a minimum 15-20mins, remove ALL affected clothing ASAP 4. For inhalation – remove them to an unaffected area, monitor their breathing 5. For ingestion – call poisons information line for first aid requirements, follow their instruction.

Emergency Procedure	Laboratory Emergency – Chemical spills / General Exposure to Chemicals	
Further response	<ol style="list-style-type: none"> 1. Only provide first aid to your level of competence 2. Apply appropriate first aid, depending on type of exposure 3. Wait for ambulance to transport worker to hospital 4. Ensure SDS is sent with worker to hospital 5. Decontaminate PPE and equipment used in the clean-up, dispose of any gloves, coveralls or clothing that are contaminated. 	
Who is in charge?	At all times a trained spill clean-up person and Technical Manager - Limestone are in control of all emergency responses involving chemicals and will work with Chief Warden to respond to the situation.	
Who to call <i>Upon identifying this type of emergency, urgently contact.</i> <i>Follow incident matrix for further notifications</i>	Name Chief Warden / Deputy Warden Technical Manager - Limestone Emergency Services Mine Management Team – Site Manager, Plant Manager, Pit Manager, Lime Manager, Mine Manager, WHS Business Partner Resources Regulator	Contact no: Two way radio Dial 209 275 000 Various 1300 814 609
Emergency equipment required	<ul style="list-style-type: none"> ● PPE, breathing apparatus and spill kits can be found outside the limestone prep area ● List of chemicals stored in laboratory can be found at each entry into the building and storeroom ● A SDS Register is located in the Spill Kit storage register. Chemaalert is also available ● First aid kit ● Safety shower/cold running water ● Site communication devices 	
Resuming operations	This type of incident will require regulator notification and regulatory approval before resuming operations, to be determined by WHS Business Partner and Site Manager. Prevent access to areas involved in the incident until the scene is released <ul style="list-style-type: none"> ● Commence internal incident investigation. ● Area to be made safe 	

8.21 Kiln Emergency – Gas Explosion / Leak

Emergency Procedure	Kiln Emergency – Gas Explosion / Leak Coal Bin Fire
What happened?	<i>Any incident involving rapid release of pressure, Gas, heat or material in a sudden and violent manner or a coal bin fire.</i>
Immediate response	<p>1. Any person observing or becoming aware of a kiln emergency must immediately report the incident by calling “Emergency Emergency Emergency” on the radio or by dialling 209 Evacuate to pre-determined area.</p> <p>GAS LEAK / EXPLOSION</p> <p>IMMEDIATE ACTION:</p> <p>Hit the red stop button labelled emergency stop in kiln control room to stop kiln Break glass on the gas stop box and activate switch in kiln control room to stop the gas</p> <ol style="list-style-type: none"> Do not attempt to shut down or isolate equipment if it is not safe to do so. Notify Jemena Gas on 131 909 Activate the nearest alarm and Contact Chief Warden Do not enter the area if it is not safe to do so. Move people out of the immediate area of danger and evacuate the affected site and surrounding area. Restrict access to the area. Eliminate any ignition sources in the area, stop and shut down all mobile equipment and trains in the yard Open the Lime Plant gate and post sentries to keep out unauthorised personnel. Assess cause and effect of incident and call 000 if required. Secure area, which may include fighting of small fires, using spill kits to stop spread, or locking down area to prevent spread of fumes/fire. Rescue injured/trapped person if safe to do so and provide first aid as required <p>COAL BIN FIRE</p> <ol style="list-style-type: none"> Notify the Kiln Control immediately Hit Emergency stop button located in kiln control room or on front of BMS panel)if in location of BMS or firing floor evacuate the area due to CO2 release) In case coal flow is to be stopped immediately hit crash stop button on citect panel. If fire out of control throughout plant, follow Gas Leak/explosion procedure Check air quality of kiln area by handheld gas monitor and ensure that there is no CO2 present before going back to kiln floor
Further response	<ol style="list-style-type: none"> Area Warden to meet emergency services at Aglime/Marulan South Rd Intersection Follow emergency services instructions.
Who is in charge?	The site Chief Warden is in charge of this type of incident.

Emergency Procedure	Kiln Emergency – Gas Explosion / Leak Coal Bin Fire	
Who to call <i>Upon identifying this type of emergency, urgently contact. Follow incident matrix for further notifications</i>	Name Chief Warden / Deputy Warden Emergency Services Mine Management Team – Site Manager, Plant Manager, Pit Manager, Lime Manager, Mine Manager, WHS Business Partner Resources Regulator	Contact no: Two way radio Dial 209 000 Various 1300 814 609
Emergency equipment required	<ul style="list-style-type: none"> • Portable first aid kit(s) • Site communication devices • Portable firefighting equipment • Isolation equipment (e.g. locks) 	
Resuming operations	This type of incident will require regulator notification and regulatory approval before resuming operations, to be determined by WHS Business Partner and Site Manager. Prevent access to areas involved in the incident until the scene is released <ul style="list-style-type: none"> • Commence internal incident investigation. • Equipment damaged by the incident will require inspection by a suitably qualified person after repair and before returning it to service. • Risk assessments of equipment involved in the incident will require review prior to returning the equipment to service. • Critically damaged equipment may require replacement. 	

8.22 Asbestos Incident

Emergency Procedure	Asbestos / Suspected Contaminated Material Incident	
What happened?	<i>Where Asbestos Containing Material or other suspected contaminated material is thought to have been encountered unexpectedly and/or disturbed</i>	
Immediate response	<ol style="list-style-type: none"> Any person who believes that friable asbestos or suspected contaminated material is present in their work area should immediately report it to their supervisor and restrict access to the area. All work associated with the ACM / suspected contaminated material should cease. Any open Authority to Work permits should be cancelled or suspended until the site has been declared safe; The site manager / WHS Partner should arrange for the material to be sampled by an external competent person; Sample/s must be sent to Noel Arnold and Associates for analysis. Expert advice from an occupational hygienist or a subject matter expert should be obtained regarding the appropriate course of action; If sampling confirms the presence of asbestos refer to the "Code of Practice for the Safe Removal of Asbestos". Broadly the Code of Practice requires; <ul style="list-style-type: none"> The continued restriction of access to the area The identification of a competent/licensed asbestos removalist An asbestos removal control plan An emergency plan Clearance to reoccupy an asbestos work area 	
Further response	<ol style="list-style-type: none"> The event should be recorded as a near miss in Incident Management System with the description of the event as "Suspect Asbestos or Asbestos Containing Material identified / Suspected Contaminated Material" in the description of the event. The Incident Management System entry should list the exact location of the material identified; A toolbox meeting should be held informing all affected parties of the action taken to assess the nature of the material, and to advise of the required course of action to be taken in relation to any possible exposures that may have occurred; The site Workplace Health and Safety Committee should be informed of the occurrence; On confirmation of the presence of ACM /Suspected Contaminated Material by the testing undertaken, a minimum short form investigation should occur; In the event that the testing confirms a material not containing asbestos, the SEquence event should be updated to reflect the findings and closed out (the rating on the event may be downgraded to 'low'). A safety notice or similar should be issued to persons working at the site. The issuing of a safety alert should be considered in consultation with the regional WHS Manager. 	
Who is in charge?	The Site Manager is in charge of this type of incident	
Who to call <i>Upon identifying this type of emergency, urgently contact.</i>	Name Immediate Supervisor Site Manager WHS Business Partner	Contact no: Various 231 223

Emergency Procedure	<i>Asbestos / Suspected Contaminated Material Incident</i>
Emergency equipment required	<ul style="list-style-type: none"> • Appropriate signage erected to identify materials • Site communication devices
Resuming operations	<ul style="list-style-type: none"> • All employees and contractors who may have been affected by an accidental release of ACM should be offered the services of the Boral Employee Assistance Program. • Asbestos Register should be updated to reflect the material tested, regardless of whether the results of the testing were positive or negative for asbestos. • Ensure that any asbestos containing material is identified with clear and concise signage

8.23 Environment – Fuel or Other Hazardous Liquid Spill

Emergency Procedure	Environment – Fuel or Other Hazardous Liquid Spill	
What happened?	<i>A spill of distillate, oil or chemical on site during delivery, or on site.</i>	
Immediate response	<ol style="list-style-type: none"> 1. Advise the supervisor or area warden immediately of the spill and its location on site. If known, advise its nature and approximate volume. 2. Shut down dispenser, any machines, appliances, valves or switches if it is safe to do so to prevent further release of spill 3. Supervisor or Area Warden to move any people in immediate danger to the Safe assembly area. 4. Advise Chief Warden and advise what resources are required to manage the emergency. 5. Determine the level of emergency and whether evacuation is required. 6. Tape off the area to keep unauthorised personnel out. 7. Small Spills: Put booms or barriers such as socks (on land) and booms (on water) in place to prevent further spread of the liquid if it is safe to do so. Use appropriate absorbent/containment materials from the site's spill kits. Stay upwind from the spill; be aware that toxic fumes are given off by some liquids. 8. Large Spills: Summon Emergency Services 000 and specialist spill emergency response contractors (e.g. Transpacific Industrial Solutions, 1800 SPILLS). 9. Block the flow to stormwater drains or water sources 	
Further response	<ol style="list-style-type: none"> 1. If spill has entered stormwater drain or water sources, seek to block downstream. 2. Clean up contaminated sand, soil or absorbent material, place in drums or appropriately stockpile to dispose of. 3. The Chief Warden will send a person to the Aglime/Marulan South Rd Intersection to meet and direct the emergency services, if applicable. 	
Who is in charge?	The site Chief Warden is in charge of this type of incident	
Who to call <i>Upon identifying this type of emergency, urgently contact.</i> <i>Follow incident matrix for further notifications</i>	Name Chief Warden / Deputy Warden Emergency Services Mine Management Team – Site Manager, Plant Manager, Pit Manager, Lime Manager, Mine Manager, WHS Business Partner Regulatory Authorities and neighbours as per Attachment 8.1.	Contact no: Two way radio Dial 209 000 Various
Emergency equipment required	<ul style="list-style-type: none"> ● Spill kits or absorbent materials near all dispensing and storage locations. ● Appropriate signage erected to identify materials ● Site communication devices 	
Resuming operations	This type of incident may require regulator notification and regulatory approval before resuming operations, to be determined by WHS Business Partner and Site Manager. Prevent access to areas involved in the incident until the scene is released <ul style="list-style-type: none"> ● Commence internal incident investigation. ● Clearance given by Emergency Services. ● Area made safe ● If required, remediate the site following the spill clean-up. 	

8.24 Environment – Significant Dust Event

Emergency Procedure	<i>Environment – Significant Dust Event</i>	
What happened?	<i>A significant dust event</i>	
Immediate response	<ol style="list-style-type: none"> 1. Advise the supervisor or area warden immediately of the dust incident and its location on site. 2. If the dust event is caused by processing equipment malfunction, shut down any machines, appliances, valves or switches to stop further dust generation. 3. Shut down ventilation system to stop dust from spreading. 4. If the dust event is caused by material handling at external stockpiles or in the mine area, stop the activity until conditions improve (wind subsides, dry surface is wetted down, etc.) 	
Further response	<ol style="list-style-type: none"> 4. Do not resume activity until the cause of excessive dust generation has been rectified. 5. Promptly clean up any solid material spills. 6. For further details see Attachment 8.1. 	
Who is in charge?	The site Chief Warden is in charge of this type of incident	
Who to call <i>Upon identifying this type of emergency, urgently contact.</i> <i>Follow incident matrix for further notifications</i>	Name Chief Warden / Deputy Warden Emergency Services Mine Management Team – Site Manager, Plant Manager, Pit Manager, Lime Manager, Mine Manager, WHS Business Partner Regulatory Authorities and neighbours as per Attachment 8.1.	Contact no: Two way radio Dial 209 000 Various
Emergency equipment required	<ul style="list-style-type: none"> ● Site water trucks ● Site communication devices 	
Resuming operations	This type of incident may require regulator notification and regulatory approval before resuming operations, to be determined by WHS Business Partner and Site Manager. Prevent access to areas involved in the incident until the scene is released <ul style="list-style-type: none"> ● Commence internal incident investigation. ● Resume operations when conditions improve 	

8.25 Civil Disorder

Emergency Procedure	Civil Disorder	
What happened?	<i>Any incident involving civil disorder with the potential to disrupt site operations or access, regardless of the size.</i>	
Immediate response	<ol style="list-style-type: none"> 1. If Civil Disorder threatens to disrupt site operations or access to the site, report the issue immediately to the Chief Warden 2. The Chief Warden shall contact line management and HR Department 3. The Chief Warden should determine whether it is safe for operations to continue and persons can gain access to the site. 4. If it is unsafe for operations to continue the site shall be closed and secured 5. All persons should remain clear of situations where personal threat is present 6. If required, management should contact emergency services and implement a safe evacuation procedure 	
Further response	<ol style="list-style-type: none"> 7. Senior Line Management may need to contact the Boral Media department depending on the size of the incident and potential outcomes. 8. HR should be kept informed of changes in the situation 9. The Boral crisis team may require notification 	
Who is in charge?	The site Chief Warden is in charge of this type of incident.	
Who to call <i>Upon identifying this type of emergency, urgently contact.</i> <i>Follow incident matrix for further notifications</i>	Name Chief Warden / Deputy Warden Emergency Services Mine Management Team – Site Manager, Plant Manager, Pit Manager, Lime Manager, Mine Manager, WHS Business Partner Resources Regulator	Contact no: Two way radio Dial 209 000 Various 1300 814 609
Emergency equipment required	<ul style="list-style-type: none"> • Portable first aid kit(s) 	
Resuming operations	This type of incident may require regulator notification and regulatory approval before resuming operations, to be determined by WHS Business Partner and Site Manager. Prevent access to areas involved in the incident until the scene is released <ul style="list-style-type: none"> • Commence internal incident investigation. • Any equipment / assets damaged by the incident will require inspection by a suitably qualified person after repair and before returning it to service. 	

8.26 Aircraft Crash

Emergency Procedure	Aircraft Crash	
What happened?	Any on-site aircraft crash.	
Immediate response	<ol style="list-style-type: none"> 1. Contact Chief Warden and emergency services 2. Assess the scene: What appears to have happened? Is there risk of escalation (e.g. fire, explosion, further roll over or people being struck by other vehicles)? 3. If safe to do so, approach and provide assistance (e.g. provide first aid, assist people in climbing out of vehicle(s), assist in firefighting). <p>CAUTION:</p> <ul style="list-style-type: none"> ● Aviation accident sites contain potential hazards including flammable, radioactive and toxic materials and may also contain explosives ● Only personnel with SCBA or full-face canister respirators may enter an aircraft accident zone until fires are extinguished and loose composite fibres are suppressed ● Due to possible activation of damaged ordnance by radio transmission – DO NOT use portable communications equipment within immediate vicinity of accident site. ● NOTHING should be disturbed other than that necessary to rescue survivors or preserve life and suppress post-crash fires 	
Further response	<ol style="list-style-type: none"> 6. The Chief Warden will send additional first aid or other resources to the incident scene. 7. The Chief Warden will send an appropriate person to the entry gate to meet and direct Emergency Services. 8. Leave the wreckage as undisturbed as possible when removing victims (Do Not remove fatalities - Police Coroner to advise of further instructions) 9. Secure the accident site by placing a cordon around all scattered wreckage, as well as other evidence such as marks made by the aircraft, and ground scars. 10. Obtain names, addresses, contact numbers and intended movements of witnesses, and note in particular any witnesses who may have photographic or video evidence of the accident 	
Who is in charge?	The site Chief Warden is in charge of this type of incident until relieved by Emergency Services.	
Who to call <i>Upon identifying this type of emergency, urgently contact.</i> <i>Follow incident matrix for further notifications</i>	Name Chief Warden / Deputy Warden Emergency Services Mine Management Team – Site Manager, Plant Manager, Pit Manager, Lime Manager, Mine Manager, WHS Business Partner Resources Regulator Australian Transport Safety Bureau (ATSB) See note below	Contact no: Two way radio Dial 209 000 Various 1300 814 609 1800 011 034
Emergency equipment required	<ul style="list-style-type: none"> ● Portable first aid kit(s) ● Site communication devices ● On board and portable firefighting equipment ● Hi-visibility clothing 	
Resuming operations	This type of incident may require regulator notification and regulatory approval before resuming operations, to be determined by WHS Business Partner and Site Manager. Prevent access to areas involved in the incident until the scene is released <ul style="list-style-type: none"> ● Commence internal incident investigation. ● BEAP counselling shall be offered (if required). ● The Site Manager may approve temporary alternate traffic flows. ● Aircraft will require retrieval / recovery. 	

Note: Who must report an aviation accident?

As required under the Transport Safety Investigation Act 2003 and regulations, the owner, operator or crew of the aircraft must report the accident immediately to the Australian Transport Safety Bureau (ATSB). However, it is understood that the owner and/or operator may not learn of the accident until sometime after the event, and the crew may be unable to notify the ATSB due to personal injuries.

Anyone learning of an aviation accident should report the accident to the ATSB immediately, in addition to alerting emergency services as required.

8.27 Radiation Accidents

Emergency Procedure	<i>Radiation Accidents</i>
What happened?	<p><i>A radiation accident is to be treated as having occurred if there is an occurrence that involves the unplanned or unexpected emission of radiation (including spillage or leakage of a radioactive substance or damage to radiation apparatus) and that is of such a nature and extent that it is likely:</i></p> <p><i>(a) that one or more persons have, or could have, received an effective dose of radiation equal to or in excess of"</i></p> <ul style="list-style-type: none"> <i>i. 5 millisieverts, in the case of an occupationally exposed person, or</i> <i>ii. 1 millisievert, in any other case, or</i> <p><i>(b) that the premises may have become contaminated within the meaning of section 21 of the Act. (Premises are to be regarded as contaminated by radioactivity if the premises or a part of the premises have a level of radioactivity of or above the prescribed level)</i></p>
Immediate response	<ol style="list-style-type: none"> 1. Notify co-workers and immediately and calmly evacuate the area 2. Notify the RSO and determine a suitable exclusion zone and erect barricades at this distance at all possible access points 3. Do not eat, smoke, drink or leave site until you have been checked for possible contamination 4. if you suspect you have touched the radiation source, wash your hands with soap and warm water and dry with paper towel 5. If clothes and shoes may have been contaminated, remove them and secure them in a plastic bag. 6. Any vehicles or equipment that was involved in the accident should remain in the location until cleared by the RSO, Police or Regulator representative. 7. Any person who is suspected of exposure shall be referred for a medical examination.
Further response	<p>The RSO will:</p> <ol style="list-style-type: none"> 1. Ensure that the necessary and appropriate emergency services have been summoned; 2. On arrival at the site, immediately assess (with the aid of a radiation survey meter) the nature and scope of the radiation hazard; 3. Take action to reduce radiation exposure levels - this action may involve applying shielding to the radioactive source, moving persons or the radioactive source to a safe distance, controlling access to the site and monitoring persons and equipment leaving the area; 4. Identify and contact those people who may have been exposed to radiation - have them congregate together at a safe place and arrange for recording of details of their movements at the time of the incident; 5. Immediately the incident is brought under control, investigate the circumstances of the incident and arrange for the estimation (by way of calculation or reading of personal dosimeters) of the radiation exposure to any person who may have been exposed; and 6. Notify the Licensee if any radioactive source is lost or damaged or if any person may have received a radiation dose in excess of the maximum permissible dose 7. If required, arrange for the decontamination of personnel and equipment and for the safe storage and/or disposal of contaminated items <p>The Licensee shall:</p> <ol style="list-style-type: none"> 8. Immediately report the matter to an emergency response provider (if required) and the NSW EPA within 48hrs, with the following: <ul style="list-style-type: none"> ● the place where it occurred

Emergency Procedure	Radiation Accidents	
	<ul style="list-style-type: none"> the period during which the emission of radiation was uncontrolled the area over which any radioactive substances may have been dispersed any steps taken to rectify the accident any personal injury or exposure that may have resulted 	
Who is in charge?	The Radiation Safety Officer in conjunction with the site Chief Warden is in charge of this type of incident.	
Who to call <i>Upon identifying this type of emergency, urgently contact.</i> <i>Follow incident matrix for further notifications</i>	Name Chief Warden / Deputy Warden Radiation Safety Officer Emergency Services Mine Management Team – Site Manager, Plant Manager, Pit Manager, Lime Manager, Mine Manager, WHS Business Partner NSW EPA's Hazardous Materials, Chemicals and Radiation Section – within 48hrs (in writing) to hazardous.materials@epa.nsw.gov.au	Contact no: Two way radio Dial 209 000 Various (02) 9995 5959
Emergency equipment required	<ul style="list-style-type: none"> Portable first aid kit(s) Site communication devices 	
Resuming operations	This type of incident may require regulator notification and regulatory approval before resuming operations, to be determined by WHS Business Partner and Site Manager. Prevent access to areas involved in the incident until the scene is released and safe to re-enter. <ul style="list-style-type: none"> Commence internal incident investigation. BEAP counselling shall be offered (if required). Complete an incident report for entry into SIMS. Establish or update any exposed persons Personal Radiation Exposure Record 	

9. Attachments

Attachment 1: Pollution Incident Response Plan

Pollution Incident Response Management Plan

(part of Site Emergency Response Plan)

Boral Cement Marulan

Rev.10

14 December 2021

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(part of Site Emergency Response Plan)

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1. General Information

1.1 Foreword

This document was prepared to fulfil the requirements of the NSW Protection of the Environment Legislation Amendment Act 2011 (POELA Act) in terms of preparation and implementation of a pollution incident response management plan.

This plan forms a part of the overall Boral Emergency Response Plan that was reviewed and amended to ensure that they cover all the new requirements of the POELA Act. The plan is kept, tested and implemented in accordance with the Act and the POEO(G) Regulation.

1.2 Background and legislative requirements

The POELA Act introduces several changes to improve the way pollution incidents are reported, managed and communicated to the general community. The Act includes a new requirement under Part 5.7A of the *Protection of the Environment Operations Act 1997* (POEO Act) to prepare, keep, test and implement a pollution incident response management plan.

The objectives of these plans are to:

- ensure comprehensive and timely communication about a pollution incident to staff at the premises, the Environment Protection Authority (EPA), other relevant authorities specified in the Act (such as local councils, NSW Ministry of Health, WorkCover NSW, and NSW emergency services) ¹ and people outside the facility who may be affected by the impacts of the pollution incident
- minimise and control the risk of a pollution incident at the facility by requiring identification of risks and the development of planned actions to minimise and manage those risks
- ensure that the plan is properly implemented by trained staff, identifying persons responsible for implementing it, and ensuring that the plan is regularly tested for accuracy, currency and suitability.

The specific requirements for pollution incident response management plans are set out in Part 5.7A of the POEO Act and the Protection of the Environment Operations (General) Regulation 2009 (POEO(G) Regulation)¹.

1.3 Definition of a pollution incident

As per the POEO Act, pollution incident means an incident or set of circumstances during or as a consequence of which there is or is likely to be a leak, spill or other escape or deposit of a substance, as a result of which pollution has occurred, is occurring or is likely to occur. It includes an incident or set of circumstances in which a substance has been placed or disposed of on premises, but it does not include an incident or set of circumstances involving only the emission of any noise.

Examples would include events such as highly alkaline water escaping catchments after a heavy rain event, dust impacting on a neighbour's property or a large hydrocarbon spill that could not be contained on site.

¹ See www.environment.nsw.gov.au

A pollution incident is required to be notified if there is a risk of 'material harm to the environment', which is defined in section 147 of the POEO Act as:

(a) harm to the environment is material if:

- (i) it involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial, or
- (ii) it results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding \$10,000 (or such other amount as is prescribed by the regulations), and

(b) loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment.

Industry is now required to report pollution incidents immediately to the EPA, NSW Health, NSW emergency services, WorkCover NSW and the local council. 'Immediately' has its ordinary dictionary meaning of promptly and without delay. These strengthened provisions will ensure that pollution incidents are reported directly to the relevant response agencies so they will have direct access to the information they need to manage and deal with the incident in a faster time.

There are new associated offences, for individuals and corporations, for not preparing a plan, not keeping the plan at the premises to which it relates, not testing the plan in accordance with the Regulations and not implementing the plan in the case of an incident.

2. Risk Assessment and Preventive Actions

2.1 Environmental Registers

Potential environmental pollutants are summarised in a site risk register entitled "Environmental Aspects and Impacts" (CMT-ENV-004-Form1 Marulan_Environmental Aspects and Impacts Register), located in Sharepoint AUS_HSE_ECement>Documents>Cement Sites>Marulan>Green Folder. This document considers; Aspect, Impact, Controls and Improvements for the site's known environmental hazards in the following areas:

- Fugitive dust emissions from plant and mining areas
- Spills of liquids (e.g. diesel, oil) or powdered solid materials (e.g. Lime), potentially leaving the site. Large spill of powdered solids may result in significant dust nuisance or lead to deposition of significant quantities of high pH particulate matter in the natural water courses.
- Fire
- Blasting/Explosives
- LPG Incidents.

Marulan has a Hazardous Substance and Dangerous Goods Register located at G:\015 Safety Document Management System\Mine Safety Management System\Mine Safety Management System

Each Hazardous Substance/Dangerous good has an associated Safety Data Sheet which contains a description of the hazards to both human health and the environment. A current set of SDS's is available through the intranet application; ChemAlert <http://vabndc09:8080/chemalert/> and available in hard copy in the Lab. Safety Data Sheets are displayed in all areas which use or store products of this nature. Supporting signage is also displayed where required.

Hazardous Chemicals and Dangerous Goods are managed onsite in line with the Standard/Protocol for Hazardous Chemicals and Dangerous Goods GRP-HSEQ-MP-6-13, which addresses:

- Determining the level of risk via;
 - SDS
 - Product labelling
 - Hazardous Substances and Dangerous Goods register
 - Risk Assessments
- Controlling the risk via;
 - Purchasing controls
 - Storage Handling and transportation
 - Storage Cabinets
 - Transporting and handling Hazardous substances and Dangerous Goods
 - PPE
 - Atmospheric Monitoring and Health Surveillance
 - Dangerous Goods Manifest
 - Dangerous Goods Audit
 - Hazardous Substance Inspections
 - Appropriate disposal
 - Spill prevention and management.

2.2 Harm Reduction

2.2.1 Prevention

The risk of harm to any persons who are on the premises or who are present where the scheduled activity is being carried out is reduced by measures outlined in “**GRP-HSEQ-8-07 Spill Management**”. These measures include:

- Placement of spill-risk facilities away from sensitive environments (sufficient to allow for effective intervention prior to pollution occurring in the event of a spill)
- Use of secondary spill containment facilities such as bunding around all storage tanks and other areas where hazardous substances are stored;
- Ensuring that areas where risky activities such as storage tank/silo loading are undertaken are bunded and sealed;
- Ensuring drainage structures can be sealed to halt passage of spilt fluids or powdered solids;
- Training of employees and contractors in good environmental practice
- Ensure that the local deluge procedure includes possible overflows and excursions off-site
- Automatic forecast notifications from Weatherzone for wind, rain and lightning events when agreed thresholds are likely to be exceeded. Risky activities can be avoided or managed.

The bunded areas must be capable of preventing the migration of any spillage or leakage to the surrounding environment. The requirement for bunding is relative to the level of risk and type of area. Bunding specifications are summarised in Australian Standard AS 1940:2004.

2.2.2 Maintenance

All bunds, silos, tanks, pipe-work and stores/magazines are inspected regularly and at least annually for signs of damage. Any defect in the bund wall or lining is repaired immediately using appropriate techniques. Damage to the tank or transfer hoses is dealt with immediately to prevent failure.

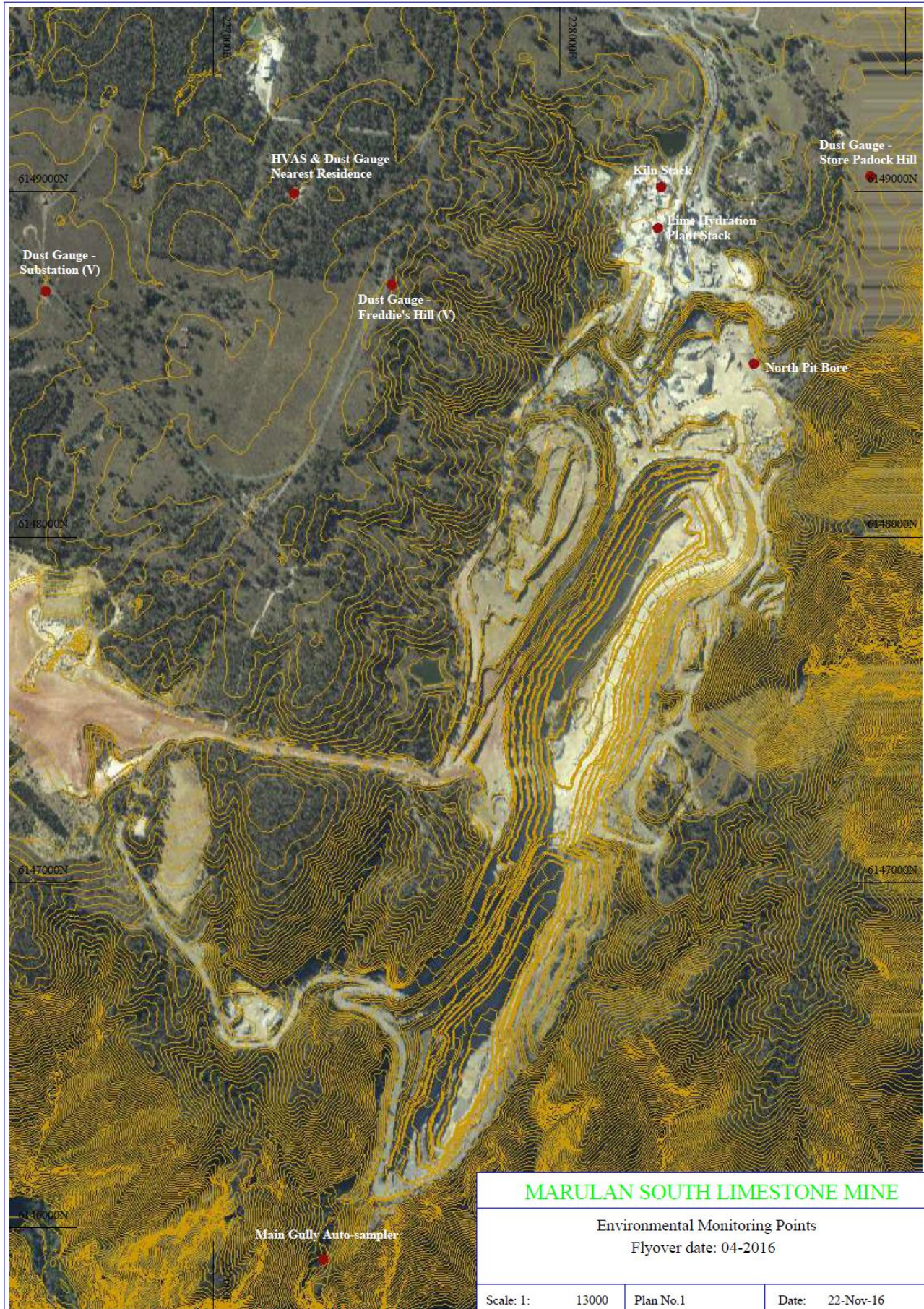
Any liquid in the bund must be promptly removed in an appropriate manner – usually as contaminated matter. Do not allow spilt liquid or stormwater to remain in the bund – it may accumulate and lead to overflowing. Rainwater entering the sump or bunded area should be regarded as potentially contaminated and must be disposed of in an authorised manner.

Any accumulated debris should be promptly removed and disposed of in the correct manner.

2.2.3 Site Maps

An aerial map overleaf (Photo 1) shows the location of the premises to which the licence relates together with the current environmental monitoring points. Photo 2 shows location of Hazardous Chemicals and spill kits on the site.

Stormwater entering the site is channelled/directed to a series of catchment dams and does not escape to the environment.



Map 1 - Site location



Photo 2: Locations of Spill Kits and Hazardous Chemicals

2.2.4 Safety Equipment

The site utilises 3M spill kits purchased from Blackwoods. The site HSE staff replenish the kits as required but personnel are encouraged to do so themselves post-incident. These kits are capable of containing large spills of hydrocarbon liquids.

A spill kit is a 240L wheelie bin that contains the following:

- 25 x 3M™ HP156 Oil & Petroleum Sorbent Pads (0008 7006)
- 2 x 3M™ P-FL550DD Oil & Petroleum Folded Sorbent Rolls (0082 7747)
- 2 x 3M™ T280 Oil & Petroleum Double Booms (0116 1379)
- 5 x Contaminated Waste Bag (0120 6293)
- 2 x 3M™ 4251 Disposable Half Face Respirator (0034 1020)
- 2 x pair Solvent & Oil Resistant gloves (0403 8056)
- 2 x 3M™ Farenheit Goggles (0105 5946)
- 2 x 3M™ 4530+ Protective Coveralls
- 1 x Spill Response Procedure

Spill kit training has been provided through Protector Alsafé.

Fire response on site is addressed in MAR-MNGT-PLAN-0007 Emergency Response Plan. The type of fire extinguishers used on site are appropriate for their application.

3. Early Notifications

3.1 Immediate Notification of Government Authorities

Any pollution incident that causes or threatens “material harm” to the environment or people must be notified to government authorities immediately upon becoming aware of the incident. When new information comes to hand following the initial notification, this information must also be communicated immediately. For the definition of “*material harm*” caused by a pollution incident refer to Section 1.2.

“Immediately” means “without unreasonable delay”. Remember, safety first.

Only nominated Boral personnel are authorised to make notifications to the Authorities:

Les Longhurst	Site Manager, Marulan	02 4820 3031	0401 895 032
Frank Murnane	Lime Operations Production Manager	02 4820 3047	0401 894 066
Garth Nagle	Technical Manager- Limestone	02 4820 3075	0401 895 737
Greg Johnson	Environment and Sustainability Manager – Boral Cement		0401 893 420

All notifications are to be in line with standard operation procedure **CMT-ENV-001 – Marulan Pollution Incident Notification**, located in WizBiz Reference Library ([Site Procedures - Marulan](#)).

The contact list of Compulsory Authorities is presented in Appendix A. Other Authorities may need to be notified as appropriate; however the Compulsory Authorities must be notified in ALL cases requiring environmental notification. All immediate notifications and updates are to be recorded in the Pollution Incident Immediate Notification Log (**CMT-ENV-001 – Marulan Pollution Incident Notification SOP**).

In borderline situations, where the exceedance of the trigger level of “material harm” of a pollution incident may not be clear, a quick assessment including consultation with Boral environmental personnel should be undertaken to help the decision whether to notify or not.

Boral’s Senior Corporate Management must be informed promptly of the fact of immediate notification to the Authorities. This includes environmental personnel listed above, Rajeev Ramankutty, Girish Yadwad, Rod Wallace and Scott Carter.

3.2 Notification of Neighbours

In case of pollution incidents that may potentially pose threat to the health and safety of the neighbours (e.g. toxic fumes, fire, fuel spill into the street or to coastal verge, release of a thick dust cloud, etc.), the neighbours must also be urgently notified.

The early warning of the neighbourhood notification will be undertaken by phone or door knock. The current contact list for neighbours is attached in Appendix B. The initial notification should be brief and contain only a description of the environmental threat together with instructions what to do. For example:

- Due to a dust collector's failure, we are experiencing elevated dust emissions from the site. Please keep your doors and windows closed until further notice.
- An accidental trade effluent discharge occurred from the site to a local creek. Please refrain from recreational use of the area until testing confirms that the water is safe.
- Due to a diesel spillage on the site, a clean-up operation is being organised. Please be watchful for road traffic in relation to this operation.

A follow up information on the resolution of emergency situation would be timely conducted on the phone or by means of a letterbox drop.

4. Pollution Incident Emergency Response

In the event of a pollution incident the risk of harm to human health and the environment will be minimised by engaging an appropriate pollution response as outlined below

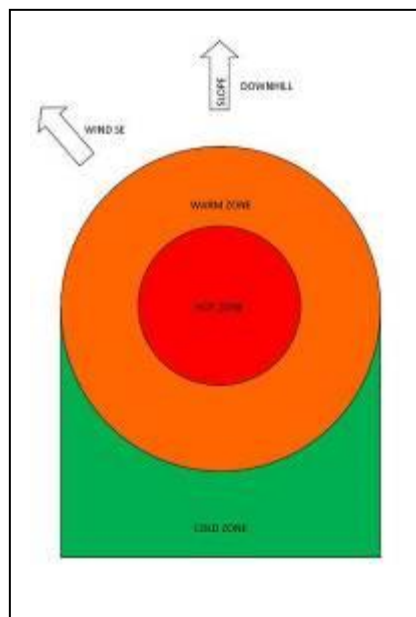
1. **Safety First:** Ensure emergency services are contacted immediately in the event to harm of any personnel.
2. **Stop the source:** If it's safe to do so, stop the process causing the spill/leak or other environmental incident.
3. **Isolate the area:** The first person to notice the spill or leak should remove themselves from the immediate area and take measures such as barricading the area to reduce the risk of exposure to others. This must occur without exposure to danger.
4. **Commence early notification:** The Manager or Supervisor must be notified immediately of the environmental incident. They in turn must immediately inform one of the persons nominated for notification of Authorities (see Appendix A). If the environmental incident is significant, the nominated person implements early notification procedures to the relevant Authorities including emergency services. Alerting the potentially affected neighbours may also be required (see Appendix B), with regular updates provided as needed.
5. **Provide a 1st aid response (if required):** First aid kits including instruction on use are available at the locations indicated in the Site Emergency Response Plan. Emergency shower and eye wash bays are suitably located, easily accessible and in good working order. Appropriate PPE is worn by all staff during periods of potential exposure as outlined in relevant SDS.
6. **Identify the release to the greatest extent possible:** Do so without being at risk. This includes identifying:
 - a. the type of material released;
 - i. Class 1 Explosives
 - ii. Class 2 Gases - compressed, liquefied or dissolved under pressure.
 - iii. Class 3 Flammable Liquids
 - iv. Class 4 Flammable Solids, Substances liable to spontaneous combustion and Substances which in contact with water emit flammable gases
 - v. Class 5 Oxidizing Agents and Organic Peroxides
 - vi. Class 6 Toxic and Infectious Substances
 - vii. Class 7 Radioactive Substances
 - viii. Class 8 Corrosive Substances
 - ix. Class 9 Miscellaneous Dangerous Goods
 - b. The label and Material Safety Data Sheet for the product should give information on safe clean-up.
 - c. The size of the release and whether the release has stopped;
 - d. Whether chemicals involved may be potentially incompatible; and
 - e. Any unusual features such as foaming, odour, smoke, etc.

7. **Determine the level of emergency:** review chemical risk assessments, seek internal advice from area specialists, review MSDS's and seek professional advice from the fire brigade and/or hazardous material specialists.
8. **Determine if evacuation is required** and consider the impact that wind, rain, local geographical features such as hills and stormwater drainage systems may have in exposing persons at emergency assembly points. If in doubt commence evacuation to "cold zones" Following a Pollution / Hazardous Material Incident the Emergency Site is to be divided into Hot, Warm and Cold Zones - for management purposes. The Chief Warden is responsible for the management of the COLD ZONE, all personnel are to be evacuated from the hot/warm zone.

Hot Zone This is the area of likely contamination. Only personnel wearing the appropriate level of protective clothing and equipment are to enter this zone. The area of the Hot Zone is defined, controlled and co-ordinated by the Hazmat Controller (FIRE BRIGADE).

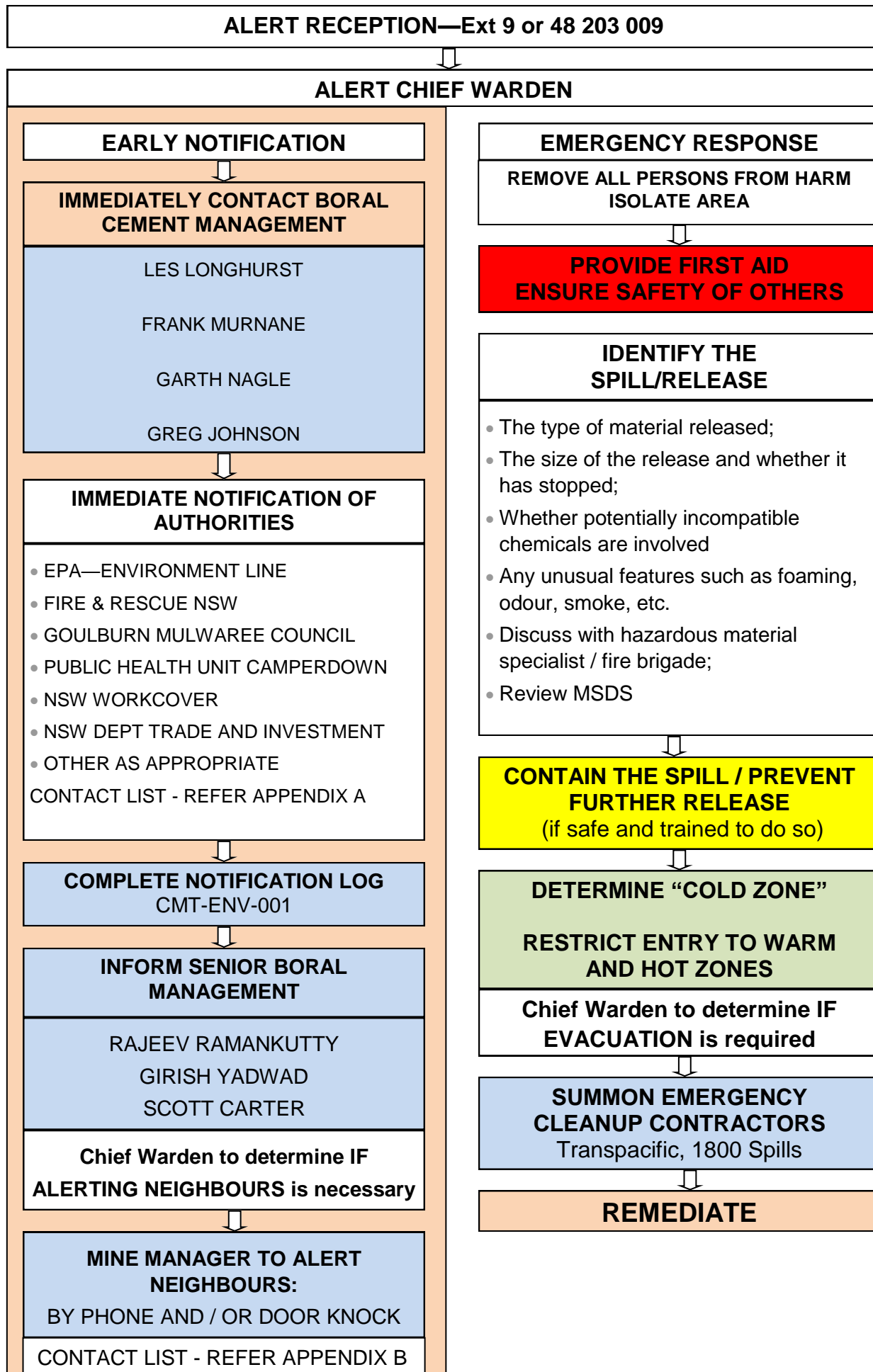
Warm Zone This is the area immediately surrounding the Hot Zone where decontamination takes place and personnel and equipment are prepared for deployment. Only personnel wearing the appropriate level of protective clothing and equipment are to enter this zone. The area of the Warm Zone is defined, controlled and co-ordinated by the Hazmat Controller (FIRE BRIGADE).

Cold Zone This is the area immediately surrounding the warm zone. It is the support area where access is limited to support agencies personnel and equipment. This zone contains the Site Control, triage and treatment facilities and other marshalling and assembly areas. The Cold Zone is free of contamination and personnel protective clothing is not required. The area of the cold zone is defined by the site controller in consultation with the Hazmat Controller and managed by the CHIEF WARDEN.



9. **Stop further release (if not done prior):** prevent further release by isolating the source of the release. (Trained personnel only with suitable PPE)
10. **Stop the release from spreading (if safe to do so):**
 - a. **Prevent off-site release of contaminated storm water:** Protect storm water grates with booms, covers or drain socks.
 - b. **Liquid spills:** Deploy spill kits to prevent further contamination dispersal, using appropriate absorbent/containment materials such as loose absorbent, socks or pads (land) and booms (water). See also **CEM-ENV-014** Spill Prevention and Control.

- c. **Powdered solid spills:** Lower down the silo rolling doors to minimise dust, cover storm water grates to prevent ingress of solids.
 - d. **Releases of pollutants into the air:** Shut down ventilation systems to keep gases, vapours and dust from spreading.
11. **Large spills:** Summon specialist spill emergency response contractors (e.g. Transpacific Industrial Solutions, 1800 SPILLS).
 12. **Fire:** If possible, endeavour to prevent fire-fighting water from entering the stormwater drains as it typically carries contamination. If possible, divert fire from areas containing materials that may generate toxic fumes when burned (e.g. stores of chemicals, cleaning aids, motor oil, etc.).
 13. **Dispose of contaminated spill clean materials and wastes using a licensed contractor.**
 14. **If required, remediate the site.**



5. Training and Testing

The Emergency planning Committee will be responsible for training and testing the content of the emergency response (including Pollution Incident Management Plan) annually. Responsibilities of the EPC are outlined under: **Organisational Arrangements and Contacts - 2.1 Emergency Planning Committee**. Pollution incident testing will be undertaken within 1 month of any pollution incident occurring in the course of an activity to which the licence relates so as to assess, in the light of that incident, whether the information included in the plan is accurate and up to date and the plan is still capable of being implemented in a workable and effective manner.

Staff training is recorded in the site Training Matrix.

Emergency response plan is reviewed at least every 2 years by WHS Committee. Testing schedule and a drilling log are recorded in the Marulan ER folder.

Test Date	Version tested	Incident Drilled	Drill Team Lead
17/10/2018	V6	Hydrocarbon Spill	Dean Beltrame, Rob Lasker
12/11/2019	V7	Hydrocarbon Spill	Mark McCarthy, Belinda Prideaux
17/11/2020	V8	Hydrocarbon Spill	Mark McCarthy, Wayne Beattie
14/12/2021	V9	Land slip/erosion event	Mark McCarthy, Garth Nagle, Greg Johnson

6. Revision History

Version	Change Date	Summary of Change	Prepared by	Approved By
Rev.0	1 September 2012	New document	Alex Wnorowski	Debbie Cook
Rev.1	19 December 2012	New Fire & Rescue NSW number for Pollution Incident notifications (replacing calls to 000)	Alex Wnorowski	Alex Wnorowski
Rev.2	1 September 2013	Incorporating company structure changes. Formatting changes.	Alex Wnorowski	Alex Wnorowski
Rev.3	1 September 2014	Annual review.	Alex Wnorowski	Alex Wnorowski
Rev.4	29 July 2015	Update HSEQ references and site contacts	Alex Wnorowski	Alex Wnorowski
Rev.5	11 November 2016	Update contacts and recommendations from PIRMP drill with Environmental Compliance Services	Rob Lasker	Belinda Prideaux
Rev.6	24 th October 2017	PIRMP Drill changes. More dust references, Boral Legal inclusion in notification flowchart	Rob Lasker	Belinda Prideaux
Rev.7	27 th September 2018	Neighbour and Boral management details update	Rob Lasker	
Rev.8	23 th October	Annual Review	Belinda Prideaux	Belinda Prideaux
Rev. 9	18 December 2020	Annual Review, update contact details	Greg Johnson	Greg Johnson
Rev. 10	14 December 2021	Annual Review, update contact details	Greg Johnson	Greg Johnson

APPENDIX A: Immediate Pollution incident Notification - Authority Contacts

Only nominated Boral personnel are authorised to make notifications to the Authorities.

(Refer to section 3.1)

GOVERNMENT AUTHORITY - COMPULSORY NOTIFICATIONS	EMERGENCY NOTIFICATION PHONE NUMBER
EPA – Environment Line	131 555
Fire & Rescue NSW	1300 729 579
Goulburn Mulwaree Council	02 4823 4444 A/H 02 4822 1080
Resources Regulator	Notify through portal https://nswresourcesregulator.service-now.com/regulator after calling 1300 814 609
Public Health Unit (Sydney South West) – Camperdown Office	BH: 02 9515 9420 AH: 02 9515 6111 Ask for Public Health Officer on call
Safework NSW	131050 Company ABN asked: 62 008 528 523
GOVERNMENT AUTHORITY - RING IF RELEVANT	EMERGENCY NOTIFICATION PHONE NUMBER
Roads and Maritime Services	132 701
NSW Office of Water	8838 7885
RFS State Operations	1800 049 933
Poisons Information Centre	131 126

APPENDIX B: Neighbours Contact List - Marulan South

NEIGHBOURS	ADDRESS	EMERGENCY NOTIFICATION PHONE NUMBER	METHOD
Peppertree Quarry	843 Marulan South Road	02 48 411 701	Phone/Door knock
Steve Wilson	5 Hume St Marulan South	0431 359 688	Phone/Door knock
Dean Beltrame	683 Marulan South Road	0401 896 979	Phone
Foti Fireworks	452 Marulan South Road	0418 242 406	Phone/Door knock
Aglime Fertilisers	709 Marulan South Road	02 4841 1528	Phone/Door knock
Rob and Robyn Steward	565 Marulan South Road	0437 831 540	Phone/Door knock
Steve and Annette Pace	381 Marulan South Road	02 4841 1116	Phone/Door knock
Barry Armit	357 Marulan South Road	02 4841 1547	Phone/Door knock
Peppertree Shift Employees	505 Marulan South Road	02 4841 1701	Phone
Pat and Bridgette Mulligan	400 Marulan South Road	02 4841 1399	Phone/Door knock
Steven Lichtenberger	270 Glynmar Road	02 4841 1299	Phone/Door knock
Bungonia State Recreation Area	838 Lookdown Road, Bungonia	02 4827 4700	Phone

APPENDIX C: Pollution Notification Log

Pollution Incident Immediate Notification Log	
Person undertaking notification (Name/Function):	
Date and time when first become aware of the incident:	
Incident type:	
Comments:	

Initial immediate notification log				
Appropriate Regulatory Authority	Time of call	Respondent's name/function	Approximate call duration	Comments
EPA				
Public Health Unit				
Emergency 000				
Local Council				
WorkCover				
Other:				
Other:				
Summary of initial communication:				
Person undertaking notification (Name/Function):				
Date and time when additional information become available:				
Comments:				

Pollution Incident UPDATE Notification Log

Immediate notification of further pertinent information (if applicable)

Appropriate Regulatory Authority	Time of call	Respondent's name/function	Approximate call duration	Comments
EPA				
Public Health Unit				
Emergency 000				
Local Council				
WorkCover				
Other:				
Other:				

Summary of additional communication

Attachment 2: Bushfire Management Plan

Boral Cement Limited

Limestone Mine Operations

Bushfire Management Plan 2022

Version History

Version	Date	By Whom	Description of Changes
1	1/11/15	Jody Oakley and Rob Lasker	Version 1
2	31/8/16	Jody Oakley and Rob Lasker	Update contact names and numbers
3	17/11/17	Jody Oakley and Rob Lasker	Update contact names and numbers
4	19/12/18	Jody Oakley and Rob Lasker	Update contact names and numbers, add guidelines for general hazard reduction fires
5	12/12/19	Jody Oakley, Rob Lasker and Mark McCarthy	Add more detail to emergency warnings, add trigger action plan, add site map
6	20/12/19	Les Longhurst	Various detail updates
7	7/01/2020	Jody Oakley and Rob Lasker	Legislation references, security considerations, Regulator notifications
8	July 2022	Jody Oakley	Update contact names and numbers

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1. Introduction

In producing this Bushfire Management Plan (BMP), the principal consideration has been to provide for the protection and safety of human life, (including Staff and Contractors of Boral, residents of the locality and firefighters suppressing bushfire events) Property and Boral infrastructure.

A Bushfire left unattended has the potential to endanger lives and damage property. During the bushfire season (October to April) winds are predominately from the SW and NNW. A bushfire on Boral land during such wind conditions has the potential to impact upon flora and fauna of the Morton and Bungonia National Park areas.

An incoming bushfire has the potential to impact Boral in the following manner:

- Damage to exposed buildings
- Disabling of production capacity
- Isolation from the general community
- Loss of regenerative plantings
- Loss of electricity supply

Activities that create sparks or hot particles, such as metal grinding and welding will be limited to workshops and hardstand or areas clear of vegetation by a minimum of 20m and will be subject to Boral's Hot Work Permit system. Designated hot work areas will have completed a "Designated Hot Work Area Risk Assessment HSEQ-6-06-F01". All fire bans, as determined by the NSW Rural Fire Service, will be adhered to by employees, contractors and service providers and enforced by Boral Management.

Note: The Marulan South Limestone Mine Operation has a Standard Exemption to Total Fire Bans (See the NSW Government Gazette, No.16, dated the 9th February, 2018 "Schedule of Standard Exemptions to Total Fire bans" Clause 14) that states:

"Fire lit, maintained or used in association with any cutting, welding or grinding work for the purpose of the essential maintenance or repair of mining equipment provided that:

- (a) the fire is lit maintained or used in a manner which will prevent the escape of the fire, and
- (b) adequate firefighting equipment is provided at the site of the fire to prevent the escape or spread of the fire."

On Total Fire Ban days the local RFS Brigade Captain shall be notified of the intention to conduct Hot Work. See contact list below.

The risk of bushfires in adjacent lands spreading to Boral assets will be minimised by the provision of slashed/mown fire breaks along boundary fences. In case of remnant or regenerating woodland that is adjacent to the boundary of the lease area, the firebreak will be constructed between the woodland/grassland interfaces.

Prevailing winds during summer are from the SW, however NW winds that lead to an extreme fire danger, i.e. elevated temperatures and low humidity do occur. Firebreak design will therefore take into consideration that a bushfire is likely to enter the site from the NW, and exit the site to the SE. As far as possible, firebreaks should be designed to protect the Eastern boundary by stopping bushfires within the Boral area threatening the Morton national Park

2. Criteria and Guidelines

The relevant legislation and standards applicable to the management of bushfire and maintenance of equipment include the following:

- Rural Fires Act, 1997;
- Rural Fires Regulation 2013;
- Work Health and Safety (Mines and Petroleum Sites) Regulation
- Australian Standard 1851-2012 Routine service of fire protection systems and equipment;
- Planning for Bushfire Protection, 2006, and
- Australian Standard 1019-2000 Internal Combustion Engines – spark emission control devices.

3. Permits

A fire permit is not required for hazard reduction fires outside the statutory bush fire season but is required that both Firecom and the local brigade are advised 24 hours prior to lighting the fire.

A fire permit must be sought from the Marulan Brigade Captain for fires outside during the Bush Fire Danger Period. This permit is free and can be issued for up to 14 days. It is automatically revoked in the event of a Total Fire Ban. Hot work does not normally fall into the category of requiring a permit but fines for the disposal of explosives for instance do require a permit.

3.1. General guidelines for hazard reduction fires:

- DO NOT burn on days declared as a Total Fire Ban by the RFS
- DO NOT burn on a “no burn day” as declared by the Department of Environment and Conservation
- DO NOT burn unless the necessary approvals/permits have been sought (Southern tablelands Zone must be notified 24hrs before a hazard reduction burn takes place))
- DO NOT burn if neighbours and the relevant fire authority (Brigade Captain) have not been notified 24hrs prior
- DO NOT leave the burn unattended

4. Risk Assessment

An Annual bushfire risk assessment will be undertaken on the site before the bushfire season begins. The bushfire season typically occurs between October and April. However, factors such as fuel load, rainfall history and climatic conditions may bring forward or extend the bushfire season. The bushfire risk assessment will consider:

- Fuel loads on Boral land;
- Advice from the Marulan Brigade Captain of the NSW Rural Fire Service;
- The climatic conditions (particularly rainfall) of the preceding year;
- Methodologies of bushfire risk assessment

The risk assessment will be kept on G:Drive - G:\015 Safety Document Management System\Mine Safety Management System\Mine Safety Management System\Site Risk Assessments.

5. Bushfire Management Plan Map

A map shall be prepared of the Boral South Marulan Operations and it shall contain at least the following data:

- Boundaries of Boral holdings
- High risk assets
- Access points
- Water points
- Access roads and tracks
- Any previous fires or hazard reductions

A table shall be appended to the map with the following information:

- In case of fire call 000 (triple zero)
- Southern tablelands zone RFS contacts
- Marulan RFS Brigade contacts
- Boral key contacts

A second table shall be appended containing:

- The address
- GPS location in Australian Map grid
- GPS location in latitude and longitude.

A third table shall be appended containing:

- NSW RFS escalating warning system and its meanings
- NSW fire danger levels and their meanings

A fourth table shall be appended containing:

- Neighbour contact details

The Bushfire Management Map forms part of the Boral Cement Marulan Mine Emergency Management Plan and copies can be found across the site in red folders or on the group drive at G:\015 Safety Document Management System\Mine Safety Management System\Mine Safety Management System\Site Plans.

6. Specific Risk Control Measures

6.1. *Mowing*

Mowing shall not take place on days of very high fire danger or above. Ride-on Mowers shall have at least a 9 litre air water fire extinguisher immediately available. Under some circumstances it may be necessary to use a brush cutter with nylon cord around buildings to reduce the fire risk.

6.2. *Vehicles*

All vehicles will be restricted to identified vehicle routes to reduce the risk of spark emissions. If a vehicle is required to traverse across grassed areas, it is to have an upward exhaust.

Petrol powered vehicles and equipment shall not be used in or over vegetation on days of Catastrophic Fire danger.

Diesel powered vehicles and equipment shall not be used in or over vegetation on days of Catastrophic Fire danger.

6.3. *Electricity Transmission*

Electricity transmission easements will be inspected annually at the time of the bushfire risk assessment to ensure regenerating vegetation does not have the potential to interfere with power lines that sag. Boral will liaise with the owner of the electrical transmission infrastructure with regards to vegetation management within the easement.

6.4. *Lightning*

In the event of a lightning strike, the location is to be monitored for at least 24 hours

6.5. *Smoking*

The risk of accidental bushfire ignition from lit cigarettes will be incorporated into site inductions.

6.6. Firefighting equipment

Boral has a wide range of facilities that will be made available to control and extinguish bushfires. Water sources are located on the attached maps. This equipment includes but is not limited to:

- Fast fill hoses and connections
- Two water tankers – one equipped with water cannon
- Water tank trailer
- Clean water dams with maintained access points
- Earthmoving equipment – grader, dozer etc.
- Water pumps
- Portable radios
- Fire alarms
- First aid room and supplies

This equipment will be made available on request to the Southern Tablelands Zone RFS for use within the Boral area.

7. Plan Dissemination

All employees on site shall be informed of the response requirements of this plan and shall receive a refreshment of these requirements at the start of each bushfire season.

Copies of the plan shall be disseminated to:

Name	Position	Address
Les Longhurst	Site Manager – Limestone	Hume St Marulan South
Michael Higgins	Operations Manager – Peppertree	843 Marulan South Rd Marulan South
Christopher Brown	Environmental Advisor- Peppertree	843 Marulan South Rd Marulan South
Therese Hadjia	Environmental Coordinator	Hume St Marulan South
Jim Divall	Marulan Brigade Captain	Cnr Portland and Goulburn Ave (PO Box 201) Marulan NSW 2579
	Southern Tablelands Zone Operations Officer	Southern Tablelands Control Centre 82-88 Combermere St (PO Box 805) Goulburn NSW 2580

This plan will also form part of the Boral Cement Marulan EMP.

8. Fire Incidents

Any incidents of unplanned bushfire during the Bushfire danger period will be reported directly to Triple Zero. The Boral Environmental Officers, Site Managers and WHS Business Partner shall be notified as soon as possible in this event.

9. Communications

All employees, contractors and service providers will be made aware of the emergency procedures applicable on the Boral site during the site induction.

Regular communication and liaison will occur between the Environmental Officer – Peppertree, Environmental Coordinator – Boral Cement, the Southern Tablelands RFS and Marulan Brigade Captain.

This communication is to occur:

- Operationally during coordinated responses to bushfires on Boral land via radio communication; and
- Immediately following a bushfire on Boral land. The purpose of the liaison activity is to identify any areas of improvement in the BMP.

10. Firebreaks and Perimeter Tracks

A cleared area will be established and maintained around above ground facilities and buildings. Access tracks will be inspected and maintained if necessary.

An area beside the access tracks will be cut or slashed extending firebreaks, as required. Existing firebreaks will be maintained. Access dams and water supplies will be inspected and maintained if necessary.

11. Response

Information on the bushfire danger period and fire activity area monitored using the “Fires Near Me” App. All Management team members to download the App and have alerts set for the Marulan South watch area.

11.1. Total Fire Bans

On days of total fire ban (Toban) the following activities shall take place:

- Establishment of communications with the Marulan Brigade Captain
- Check operation of Firefighting Equipment
- Toolbox the warning to all persons on site.
- Confirm firefighting water tanker is full and on standby
- Monitor “Fires Near Me” app regularly

- On low visibility days (such as days of high smoke volumes) Production Supervisors will complete regular inspections of the mining lease checking for any fire activity

On days of total fire ban (Toban) the following activities shall NOT take place:

- Hot Work in the open air
- Driving of petrol vehicles on or over vegetation
- Mowing/slashing
- Earthworks in vegetation
- Any grinding activities on the rail

11.2. Catastrophic fire conditions

On days of Catastrophic conditions the following activities shall take place in addition to Toban activities:

- A risk assessment of all operations including considering closing the plant and sending people home – refer to trigger action plan
- A test of all firefighting equipment
- Establishment of communications with the Marulan Brigade Captain

On days of Catastrophic conditions the following activities shall NOT take place in addition to Toban activities:

- Hot Work
- Driving in or on vegetation in any vehicle
- Explosions other than pre charged holes
- Train despatch wherever possible

IT IS CRITICAL THAT BORAL DOES NOT WAIT AND RELY ON BROADCAST WARNINGS BEFORE TAKING ACTION.

FIRES SOMETIMES SPREAD OR ESCALATE SO RAPIDLY THAT WARNING IS NOT POSSIBLE.

If it is a catastrophic day and there is a big fire and it is headed to Marulan South then assume the warning system has failed.

12. Emergency Warnings

Emergency warnings are broadcast over local public radio stations and the designated public emergency channel is 666 ABC Canberra. On days of total fire bans or extreme conditions, this will be discussed at the start up meeting at the commencement of shift and it will be decided here who should be tuned into the radio for the purposes of hearing any emergency warnings.

On receipt of any warnings in the immediate area the Site Manager, WHS Business Partner or delegate will contact the local fire Captain and agree between the parties what communications should be carried out, to which neighbours and by whom. In the event that the local fire Captain is not able to be contacted, a Boral delegate will endeavour to inform the immediate neighbours.

Because of the somewhat unique location of the Marulan South quarries with only one access road Boral needs to respond at a higher level than most of the community.

Please refer to the trigger action plan to assess what action may need to be taken

12.1. Advice:

"A fire has started. There is no immediate danger. Stay up to date in case the situation changes"

On receipt of this warning Boral shall:

- Check on the availability and operation of firefighting equipment
- Warn all persons on site of the "advice" via the two way radio and advise them to monitor their work area for any fire activity
- Establish communications with key persons. Includes RFS Captain and Senior Boral Management
- Consider stopping Kiln operations to allow for appropriate shutdown procedures to occur.

12.2. Watch and Act

"There is a heightened level of threat and you need to start taking action now"

On receipt of this warning Boral shall:

- Activate and check all firefighting equipment
- Ensure all persons onsite are aware of the warning via the two way radio
- If the fire has impact potential - risk assess and act on evacuation of workers to their home
- If evacuation is required initiate the Emergency Management Plan and follow evacuation procedures, relevant duty cards and the instructions of the Chief Warden. The Chief Warden will contact emergency services to advise them that the site has been evacuated and that everyone has been accounted for. Resource Regulator must be notified of the evacuation as soon as possible by the Chief Warden or WHS Business Partner
- If Kiln still running consider shutdown procedures, taking into account the local impact, if any.
- Advise appropriate senior persons within Boral Cement Management

12.3. Emergency Warning

“An Emergency warning is the highest level of bushfire alert. You need to take action NOW. Any delays puts your life at risk”

On receipt of this warning Boral shall:

- If the fire has impact potential - risk assess and act on evacuation of workers to their home
- If evacuation is required initiate the Emergency Management Plan and follow evacuation procedures, relevant duty cards and the instructions of the Chief Warden. The Chief Warden will contact emergency services to advise them that the site has been evacuated and that everyone has been accounted for. Resource Regulator must be notified of the evacuation as soon as possible by the Chief Warden or WHS Business Partner
- Risk assess if fire is imminent and safe evacuation cannot occur to stop persons leaving the site (i.e. if access / egress has been impacted)
- Assemble and account for all persons in the planned safe location
- Following a risk assessment of conditions (i.e. fire direction, wind direction and speed) the following places are the designated shelter areas: Machine Shop, Production Meal room, Peppertree Quarry Administration Building and last resort is the North Pit.
- Communicate with Firecom and advise appropriate senior persons within Boral Cement Management
- If Kiln still running consider shutdown procedures (including gas isolation), taking into account the local impact, if any.

13. Responsibilities and Accountabilities

13.1. Site Manager

The Site Manager will have the following responsibilities:

- Ensure that all conditions of consent are followed by contractors, employees and service providers;
- Ensure that all relevant regulations, licences and approvals are complied with by all personnel on site;
- Maintain overall responsibility for activities undertaken on the Boral site.
- Ensure the plan is communicated to the Marulan RFS Captain and the Southern Tablelands Zone Operations Officer;
- Ensure an adequate number of persons are on the Toban notifications list
- Ensure firefighting equipment is as compatible as possible with the local RFS
- Ensure a liaison meeting with the local RFS brigade takes place at least once a year.
- Ensure appropriate communication with various parties as listed above
- Other communications, such as the Regulators, as required. Refer to Clause 128 of the WHS (Mines and Petroleum Sites) Regulation.

13.2. Environmental Coordinator / WHS Business Partner

The Environmental Coordinator / WHS Business Partner will report to the Site Manager. They will be responsible for:

- Ensuring that all procedures detailed in this management plan are followed and implemented by the site.

14. Table 1: Bushfire Contacts List

In case of Emergency or to report a fire call 000 (triple zero)




Name	Position	Mobile	Phone	Email / Radio Channel
Jess Seifert	WHS Business Partner Boral Cement	0401 895 449		Jessica.seifert@boral.com.au
Therese Hadjia	Environmental Coordinator – MSL		48 203 007	Therese.hadjia@boral.com.au
Chris Brown	Environmental Advisor – Peppertree	0401 894 399	48 411 701	Christopher.brown@boral.com.au
Les Longhurst	Site Manager – Marulan	0401 894 248	48 203 006	Les.longhurst@boral.com.au
Michael Higgins	Operations Manager – Peppertree	0401 894 082	48 411 701	Michael.Higgins@boral.com.au
	Southern Tablelands RFS Operations		4822 2900	
Firecom	Yass Goulburn		6226 3100 4822 2900	
Jim Divall	Marulan RFS Captain	0407 227 047	4841 1555	UHF Channel 16
Warren Denniss	Deputy Captain	0408 401 316		
Terry Lewis	Bungonia RFS Captain	0408 223 380		UHF Channel 16
Sean Whitby	Deputy Captain	0401 712 677		
Dave Edworthy	Windellama RFS Captain		4844 5359	UHF Channel 21
Resource Regulator	Mines Inspectors		1300 814 609	Called by the Site Manager or WHS Business Partner

15. Table 2 Address and coordinates of Boral South Marulan Operations

Operation	Address	GPS – Mapgrid	GPS – lat / long
Boral Cement Marulan South Limestone Mine	5 Hume St, Marulan NSW 2579. Nearest cross street – Marulan South Road (becomes Cooper Crescent over railway line) 8.5 kms SE from Jerrara Rd / Hume Highway overpass.	56H228543.1 6149025.871	34°45'53.3" South 150°02'02.7" East -34.764849 150.034110
Boral Peppertree Quarry	843 Marulan South Rd Marulan South NSW 2579	56H228078 6149734	34.D45.501 150D1.756

16. Table 3: NSW RFS Fire Danger Ratings and Alert Levels

FIRE DANGER RATING	WHAT YOU SHOULD DO
CATASTROPHIC	<p>For your survival, leaving early is the only option.</p> <p>Leave bush fire prone areas the night before or early in the day – do not just wait and see what happens.</p> <p>Make a decision about when you will leave, where you will go, how you will get there and when you will return.</p> <p>Homes are not designed to withstand fires in catastrophic conditions so you should leave early.</p>
EXTREME	<p>Leaving early is the safest option for your survival.</p> <p>If you are not prepared to the highest level, leave early in the day.</p> <p>Only consider staying if you are prepared to the highest level – such as your home is specially designed, constructed or modified, and situated to withstand a fire, you are well prepared and can actively defend it if a fire starts.</p>
SEVERE	<p>Leaving early is the safest option for your survival.</p> <p>Well prepared homes that are actively defended can provide safety – but only stay if you are physically and mentally prepared to defend in these conditions.</p> <p>If you're not prepared, leave early in the day.</p>
VERY HIGH	<p>Review your <u>bush fire survival plan</u> with your family. Keep yourself informed and monitor conditions. Be ready to act if necessary.</p>
HIGH	
LOW MODERATE	

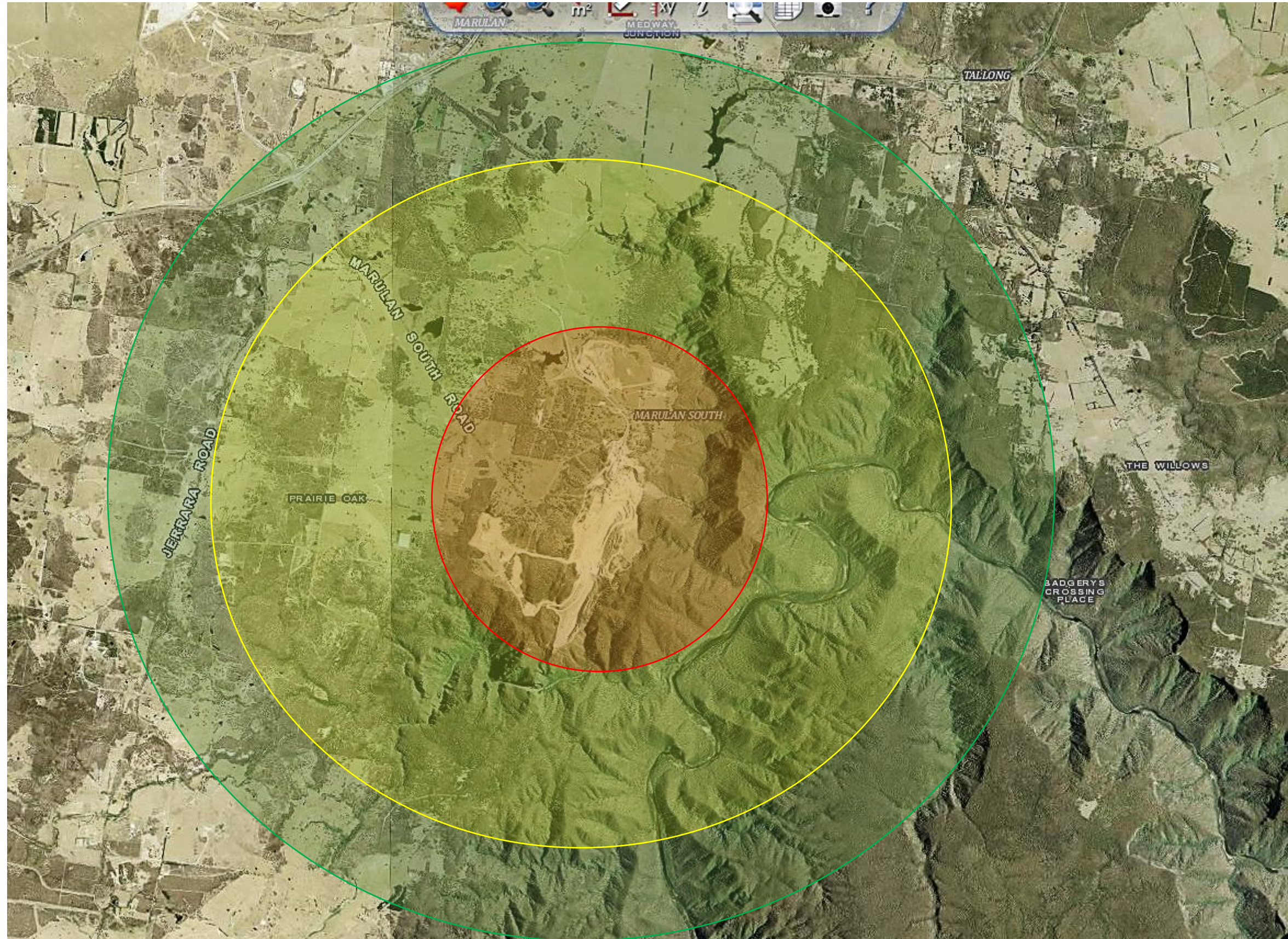
NSW RFS Alert Levels	
	<p>Advice</p> <p>A fire has started. There is no immediate danger. Stay up to date in case the situation changes.</p>
	<p>Watch And Act</p> <p>There is a heightened level of threat. Conditions are changing and you need to start taking action now to protect you and your family.</p>
	<p>Emergency Warning</p> <p>An Emergency Warning is the highest level of Bush Fire Alert. You may be in danger and need to take action immediately. Any delay now puts your life at risk</p>

17. Table 4 Neighbour Contact List

NEIGHBOURS	ADDRESS	EMERGENCY NOTIFICATION PHONE NUMBER	METHOD
Peppertree Quarry	843 Marulan South Road	02 48 411 701	Phone/Door knock
Steve Wilson	5 Hume St Marulan South	0431 359 688	Phone/Door knock
Dean Beltrame	683 Marulan South Road	0401 896 979	Phone
Foti Fireworks	452 Marulan South Road	0418 242 406	Phone/Door knock
Aglime Fertilisers	709 Marulan South Road	02 4841 1528	Phone/Door knock
Rob and Robyn Steward	565 Marulan South Road	0437 831 540	Phone/Door knock
Steve and Annette Pace	381 Marulan South Road	02 4841 1116	Phone/Door knock
Barry Armitt	357 Marulan South Road	02 4841 1547	Phone/Door knock
Peppertree Shift Employees	505 Marulan South Road	02 4841 1701	Phone
Pat and Bridgette Mulligan	400 Marulan South Road	02 4841 1399	Phone/Door knock
Steven Lichtenberger	270 Glynmar Road	02 4841 1299	Phone/Door knock
Bungonia State Recreation Area	838 Lookdown Road, Bungonia	02 4827 4700	Phone

18. Trigger Action Map

Red: Emergency – take shelter if escape isn't possible
 Yellow: Watch and Act – Evacuation if required
 Green: Consider Evacuation depending on conditions



19. Bushfire Trigger Action Matrix

Fire Danger Rating: Severe/Extreme/Catastrophic				
Trigger Action Map	Fire Direction	Wind Direction	Outcome	Action
Green Zone	W/NW	W/NW	Fire could move very quickly and access could be blocked	<ul style="list-style-type: none"> ➤ Consider early evacuation if safe to do so ➤ Check availability and operation of firefighting equipment ➤ Advise all personnel on site of fire and actions being taken ➤ Actively monitor Mine site for fire activity ➤ Advise other key persons of threat ➤ Consider stopping kiln operations
	W/NW	E/SE	Fire moving away from Mine, however access could be become blocked	<ul style="list-style-type: none"> ➤ Consider early evacuation if safe to do so ➤ Check availability and operation of firefighting equipment ➤ Advise all personnel on site of fire and actions being taken ➤ Actively monitor Mine site for fire activity ➤ Advise other key persons of threat ➤ Consider stopping kiln operations
	E/SE	W/NW	Fire moving away from Mine	<ul style="list-style-type: none"> ➤ Monitor weather conditions ensuring wind doesn't change direction ➤ Check availability and operation of firefighting equipment ➤ Advise all personnel on site of fire and actions being taken ➤ Actively monitor Mine site for fire activity ➤ Advise other key persons of threat
	E/SE	E/SE	Fire moving towards Mine moving up hill	<ul style="list-style-type: none"> ➤ Consider early evacuation if safe to do so ➤ Check availability and operation of firefighting equipment ➤ Advise all personnel on site of fire and actions being taken ➤ Actively monitor Mine site for fire activity ➤ Advise other key persons of threat ➤ Consider stopping kiln operations
Yellow Zone	W/NW	W/NW	Fire within danger zone and access will be become blocked, possible Ember attacks	<ul style="list-style-type: none"> ➤ Evacuate now if safe to do so. Rail access road may need to be considered ➤ Activate and check all firefighting equipment if staying ➤ Advise all persons on site of the situation via two way radio ➤ Activate evacuation procedures and follow bushfire duty card ➤ Chief Warden to contact Emergency services and advise them of evacuation ➤ If Kiln is still on, consider emergency shutdown procedures or whether there is time to shut down to correct temperature and isolate incoming gas
	W/NW	E/SE	Fire moving away from Mine, however access could be become blocked	<ul style="list-style-type: none"> ➤ Evacuate now if safe to do so. ➤ Activate and check all firefighting equipment if staying ➤ Advise all persons on site of the situation via two way radio ➤ If Kiln is still on, consider emergency shutdown procedures or whether there is time to shut down to correct temperature and isolate incoming gas
	E/SE	W/NW	Fire moving away from Mine	<ul style="list-style-type: none"> ➤ Monitor conditions closely if wind changes direction, evacuate if safe to do so ➤ Activate and check all firefighting equipment if staying ➤ Advise all persons on site of the situation via two way radio ➤ If Kiln is still on, consider emergency shutdown procedures or whether there is time to shut down to correct temperature and isolate incoming gas

	E/SE	E/SE	Fire moving towards Mine, moving up hill, possible Ember attacks	<ul style="list-style-type: none"> ➤ Evacuate now if safe to do so ➤ Activate and check all firefighting equipment if staying ➤ Advise all persons on site of the situation via two way radio ➤ Activate evacuation procedures and follow bushfire duty card ➤ Chief Warden to contact Emergency services and advise them of evacuation ➤ If Kiln is still on, consider emergency shutdown procedures or whether there is time to shut down to correct temperature and isolate incoming gas
Red Zone	W/NW	W/NW	Fire Imminent, access blocked	<ul style="list-style-type: none"> ➤ Take shelter in designated shelter areas (based on risk assessment - Machine Shop, Production Meal room, Peppertree Quarry Administration Building and last resort is the North Pit) ➤ Activate and check all firefighting equipment ➤ Advise all persons on site of the situation via two way radio ➤ Activate evacuation procedures to shelter areas and follow bushfire duty card ➤ Chief Warden to contact Emergency services and advise of the situation ➤ If Kiln is still on, begin emergency shutdown procedures or consider whether there is time to shut down to correct temperature and isolate incoming gas
	W/NW	E/SE	Fire moving away from Mine - access will most likely be blocked	<ul style="list-style-type: none"> ➤ Take shelter in designated shelter areas (based on risk assessment - Machine Shop, Production Meal room, Peppertree Quarry Administration Building and last resort is the North Pit) ➤ Activate and check all firefighting equipment ➤ Advise all persons on site of the situation via two way radio ➤ Activate evacuation procedures to shelter areas and follow bushfire duty card ➤ Chief Warden to contact Emergency services and advise of the situation ➤ If Kiln is still on, consider emergency shutdown procedures or whether there is time to shut down to correct temperature and isolate incoming gas
	E/SE	W/NW	Fire moving away from Mine	<ul style="list-style-type: none"> ➤ Evacuate if safe to do so and only if advised by RFS, otherwise shelter in designated areas (based on risk assessment - Machine Shop, Production Meal room, Peppertree Quarry Administration Building and last resort is the North Pit) ➤ Activate and check all firefighting equipment if staying ➤ Advise all persons on site of the situation via two way radio ➤ Activate evacuation procedures and follow bushfire duty card ➤ Chief Warden to contact Emergency services and advise them of evacuation ➤ If Kiln is still on, consider emergency shutdown procedures or whether there is time to shut down to correct temperature and isolate incoming gas
	E/SE	E/SE	Fire imminent, conditions could be too dangerous to leave if access not blocked	<ul style="list-style-type: none"> ➤ Take shelter in designated shelter areas (based on risk assessment - Machine Shop, Production Meal room, Peppertree Quarry Administration Building and last resort is the North Pit) ➤ Activate and check all firefighting equipment ➤ Advise all persons on site of the situation via two way radio ➤ Activate evacuation procedures to shelter areas and follow bushfire duty card ➤ Chief Warden to contact Emergency services and advise of the situation ➤ If Kiln is still on, begin emergency shutdown procedures or consider whether there is time to shut down to correct temperature and isolate incoming gas

Attachment 3: Critical Incident Contact List

Critical Incidents Contact Sheet - Boral Cement Ltd Marulan South

WHS REPORTING HIERARCHY						
Measure of Consequence						
Description/ Category level	Insignificant	Minor	Moderate	Major	Severe	
Impact (Refer to the Risk Matrix for the full list)	No injuries, illness, property damage, business interruption or community impacts.	Injuries requiring competent first aid, treatment by a medical professional or as a hospital outpatient and typically no time lost (i.e. FAIs and most MTIs).	One or more injuries that are serious enough to result in lost time, non-permanent disabling injuries or an injury that may require non-emergency hospitalisation as an inpatient.	Serious injuries, requiring immediate emergency hospital treatment as an inpatient, resulting in significant permanent disabling injury e.g. reduced mobility, loss of fingers or extended temporary impairment and/or extended hospitalisation. Serious/dangerous incident/occurrence (as per regulatory reporting definition).	Fatality or life threatening injuries, or resulting in substantial life changing permanent disability e.g. blindness, loss of hand(s), limb.	
Response	Employee immediately reports verbally to Supervisor.	Employee immediately reports verbally to Supervisor. Supervisor reports immediately verbally to: - Operations / Site Manager - Workfile	Employee immediately reports verbally to Supervisor. Supervisor reports immediately verbally to: - Operations / Site Manager - Workfile Operations / Site Manager reports verbally and by email to the WHS Business Partner and National Operations Manager – Cement Ops who will report to Executive General Manager – Cement.	As per moderate response, plus: Operations / Site Manager reports within 24 hours verbally and by email WHS Business Partner and National Operations Manager – Cement Ops who will report to Executive General Manager – Cement. Executive General Manager – Cement reports within 24 hours verbally and by email to: - Group Legal - EGM HSE	As per major response plus: Executive General Manager – reports reports within 24 hours verbally and by email to: - Upper Boral Management - Boral Chief Executive Officer Chief Executive reports to the Board.	
KEY CONTACTS						
Local / Site Contacts				Regulatory Authority Notification		
Police, Ambulance, Fire:	000 (Mobile Phone Users: Dial 112)			State or Territory: NSW		
Program Manager – Mine Operations	Les Longhurst	0401 895 032 / Ext 261 / 231		Senior Manager ONLY to immediately notify the appropriate Regulatory Authorities of a reportable incident affecting an employee, a contractor or a visitor to the workplace.		
Production Manager	Jamie Whitaker	0401 895 212 / Ext 201		There are six types of incidents that must be reported to the NSW Resources Regulator if they arise out of conducting business or performing any activity at a mine or petroleum site (See WHS (Mines and Petroleum Sites) Regulation 2014 for more information on what is notifiable). These are:		
Engineering Manager	Cameron Atkinson	0401 895 346 / Ext 206		➢ the death of a person		
Nominated Electrical Engineer	Pete Randazzo	0401 895 896 / Ext 216		➢ a 'serious injury or illness'		
Senior Production Supervisor (Plant)	Adrian Smith	0401 893 247 / Ext 260		➢ a 'dangerous incident', as defined in the regulations		
Senior Production Supervisor (Pit)	Darryl Young	0428 104 883 / Ext 202		➢ an incident that results in injury or illness requiring medical treatment		
WHS Business Partner	Jess Seifert	0401 895 448		➢ a high potential incident		
Lime Operations Manager	Frank Murnane	0401 894 086 / Ext 247		➢ certain incidents relating to explosives		
Lime Maintenance Manager	Sam Karlyawacum	0401 893 051 / Ext 262		If there is a serious injury or illness, a death or a dangerous incident, you must:		
Technical Manager – Limestone	Garth Nagle	0401 895 737 / Ext 275		➢ provide first aid and make the area safe if needed		
Internal Senior Management				➢ report the incident to us immediately by calling 1300 814 809 (24 hours a day, 7 days a week).		
P & C Partner	Karen Brady	0401 894 122		➢ preserve the site where the incident occurred until an inspector releases it		
WHS Manager – Cement	Marous Forbes	0427 434 871		➢ log in to the Regulator Portal to access the incident lodged by the Resources Regulator and provide further information if required		
Cement Sustainability Manager	Greg Johnson	0401 893 420		If there is an incident that results in illness or injury that requires medical treatment, other than diagnostic procedures, observation, counselling, first aid or therapeutic measures taken solely for preventative purposes, you must:		
NSW Injury Management Team		1300 763 486		➢ make the area safe, if needed		
		AH 1300 031 057		➢ notify us as soon as possible (but no later than 48 hours) by completing the notify resources regulator form on the Regulator Portal.		
Executive General Manager – Cement	Rajeev Ramankutty	0419 355 602		If there is a high potential incident:		
National General Manager – Operations Cement	Glirich Yadwad	0401 895 035 / 8033 4036		➢ make the area safe, if needed		
HSE Executive General Manager	Deirdre Lewis	02 8220 8300		➢ notify us as soon as possible (but no later than 7 days) by completing the notify resources regulator form on the Regulator Portal.		
Head of P & C	Mark Ratcliffe	0410 472 882		To report the loss, theft, suspicious activity that threatens security, or serious incidents involving explosives or explosive precursors, you must:		
Group Environmental Advisor	Scott Carter	0401 894 258		➢ notify us immediately by calling 1300 814 809 (24 hours a day, 7 days a week) and submit the report an explosives incident form available on the Regulator Portal and provide additional information as required		
Boral Legal	Amy Jackson	0401 894 289		➢ preserve the area within a 4-metre radius of where the serious incident occurred, do not use, interfere or disturb the place(s) affected by the serious incident for a period of 36 hours after you have notified us		
Boral Insurance	Insurance	8033 4432				
External Contacts						
*EPANSW		131 555				
*Resources Regulator		1300 814 809				
*ONRSR National Rail Safety Regulator (occurrences@onrsr.com.au)		1800 011 034				
Boral Employee Assistance Program (BEAP)		1300 002 327				
Essential Energy - electricity		13 20 80				
Actew AGL - gas		13 19 08				
Poisons Information		13 11 28				
Goulburn Police		4824 0788				
KEY DOCUMENTATION						
Documentation to Complete						
Boral Sequence	DPI – Mine Incident Notification – Online Portal	Safety Alert Form	Boral Workers Comp Claim Form	Incident Investigation Form	Lumley Motor Vehicle Claim Form	
When:	ASAP	ASAP (Senior Management only)	Initial first 48 Hours (WHS Business Partner)	ASAP (Supervisor/Manager)	ASAP (Manager)	ASAP
Send to:	WHS Business Partner Jessie Seifert 0401 895 448	NSW DTI 1300 814 809	Cement WHS Manager Marous Forbes 0427 434 871	NSW Workfile Team 1300 763 488	WHS Business Partner Jessie Seifert 0401 895 448	Insurance Officer Lumley Insurance 1800 852 258

Attachment 4: Site Phone List

Boral Cement Marulan

Telephone Directory



Main Office (02) 48 203000 **Spare** 4841 1520 **Fax:** (02) 48 411617 **Date** 12/07/2022
Emergency Phone 209

NAME	EXT	DEPT		FAX/MOBILE	Alt No
HEAD PAYROLL OFFICE		NORTH RYDE	1300 729 123		
ACCOUNTS PAYABLE		NORTH RYDE	1300 324 915		
ACCOUNTANTS		Senior Commercial Analyst	Zac Rowe - 0430 091 614	Malcolm DeZilwa - 4860 2223	
ATKINSON, Cameron	206	Engineering Manager	48 203 006	0401 896 346	0432 760 147
BELL, Glen	241	HME Team Leader	48 203 041		
BELL, Rodney	251	Lime Plant Electrical Maintenance	48 203 051	48 411 819 (F)	
BROOK, Matt	240	Electrical Team Leader	48 203 040	0417 277 562	
BYRNE, Rodney	244	Civil Works	48 203 044	0401 893 874	48 411 971 (F)
CHAPMAN, Craig	214	Shot Firer	48 203 014		
CHARNOCK, Luke	238	Electrical Projects Team Leader	48 203 040	0401 895 576	48 411 819 (F)
DANIEL, Josh	251	Lime Plant Maintenance Team Leader	48 203 051		48 411 819 (F)
ESSON, James	224	Maintenance Superintendant	48 203 024	0420 220 655	48 411 611 (F)
HADJIA (THOMAS), Therese	207	Environmental Coordinator	48 203 007		
HEDGES, Kristy	213		48 203 013	0401 893 543	48 411 971 [F]
HILLIER, Andrew	242	Project Team Leader	48 203 042		48 411 275 [F]
KARIYAWASAM, Sam	252	Lime Maintenance Manager	48 203 052	0401 893 051	48 411 617 (F)
LONGHURST, Les	261/231	Site Manager	48 203061	0401 895 032	48 411 617 (F)
MURDOCH, Greg	225	Fixed Plant Team Leader	48 203 025		48 411 611 (F)
MURNANE, Frank	247	Lime Operations Manager	48 203 047	0401 894 066	48 411 814 (F)
NAGLE, Garth	248	Limestone Mine Technical Manager	48 203 075	0401 895 737	48 411 275 (F)
OAKLEY, Jody	203	Operations Administrator	48 203 003		48 411 617 (F)
RANDAZZO, Pete	219	Site Electrical Engineer	48 203 019	0401 896 998	48 411 819 (F)
RECEPTION - Unattended	9	Reception/Admin Office	48 203 000		48 411 617 (F)
SALES		Ian Fitzsimons(Limestone) Brad Vanderburg(Stabilization/road)	IF-9033 4055 BV-9033 4096 boralcementquotations@boral.com.au	Bulk allocations 1800 451 240 Bag Orders 1800 651 799	IF - 0401 895 610 BV - 0401 896 167
SMITH, Mark	221 / 204	Continuous Improvement Co-Ordinator	48 203 021	0401 893 229	48 411 275 (F)
SMITH, Adrian	260	Senior Production Supervisor (Plant)	48 203 069	0401 893 247	
STORE - Don Wagner	232	Main store counter	48 203 032	48 411 971 [F]	
WHITTAKER, Jamie	201	Production Manager	48 203 001	0401 895 212	48 411 275 (F)
YOUNG, Darryl	202	Senior Production Supervisor (Pit)	48 203 002	0428 104 983	48 411 275 (F)
FIRST AID ROOM	243				
Computer Room	205	Mine Management Office	48 203 005		
Despatch office	234				
Elect Coms Room	235		48 203 035		
Electrical Office	211		48 203 011		
Electrical Workshop	233		48 203 033	0401 897 974	
Geoscan	236				
Kiln Road Gate	254				
Hydration Plant	237		48 203 037		
Jaw Crusher	228		48 203 028		
Laboratory	230/21	218 XRF	48 203 030	48 411 980 [F]	

	5				
Lime Plant/Maint	251	Kiln Maintenance	48 203 051		
Lime Plant/Kiln	229	Control Room	48 203 029	48 411 814 [F]	
Machine Shop	220		48 203 020	48 411 611 (F)	
Medway Staff Hut				0401 892 312	
Production Meeting Room	281				
Production Supervisors	222	0401 896 197 B Croker-0401 896 191	48 203 022		
Training Centre Room	210		48 203 010	48 411 617 (F)	
Weighbridge - Truck	255	KRISTY HEDGES	48 203 055	0401 893 543	
Weighbridge - Train	216		48 203 016		
Peppertree Quarry		Michael Higgins	48 411 701	0401 894 082	48 411 718 (F)
Spare numbers - Main Office	208 / 204	Visitors offices	48 203 007		
Spare office numbers		249 246 250 227 245 (prev.training office)			
Spare numbers - Electrical	212	Electronics System Engineer	48 203 012		48 411 819(F)
Spare numbers - Lime	217	Technical Manager - Lime	48 203 017		48 411 617 (F)
Spare numbers - Main Office	248	Technical Manager - Limestone	48 203 048		
Spare numbers - Mine Mgt	256		48 203 056		48 411 275 (F)
Spare numbers - Machine Shop	226	Machine Shop	48 203 026		

Attachment 5: Fire Extinguishers

YES NO TYPE OF EXTINGUISHER Colour scheme - AS 1841.1		A Wood, Paper & Plastic 	B Flammable & Combustible Liquids 	C Flammable Gases 	E Energised Electri- cal Equipment 	F Cooking Oils & Fats 	COMMENTS: Refer Appendix B of AS 2444
Pre 1997	Post 1997						
							Special Powders are available specifically for various types of metal fires. Seek expert advice.
							Special Powders are available specifically for various types of metal fires. Seek expert advice.
							Generally not suitable for outdoor fires. Suitable only for small fires.
							Dangerous if used on flammable liquid, energized electrical equipment and cooking oil/fat fires.
							Dangerous if used on energized electrical equipment.
							Dangerous if used on energized electrical equipment.
							Check the characteristics of the specific extinguishant.
							Use blanket to wrap around a human torch. Ensure you replace the blanket with a new one after use.
							Ensure you maintain a path of egress between you and the nearest exit.

* Limited indicates that the extinguishant is not the agent of choice for the class of fire, but that it will have limited extinguishing capability.

*** Solvents which may mix with water, e.g. alcohol and acetone, are known as polar solvents and require special foam. These solvents break down conventional AFFF.

NOTE: Class D fires (involving combustible metal(s)) use only special purpose extinguishers and seek expert advice.

Page: 1 **Record Of Service**

Docket No:	2006244	Invoice No.:	8563160	Wormald
Service Due:	30-SEP-2021	Site Number:	BORA197Q	PO BOX 1415
				WOLLONGONG NSW 2500
Address:	[NSIA] BORAL CEMENT BORAL LIME PLANT MARULAN 1 HUME ST MARULAN NSW			Site Barcode:
Contact:	Rodney Byrne			Phone : 02 4228 5533
Phone:	48203000			Fax : 02 4226 4736

Equipment Description	B/Code No	Location , Area & Notes	Service Level	P/F	DOM Last PT
Fire Extinguishers FX	1	GATEWAY INVOICING-DONT REMOVE	ASL1	P	15-SEP-2021
Dry Chem ABE 9.0kg Ext WD	12037277	FST INVOICING	ASL1	P	20-FEB-2019
Dry Chem ABE 9.0kg Ext WD	12037278	MEAL ROOM CRUSHER	ASL1	P	20-FEB-2019
Dry Chem ABE 9.0kg Ext WD	12415720	MEAL ROOM CRUSHER	ASL1	P	21-JUL-2021
		#C16 CONVEYOR 19 TAIL DRUM replaced			
Dry Chem ABE 9.0kg Ext SEU	11592890	#A55 LOCO SHED	ASL2	P	19-FEB-2017
Dry Chem ABE 9.0kg Ext FM	10844919	#B4 LEVEL 2 SCREEN BUILDING	ASL1	P	23-APR-2020
Dry Chem ABE 9.0kg Ext SEU	10844918	#B5 LEVEL 3 SCREEN BUILDING	ASL2	P	21-APR-2020
Dry Chem ABE 9.0kg Ext SEU	12437717	#B7 TOP LEVEL SCREEN BUILDING	ASL1	P	21-APR-2021
Dry Chem ABE 9.0kg Ext SEU	11723909	#B1 No 6 CONVEYOR HEAD DRUM	ASL2	P	21-FEB-2018
Dry Chem ABE 9.0kg Ext SEU	12037271	#A9 STORE COMPOUND YARD	ASL1	P	20-JUN-2018
Dry Chem ABE 9.0kg Ext WD	12415179	#A8 STORE COMPOUND YARD	ASL1	P	20-JUL-2021
		10/16 bag a n d signage			
Dry Chem ABE 9.0kg Ext WD	11908456	#A10 STORE COMPOUND YARD	ASL1	P	23-APR-2018
Dry Chem ABE 9.0kg Ext SEU	12437795	#D55 INSIDE SERVICE BAY	ASL1	P	20-APR-2021
Dry Chem ABE 9.0kg Ext SEU	11720963	#B29 CONVEYOR 34 HEAD DRUM	ASL1	P	22-JUL-2017
Dry Chem ABE 9.0kg Ext WD	11720965	#B31 TOP OF LIMESTONE BIN 5	ASL1	P	22-OCT-2017
Dry Chem ABE 9.0kg Ext SEU	12437789	#B32 2ND LEVEL LIMESTONE BIN	ASL1	P	23-APR-2021
Dry Chem ABE 9.0kg Ext FL	12514357	#B33 TOP OF LIMESTONE BIN	ASL1	P	20-OCT-2020
Dry Chem ABE 9.0kg Ext WD	10844654	#B35 LEVEL 1 LIMESTONE BIN	ASL1	P	23-DEC-2019
Dry Chem ABE 9.0kg Ext SEU	12122364	#D66 JAW CRUSHER AIR LOCK	ASL2	P	22-MAY-2018
Dry Chem ABE 9.0kg Ext SEU	11598861	#B16 TERTIARY SCREEN TOP LEVEL	ASL5	F	20-JUL-2016
		Pressure Test Required			
Dry Chem ABE 9.0kg Ext SEU	12363580	#D63 TOP LEVEL CRUSHER	ASL2	P	23-APR-2020
Dry Chem ABE 9.0kg Ext SEU	11719978	#D49 OUTSIDE WOMENS TOILET	ASL1	P	20-APR-2017
Dry Chem ABE 9.0kg Ext SEU	12363581	#D35 4TH FLOOR CRUSHER	ASL2	P	23-APR-2020
Dry Chem ABE 9.0kg Ext SEU	11724210	#D46 OUTSIDE WELDERS SHOP	ASL1	P	22-MAY-2017
Dry Chem ABE 9.0kg Ext SEU	11889182	SOUTH HALL	ASL2	P	19-JUL-2017
Dry Chem ABE 9.0kg Ext SEU	12496544	welding bay maintenance w/s	ASL2	P	20-APR-2020
Dry Chem ABE 9.0kg Ext SEU	12437806	#D58 OUTSIDE WASH BAY	ASL2	P	20-APR-2021
Dry Chem ABE 9.0kg Ext WD	12437809	#D8 STOCK PILE HOPPER	ASL1	P	23-APR-2021
Dry Chem ABE 9.0kg Ext WD	11592889	SOUTH HALL EXTERNAL	ASL2	P	19-JUL-2017
Dry Chem ABE 9.0kg Ext SEU	11592884	#D68 INSIDE CRUSHER ROOM	ASL1	P	23-NOV-2016
Dry Chem ABE 9.0kg Ext SEU	11889183	extinguishers spare shed white	ASL2	P	20-JUL-2017
Dry Chem ABE 9.0kg Ext SEU	12496792	#D14 OUTSIDE CONTROL ROOM	ASL2	P	20-APR-2020
Dry Chem ABE 9.0kg Ext WD	12514361	#D37 OUTSIDE MEAL ROOM	ASL1	P	20-OCT-2020
Dry Chem ABE 9.0kg Ext WD	10844648	#C15 COMPRESSOR HOUSE AC22	ASL1	P	20-DEC-2019
Dry Chem ABE 9.0kg Ext WD	12415722	#C8 HYDRATION PLANT	ASL1	P	21-JUL-2021
		replaced			
Dry Chem ABE 9.0kg Ext WD	10844650	#C10 3RD LEVEL HYDRATION PLANT	ASL1	P	21-DEC-2019
Dry Chem ABE 9.0kg Ext SEU	10844859	#C22 TOP OF LIME BIN 19	ASL1	P	21-MAR-2020
Dry Chem ABE 9.0kg Ext SEU	12319218	#C20 4TH LVL 1 SCREEN BUILDING	ASL2	P	20-MAY-2019
Dry Chem ABE 9.0kg Ext WD	12415721	#C18 3RD LEVEL SCREEN HOUSE	ASL1	P	21-JUL-2021
		replaced			
Dry Chem ABE 9.0kg Ext SEU	12437780	#C17 1ST LEVEL SCREEN HOUSE	ASL2	P	20-APR-2021
Dry Chem ABE 9.0kg Ext SEU	12514356	#C25 NORTH END CONVEYOR 14	ASL1	P	21-OCT-2020
Dry Chem ABE 9.0kg Ext WD	11600034	#C26 KILN TOILET BLOCK	ASL1	P	21-FEB-2019

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Dry Chem ABE 9.0kg Ext WD	11600020	#C33 1ST LEVEL NO 2 SCREEN	ASL2	P	21-FEB-2019
Dry Chem ABE 9.0kg Ext WD	12514371	#C34 TOP LEVEL NO 2 SCREEN	ASL1	P	21-OCT-2020
Dry Chem ABE 9.0kg Ext SEU	10844860	#C35 CO 21 HEAD DRUM	ASL2	P	21-AUG-2019
Dry Chem ABE 9.0kg Ext OTCL	12037261	#C31 KILN tool store	ASL2	P	20-FEB-2019
Dry Chem ABE 9.0kg Ext SEU	12437786	#C84 COAL AREA	ASL1	P	21-APR-2021
Dry Chem ABE 9.0kg Ext WD	12514372	#C86 COAL AREA	ASL1	P	21-OCT-2020
Dry Chem ABE 9.0kg Ext SEU	12437787	#C85 COAL AREA	ASL1	P	21-APR-2021
Dry Chem ABE 9.0kg Ext WD	12513981	#C72 KILN GROUND WST OF ROTARY	ASL1	P	21-OCT-2020
Dry Chem ABE 9.0kg Ext WD	12496301	#C70 KILN FIRING FLOOR	ASL2	P	21-MAR-2020
Dry Chem ABE 9.0kg Ext SEU	11720977	FETTLERS SHED Unable to Access	ASL2	F	23-NOV-2017
Dry Chem ABE 9.0kg Ext WD	11723896	#C48 CO 22 HEAD DRUM	ASL2	P	20-FEB-2018
Dry Chem ABE 9.0kg Ext SEU	12514367	#C45 CO 16 TAIL DRUM	ASL2	P	20-OCT-2020
Dry Chem ABE 9.0kg Ext WD	12037264	#C40 P.H.T. LEVEL 1	ASL1	P	21-OCT-2018
Dry Chem ABE 9.0kg Ext FM	12514364	#C38 P.H.T. LEVEL 2	ASL1	P	21-OCT-2020
Dry Chem ABE 9.0kg Ext SEU	12437784	#C36 P.H.T. LEVEL 3	ASL1	P	21-APR-2021
Dry Chem ABE 9.0kg Ext SEU	11908457	#A66 OIL DRUM STORE	ASL2	P	20-FEB-2018
Dry Chem ABE 9.0kg Ext SEU	11908458	#A65 OIL DRUM STORE	ASL2	P	20-FEB-2018
Dry Chem ABE 9.0kg Ext WD	12513987	#A62 GARDENERS SHED	ASL1	P	19-OCT-2020
Dry Chem ABE 9.0kg Ext FM	12514353	#A61 GARDENERS SHED	ASL1	P	19-OCT-2020
Dry Chem ABE 9.0kg Ext FM	11592887	behind site supervisors office	ASL1	P	20-FEB-2017
Dry Chem ABE 9.0kg Ext SEU	11199884	CO 16 HEAD DRUM	ASL2	P	20-MAY-2019
Dry Chem ABE 9.0kg Ext WD	12514373	#C87 LIME BIN 43 WEIGHBRIDGE	ASL1	P	23-OCT-2020
Dry Chem ABE 9.0kg Ext WD	11600035	#C29 CO 36 HEAD DRUM	ASL1	P	21-FEB-2019
Dry Chem ABE 9.0kg Ext SEU	11719985	#D3 SURGE BIN GROUND LEVEL	ASL1	P	21-JAN-2017
Dry Chem ABE 9.0kg Ext WD	10844925	#D4 1ST LEVEL SURGE BIN	ASL1	P	21-APR-2020
Dry Chem ABE 9.0kg Ext WD	11723904	#E34WORKSHOP	ASL2	P	20-FEB-2018
Dry Chem ABE 9.0kg Ext WD	11720981	#D9 CONVEYER TAIL DRUM	ASL2	P	20-JUL-2017
Dry Chem ABE 9.0kg Ext SEU	11600010	New bore pump shed	ASL1	P	23-FEB-2019
Dry Chem ABE 9.0kg Ext SEU	12037242	#D20 EXPLOSIVE STORE	ASL1	P	19-JUN-2018
Dry Chem ABE 9.0kg Ext SEU	11122103	#D21 EXPLOSIVE STORE	ASL1	P	19-APR-2017
Dry Chem ABE 9.0kg Ext WD	12496305	#D33 GRD LVL SECONDARY CRUSHER	ASL2	P	23-APR-2020
CO2 5.0kg Ext SEU	11889184	#B18 IN TERTIARY COMPRESSOR RM	ASL2	P	22-OCT-2017
CO2 5.0kg Ext SEU	11720973	#B36 WEIGHBRIDGE SWITCH ROOM	ASL2	P	22-OCT-2017
CO2 5.0kg Ext SEU	11720972	#B37 WEIGHBRIDGE SWITCH ROOM	ASL2	P	22-OCT-2017
CO2 5.0kg Ext WD	12554573	spares white shed behind store New Install -NO SERVICE CHARGE Pressure Test Required repla	ASL1	P	23-AUG-2021
CO2 5.0kg Ext SEU	11119105	#B54 LOCO SHED	ASL2	P	19-MAY-2019
CO2 5.0kg Ext SEU	11889187	#B6 TOP LEVEL SCREEN BUILDING	ASL2	P	21-MAY-2018
CO2 5.0kg Ext SEU	10844917	#B8 TOP LEVEL SCREEN BUILDING	ASL2	P	21-APR-2020
CO2 5.0kg Ext WD	12563812	#A12 STORE ENTRANCE bag added	ASL1	P	20-JAN-2021
CO2 5.0kg Ext SEU	12037270	#A17 STORE SIDE ROLLER DOOR	ASL1	P	20-AUG-2018
CO2 5.0kg Ext WD	12545648	#A3 ELECTRICAL WORKSHOPS replaced	ASL1	P	20-AUG-2021
CO2 5.0kg Ext SEU	12533674	#D65 CRUSHER SWITCH ROOM	ASL2	P	23-APR-2021
CO2 5.0kg Ext SEU	11720980	#D64 CRUSHER SWITCH ROOM	ASL2	P	23-AUG-2017
CO2 5.0kg Ext SEU	12363576	#D60 MACHINE SHOP CRIB ROOM	ASL2	P	20-APR-2020
CO2 5.0kg Ext WD	11723905	#D40 IN MACHINE SHOPWORK AREA	ASL2	P	20-FEB-2018
CO2 5.0kg Ext FM	11598856	#D31 CRUSHER CENTER SWITCHROOM	ASL1	P	23-OCT-2016
CO2 5.0kg Ext SEU	10844858	#C6 HYDRATION PLANT BALL MILL	ASL2	P	21-MAR-2020
CO2 5.0kg Ext FL	12523279	#C2 HYDRATION PLANT SWITCHROOM	ASL1	P	21-OCT-2020
CO2 5.0kg Ext SEU	11889193	#C1 HYDRATION PLANT SWITCHROOM	ASL2	P	21-OCT-2017
CO2 5.0kg Ext SEU	11720975	#C32 LIMESTONE MAINT SHED	ASL2	P	21-OCT-2017
CO2 5.0kg Ext WD	12523210	#C55 KILN SWITCHROOM	ASL2	P	21-OCT-2020

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CO2 5.0kg Ext SEU	12037256	#C54 KILN SWITCHROOM	ASL1	P	21-FEB-2019
CO2 5.0kg Ext SEU	11720971	#C78 KILN WESTERN SWITCHROOM	ASL2	P	21-OCT-2017
CO2 5.0kg Ext SEU	12037251	#C64 PRECIPITATOR SWITCHROOM	ASL1	P	21-FEB-2019
CO2 5.0kg Ext SEU	11720976	#C62 OUTSIDE ID FAN	ASL2	P	21-OCT-2017
CO2 5.0kg Ext SEU	12037249	#C63 PRECIPITATOR SWITCHROOM	ASL1	P	21-OCT-2018
CO2 5.0kg Ext SEU	10844816	#C47 FINES CRUSHER	ASL2	P	20-MAR-2020
CO2 5.0kg Ext WD	12563717	#C46 FINES CRUSHER replaced	ASL1	P	20-JAN-2021
CO2 5.0kg Ext SEU	12037263	#C39 P.H.T. LEVEL 1	ASL1	P	21-SEP-2018
CO2 5.0kg Ext SEU	12037265	#C37 P.H.T. LEVEL 2	ASL1	P	21-DEC-2018
CO2 5.0kg Ext SEU	11908453	#A70 FILTRATION SHED	ASL1	P	19-AUG-2017
CO2 5.0kg Ext WD	12217056	#C88 1ST LEVEL LIME BIN 43	ASL1	P	23-DEC-2019
CO2 5.0kg Ext SEU	10981008	#D1 SURGE BIN SWITCHROOM	ASL2	P	21-AUG-2017
CO2 5.0kg Ext SEU	11889186	#D2 SURGE BIN SWITCHROOM	ASL2	P	21-AUG-2017
CO2 5.0kg Ext FM	11719986	#D10 CONVEYOR 4 HEAD DRUM SWAPPED PUT TO A 4.5	ASL2	P	21-APR-2017
CO2 5.0kg Ext FM	12363578	#D32 GRD LVL SECONDARY CRUSHER	ASL2	P	23-APR-2020
CO2 5.0kg Ext FM	12363579	#D34 1ST LVL SECONDARY CRUSHER	ASL2	P	23-APR-2020
CO2 5.0kg Ext WD	12545609	#C3 HYDRATION PLANT SWITCHROOM replaced	ASL1	P	21-AUG-2021
CO2 5.0kg Ext SEU	12533830	#D54 INSIDE SERVICE BAY	ASL2	P	20-APR-2021
CO2 5.0kg Ext SEU	12037276	A Admin conference room	ASL1	P	19-SEP-2018
CO2 5.0kg Ext SEU	10844926	#B25 ELECTRICAL SHOP MEAL ROOM	ASL2	P	21-APR-2020
CO2 5.0kg Ext SEU	11598570	#A14 STORE ROLLER DOOR	ASL1	P	20-SEP-2018
CO2 5.0kg Ext SEU	12523257	#A38 INSIDE LAB	ASL2	P	20-OCT-2020
CO2 5.0kg Ext SEU	11598860	primary crusher compressor roo	ASL2	P	23-OCT-2016
CO2 5.0kg Ext SEU	12037266	#A71 SOUTH HALL	ASL1	P	19-DEC-2018
CO2 5.0kg Ext SEU	12037275	#A68 ADMIN BOWLING CLUB KITCHN	ASL1	P	19-DEC-2018
CO2 5.0kg Ext WD	12545598	#A48 INSIDE SHOWER BLOCK replaced	ASL5	P	19-AUG-2021
CO2 5.0kg Ext SEU	12492287	#A26 OUTSIDE LAB FRONT	ASL1	P	19-OCT-2020
CO2 5.0kg Ext SEU	12037268	#A32 INSIDE LAB ENTRANCE	ASL1	P	20-SEP-2018
CO2 5.0kg Ext SEU	11719974	#B21 TERTIARY CRUSHER S/ROOM Pressure Test Required	ASL2	P	21-AUG-2021
CO2 5.0kg Ext SEU	11885838	#B20 TERTIARY CRUSHER S/ROOM	ASL2	P	21-MAY-2019
CO2 5.0kg Ext WD	11724032	#B19 TERTIARY SCREEN S/ROOM Pressure Test Required	ASL1	F	22-OCT-2016
Fire Blanket 1.2x1.8 OTCL	10778649	#B27 WEIGHBRIDGE SWITCH ROOM	ASL1	P	
Fire Blanket 1.2x1.8 FM	10778691	#D56 CRUSHER SWITCH ROOM	ASL1	P	
Fire Blanket 1.2x1.8 OTCL	10778732	#D28 SECONDARY CRUSHER S/ROOM	ASL1	P	
Fire Blanket 1.2x1.8 FM	10778736	#D75 CRUSHER CENTER SWITCHROOM	ASL1	P	
Fire Blanket 1.2x1.8 OTCL	10778800	#C27HYD'N PLANT SWITCHROOM	ASL1	P	
Fire Blanket 1.2x1.8 FM	10778801	#C42 HYD'N PLANT SWITCHROOM	ASL1	P	
Fire Blanket 1.2x1.8 FM	10778823	#C89 KILN WESTERN SWITCHROOM	ASL1	P	
Fire Blanket 1.2x1.8 OTCL	10778834	PRECIPITATOR SWITCHROOM	ASL1	P	
Fire Blanket 1.2x1.8 WD	10436498	#C91 PRECIPITATOR SWITCHROOM	ASL1	P	
Fire Blanket 1.2x1.8 OTCL	11908238	CONTROL ROOM LUNCH ROOM	ASL1	P	
Fire Blanket 1.2x1.8 OTCL	10778843	#C94 KILN CONTROL ROOM	ASL1	P	
Fire Blanket 1.2x1.8 FM	10778764	#D79 SURGE BIN SWITCHROOM	ASL1	P	
Fire Blanket 1.2x1.8 OTCL	10778741	#D76 MEAL RM NEAR CONTROL ROOM	ASL1	P	
Fire Blanket 1.2x1.8 OTCL	10778638	#B14 TERTIARY CRUSHER S/ROOM	ASL1	P	
Dry Chem ABE 1.0kg Ext WD	12122365	Toyota forklift bulkbag area	ASL1	P	21-MAY-2019
Dry Chem ABE 1.0kg Ext WD	12037258	#D77 MACHINE WORKSHOP FORKLIFT Condemned	ASL2	F	23-MAY-2018
Dry Chem ABE 1.0kg Ext OTCL	12217061	#E17 HAUL TRUCK 15	ASL1	F	23-DEC-2019

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Dry Chem ABE 1.0kg Ext WD	11719997	Condemned gauge damage fettlers	ASL2	F	23-NOV-2016
Dry Chem ABE 1.0kg Ext WD	12437798	Unable to Access	ASL2	P	21-JUL-2018
Dry Chem ABE 1.0kg Ext WD	12415734	#C71 LIME LOADER KOMATSU WA120	ASL5	P	21-JUL-2021
Dry Chem ABE 1.0kg Ext WD	12037269	#C77 TOYOTA FORKLIFT	ASL1	P	20-JUN-2018
CO2 2.0kg Ext WD	12577088	New Install -NO SERVICE CHARGE Pressure Test Required repla	LVL5	P	20-FEB-2021
CO2 2.0kg Ext SEU	12558185	spray wagon bx2230RIDE MOWER	ASL2	P	19-JAN-2021
CO2 2.0kg Ext SEU	12037199	#D15 JAW CRUSHER CONTROL ROOM	ASL1	P	20-APR-2018
CO2 2.0kg Ext WD	11723788	Pressure Test Required	ASL2	P	20-OCT-2017
CO2 2.0kg Ext SEU	11889190	A22 Office	ASL2	P	20-JAN-2017
CO2 2.0kg Ext WD	12577021	#C51 CONTROL ROOM LUNCH ROOM	ASL5	P	20-APR-2021
CO2 2.0kg Ext WD	11889192	#C49 KILN CONTROL ROOM	ASL2	P	20-DEC-2018
CO2 2.0kg Ext WD	12558175	SPARES white shed behind store	ASL2	P	21-JUL-2017
Dry Chem ABE 4.5kg Ext WD	12037175	#A52 INSIDE MAIN OFFICE KITCHN	ASL1	P	20-APR-2020
Dry Chem ABE 4.5kg Ext SEU	11719987	older stock, adjust price pro rata	ASL2	F	20-FEB-2018
Dry Chem ABE 4.5kg Ext SEU	10844905	#A34 INSIDE LAB	ASL2	P	20-APR-2020
Dry Chem ABE 4.5kg Ext SEU	11885608	#A33 INSIDE LAB	ASL1	P	23-APR-2020
Dry Chem ABE 4.5kg Ext SEU	12496793	#A2 ELECTRICFAL WORKSHOPS	ASL1	P	20-DEC-2018
Dry Chem ABE 4.5kg Ext SEU	10844928	CONVEYORS MID STATION	ASL2	P	21-JUL-2017
Dry Chem ABE 4.5kg Ext SEU	12037296	#D43 MACHINE SHOP OFFICE	ASL2	P	20-APR-2020
Dry Chem ABE 4.5kg Ext SEU	12437779	LOADER TRUCK L0-09	ASL2	P	20-APR-2020
Dry Chem ABE 4.5kg Ext SEU	12492306	condemned	ASL1	P	20-DEC-2018
Dry Chem ABE 4.5kg Ext SEU	12415180	entry workshop	ASL1	P	23-APR-2021
Dry Chem ABE 4.5kg Ext SEU	10844899	3B24 ELECTRICAL SHOP	ASL1	P	20-JAN-2020
Dry Chem ABE 4.5kg Ext WD	10844927	lindt tyre forklift	ASL1	P	20-OCT-2020
Dry Chem BE 2.0kg Ext WD	12437800	#E13 CAT777 TRUCK 13	ASL2	P	19-AUG-2018
Air Foam 9.1Lt Ext WD	12561981	#A35 INSIDE LAB	ASL2	P	22-APR-2020
Air Foam 9.1Lt Ext SEU	11723789	#A39 INSIDE LAB	ASL1	P	20-MAY-2019
Air Foam 9.1Lt Ext WD	12415701	#A23 INSIDE MESS ROOM	ASL1	P	19-APR-2021
Air Foam 9.1Lt Ext SEU	11885555	#B23 ELECTRICAL SHOP	ASL5	P	23-MAY-2017
Air Foam 9.1Lt Ext SEU	11885556	loader LD09 cabin	ASL1	P	20-JUL-2021
Air Foam 9.1Lt Ext SEU	11723906	#B43 FETTLERS SHED	ASL1	P	
Air Foam 9.1Lt Ext SEU	11885557	#D69 INSIDE CRUSHER ROOM	ASL1	P	
Dry Chem BE 9.0kg Ext SEU	12496309	#D50 OUTSIDE MENS TOILET	ASL1	P	
Dry Chem BE 9.0kg Ext SEU	11592886	SWAPPED TO,POWDER	ASL1	P	
Fire Blanket OTCL	11724031	swapped	ASL1	P	
Fire Hose Reel 36m FM	10778727	ADJ MENS TOILET	ASL1	P	
CO2 3.5kg Ext WD	12415175	#D48 OUTSIDE WOMENS TOILET	ASL1	P	
CO2 3.5kg Ext SEU	10844916	#D74 FUEL STATION	ASL1	P	
CO2 3.5kg Ext SEU	12553516	#D52 INSIDE SERVICE BAY	ASL2	P	
CO2 3.5kg Ext FL	10844651	#D73 FUEL STATION	ASL2	P	
CO2 3.5kg Ext SEU	11723901	#D72 FUEL STATION	ASL1	P	
CO2 3.5kg Ext SEU	12037250	SOUTH HALL	ASL1	P	
CO2 3.5kg Ext WD	11908454	#D39 MACHINE SHOP WORK AREA	ASL1	P	
CO2 3.5kg Ext WD	12415183	#D24 SECONDARY CRUSHER S/ROOM	ASL1	P	20-AUG-2021
		replaced	ASL2	P	
		#D25 SECONDARY CRUSHER S/ROOM	ASL1	P	20-APR-2020
		#C5 HYDRATION PLANT CRIB ROOM	ASL1	P	21-APR-2021
		KBQU2011-217	ASL1	P	
		lime switch room	ASL1	P	20-DEC-2019
		#C79 KILN ROAD WEIGHBRIDGE	ASL2	P	21-FEB-2018
		cabinet opposite kiln pier2	ASL1	P	21-FEB-2019
		#A49 OUTSIDE MAIN OFFICE	ASL2	P	19-FEB-2018
		#A50 INSIDE MAIN OFFICE	ASL1	P	19-AUG-2021

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CO2 3.5kg Ext SEU	12538351	#A21 INSIDE CONFERENCE ROOM	ASL2	P	19-APR-2021
Dry Chem ABE 9.0kg Ext WD	12319235	cat 777 WATERCART	ASL1	P	20-OCT-2017
Dry Chem ABE 9.0kg Ext SEU	12437718	#B2 GROUND LEVEL SCREEN BLDG	ASL2	P	21-APR-2021
Dry Chem ABE 9.0kg Ext WD	12037274	#A69 ADMIN BOWLING CLUB	ASL1	P	19-JUN-2018
Dry Chem ABE 9.0kg Ext FM	10844929	#A63 OS GEOLOGIST OFFICE FRONT	ASL2	P	19-AUG-2019
Dry Chem ABE 9.0kg Ext SEU	10844930	#A64 OS GEOLOGIST BACK HOUSE	ASL2	P	19-APR-2020
Dry Chem ABE 9.0kg Ext SEU	12437788	WEIGHBRIDGE OFFICE	ASL2	P	21-APR-2021
Dry Chem ABE 9.0kg Ext WD	11719965	#A47 INSIDE SHOWER BLOCK	ASL2	P	19-SEP-2017
Dry Chem ABE 9.0kg Ext SEU	12037267	#A46 OUTSIDE SHOWER BLOCK signage added	ASL1	P	19-JUN-2018
Dry Chem ABE 9.0kg Ext SEU	11724214	#A44 OUTSIDE LAB bag added	ASL2	P	19-JAN-2017
Dry Chem ABE 9.0kg Ext WD	12415182	#A31 OUTSIDE LAB FRONT 10/16 bag added	ASL1	P	20-JUL-2021
Dry Chem ABE 9.0kg Ext SEU	11908455	CONVEYOR #7 HEAD DRUM	ASL1	P	22-FEB-2018
Dry Chem ABE 9.0kg Ext SEU	12496295	HYDRATION PLANT	ASL2	P	21-MAR-2020
Dry Chem ABE 9.0kg Ext SEU	10844898	#A41 INSIDE LAB	ASL2	P	20-AUG-2019
Dry Chem ABE 9.0kg Ext GM	12514362	#A42 INSIDE LAB	ASL1	P	20-MAR-2020
Dry Chem ABE 9.0kg Ext WD	11889197	PRECIP STAIRS	ASL2	P	21-OCT-2017
Dry Chem ABE 9.0kg Ext WD	11885839	#B11 2ND LVL TERTIARY CRUSHER	ASL2	P	21-JAN-2019
Dry Chem ABE 9.0kg Ext SEU	11719971	#B12 TOP LVL TERTIARY CRUSHER	ASL2	P	21-JUL-2017
Dry Chem ABE 9.0kg Ext SEU	11719972	#B13 TOP LVL TERTIARY CRUSHER	ASL2	P	21-APR-2017
Dry Chem ABE 9.0kg Ext SEU	11723897	#C4 QUICK LIME SCREEN	ASL2	P	21-FEB-2018
Dry Chem ABE 9.0kg Ext SEU	11719973	#B15 1ST LEVEL TERTIARY SCREEN	ASL2	P	21-FEB-2017
Dry Chem ABE 9.0kg Ext SEU	12525094	#B28 BOTTOM OF CONVEYOR 34	ASL1	P	21-OCT-2020
Dry Chem ABE 9.0kg Ext WD	10844813	truck bx21hu	ASL2	P	20-FEB-2020
Dry Chem ABE 9.0kg Ext WD	10844652	above silo BN_34	ASL1	P	21-DEC-2019
Dry Chem ABE 4.5kg Ext SEU	11720984	spares white shed behind store	ASL1	P	20-JUL-2017
Dry Chem ABE 9.0kg Ext WD	12496780	sand plant screen ground	ASL2	P	23-APR-2020
Dry Chem ABE 9.0kg Ext WD	10844904	sand plant screen lvl 1	ASL2	P	23-APR-2020
Dry Chem ABE 9.0kg Ext WD	10844903	sand plant screen lvl2	ASL2	P	23-APR-2020
Dry Chem ABE 9.0kg Ext WD	10844902	sand plant screen top	ASL2	P	23-APR-2020
Dry Chem ABE 9.0kg Ext WD	12037300	sand crusher levels 1	ASL1	P	23-FEB-2019
Dry Chem ABE 9.0kg Ext WD	12037299	sand crusher ground	ASL1	P	23-FEB-2019
Dry Chem ABE 9.0kg Ext WD	12037298	sand crusher top roof	ASL1	P	23-FEB-2019
Dry Chem ABE 9.0kg Ext WD	12496781	air classifier ground	ASL2	P	23-APR-2020
Dry Chem ABE 9.0kg Ext WD	10844900	sand plant truck loading	ASL2	P	23-APR-2020
Dry Chem ABE 9.0kg Ext WD	10844901	sand plant truck loading	ASL2	P	23-APR-2020
Dry Chem ABE 9.0kg Ext WD	12496291	air classifier top co58	ASL2	P	23-APR-2020
Dry Chem ABE 9.0kg Ext WD	10844653	head co 50 top silo	ASL1	P	22-JUN-2019
CO2 5.0kg Ext WD	10844656	lime plant high voltage switc	ASL1	P	21-DEC-2019
Dry Chem ABE 1.0kg Ext WD	12472608	kubota cart	ASL1	P	23-APR-2020
Dry Chem ABE 4.5kg Ext FL	11889306	truck bu.79.ae	ASL1	P	23-JAN-2018
Dry Chem ABE 4.5kg Ext FL	11720959	light tower Unable to Locate	ASL1	F	23-OCT-2016
CO2 5.0kg Ext NFS	11723907	sand plant switch room	ASL1	P	23-FEB-2018
CO2 5.0kg Ext NFS	11723908	sand plants switch room	ASL1	P	23-FEB-2018
Dry Chem ABE 4.5kg Ext SEU	12037272	work shop store	ASL1	P	20-JUN-2018
Dry Chem ABE 1.0kg Ext SEU	12472241	ride on mower	ASL1	P	20-OCT-2019
Dry Chem ABE 4.5kg Ext WD	11720985	cabinet opposite kiln pier 2	ASL2	P	21-MAY-2018
Dry Chem ABE 1.0kg Ext WD	12472394	lab buggy	ASL1	P	19-OCT-2020
Dry Chem ABE 9.0kg Ext WD	11885609	TRUCK 5637	ASL2	P	20-FEB-2019
Dry Chem ABE 1.0kg Ext FL	10844915	ute bw29pg	ASL2	P	23-APR-2020
Dry Chem ABE 9.0kg Ext WD	12415176	Workshop D53 replaced	ASL1	P	20-JUL-2021

Docket No: 2006244 Invoice No.: 8563160 Wormald
Service Due: 30-SEP-2021 Site Number: BORA197Q PO BOX 1415
WOLLONGONG NSW 2500

Equipment Description	B/Code No	Location , Area & Notes	Service Level	P/F	DOM Last PT
Hose Reel FFE	10778666	store	ASL2	P	0.63 L/s
Dry Chem ABE 4.5kg Ext WD	12437802	light L867	ASL2	F	23-APR-2021
		Unable to Locate			
Dry Chem ABE 4.5kg Ext WD	12037246	light L868 we103	ASL2	F	23-FEB-2019
		Unable to Locate			
Dry Chem ABE 2.0kg Ext WD	11592535	light tower	ASL5	F	22-MAY-2016
		Pressure Test Required			
Dry Chem ABE 1.0kg Ext WD	12037297	grader	ASL1	P	20-DEC-2018
Dry Chem ABE 9.0kg Ext WD	12415177	loader LO13	ASL5	P	20-JUL-2021
		bag added			
Dry Chem ABE 1.0kg Ext CB	11908191	loader 13 in cabin	ASL1	P	20-FEB-2017
Dry Chem ABE 2.0kg Ext WD	12437801	haul truck 19 cabin	ASL1	P	20-JAN-2017
Dry Chem ABE 9.0kg Ext FR	12496308	haul truck 19	ASL2	P	20-APR-2020
Dry Chem ABE 4.5kg Ext WD	11720968	conveyor 34 head drum	ASL1	P	22-OCT-2017
Dry Chem ABE 1.0kg Ext WD	12437783	bobcat	ASL1	P	23-AUG-2017
Dry Chem ABE 1.0kg Ext WD	10844870	Loader 10	ASL1	P	23-APR-2020
Dry Chem ABE 1.0kg Ext WD	11719993	red light tower	ASL1	F	23-OCT-2016
		Unable to Locate			
CO2 5.0kg Ext WD	11720986	Control office C50	ASL1	P	20-OCT-2017
Dry Chem ABE 4.5kg Ext WD	11889303	sweeper shed	ASL1	P	20-JAN-2018
Dry Chem ABE 4.5kg Ext WD	11889307	R.H.T GROUND LEVEL	ASL1	P	21-JAN-2018
CO2 5.0kg Ext WD	11889199	vac hose storage container. ou	ASL1	P	21-AUG-2017
Fire Hose Reel 36m WD	11724033	kiln firing floor	ASL1	F	
		Non Compliant with AS leaking heavily from the hub			
Dry Chem ABE 4.5kg Ext WD	12437716	haul truck 16	ASL2	P	23-JUL-2017
CO2 3.5kg Ext WD	12553627	spares white shed behind store	ASL2	P	20-OCT-2020
Dry Chem ABE 1.0kg Ext WD	11600009	watercart cab	ASL2	P	21-DEC-2018
Fire Hose Reel 36m FG	10778695	Maintainance Shed O/S Toilets	ASL2	P	
CO2 5.0kg Ext WD	12037255	kiln firing floor cabinet	ASL1	P	21-SEP-2018
Dry Chem ABE 9.0kg Ext WD	12037254	kiln cabinet#1 grd lvl.	ASL1	P	21-FEB-2019
Dry Chem ABE 9.0kg Ext WD	12037253	kiln cabinet #1 grd lvl.	ASL1	P	21-FEB-2019
CO2 5.0kg Ext WD	12037257	kiln cabinet #2 grd lvl.	ASL1	P	21-FEB-2019
Dry Chem ABE 9.0kg Ext WD	12037252	kiln cabinet #2 grd lvl.	ASL1	P	21-FEB-2019
Dry Chem ABE 9.0kg Ext WD	10844655	cardox room	ASL1	P	20-DEC-2019
Dry Chem ABE 4.5kg Ext WD	12037244	spares white shed behind store	ASL1	P	20-APR-2018
Dry Chem ABE 9.0kg Ext WD	12037247	water truck.- green	ASL1	P	20-FEB-2019
Dry Chem ABE 1.0kg Ext WD	12217058	water truck cab- green.	ASL1	P	20-APR-2019
Dry Chem ABE 1.0kg Ext WD	12578542	stockroom forklift Hyundai.	ASL1	P	20-APR-2021
CO2 5.0kg Ext EX	12037157	rail weighbridge	ASL1	P	22-FEB-2019
CO2 5.0kg Ext EX	12037158	spares white shed behind store	ASL1	P	20-SEP-2018
CO2 5.0kg Ext EX	12037150	spares white shed behind store	ASL1	P	20-SEP-2018
Dry Chem ABE 9.0kg Ext WD	12415173	south Hall	ASL1	P	19-JUL-2021
		replaced			
Dry Chem ABE 1.0kg Ext WD	10844658	Loader 8	ASL1	P	20-DEC-2019
Dry Chem ABE 9.0kg Ext WD	12227821	Loader 10	ASL1	P	23-AUG-2018
Dry Chem ABE 1.0kg Ext WD	12415748	Haul truck 16 cab	ASL1	P	23-MAY-2021
		Pressure Test Required			
Dry Chem ABE 9.0kg Ext WD	12437799	dump truck TR23	ASL1	P	23-OCT-2018
Dry Chem ABE 9.0kg Ext WD	10844630	dump truck TR23	ASL1	P	23-OCT-2018
Dry Chem ABE 1.0kg Ext WD	12578815	dump truck cab TR23	ASL1	P	23-FEB-2021
		Pressure Test Required			
Dry Chem ABE 9.0kg Ext WD	10844632	dump truck TR22	ASL1	P	23-OCT-2018
Dry Chem ABE 1.0kg Ext WD	11720957	dump truck cab TR22	ASL1	P	23-JAN-2017
Dry Chem ABE 2.5kg Ext WD	12486249	LO-08	ASL1	P	20-SEP-2020
Dry Chem ABE 9.0kg Ext WD	10844633	digger EX-06	ASL1	P	23-OCT-2018

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 WOLLONGONG NSW 2500

Equipment Description	B/Code No	Location , Area & Notes	Service Level	P/F	DOM Last PT
Dry Chem ABE 1.0kg Ext WD	10844634	digger EX-06	ASL1	P	23-OCT-2018
Dry Chem ABE 9.0kg Ext WD	10844635	digger EX-06	ASL1	P	23-OCT-2018
Fire Blanket WD	12437807	oil store maintenance	ASL1	P	
Dry Chem ABE 9.0kg Ext WD	10844668	ute cj80ww	ASL1	P	20-OCT-2020
Dry Chem ABE 9.0kg Ext WD	10844667	truck bx21hu	ASL1	P	20-OCT-2018
Dry Chem ABE 9.0kg Ext WD	10844664	Loader TR15	ASL1	P	23-DEC-2019
Dry Chem ABE 9.0kg Ext WD	10844665	franna	ASL1	P	20-DEC-2019
Fire Blanket FL	11723902	Kiln Firing Floor	ASL2	P	
Fire Hose Reel 36m WD	10844817	above silo bn34	ASL2	F	
Dry Chem ABE 2.5kg Ext WD	10844818	Flow Rate Non Compliant	ASL2	P	20-JAN-2019
Dry Chem ABE 9.0kg Ext FL	10844868	spares white shed behind store	ASL2	P	20-APR-2018
Dry Chem ABE 4.5kg Ext FL	10844869	powerscreen conveyor belt	ASL2	P	20-APR-2018
Dry Chem ABE 4.5kg Ext WD	11719981	powerscreen conveyor belt	ASL2	P	23-APR-2017
Dry Chem ABE 2.5kg Ext WD	10844909	near men's toilet workshop	ASL2	P	20-FEB-2019
Dry Chem ABE 9.0kg Ext WD	12496271	Loader LO11 Cat	ASL2	P	20-APR-2020
Dry Chem ABE 2.0kg Ext WD	10844910	Loader LO11 Cat	ASL2	F	23-APR-2020
Dry Chem ABE 2.0kg Ext WD	10844911	atlas Generator	ASL2	P	23-APR-2020
Dry Chem ABE 4.5kg Ext WD	10844912	Unable to Access	ASL2	P	20-OCT-2019
Dry Chem ABE 4.5kg Ext WD	10844913	de-watering pump	ASL2	P	20-APR-2020
Dry Chem ABE 2.0kg Ext WD	10844914	4B Conveyor	ASL2	P	20-OCT-2018
Dry Chem ABE 9.0kg Ext WD	12496546	#07 Radial Stacker	ASL2	P	20-APR-2020
Dry Chem ABE 4.5kg Ext WD	10844931	Booster Pump	ASL2	P	20-APR-2020
Dry Chem ABE 9.0kg Ext WD	12513982	Outside Primary Crusher S/R	ASL2	P	22-APR-2021
Dry Chem ABE 9.0kg Ext WD	12415742	small green hut nr production	ASL1	P	21-JUL-2021
Dry Chem ABE 4.5kg Ext WD	12437781	top of bin 8 20mm limestone lu	ASL1	P	21-APR-2021
Dry Chem ABE 9.0kg Ext WD	10844649	replaced	ASL1	P	21-DEC-2019
Dry Chem ABE 9.0kg Ext WD	12415741	top level bin 26 Quicklime fin	ASL1	P	21-JUL-2021
Fire Blanket 1.2x1.8 WD	10778806	bulkbag ground area	ASL1	P	
Dry Chem ABE 4.5kg Ext WD	12037243	replaced	ASL1	P	21-APR-2018
Fire Blanket 1.2x1.8 WD	10778816	limestone maintenance shed	ASL1	P	
Dry Chem ABE 4.5kg Ext WD	12319228	limestone maintenance shed	ASL1	P	23-SEP-2020
Dry Chem ABE 4.5kg Ext WD	12486251	kiln switchroom	ASL1	F	23-SEP-2020
Dry Chem ABE 4.5kg Ext WD	12486301	komatsu dozer	ASL1	P	20-SEP-2020
Dry Chem ABE 4.5kg Ext WD	12486302	hme spares	ASL1	P	23-SEP-2020
Dry Chem ABE 4.5kg Ext WD	12486248	Unable to Locate	ASL1	P	23-SEP-2020
Dry Chem ABE 1.0kg Ext WD	12319239	hme spares	ASL1	F	20-NOV-2016
Dry Chem ABE 9.0kg Ext WD	12319232	taken from spares	ASL1	P	23-MAY-2019
Dry Chem ABE 9.0kg Ext WD	12319238	haul truck 16	ASL1	F	23-JUL-2019
Dry Chem ABE 1.0kg Ext WD	12319233	hme spares	ASL1	F	23-JAN-2020
Dry Chem ABE 1.0kg Ext WD	10844663	hire rockbreaker excavator	ASL1	P	23-APR-2021
Dry Chem ABE 4.5kg Ext WD	12319237	Unable to Access	ASL1	P	21-MAY-2017
Dry Chem ABE 2.5kg Ext WD	11723898	hire rockbreaker excavator	ASL1	P	21-AUG-2017
CO2 5.0kg Ext WD	11720987	spare limestone maintenance sh	ASL1	P	23-OCT-2017
Dry Chem ABE 1.0kg Ext WD	11596030	kiln water pump trailer	ASL5	F	20-AUG-2016
Dry Chem ABE 4.5kg Ext WD	12037248	jcb small dump truck nr kiln c	ASL1	P	22-FEB-2019
Dry Chem ABE 9.0kg Ext WD	12415747	meropa syntheso waste oil cont	ASL1	P	23-JUL-2021
		TEST PLAN DATA CLEANSE			
		lpg bottles os workshop lime p			
		spares white shed behind store			

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Docket No: 2006244 Invoice No.: 8563160 Wormald
 Service Due: 30-SEP-2021 Site Number: BORA197Q PO BOX 1415
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Equipment Description	B/Code No	Location , Area & Notes	Service Level	P/F	DOM Last PT
Dry Chem ABE 9.0kg Ext WD	12415746	New Install -NO SERVICE CHARGE Pressure Test Required repla spares white shed behind store	ASL1	P	23-JUL-2021
Dry Chem ABE 9.0kg Ext WD	12415178	New Install -NO SERVICE CHARGE Pressure Test Required repla spares white shed behind store	ASL1	P	20-MAR-2019
Dry Chem ABE 9.0kg Ext WD	12514370	level 1 mezz nr bin 31 bag hyd	ASL2	P	21-APR-2021
Dry Chem ABE 9.0kg Ext WD	12415174	electrical workshop rear room	ASL1	P	20-JUL-2021
Dry Chem ABE 2.0kg Ext WD	11889434	cat tractor 432d	ASL2	P	19-AUG-2017
CO2 3.5kg Ext WD	12538348	#a13 inside office store	ASL2	P	20-APR-2021
Dry Chem ABE 4.5kg Ext WD	12437713	spares white shed behind store	ASL2	P	20-JAN-2021
Dry Chem ABE 2.5kg Ext WD	12437714	Kubota buggy rtv x900 Condemned	ASL2	F	22-APR-2021
Dry Chem ABE 4.5kg Ext WD	12437715	#b17 in tertiary compressor ro	ASL2	P	22-JUN-2018
Dry Chem ABE 1.0kg Ext WD	12472581	Coates jbg 260 mrt lift	ASL2	P	23-OCT-2020
CO2 5.0kg Ext WD	12363542	screen building ground level	ASL2	P	21-APR-2020
Dry Chem ABE 2.0kg Ext WD	12437782	spare limestone maintenance sh	ASL2	P	23-FEB-2021
Dry Chem ABE 9.0kg Ext WD	12509093	kiln firing floor cabinet	ASL2	P	21-OCT-2020
Dry Chem ABE 2.0kg Ext WD	10844660	canter truck XN.02gb Unable to Locate	ASL2	P	23-APR-2020
Dry Chem ABE 9.0kg Ext WD	11598582	machine shop locker room	ASL2	P	21-APR-2021
Fire Blanket 1.2x1.8 WD	11354066	machine shop os harness cage	ASL2	P	
Dry Chem ABE 4.5kg Ext WD	12525362	hme meeting room maintenance	ASL2	P	20-OCT-2020
Dry Chem ABE 4.5kg Ext WD	12437796	#d30 prim crushed compressor r	ASL2	P	21-APR-2017
Dry Chem ABE 9.0kg Ext WD	10844659	cat grader	ASL2	P	20-APR-2020
Dry Chem ABE 4.5kg Ext WD	11885833	fettlers shed Unable to Access	ASL2	F	23-AUG-2018
Dry Chem ABE 4.5kg Ext WD	12437797	#d16 outside locker room	ASL2	P	21-OCT-2020
Dry Chem ABE 1.0kg Ext WD	12472577	Ute cj.80.ww	ASL2	P	20-OCT-2019
Dry Chem ABE 4.5kg Ext WD	11592888	top of bin 19 nr limestone loa	ASL2	P	20-APR-2017
Dry Chem ABE 2.0kg Ext WD	12564435	spares white shed behind store	ASL2	P	23-APR-2021
Dry Chem ABE 9.0kg Ext WD	11598560	garage opposite the hub Equipment AB9.0 added replaced old deleted u	ASL1	P	21-JUL-2021
Dry Chem ABE 1.0kg Ext WD	12415205	truck 21 tnm00465	ASL5	P	20-JUL-2021
Dry Chem ABE 2.0kg Ext WD	12415184	Equipment AB1.0 added unit 4	ASL1	P	20-JAN-2021
Dry Chem ABE 1.0kg Ext FL	12415181	Equipment AB2.0 added bobcat s220	ASL1	P	20-JUL-2021
Dry Chem ABE 1.0kg Ext WD	12415728	Equipment AB1.0 added new entry kiln bobcat	ASL1	P	21-AUG-2017
CO2 5.0kg Ext WD	12554568	Equipment AB1.0 added #B19 TERTIARY SCREEN S/ROOM	ASL1	P	22-AUG-2021
Dry Chem ABE 2.5kg Ext WD	12415745	Equipment CO5.0 added Kubota buggy rtv x900	ASL1	P	22-JUN-2021
Dry Chem ABE 4.5kg Ext WD	12565273	Equipment AB2.5 added spare work store	ASL1	P	23-MAR-2021

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Docket No:	2006244	Invoice No.:	8563160	Wormald
Service Due:	30-SEP-2021	Site Number:	BORA197Q	PO BOX 1415
				WOLLONGONG NSW 2500

Technician:	John McAlpine	Engineer Code:	22J
Customer Ref:	Rodney Byrne	DRA Number:	800920
Date of Service:	26-SEP-2021		

Customer Signature

Authorisation Unavailable

Signatory:

Position in Company

Service Level legend

Service Level Routines covered under AS1851-2005 & 2012

ASL1 (AS1851-2005/2012)= six monthly

ASL2 (AS1851-2005/2012)= yearly

ASL5 (AS1851-2005/2012)= 5 yearly

LVOM = Hydrant Monthly Inspection

LVOT = Hydrant 6 Monthly Visual Inspection

LVOY = Hydrant Annual Test For Water

Service Level Routines covered under AS1851-1995

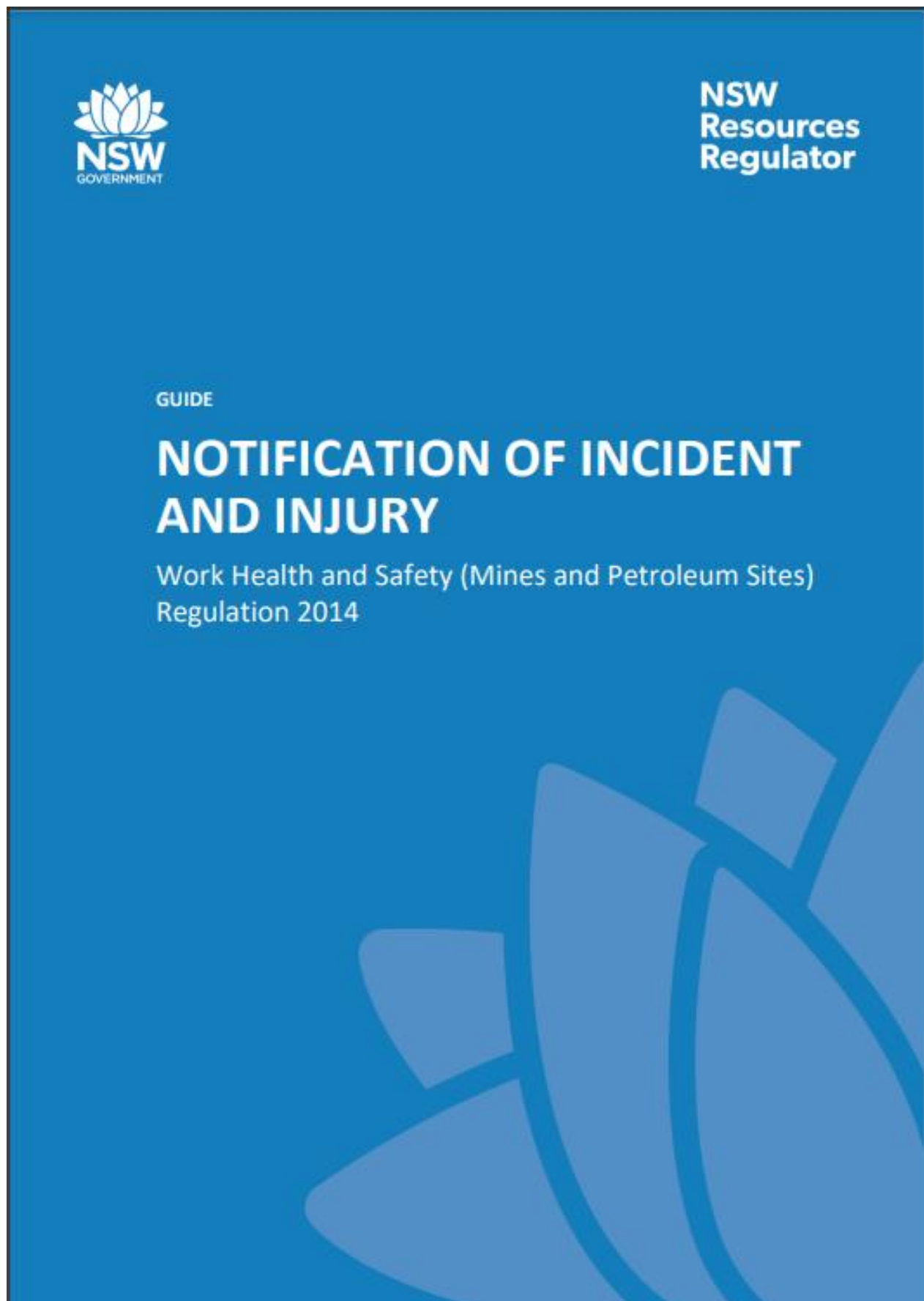
LVL1 (AS1851-1995) = six monthly

LVL2 (AS1851-1995) = yearly

LVL3 (AS1851-1995) = 3 yearly

LVL4 (AS1851-1995) = 6 yearly

LVL5 (AS1851-1995) = recharge after use.

Attachment 6: Notification of Incidents

GUIDE

Notification of incident and injury

**NSW
Resources
Regulator**

Document control

Published by NSW Resources Regulator

Title: Notification of Incident and Injury

First published: January 2016

Authorised by: Chief Inspector

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AMENDMENT SCHEDULE

Date	Version	Amendment
January 2016	1	First published.
March 2016	2	Revised to reflect amendments to the Work Health and Safety (Mines and Petroleum Sites) Act and Regulation 2014.
July 2016	3	Revised to include new phone number for notification of incidents.
April 2018	4	Added four new events to the definition of high potential incidents, and three new events to the list of dangerous incidents, under the Work Health and Safety (Mines and Petroleum Sites) Regulation 2014. Updated department's name and contact details.
January 2020	5	Revised to reflect amendments to the Work Health and Safety (Mines and Petroleum Sites) Regulation 2014. New template.
October 2020	6	Revised to reflect new respirable crystalline silica workplace exposure standard of 0.05mg/m ³ which took effect in NSW from 1 July 2020 and new respirable coal dust workplace exposure standard of 1.5mg/m ³ which will take effect in NSW from 1 February 2021.

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Regulator**

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1. Introduction

This guide will help you decide whether the NSW Resources Regulator needs to be informed of a work-related death, injury, illness, dangerous incident or high-potential incident under the *Work Health and Safety (Mines and Petroleum Sites) Act 2013* and *Work Health and Safety (Mines and Petroleum Sites) Regulation 2014*.

Notifying the Regulator of incidents can help identify causes of incidents and prevent similar incidents at that workplace and other workplaces.

There are two types of incidents that require information to be given to the Regulator - notifiable incidents and 'other' incidents. Requirements to notify the Regulator may relate to any person - whether an employee, contractor or member of the public. Failure to notify is an offence and penalties apply.

NOTIFIABLE INCIDENT	'OTHER' INCIDENT THAT MUST BE NOTIFIED
<p>A notifiable incident is:</p> <ul style="list-style-type: none"> the death of a person a 'serious injury or illness', or a 'dangerous incident' prescribed by the regulations. <p>Notification must be given to the Regulator if a notifiable incident arises out of the conduct of a business or undertaking at the mine or petroleum site.</p>	<p>An 'other' incident is an incident arising out of operations at the mine or petroleum site that:</p> <ul style="list-style-type: none"> results in injury or illness requiring 'medical treatment', or is a high potential incident.
<p>A notifiable incident requires:</p> <ul style="list-style-type: none"> immediate notification by the fastest possible means preservation of the incident site. <p>If notification is by telephone, written notification must be given within 48 hours of giving the notice by telephone.</p>	<p>An 'other' incident requires:</p> <ul style="list-style-type: none"> written notification as soon as possible but within 48 hours of becoming aware that the incident resulted in injury or illness, or written notification as soon as possible - but no later than 7 days of

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becoming aware of the incident
(whichever is earlier).

There is no need to preserve the incident site in
relation to an 'other' incident.

Written notification is made using the online incident notification via the Regulator Portal. For information and access to the portal see the Regulator's website at:

www.resourcesregulator.nsw.gov.au/safety-and-health/notifications/incident-or-injury

2. Notifiable incidents

2.1. What is serious injury or illness?

Work health and safety laws define certain matters to be serious injuries or illness. The table below lists these matters together with examples. A key element for most matters is that the person affected 'requires' treatment. This means that the notification must still be made if treatment would be required but was not received by the person. For example, if:

- immediate treatment is not readily available because the incident site is rural or remote or specialist treatment is not available.
- the person refuses treatment.

Treatment includes by a paramedic, registered nurse or a doctor. Medical treatment refers specifically to treatment by a registered medical practitioner, i.e. a doctor.

2.1.1. Examples of serious injury or illness

INJURY OR ILLNESS	EXAMPLE
Immediate treatment as an in-patient in a hospital	Admission into a hospital as an in-patient for any duration, even if the stay is not overnight or longer. It does not include out-patient treatment provided by the emergency section of a hospital and immediate discharge or subsequent corrective surgery such as that required to fix a fractured nose.

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Immediate treatment for the amputation of any part of the body	Amputation of a limb such as arm or leg, body part such as hand, foot or the tip of a finger, toe, nose or ear. It does not include bruising or minor abrasion or laceration to the skin.
Immediate treatment for a serious head injury	Fractured skull, loss of consciousness, blood clot or bleeding in the brain, damage to the skull to the extent that it is likely to affect organ/face function. Head injuries resulting in temporary or permanent amnesia.
Immediate treatment for a serious eye injury	Injury that results in or is likely to result in the loss of the eye or total or partial loss of vision. Injury that involves an object penetrating the eye (for example metal fragment, wood chip). Exposure of the eye to a substance that poses a risk of serious eye damage. It does not include eye exposure to a substance that merely causes irritation.
Immediate treatment for a serious burn	A burn requiring intensive care or critical care that could require compression garment or a skin graft. It does not include a minor burn that merely requires washing the wound and applying a dressing.
Immediate treatment for the separation of skin from an underlying tissue	Separation of skin from an underlying tissue such that tendon, bone or muscles are exposed (for example, degloving or scalping).
Immediate treatment for spinal injury	Injury to the cervical, thoracic, lumbar or sacral vertebrae including the discs and spinal cord.
Immediate treatment for the loss of a bodily function	Loss of consciousness, loss of movement of a limb or loss of the sense of smell, taste, sight or hearing, or loss of function of an internal organ. It does not include mere fainting or a sprain, strain or fracture.

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Immediate treatment for serious lacerations

Serious lacerations that cause muscle, tendon, nerve or blood vessel damage or permanent impairment.

Deep or extensive cuts.

Tears or wounds to the flesh or tissues – this may include stitching to prevent loss of blood and/or other treatment to prevent loss of bodily function and/or infection.

Notification is also required for:

- an injury or illness requiring medical treatment (by a doctor) within 48 hours of exposure to a substance
- a fractured bone other than in a hand (including finger) or foot (including toe)
- the following prescribed serious illness:
 - any infection to which the carrying out of work is a significant contributing factor, including any infection that is reliably attributable to carrying out work:
 - with micro-organisms
 - that involves providing treatment or care to a person
 - that involves contact with human blood or body substances
 - that involves handling or contact with animals, animal hides, skins, wool or hair, animal carcasses or animal waste products
 - the following occupational zoonoses contracted during work involving handling or contact with animals, animal hides, skins, wool or hair, animal carcasses or animal waste products:
 - Q fever
 - Anthrax
 - Leptospirosis
 - Brucellosis
 - Hendra virus
 - Avian Influenza.

2.2. Dangerous incidents

These include certain types of incidents that are inherently dangerous and other incidents where a person is exposed to a serious risk to their health or safety emanating from an immediate or imminent exposure to the hazard.

For most hazards, such as plant or a structure collapsing, a person will need to be in the immediate vicinity to be exposed to a serious risk to their health or safety. But some hazards, such as an uncontrolled leak of a hazardous gas or a fire, can travel towards a person and expose them to a serious risk to health and safety away from the original source.

A dangerous incident can include situations where there is an immediate exposure to the hazard, but the potential harm to a person's health or safety may not materialise until sometime in the future, for example exposure to asbestos or chemicals.

The following are reportable as a dangerous incident if a person is exposed to a serious risk to their health or safety from immediate or imminent exposure to a hazard:

- an uncontrolled escape, spillage or leakage of a substance
- an uncontrolled implosion, explosion or fire
- an uncontrolled escape of gas or steam
- an uncontrolled escape of a pressurised substance
- the fall or release from a height of any plant, substance or thing
- the collapse, overturning, failure or malfunction of, or damage to, any plant that is required to be authorised
- the collapse or partial collapse of a structure
- the collapse or failure of an excavation or of any shoring supporting an excavation
- the inrush of water, mud or gas in workings at an underground excavation or tunnel
- the unintended interruption of the main system of ventilation at an underground excavation or tunnel
- the loss of control of heavy earthmoving machinery (including any failure of braking or steering)
- the unintended activation, movement, or failure to stop of vehicles or machinery

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- a collision involving a vehicle or mobile plant
- damage to, or failure of any part of, a powered winding system or a shaft or shaft equipment
- damage to any plant or structure
- a failure of ground, or of slope stability control measures
- rock falls, instability of cliffs, steep slopes or natural dams, occurrence of sinkholes, development of surface cracking or deformations or release of gas at surface, due to subsidence
- a vehicle or plant making contact with an energised source having a voltage greater than 1200 volts (not including testing equipment applied to energised equipment in accordance with the WHS Regulations)
- spontaneous combustion at a coal mine.

The following incidents are also dangerous incidents that must be notified to the Regulator, even if no-one was in the vicinity at the time of the incident:

- a fire in the underground parts of a mine, including where the fire is in the form of an oxidation that releases heat and light
- an electric shock to a person (other than a shock from an extra low voltage source)
- any initial indication that any underground part of a coal mine is subject to windblast, outbursts or spontaneous combustion
- the unintended overturning of any vehicle or plant weighing more than 1000 kilograms
- ejection of fly rock so that it falls outside an exclusion zone (the area from which people are excluded during blasting)
- any initial indication that there may be a fault in the cementing of a casing string forming part of the cement casing of a well
- a gas outburst at an underground coal mine
- a coal burst or rock burst at an underground coal mine.

2.3. Only work-related incidents are notifiable

Only incidents arising out of the conduct of a business or undertaking at the mine or petroleum site must be notified. There may be cases where an incident occurs at a workplace but does not arise out of work.

2.4. Work-related incidents that occur outside a workplace may be notifiable

Even where a death, serious illness or injury or exposure to a dangerous incident occurs outside the workplace, notification will be required where that incident arises out of the conduct of a business or undertaking at the mine or petroleum site. For example, fumes from shot-firing causing illness to a person adjacent to the mine, or a chemical spill at a mine or petroleum site that exposes residents nearby to health and safety risks.

2.5. Still unsure?

If you are still unsure about whether an incident should be notified, contact the Regulator on 1300 814 609 for guidance.

2.6. When and how to notify a notifiable incident

The Regulator must be notified of a notifiable incident immediately by the fastest possible means. This should be by telephone to the central reporting number 1300 814 609.

Further written notification is to be made using the online incident notification form via the 'Regulator Portal' on the Regulator's website at:

<https://www.resourcesregulator.nsw.gov.au/safety-and-health/notifications/incident-or-injury>.

2.7. Who is responsible for notifying?

All persons conducting a business or undertaking (PCBUs) at a mine or petroleum site, including the operator of the mine or petroleum site, have a duty to ensure that the Regulator is immediately notified of a notifiable incident arising out of the conduct of their business or undertaking at the mine or petroleum site. This does not mean that both the operator and a contractor must notify the Regulator, only that notification is made. In these circumstances, the duty holders must, so far as is reasonably practicable, consult, cooperate and coordinate and should put appropriate reporting and notification arrangements in place. For example, contractors at the mine or petroleum site may agree

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with the operator of the mine or petroleum site that the operator will notify of all 'notifiable incidents' that occur at the workplace.

If another PCBU at the mine or petroleum site notifies the Regulator of a notifiable incident, they must also ensure that the operator of the mine or petroleum site is notified as soon as is reasonably practicable after doing so.

In general, a PCBU that is a corporation is considered to be aware of a notifiable incident at the time that any of their workers in supervisory or managerial roles become aware of that incident. For example, if a worker is seriously injured and notifies their immediate supervisor, this is when the operator of the mine or petroleum site is considered to be aware of the incident. Operators and other PCBUs working at a mine or petroleum site should develop appropriate internal communication procedures to ensure compliance with their notification obligations.

When the incident occurs at a coal mine, the mine operator or other PCBUs must also ensure that an industry safety and health representative is notified and provided the same information as required by the Regulator.

2.8. Can work continue where a notifiable incident occurred?

When a notifiable incident has occurred, each person required to ensure the Regulator is notified, and any other PCBU with management and or control of the workplace is to ensure, so far as is reasonably practicable, that the site of the incident is not disturbed until an inspector arrives at the site or directs otherwise (whichever is earlier).

Requirements to preserve the incident site apply to any plant, substance, structure or thing associated with the notifiable incident. This ensures that any evidence that may help an inspector determine the cause of the incident is preserved.

However, the requirement to preserve the site does not prevent any action:

- to assist an injured person
- to remove a deceased person
- essential to make the site safe or to minimise the risk of a further notifiable incident
- associated with a police investigation
- for which an inspector or the Regulator has given permission.

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An inspector who considers that a site should remain undisturbed (for example, to facilitate investigation of the incident) may issue a non-disturbance notice. This notice must specify the period for which the notice is to apply but cannot be for more than seven days.

Penalties apply for failing to preserve a site.

2.9. Site preservation requirements apply only to the incident site

The requirement to preserve the site may not necessarily extend to the whole workplace. For example, in the case of a multiple vehicle collision, the site would include the immediate area where the incident occurred and the vehicles.

If unsure about what is required to preserve a site, ask the Regulator for guidance when notifying of the incident.

2.10. Upgrading notifications

If a notifiable incident escalates from serious illness or injury to death, the Regulator must be separately notified of the death immediately after becoming aware of the death. The Regulator must also be notified in an incident that did not originally involve injury or illness. For example, a dangerous incident escalates such that it is now notifiable on additional grounds.

2.11. Record-keeping requirements

A record of every incident notified to the Regulator must be kept with the mine or petroleum site record for at least seven years from the date the record is made. Penalties apply for failing to do so.

NOTE: A record of certain notices issued in respect of the incident, such as a non-disturbance notice, must also be kept.

2.12. What type of information must be provided?

See section 4. Information needed when notifying an incident.

3. Other incidents that must be notified

Notification is also required for other incidents as set out below.

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TYPE OF 'OTHER' INCIDENT	WHEN AND HOW
<p>An incident that results in illness or injury that requires medical treatment by a doctor, being the management or care of a patient including:</p> <ul style="list-style-type: none"> ■ the suturing of a wound ■ the treatment of fractures ■ the treatment of bruises by drainage of blood ■ the treatment of second and third-degree burns ■ but not including diagnostic procedures, observation, counselling, first aid or therapeutic measures taken solely for preventative purposes. 	<p>Notification must be made as soon as possible and no later than 48 hours of becoming aware the incident resulted in an injury or illness.</p> <p>Notification must be made by completing the online Notification of incident and injury form via the Regulator Portal.</p>
<p>A high potential incident.</p>	<p>Notification must be as soon as possible and:</p> <ul style="list-style-type: none"> ■ in the case of a high potential incident that resulted in an injury or illness, no later than 48 hours after becoming aware the incident resulted in an injury or illness, or ■ no later than 7 days after becoming aware of the incident (whichever is earlier). <p>Notification must be made by completing the online Notification of incident and injury form via the Regulator Portal.</p>

3.1. Medical treatment by a doctor

Medical treatment refers to treatment by a registered medical practitioner, such as a doctor. It does not include treatment by an allied health professional, such as a paramedic or nurse.

For the purposes of notifying other incidents or completing a work health and safety (WHS) report, the management or care of a patient by a doctor involving any of the following matters is medical treatment:

- the suturing of a wound
- the treatment of fractures
- the treatment of bruises by drainage of blood
- the treatment of second and third-degree burns.

Other management or care of a patient by a doctor may also constitute medical treatment, unless it is diagnostic procedures, observation, counselling, first aid or therapeutic measures taken solely for preventative purposes.

The first question to consider is whether the treatment involved care or management of the patient by a doctor (other than diagnostic procedures, observation, counselling or first aid). The *First Aid in the Workplace Code of Practice* (July 2015) states that: "First aid is the immediate treatment or care given to a person suffering from an injury or illness until more advanced care is provided or the person recovers". Unless a doctor provides immediate treatment or care of the patient, it is unlikely to be first aid.

A second question to consider is whether the care or treatment is solely for preventative purposes. Treatments for preventative purposes may include a tetanus injection, vaccination or other treatments to prevent an illness because a person may have been exposed to a harmful substance or agent. If the therapeutic measure was solely for preventative purposes, it is not medical treatment for the purposes of notifying other incidents or completing WHS reports.

3.2. High potential incidents

There are two groups of incidents that are high potential incidents. Firstly, there is an incident or event that would have been a dangerous incident (see above) if a person were in the vicinity at the time when the incident or event occurred and in usual circumstances a person could have been in that vicinity at that time.

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The important element in this group of incidents is that a person could have been present, and if so that the person would have been exposed to a serious risk from an immediate or imminent exposure to a hazard. For example, events that happened within an area that is fenced off from entry or events in other exclusion areas would be a high potential incident rather than dangerous incident because people would not usually be in the area.

The second group of high potential incidents is:

- the detection of 2% by volume or greater concentration of methane in the general body of the air at an underground coal mine (other than in a sealed area or goaf)
- an unplanned fall of ground, roof or sides that impedes passage, extends beyond the bolted zone or disrupts production or ventilation
- a failure of ground support where people could potentially have been
- the burial of machinery such that it cannot be recovered under its own tractive effort
- progressive pillar failure or creep
- a sudden pillar collapse
- an electric arc occurring in the hazardous zone at an underground coal mine that is directly observed, or which leaves visible evidence on an electric cable
- an injury to a person (supported by a medical certificate) that results, or is likely to result, in the person being unfit, for a continuous period of at least seven days, to perform their usual activities at work
- a misfire or unplanned explosion of a blasting agent or explosive or explosive precursor (but not in the case of a misfire at a mine or petroleum site other than a coal mine if the misfired explosive can be fired without any significant risk to a person)
- an unplanned event that causes the emergency evacuation of more than one person from the mine or petroleum site or part of the mine or petroleum site
- an unplanned event that causes fewer than two exits from an underground mine to be available for use
- any indication from monitoring data of the development of subsidence that may result in damage to any plant or structure or a failure of ground

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- the illness of a person (supported by a medical certificate) that is related to a work process and that results, or is likely to result in the person being unfit to do their usual activities at work for a continuous period of at least seven days
- the failure of the explosion-protection characteristics of an explosion-protected plant while it is in service at an underground coal mine¹
- the presence of energised electrical plant that is not explosion-protected in a hazardous zone at an underground coal mine (except where the use of the plant is permitted under clause 79 of the Regulation²)
- the detection of an atmospheric concentration of respirable dust that exceeds the level specified in clause 39(1)(a) (3 milligrams per cubic metre of air, or in the case of a coal mine, 2.5 milligrams per cubic metre of air. The new respirable coal dust workplace exposure standard of 1.5 milligrams per cubic metre of air will take effect in NSW from 1 February 2021)
- the detection of an atmospheric concentration of crystalline silica that exceeds the exposure standard specified in the *Workplace Exposure Standards for Airborne Contaminants* (the new respirable crystalline silica workplace exposure standard of 0.05 milligrams per cubic metre of air took effect in NSW from 1 July 2020)
- electrical plant that is powered by an internal battery is lost or misplaced in an underground coal mine

¹ The failure of the explosion-protection characteristics of explosion-protected plant while that plant is in service at an underground coal mine is not limited to failure while the plant is operating (i.e. turned on and running). It includes any explosion-protection characteristic failures identified during routine maintenance or overhaul, as well as those identified during use. Such failures indicate that an explosion-protected plant has been (or is likely to have previously been) operating in a non-explosion-protected condition.

² Portable electrical plant may be used in the hazardous zone of an underground coal mine if:

- the concentration of methane in the general body of the air is 0.5% by volume or less, and
- the plant is powered by internal batteries, and
- the temperature of any surface of any component or part of the plant is not greater than 150°C, or if the surface is wholly internal to the plant and the plant has a level of ingress protection sufficient to prevent coal dust coming into contact with the surface – 450°C, and
- the plant does not in normal operation produce hot surfaces or sparks that could ignite methane, and
- the mine operator has implemented control measures to manage the risk of the plant becoming an ignition source. Electrical equipment associated with hot work may be used in the hazardous zone of an underground coal mine if the mine operator has complied with the notification of high risk activities in clause 33 of the Regulation.

Insulation test instruments may be used in the hazardous zone of an underground coal mine if the instruments are used in accordance with the procedures for using those instruments developed under the electrical engineering control plan for the mine.

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- an uncontrolled fire on mobile plant that is in operation (whether operated directly, remotely or autonomously)
- a loss of control of heavy earthmoving machinery that is operated remotely or autonomously, including any failure in braking or steering
- spontaneous combustion occurring at the surface of a coal mine (including an underground coal mine).

For explosion-protected diesel engine systems, this means that the plant may have been operating in a condition which has potential to ignite an explosion of dust or gas (such as coal dust on the surface of the engine) or methane in the surrounding atmosphere. An ancillary report is required for such incidents. Examples of such failures include:

- the failure of an explosion-protected open joint which exceeds the specified dimensions for explosion protection
- the failure of a diesel engine system to shut down when required by the control sensors (e.g. loss of water in the scrubber), excessive system temperature (above 150° C), failure of engine cooling system, etc.
- a catastrophic failure of the diesel engine system which protrudes external to the engine (such as turbochargers, superchargers, piston, valves, connecting rods, etc.)
- the failure to replace any explosion-protected component (such as a cap, plug, flame trap, gland or other like component) after carrying out maintenance activities
- evidence of thermal degradation of an exhaust filter
- looseness of any explosion-protected fixed joint (gasket joint).

3.3. Only work-related incidents are notifiable

The only other incidents that must be notified are those arising out of the carrying out of mining operations at the mine or the carrying out of petroleum operations at the petroleum site. As with notifiable incidents there may be cases where, for example, an incident occurs at a mine or petroleum site but does not arise out of mining or petroleum operations at the site, such as a person having a heart attack that is unrelated to work or the workplace.

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3.4. Who is responsible for notifying?

The operator of the mine or petroleum site at which the incident occurs must tell the regulator when they become aware of the incident.

In general, an operator of the mine or petroleum site that is a corporation is considered to be aware of an incident at the time that any of their workers in supervisory or managerial roles become aware of that incident. For example, if a worker is seriously injured and notifies their immediate supervisor, this is when the operator is considered to be aware of the incident.

When the incident occurs at a coal mine, the mine operator must also notify an industry safety and health representative.

3.5. Site preservation is not required for 'other' incidents

There is no requirement to preserve the incident site in relation to an 'other' incident.

3.6. Upgrading notifications

If an 'other' incident escalates to a notifiable incident, the regulator must be separately notified of the incident immediately after becoming aware of the escalation.

3.7. Record-keeping requirements

As with notifiable incidents, a record of every incident notified to the regulator must be kept with the mine or petroleum site record for at least seven years from the date the record is made. Penalties apply for failing to do so.

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4. Information needed for all incidents

A clear description of the incident (with as much detail as possible) will help the Regulator assess whether the incident needed to be notified and if the Regulator needs to investigate or take other action.

INFORMATION	DETAIL REQUIRED
What happened? provide an overview	Provide an overview of what happened. Nominate the type of notifiable incident. For example, was it death, serious injury or illness, or dangerous incident (as defined above)?
When did it happen?	Supply the date and time of the incident.
Where did it happen?	Identify the address of the incident location. Supply details to describe the specific location of the notifiable incident to help instructions about site disturbance. For example, the section of the warehouse or the piece of equipment that the incident involved.
To whom did it happen?	Supply the injured person's name, salutation, date of birth, address, contact telephone number and occupation Include the relationship of the injured person to the entity notifying.
Additional details about the person	Add details about the injured person's roster, travel hours, experience and training.
What happened? provide a detailed description	Provide a detailed description of the notifiable incident.
How and where is the injured person being treated (if applicable)?	Include: <ul style="list-style-type: none"> a description of serious injury or illness (i.e. nature of injury)

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INFORMATION	DETAIL REQUIRED
	<ul style="list-style-type: none"> ■ initial treatment of serious injury or illness ■ where the patient has been taken for treatment
Who is the person conducting the business or undertaking (there may be more than one)?	Include: <ul style="list-style-type: none"> ■ legal and trading name ■ business address (if different from the incident address), ABN/ACN and contact details including phone number and email.
What has/is being done?	Explain the action taken, or intended to be taken, to prevent recurrence (if any).
Who is notifying?	Supply: <ul style="list-style-type: none"> ■ the notifier's name, salutation, contact phone number and position at workplace. ■ the name, phone number and position of the person to contact for further information (if different from the above).

4.1. Information needed for ancillary reports

Additional details may also be required in relation to some types of incidents, such as those involving particular types of plant. These details are referred to as ancillary reports and where required must be submitted no later than 30 days after the incident was required to be notified to the Regulator. Typically, the information needed for ancillary reports is very specific to the type of incident and type of plant, such as fires on mobile plant or failure of explosion-protected plant.

Details of when ancillary reports must be submitted are included in the online incident form.

5. Explosives Act 2003

Licence holders under the *Explosives Act 2003* also have obligations to notify the regulator of certain incidents involving explosives. See [Incidents to be reported under explosives legislation](#) for more information.

REPORT AN INCIDENT OR INJURY

NSW Resources Regulator

Notifying the NSW Resources Regulator

Serious safety incidents that occur at NSW mines, extractives or petroleum sites **must be reported** to the Resources Regulator under work health and safety legislation.



FURTHER INFORMATION
SCAN FOR MORE INFORMATION ON REPORTING AN INCIDENT OR INJURY TO THE NSW RESOURCES REGULATOR.



NSW GOVERNMENT

WHAT HAPPENED?	PHONE	REPORT ONLINE	PRESERVE SITE
DEATH, SERIOUS INJURY OR ILLNESS	IMMEDIATELY	AS SOON AS POSSIBLE <small>NO LATER THAN 48 HOURS</small>	YES
DANGEROUS INCIDENT	IMMEDIATELY	AS SOON AS POSSIBLE <small>NO LATER THAN 48 HOURS</small>	YES
NON-SERIOUS INJURY	NOT REQUIRED	AS SOON AS POSSIBLE <small>NO LATER THAN 48 HOURS</small>	ON REQUEST
OTHER INCIDENT	NOT REQUIRED	AS SOON AS POSSIBLE <small>NO LATER THAN 7 DAYS</small>	ON REQUEST

 If there is a serious injury or illness, a death or a dangerous incident, you must report it to us immediately on **1300 814 609** as an urgent investigation may be needed. The incident site must be preserved until an inspector attends or the inspector or regulator directs otherwise. Operators of coal mines must also notify an industry safety and health representative.

 For other types of notifiable incidents, complete the Resources Regulator's online incident notification form on our website as soon as possible.

REPORT AN INCIDENT TO THE NSW RESOURCES REGULATOR

1300 814 609

Online notification form: resourcesregulator.nsw.gov.au

Notification of Incident and Injury can be done in the regulator portal found at:

<https://nswresourcesregulator.service-now.com/regulator>

Attachment 7: Rail Safety Incident Reporting Obligations

Incident Reporting Obligations to the Office of the National Rail Safety Regulator (ONRSR)

Boral Cement has a number of sites which incorporate rail operations within the boundary of the site and involve employees and other third parties working on or near the rail line. Boral Cement also holds rail safety accreditation in NSW and as such is required to report 'notifiable occurrences' to ONRSR as outlined in the Rail Safety National Law 2012 and summarised in the table below

Category A – Report immediately
<p>A collision between a train and:</p> <ul style="list-style-type: none"> • a person that results in a serious injury or fatality – including self-harm incidents; or • a rail safety worker; or • a vehicle at a level crossing; or • a vehicle that results in a serious injury or fatality; or • another train on the running line. <p>A collision resulting in significant damage or serious injury/fatality between a train and:</p> <ul style="list-style-type: none"> • a train; or • rolling stock; or • plant/machinery within a rail worksite; or • rail infrastructure. <p>A near hit collision between a train and a rail safety worker.</p> <p>Incident specific information must be submitted for these occurrences as described in the <i>National Rail Occurrence Data Submission Requirements</i> within 7 days of the occurrence.</p>
Category B – Report within 72 hours
<p>A collision between a train and person other than a rail safety worker that does not result in a serious injury or fatality.</p> <p>A near hit collision between a train and a person or vehicle at a level crossing.</p> <p>A near hit collision or a collision (not being Category A) between a train and:</p> <ul style="list-style-type: none"> • a train; or • rolling stock; or • plant/machinery within a rail worksite; or • rail infrastructure. <p>Incident specific information must be submitted for these occurrences as described in the <i>National Rail Occurrence Data Submission Requirements</i> within 14 days of the occurrence.</p>
Category C – Annual data submission only
<p>All other collisions or near hit collisions that are not Category A or B.</p> <p>Data must be submitted for these occurrences as described in the <i>National Rail Occurrence Data Submission Requirements</i> by the annual submission date.</p>

Attachment 8: Wardens – training requirements

AIM:

To provide all Wardens with skills and resources to manage and safety execute an Emergency Incident on any of the Boral Minerals sites.


TRAINING COMMITMENT:

Boral has a legal and moral duty for the health and safety of any person on site. Part of this duty is to have plans in place to manage emergencies. Boral will provide the following training to allow employees to develop skills to manage such incidents:

Chief Wardens.....once every two years
Area Wardens.....once every two years
Exercises(tabletop and scenarios)
Emergency drills.....Once per 12 month period

Basic training is provided in the relevant site and area inductions
Where an actual emergency incident occurs the incident will be reviewed / debriefed and will be recorded as an exercise.

Attachment 9: Drill Register

Date /Time	Drill Type	Comments
27/3/12 Start:07:55 Finish: 08:25	Site Evacuation Drill	<p><u>Things that didn't go well:</u></p> <ul style="list-style-type: none"> • There was a couple of employees who had not clocked off/on and their whereabouts had to be ascertained by talking to their supervisor • Some contractors had not signed in the visitors book. • There was no record of what salaried staff were on-site. • Names were relayed too quickly over the radio for the Administration and Financial Officer to keep track, requiring them to be repeated a number of times. • One of the Despatch employees did not hear the siren when he was at the rail crossing on the Mule but heard it on his return to site and went straight to Assembly Area B. • Supervisors assumed the role of Evacuation Marshall as they were not aware of who should be in the role. <p><u>Things that did go well:</u></p> <ul style="list-style-type: none"> • Everyone was accounted for within 20 minutes from when the siren was activated. • The siren was clearly audible from all over site. • The Supervisors did a good job assuming the role of Evacuation Marshalls and kept good control. • The process by which Marshalls radioed their assembled employees names into a central location worked well • Someone went to the main gate to control access to site without being asked.
16 th October 2013	Table Top Exercise	<p><u>Pre-incident planning with Goulburn Police Rescue</u></p> <p>Heavy Mining Equipment Incident -Examples in the last 2 years</p> <p><u>Total Brake Failure in Pit. 777 Haul Truck</u></p>  <p><u>Collision in Dumping Area. FEL and 777 Haul Truck</u></p>



Dropped back wheels over tipping edge. Reversing 777 Haul truck.



Dropped Fuel Tank. 777 Haul Truck



FEL operated with faulty park brake. Category A Fault.



Some things to consider...

- What kind of Heavy Vehicle incidents can Goulburn Police Rescue help us with?
 - Vehicle entrapment? Rollover. Collisions. (Heavy/Heavy, Heavy/Light)
 - Heights Rescue? Fall from bench
 - ????
- Is Goulburn Police Rescue the right agency to assist with these kinds of incidents only when they involve someone who is injured or deceased?
- What is the expected travel time in an emergency from Goulburn to Marulan South?
- How do we request your assistance? Is it in the usual way through 000, asking for all services? (Fire, Ambulance, Police Rescue etc.)
- Are your vehicles 4 wheel drive? Access issues in the wet?
- Although this is a desktop exercise, what should we consider if we decide to escalate this in future to a full hands-on exercise? What would this exercise look like?
- Is there anything in particular on site that you need to have a look at?
- Is there anything in your opinion we can put in place in the short term to help mitigate any risk from these kinds of incidents?

22nd
November,
2012

Exercise

Heavy/Light Vehicle Interaction Exercise at Marulan South

The need for Emergency Drills every six months can often result in an exercise that involves hitting the Emergency Siren and taking note of who turns up at the Assembly Areas. While this kind of evacuation drill has its place and needs to be done well it does not address some of the more likely scenarios that have the potential for serious consequences.

Marulan South is an open-cut Limestone Mine that operates six 777 Haul trucks, three Heavy Front End Loaders (FEL's) and a 70 tonne Excavator. There are numerous smaller vehicles that need to interact with this Heavy Mining Equipment. (HME) on a daily basis. In the last 2 years a number of near misses involving HME have been recorded. These incidents have included total brake failure in a Haul Truck and a FEL reversing into a Haul Truck. This latter incident involving the reversing FEL highlighted some very serious issues for us. The Haul Truck operator made a radio call to the FEL operator before entering his area of responsibility, in accordance with site practice and procedure, but entered the area before receiving acknowledgment or authorisation from the FEL operator. This resulted in the FEL reversing into the rear of the Haul Truck, inflicting significant damage to the FEL. Thankfully no-one was injured. The serious issue for us is that the procedure for entering a Heavy Vehicle's area of responsibility is the same for a Light Vehicle (LV), with obvious implications. This incident was thoroughly investigated and some higher order controls were identified and implemented.

It was decided that some pre-incident planning was required, with a HME focus. NSW Police Rescue Squad were approached with this in mind. A tabletop exercise was

arranged that involved two squad members, the Production Superintendent, Production Supervisor and the OH&S Advisor. The squad members were presented with photos and a summary of 5 of the more serious near misses involving HME. Discussion centred around the type of assistance the squad could provide given our site's specific requirements, for example the weight of our equipment and some of the accessibility issues in the pit and gorge country. Squad members were shown our equipment and the area of operations. It was agreed that our most significant exposure would be from an interaction between a Heavy and Light vehicle and that the NSW Police Rescue Squad were the right agency to help us in the event of this kind of emergency. A date was arranged for a full day exercise on-site

Six members of the Rescue Squad arrived on-site on the 14th of November. The Production Department had prepared a LV, identified a suitable location and the use of one of the FEL's for the exercise. All Rescue Squad members and Boral employees involved in the exercise were taken through the Safe Work Method Statement and an initial site inspection and briefing. A dummy was placed in the LV and the FEL operator was briefed on what was required for two scenarios. Both scenarios involved a LV entering the FEL's area of responsibility without authorisation, resulting in it being run over. One scenario resulted in a casualty that needed to be extracted and the other a fatality.



This photo shows the extraction of a casualty who is trapped. It is worth noting that when setting up this scenario the intention was run over the back of the cab of the LV with the FEL, therefore trapping the driver in the driver's seat. When backing over the LV the FEL operator stated that he could not "feel" the LV when he ran over it and relied on radio communication to tell him when he was in the right spot.

While the Rescue Squad were extracting their casualty in this scenario, Boral employees were taken through the procedure they would need to follow immediately following this kind of incident. This included notifications, the need for prudent overreaction when obtaining resources to deal with it and the barricading and non-disturbance of the incident area.

The next scenario required the FEL to be removed, the dummy replaced in the LV and the FEL driven back onto the LV in such a way that the occupant would not have survived. This was then a recovery scenario rather than a rescue. This was an opportunity for the Rescue Squad to try the many tools at their disposal to remove the occupant.



This photo shows the Rescue Squad raising the dashboard and steering column while trying to remove the occupant.

The exercise gave us a much clearer understanding of what is required in such an emergency, from our perspective and that of the emergency services. Their response time from the first phone call to arriving at site is approximately 30 minutes and is initiated with a simple 000 call. It is important to provide explicit details of the location of the incident and any other relevant information as soon as possible. In our case it was identified that someone would need to be sent out on the Marulan South Road to escort emergency services in. (Though this pre-incident planning goes a long way towards addressing this) The Rescue Squad generally deals with weights of up to 50 tonnes during truck accidents. Our HME exceeds their capacity to lift but the exercise identified that their equipment and ours could be used together if required. It was also identified that other scenarios that would require a vertical rescue, such as a vehicle over an edge, would also be dealt with by NSW Police Rescue.

Police Rescue expressed gratitude at having the opportunity to train with our HME and people and would be interested in using our site for future exercises.

Rob Lasker OH&S Advisor

9/7/13

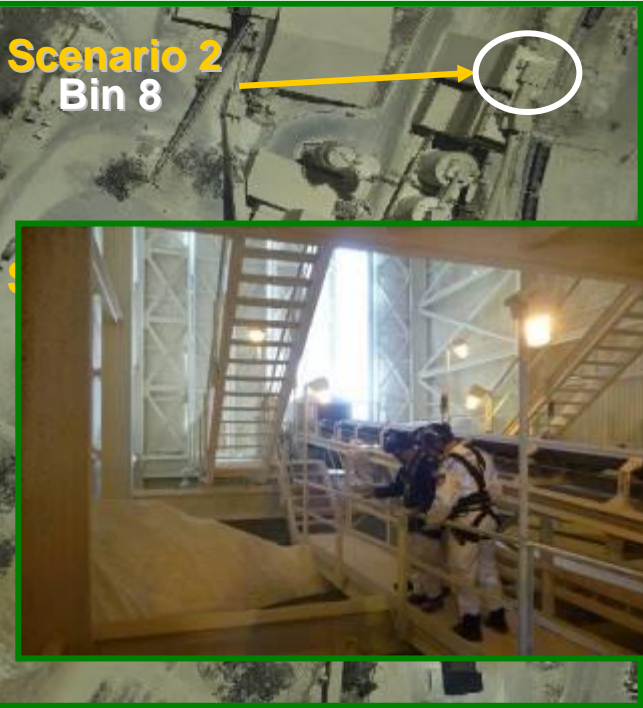
Confined Space/Vertical Rescue Exercise

Scope:

- A need to identify emergency scenarios that would benefit from Pre-incident Planning and collaboration with external emergency services. In this case, NSW Police Rescue.
- Previous successful collaboration with NSW Police Rescue focused on Heavy and Light vehicle interaction.

Planning

- This exercise focused on the extraction of a casualty from a confined space and the vertical rescue of a casualty.
- NSW Police Rescue personnel attended site on the 12th of June and conducted a walkthrough of the proposed location and scenario/s with Marulan personnel.
- Risk Assessments for the 2 proposed scenarios were composed and distributed to Marulan and Police Rescue personnel for review and to clearly establish a script for the exercise to be held on the 9th of July
- Working at Heights and Confined Space permits were completed
- All controls were implemented and a sunny day was ordered.



mechanical advantage haulage system and brake



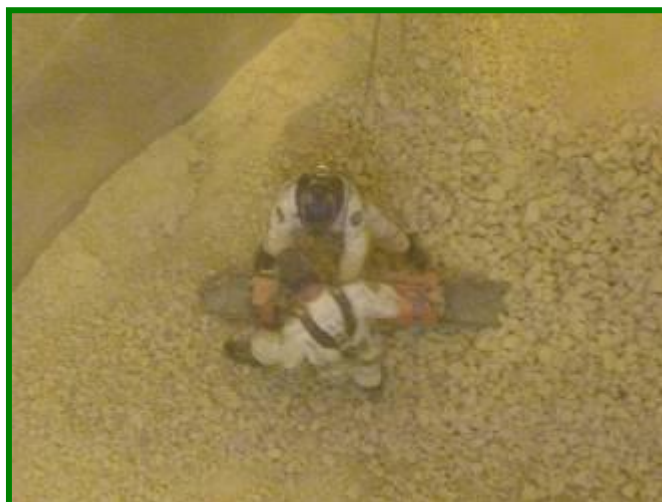
Some new Police Rescue members receive instruction and check each other's work



First rescuer descends to assess and stabilise the casualty



Second rescuer then descends to assist



Marulan Production personnel called in to assist with hauling the casualty and escort from Bin 3



Manoeuvring around infrastructure



and over the handrail. Ideally the casualty would be carried down stairs and walkways in the litter to the ground. If this is not possible there is the vertical rescue option...






Scenario 2: Casualty lowered to ground from top of Bin 8

Isolate ground area with danger tap, signage & an employee as a look out to notify oncoming traffic & Pedestrians



A disadvantage with rope work is the set-up time. Once established a vertical rescue can be conducted very quickly. In this photo Police Rescue members confer on suitable anchor points at the top of Conveyor 39



		<p><i>Available infrastructure is used to best advantage</i></p>  <p><i>A slow setup but a quick decent.....</i></p>  <p><i>Casualty escorted to the ground</i></p> 
9/6/15	Confined Space Rescue Exercise (Conducted at Peppertree)	<p>Our intent was to deal with a scenario that may occur at either of the Marulan South sites.</p> <p>Scenario: Two plantmen are tasked with cleaning out a blocked cone crusher which requires them to enter the crusher. A third person arrives later and offers to help but does not lock onto the isolator. The 2 plantmen leave the crusher and remove their red locks from the isolator and turn the isolator to the “on” position, at which time the crusher starts with the third person still inside.</p>

Exercise Outcome 1: The person in the crusher alerts the plantmen and they immediately shut down the crusher and call for assistance. His foot is crushed but he is conscious. Police Rescue extract him through the side of the crusher manually.



Outcome 1. Conscious casualty in the crusher



Casualty's condition is assessed. Medical assistance could be provided at this stage



The casualty can be manually extracted



through the side of the crusher in a fairly

Exercise Outcome 2: The person in the crusher is rendered unconscious. Police Rescue extract him through the side of the crusher manually using a stretcher.



needs to be manually extracted on a



There is even less room to move this time. The casualty needed to be raised vertically before he could be taken out horizontally



It took a little longer this time to ensure the casualty was safely extracted



Two people were needed at each end to manoeuvre the stretcher out through the side door

Exercise Outcome 3: The person in the crusher is rendered unconscious and cannot be extracted through the side of the crusher. He must be rescued vertically by stretcher and taken to the ground.



Outcome 3. Unconscious casualty is strapped into the stretcher



Casualty is uncoupled from the ropes but remains on the stretcher, to be taken to ground level



Casualty is lowered to the adjacent walkway



Not so easy between the handrails.



Handles on the side of the stretcher were hard to access, difficult to rotate team members.



Delivered safely to Ambulance personnel at ground level

13/8/15	Site Evacuation Drill	Milestone	Comment	Action
		10:50am Alarm Activated	Activated at the Mining Office	
		10:50am Radio call on Channels 1 & 3	Radio calls mentioned that it was an evacuation exercise and to follow the instructions of Supervisors/Wardens	
		10:54am Gardener took control of the main gate	Used the mower and trailer to block the gate	
		10:54am Jody obtained the Kronos list and sign in book	Jody took the list and book to Emergency Assembly Area "A"	There was some confusion as to who should take on the Chief Warden role in Les's absence. <i>Re-communicate the ER Contacts Poster Flowchart Warden Training to be developed and rolled out</i> The Kronos List and Sign In book went to Emergency Assembly Area "A" <i>Chief Warden to identify someone to distribute the list to all assembly areas. Chief Warden duty card to reflect this.</i>
		10:57am Radio Call to Wardens on Channels 1 & 3 from WHS Business Partner	Wardens asked to let WHS Business Partner know on the Mine Channel when they had accounted for their people	A list of employees and their closest Assembly Area exists in the ERP. (Page 37) It was not evident where names were being checked off at the other Assembly Areas. There appeared to be no radio calls asking for people's location though some people were seen at Assembly Area "A", for example, who would usually not work in that area. <i>Update the Evacuation Checklist in the ERP.</i> <i>Communicate its location during Warden training.</i> There were people on site who were not signed in.

				Possibly Westrac, Peter Rendazzo, Taylor Rail. This means that we could not with any certainty confirm we had accounted for everybody. <i>Re-communicate to the management team the site entry requirements</i>	
		10:59am Scott Thomson called the WHS Business Partner on Channel 1	Scott stated that his people and contractors were accounted for		
		11:05am Jody radioed Louise on Channel 1	Jody informed Louise that everyone at Assembly Area "A" had been accounted for		
		11:06am Louise called Emergency Assembly Area "B" on Channel 1	Second call received a response from Ravi. All Lime Plant personnel and 5 visiting truck drivers accounted for	Same comment as above regarding the list being used to check people off. A handwritten list was submitted for the incident post-exercise.	
		11:08am Louise called Scott Thomson on Channel 1	Louise asked if Scott had accounted for his people. Scott responded that he had and read off a list of who he had at Assembly Area "A"		
		11:09am Louise call Emergency Assembly Area "D" on Channel 1	Louise asked if everyone was accounted for. Jamie Whittaker responded that they were still working on it		
		11:10am Jamie Whittaker responded to Louise on Channel 1	Everyone was accounted for at Assembly Area "D"		
		11:11am Louise stated on Channel 1 that according to the information she had received everyone was accounted for	WHS Business Partner ended the exercise at this point with a radio call thanking everyone on both Channels and then stopped the siren.	Louise had to trust that Wardens had accounted for their people using the Evac Checklist, Kiosk or sign-in books. <i>Put together a procedure for the Coordinator in the Admin office.</i>	
15/8/18	Full Evac	Milestone	Comment	Action	

		15-8-18. 7:45am Alarm Activated	Activated at the Mining Office	
		7:45am Radio calls on Channels 1 & 3	Radio calls stated <i>"This is an Emergency Exercise. I repeat, this is an Emergency Exercise. The exercise scenario is workers missing during a confined space task. We need to account for all personnel. Please proceed to the nearest assembly area and await further instructions from your area Wardens."</i>	
		7:47am Chief Warden not on site	Plant Production Manager assumed the Deputy Chief Warden role in accordance with the Emergency Response Plan	
		7:48am Deputy Chief Warden tried to contact the top office on a number of occasions on the radio	Radio was not heard initially. Emergency Coordinator had heard the alarm and had started to record communications and obtain Kiosk reports	
		7:53am 4 copies of the Kiosk report printed		
		7:56am Assembly Area B Warden calls the Emergency Coordinator on the radio	Warden confirms all their people are accounted for.	They did not have a copy of the Kiosk report but have a small team that is easily managed.
		7:56am Deputy Chief Warden calls the top office on the radio looking for Kiosk reports	Emergency Coordinator informs the Deputy Chief Warden that the reports are ready in the top office	
		7:57am Deputy Chief Warden arrives at the top office		
		7:57am Assembly Area B Warden reads out the	Emergency Coordinator starts ticking names off	Should names be used over the radio?

		names of the people accounted for at the Lime Plant over the radio		
		7:58am Names start being ticked off the Kiosk lists	Several contractors are identified who have not signed out so still appear in the records as being on-site. Emergency Coordinator reads out the names of several contractors over the radio to confirm their presence on-site. Staff members are not recorded anywhere and are difficult to positively confirm.	
		7:58am Deputy Chief Warden confirms the Wardens names for each assembly area with the HSE Advisor. Face-to-face		
		7:59am Assembly Area C Warden states over the radio that he has nearly completed the list of names for his area		
		8:00am Assembly Area B Warden asked to repeat the names of people at their assembly area	Emergency Coordinator rechecks names	
		8:00am Personnel involved in the shot-firer training still coming to site during the exercise.	Trainees sent to the nearest assembly area. Names written on the list for Assembly Area A as they did not appear on the list of people who has signed in	Most did not get an opportunity to sign in as the exercise was underway when they arrived.
		8:02am Relief Administration person sent to Assembly Area A to check names against KIOSK report		

		8:03am South Pit declared clear over the radio after inspection by Production Supervisor		
		8:05am Assembly Area B Warden states over the radio that he is bringing the list of names across to the top office.		
		8:08am Contractor identified at Assembly Area C that had not signed off on his ATW and had left site. He had signed in and out.	It is good to see that ATW's were being checked as part of this exercise.	Contractor was called on the phone immediately and he confirmed he was off site and apologised for not signing off on the ATW
		8:09am Assembly Area B list dropped off at top office with Emergency Coordinator		
		8:10am Deputy Chief Warden asks over the radio if everyone was accounted for	Emergency Coordinator responded that not everyone had been accounted for yet	
		8:10am Assembly Area A list of names received at the top office		
		8:11am Deputy Chief warden asked over the radio if permits and ATW's had been checked	Area C Warden replied that they had been checked	
		8:12am Names of shot-firer trainees checked		
		8:14am Deputy Chief Warden checks with the Area C warden if toilets and crib rooms have been checked	Area C Warden confirms that they have been checked	
		8:15am Deputy Chief Warden checks that the store personnel have		

		been evacuated		
		8:16am Emergency Coordinator asks if there is anyone in Assembly Area D	Lime Plant Technical manager confirms that there is nobody at Assembly Area D	
		8:18am Emergency Coordinator confirms some final names over the radio	Emergency Coordinator checks the lists again	
		8:20am The Emergency Coordinator states that she is satisfied that everyone has been accounted for	HSE Advisor notifies everyone over the radio, on both channels, that everyone is accounted for and thanks them for their participation. Alarm reset	
		Post exercise	Alarm in the workshop ceased operating during the exercise	Alarms are tested weekly. What has happened on this occasion?
		Post exercise	Can road trucks hear, and respond to the alarm? Sand Plant, Lime Plant, Aggregates etc What about the sales loader operator?	Do they need to respond? Sales FEL operator may be on UHF channel 10 rather than the Mine channel.
		Post Exercise	Staff locations?	Sign in and out?
17/11/2020	Envrionmental spill and truck collision			

Post Emergency Response Event Evaluation

HSEQ-2-09-F07



Site & Emergency Event Details

Division / Business / Site:	Cement/Marulan Limestone		
Type of Event:	Drill	Date & Time of Training:	17/11/2020 12:00
Nature of the Event:	Environmental Spill and PMH Roads and Vehicles – collision. Service truck and Unit 6? Collision in the screening area resulting in a minor fuel spill with a potential major fuel spill. Observers Wayne Beattie and Naomi Munce		
Emergency Response Team:	Chief Warden:	Adrian Smith	Warden/Assistant:
	Deputy Warden:		Warden/Assistant:
	Call Receiver:	All	Warden/Assistant:
	First Aider:	Not Required	Warden/Assistant:
Equipment Used:	Radio Communications / Loader 11 / Water truck / Service Truck Spill Kit / Fire Extinguishers from trucks		

Event Sequence

No.	Timing	Event Stages	Observation
	[HH:MM]	[Detail the stages of the event as played out]	[Detail any learning's that can be made of the site's response to the stage in the overall event]
1.1		Refer to Comms log for full details	
1.2		Service truck (used for refuelling)	Refuelling truck was left on and should have been turned off/isolated
1.3		Emergency Equipment	Direction was required to find the spill kit and deploy it. Fire extinguishers were deployed after was direction – they were checked and were in date
1.4		Chief Warden Directions	CW used resources from the store to act as area guards – keep people out of the area
1.5		Spill Containment	actual spill was say 20L potential for 2700L. Socks put out, bund put in place by loader 11 on the downward slope. Good direction from chief warden to change the location where the material was taken from that was closer to the spill
1.6		Notifications	failure to notify enviro site (Garth/Les), internal (Greg) or external and have the site released: duty card for environmental issues don't include the requirement to notify Boral environmental team. Mock notification to resource regulator was given at the time of the incident and got a "release" from the regulator of an all clear
1.7		Other Observations	<ul style="list-style-type: none"> good radio silence during the drill CW gave the all clear for the exercise Truck was in the exclusion zone and was removed via Loader 11 – good pick up. Duty card in emergency response plan refers to Section 8.1 for notifications however this is not the correct reference and it was hard to find. CW found it hard to find the right duty card and suggested that an index at the front of the duty cards would be helpful, as well as a divider tab for the attachments.

Post Emergency Response Event Evaluation

HSEQ-2-09-F07



Emergency Preparedness Review

No.	Timing Event Stages	Observation
2.1	All personnel onsite have been trained in the Emergency Response Plan?	Yes, training records available
2.2	The Emergency Response Team have current competencies in place (ie. First Aiders etc)?	Yes, recent training and first aiders available but not required
2.3	The Critical Incidents Contact Sheet is current and displayed?	Yes – also available in Red Book
2.4	The Emergency Response Team is complete and the Emergency Response Contacts Poster is current?	Yes
2.5	A schedule of Drills are programmed within eAM?	No
2.6	The Emergency Equipment Register is current and equipment is within test date?	To be checked as an action from this drill
2.7	Was the emergency response procedure followed and effective for the emergency situation/drill?	Yes, refer to minor improvement actions

Action Plan

Site Safe Ref No.	Agreed Actions	Person Responsible	Completion Date	Residual Risk
	Emergency Drills to be programmed into Maximo	Wayne Beattie	30/11/2020	
	Toolbox on spill containment. NM to provide WB with a video.	Naomi Munce/ Wayne Beattie	30/11/2020	
	Updates to the Emergency Response Plan: <ul style="list-style-type: none"> - In duty cards include directions for deployment of spill kits and have fire extinguishers at the ready - In duty cards include Boral environment in the "who to call" section - In duty cards check references for who to notify – reference to Section 8.1 is incorrect - Include an index at the front of the duty cards - Include an attachments tab 	Jess Seifert	31/12/2020	

Endorsement

The Site Manager is responsible for the completion of the above actions and tool boxing Emergency Event.

Position	Name	Signature	Date
Site Manager	Mark McCarthy		

I confirm that the above actions have been actioned.

Drill will be reviewed against the following criteria

- Training requirements needed to improve the current Emergency Management Plan.
- Was the Evacuation adequate, are improvements required.
- Are the necessary resources available to bring the situation to a successfully closure.
- Was the response adequate for the level of the emergency?
- Is there any documentation updates required? (Emergency Management Plan)

Attachment 10: Print Kronos Report “Employees Currently Earning Time on Premises Report” in the event of an emergency

Key Business Focus Area: Administration

Document No:

One Point Lesson: Print Kronos “Employees Currently Earning Time on Premises Report” in the event of an Emergency

Revision No: 1.0

Effective date: 1/4/17

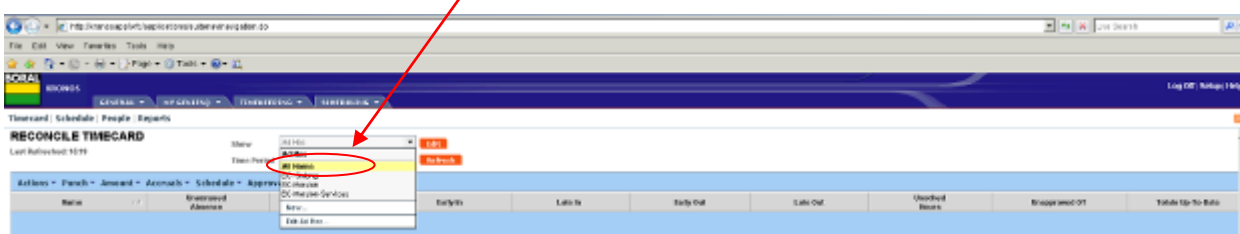
Applicable Region Marulan South

Purpose

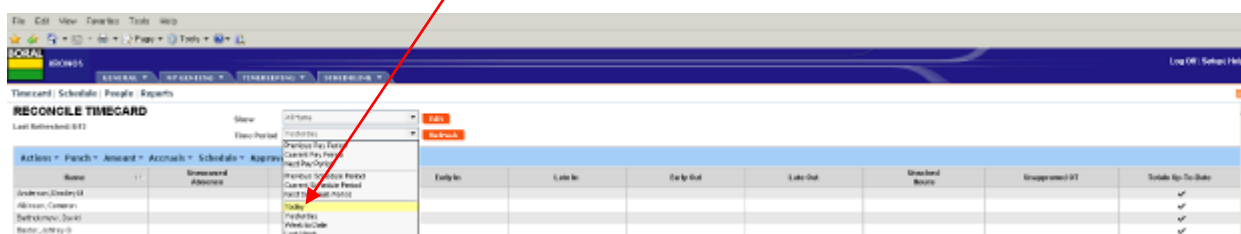
This aim of this One Point Lesson is to describe how to print an “Employees Currently earning Time on premises Report” in Kronos in the event of an emergency.

One Point Lesson

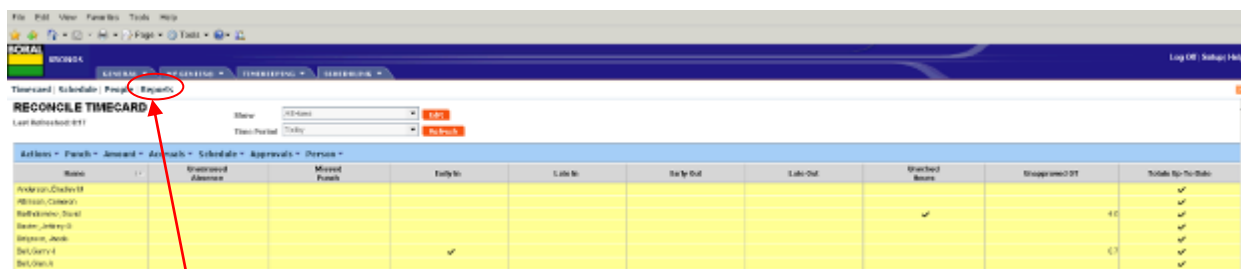
1. Log into Kronos
2. Click on drop down arrow next to “Show” and select “All Home” from the list.



3. Click on drop down arrow next to “Time period” and select “Today” from the list.

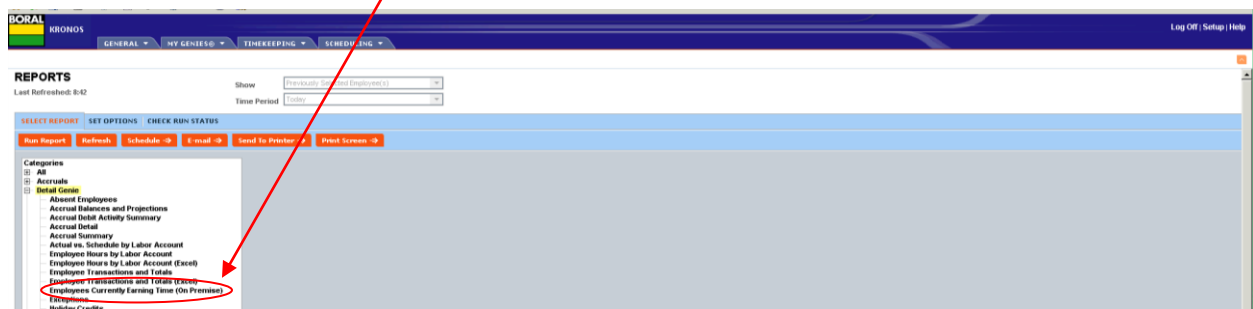


4. Highlight all employees (click first line – scroll down holding “Shift” key and click on last line).

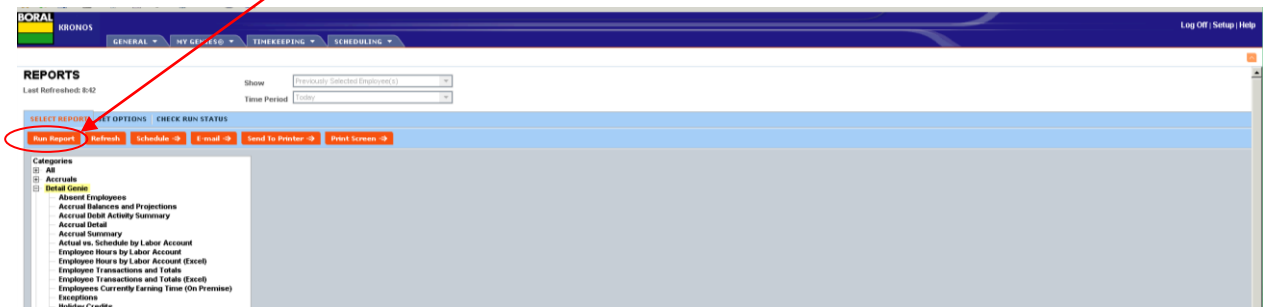


5. Click on “reports”

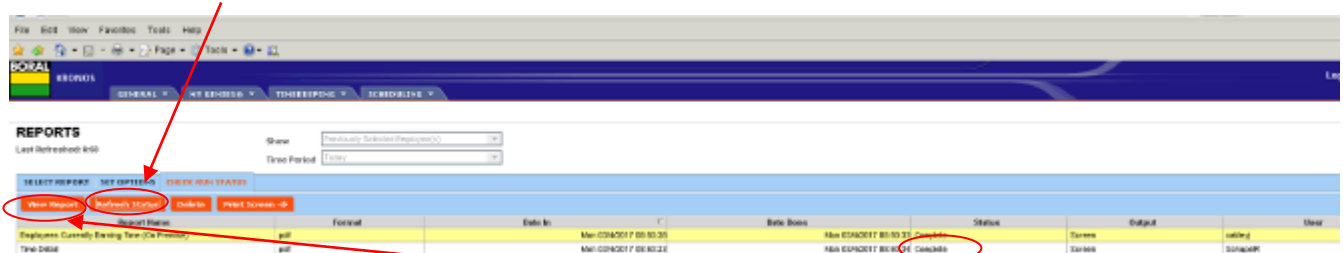
- Click on "Employees currently earning time on premises" report



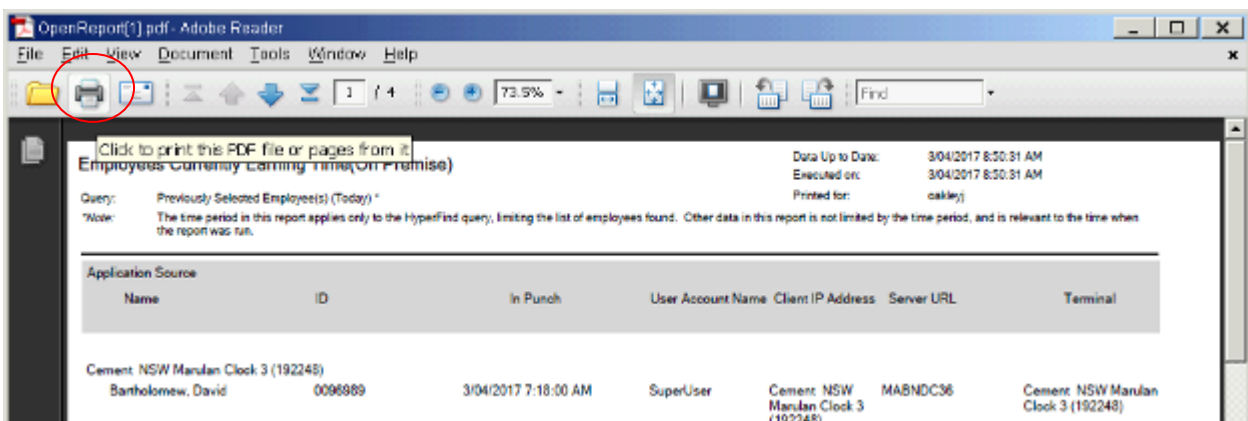
- Click on "run report"



- Click "refresh status"



- When report comes up completed click on View Report. You can then Print report



Attachment 11: Print Evacuation Report off Who's On Location (Sign in System) OPL

Key Business Focus Area: Administration

Document No:

One Point Lesson: View Contractors onsite in Who's on Location and print reports

Revision No: 1.0

Effective date: 8/2/18

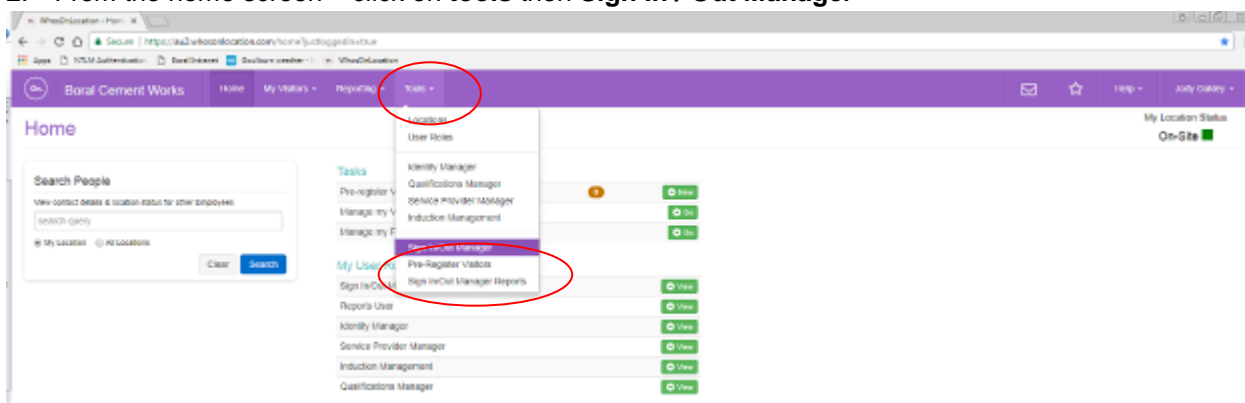
Applicable Regions: Marulan South

Purpose

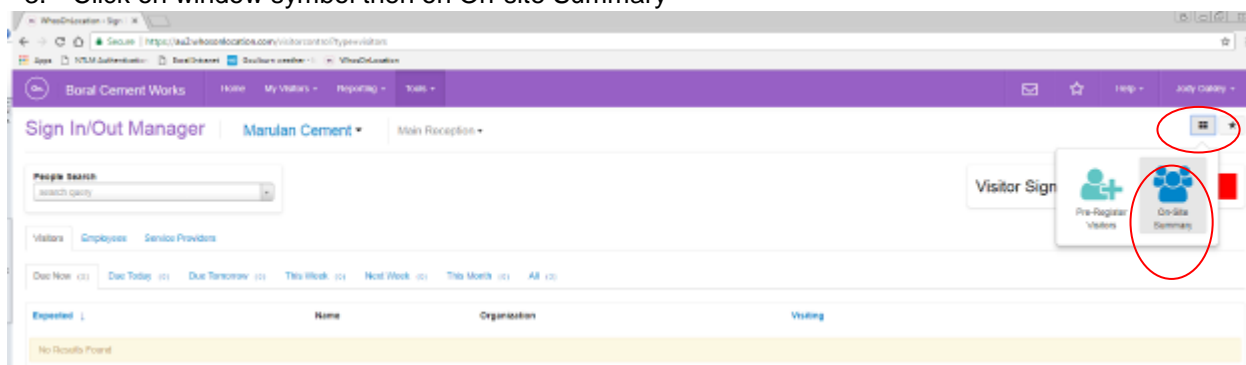
This aim of this One Point Lesson is to describe how to view Contractors onsite in Sign-In System and print an Evacuation Report / sign in and out reports.

One Point Lesson

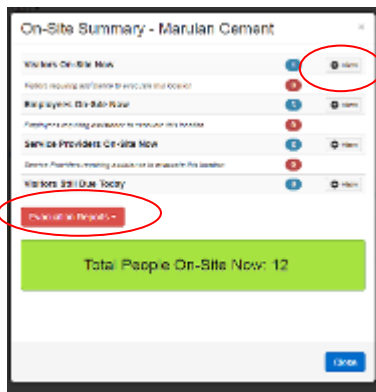
1. Log into Who's on location – See Sign in to Who's on Location OPL.
2. From the home screen – click on **tools** then **Sign In / Out Manager**



3. Click on window symbol then on On-site Summary

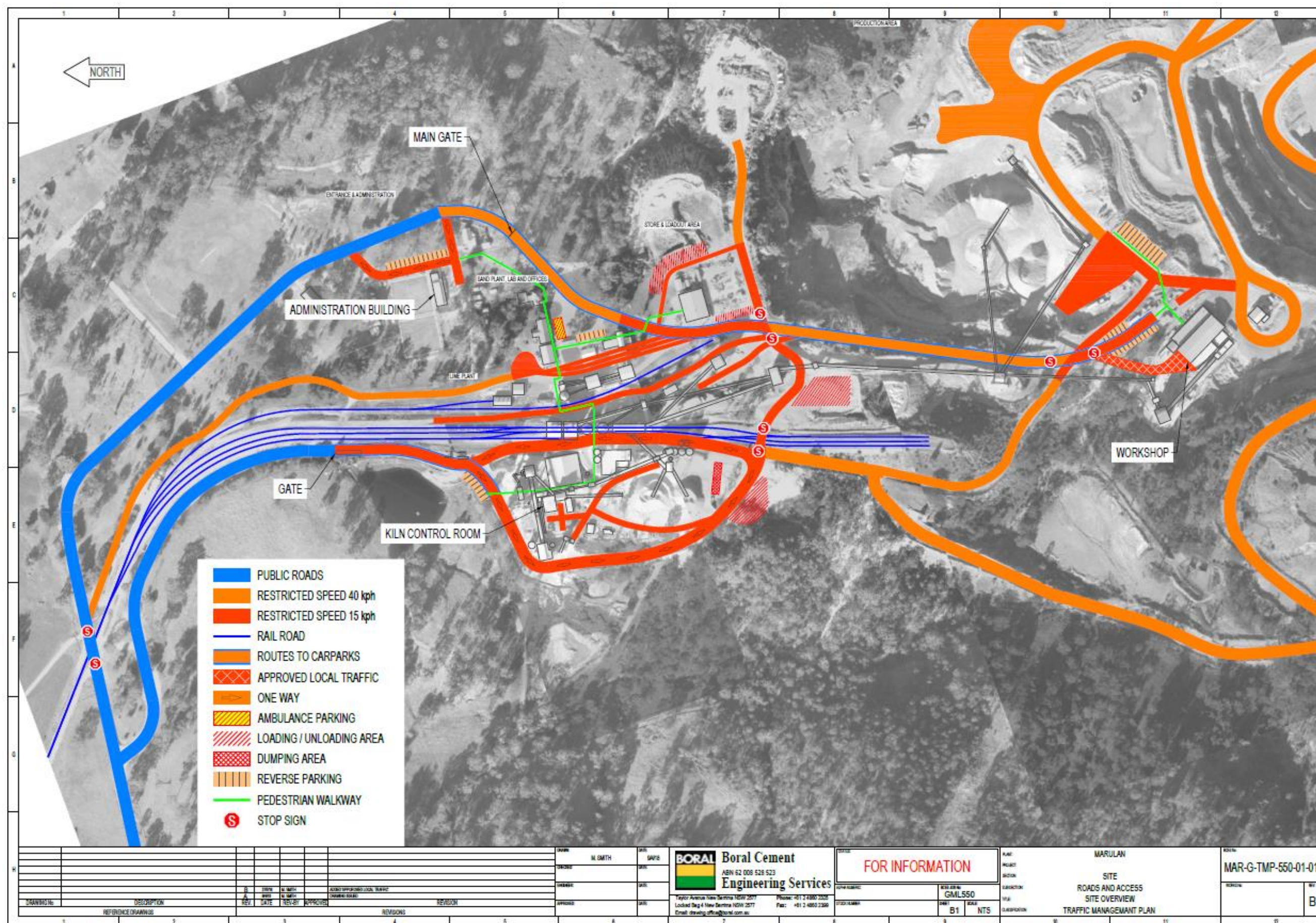


4. The following Screen will appear with on-site summary click on the view buttons for more information

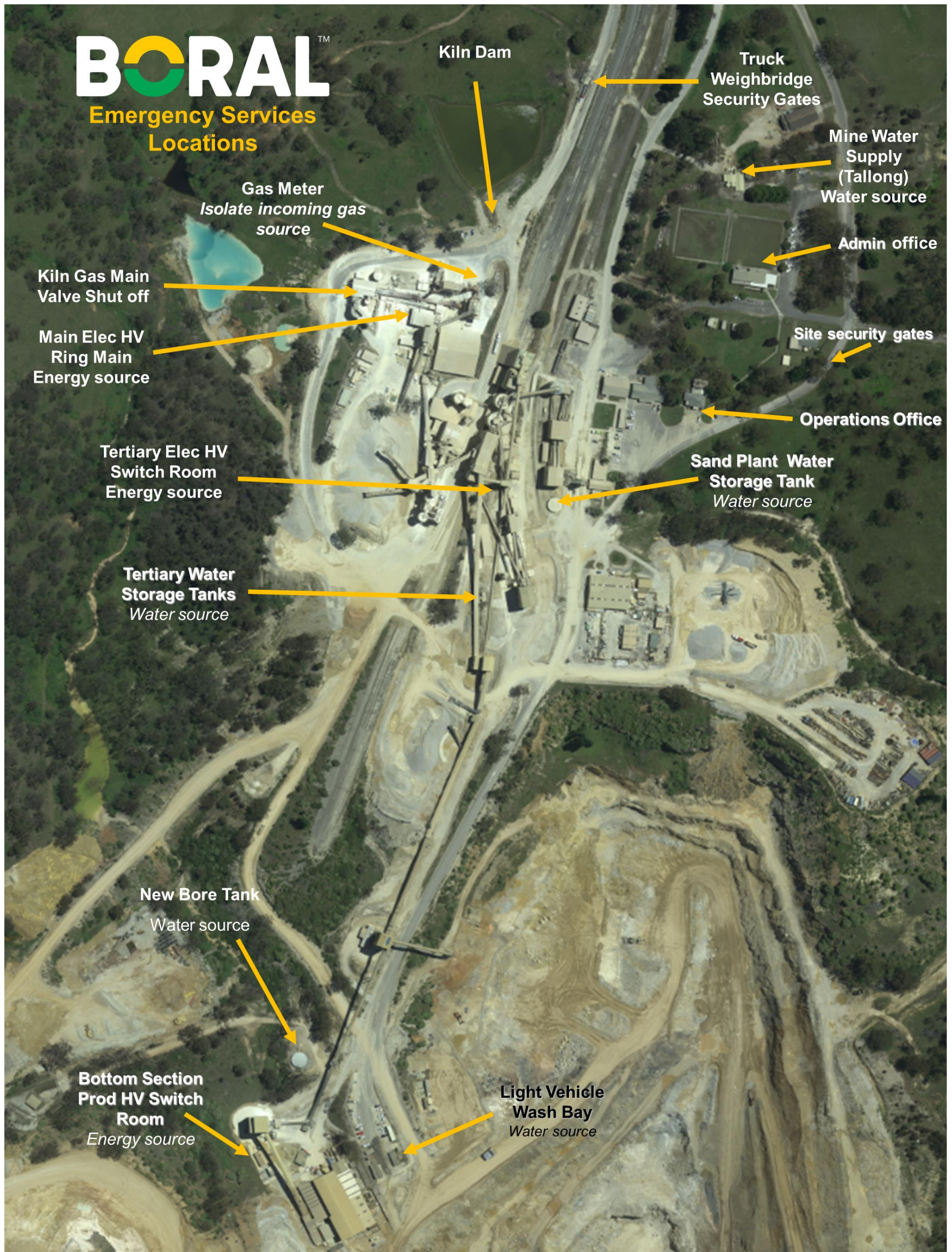


5. To Print an Evacuation Report – Click on Evacuation Report button and click on view. The report will download as a pdf at the bottom of your screen where you can then open it.

Attachment 12: Site Plan



Attachment 13: Services Locations



Attachment 14: First Aid Fact Sheets

DRSABCD

DRSABCD

IN AN EMERGENCY CALL **TRIPLE ZERO (000)** FOR AN AMBULANCE



D

Dangers?

Ensure the area is safe for yourself, others and the patient.



R

Responsive?

Check for a response: ask name, squeeze shoulders.

No response? Send for help.

Response? Make comfortable and monitor response.



S

Send for help

Call triple zero (000) for an ambulance or ask another person to make the call.



A

Open Airway

Open the mouth and check the airway for foreign material.

Foreign material? Place in the recovery position and clear the airway.

No foreign material? Leave in position.

Open the airway by tilting the head back with a chin lift.



B

Normal Breathing?

Check for breathing: look, listen, feel for 10 seconds.

Not normal breathing? Ensure an ambulance has been called; start CPR.

Normal breathing? Place in the recovery position and monitor breathing.



C

Start CPR

30 chest compressions : 2 breaths.

Continue CPR until help arrives or the patient starts breathing.



D

Attach defibrillator (AED)

and follow the voice prompts.



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CPR



First aid fact sheet

CPR adult or child (over 1 year)



CPR is the action of giving 30 compressions followed by 2 breaths. Try to achieve 5 sets of 30:2 in about 2 minutes (or 100–120 compressions/minute). If unwilling or unable to give breaths, giving compressions only is better than not doing CPR at all.

Give 30 compressions

- 1 Position the patient on their back, on a firm surface, and kneel beside the patient's chest.
- 2 Locate the lower half of the sternum (breastbone) in the centre of the chest.
- 3 Place the heel of one hand on the lower half of the sternum and the heel of your other hand on top of the first hand.
- 4 Interlock the fingers of your hands and raise your fingers.
- 5 Press down on the sternum.
- 6 With your arms straight, press down on the patient's chest until it is compressed by about one-third.
- 7 Release the pressure. Pressing down and releasing is 1 compression.
- 8 Give 30 compressions.



Giving 2 breaths

- 1 Open the airway by tilting the head and lifting the chin.
- 2 With the head tilted backwards, pinch the soft part of the nose closed with your index finger and thumb, or seal the nose with your cheek.
- 3 Open the patient's mouth by placing your thumb over the chin below the lip and supporting the tip of jaw with the knuckle of middle finger. The chin is held up by your thumb and fingers to open the mouth and keep the airway clear.
- 4 Take a breath and place your lips over the patient's mouth, ensuring a good seal. Blow steadily for about 1 second, watching for the chest to rise.
- 5 Turn your mouth away from the patient's mouth. Watch for their chest to fall. Listen and feel for signs of air being expelled. Maintain head tilt and chin lift.
- 6 Take another breath and repeat the sequence above. This is now 2 breaths.
- 7 If the chest does not rise, recheck the mouth and remove any obstructions. Make sure the head is tilted and chin lifted, and ensure there is a good seal around the mouth (or mouth and nose).



In a medical emergency call Triple Zero (000)

DRSABCD Danger ▶ Response ▶ Send for help ▶ Airway ▶ Breathing ▶ CPR ▶ Defibrillation

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Allergic Reaction



St John

First aid fact sheet

Severe allergic reaction



A severe allergic reaction is called anaphylaxis and is potentially life-threatening.

People diagnosed with severe allergies should have an anaphylaxis action plan and an adrenaline auto-injector. They may also wear a medical alert device.

In a severe allergic reaction, you should use any available adrenaline auto-injector.

Signs & symptoms

The following signs and symptoms of a **mild to moderate allergic reaction** may precede anaphylaxis:

- swelling of face and tongue
- hives, welts or body redness
- tingling mouth
- abdominal pain, vomiting, diarrhoea

The main symptoms of a **severe allergic reaction** are rapidly developing breathing and circulation problems.

Other signs and symptoms may include:

- wheeze or persistent cough
- difficult or noisy breathing
- difficulty talking or a hoarse voice
- swelling or tightness in throat
- faintness, dizziness
- confusion
- loss of consciousness
- pallor and floppiness (in young children)

What to do

- 1 Follow DRSABCD.
- 2 Do not allow the patient to stand or walk. Help the patient to lie down flat, or if breathing is difficult, allow the patient to sit.
- 3 Ask the patient if they need help with their action plan if they have one. Only help the patient if they request it. If the patient is unable to give verbal consent, administer an adrenaline auto-injector immediately.

How to give an EpiPen® or EpiPen Jr®

- 1 Form a fist around the EpiPen® and pull the blue safety release off.
- 2 Hold the patient's leg still and place the orange end against the patient's outer mid-thigh (with or without clothing).
- 3 Push down hard until a click is heard or felt, and hold in place for 3 seconds.
REMOVE the EpiPen®.
- 4 Call triple zero (000) for an ambulance.
- 5 Monitor the patient. If there is no improvement after 5 minutes, use another adrenaline auto-injector, if available.
- 6 If breathing stops, follow DRSABCD.

In a medical emergency call Triple Zero (000)

DRSABCD Danger ▶ Response ▶ Send for help ▶ Airway ▶ Breathing ▶ CPR ▶ Defibrillation

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Asthma



St John

First aid fact sheet

Asthma emergency



An asthma emergency is potentially life-threatening.

Most people who suffer asthma attacks are aware of their asthma and should have an action plan and medication. They may wear a medical alert device.

In an emergency, or if a patient does not have their own reliever, use another person's reliever (if permitted under local state or territory regulations), or one from a first aid kit.

If the patient is having difficulty breathing but has not previously had an asthma attack, follow **WHAT TO DO**

Signs and symptoms

Mild to moderate asthma attack

- increasingly soft to loud wheeze
- persistent cough
- minor to obvious difficulty breathing

Asthma emergency

- symptoms get worse very quickly
- little or no relief from inhaler
- severe shortness of breath, focused only on breathing
- unable to speak normally
- pallor, sweating
- progressively more anxious, subdued or panicky
- blue lips, face, earlobes, fingernails
- loss of consciousness

What to do

- 1 Follow DRSABCD.
- 2 Help the patient to sit down in a comfortable position.
- 3 Reassure and stay with the patient.
- 4 If requested, help the patient to follow their action plan.

How to give medication (4:4:4)

Use a spacer if available.

- 1 Give 4 separate puffs of blue/grey reliever puffer:
 - shake the inhaler
 - give 1 puff
 - take 4 breaths
 - repeat until 4 puffs have been given.
- 2 Wait 4 minutes
- 3 If there is no improvement, give 4 more separate puffs of blue/grey reliever as above.
- 4 If the patient still cannot breathe normally, **call triple zero (000)** for an ambulance.
- 5 Keep giving 4 puffs every 4 minutes (as above) until medical aid arrives.

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Bites and Stings



First aid fact sheet

Bites and stings quick guide

<p>For any snake bite (including sea snakes), funnel-web spider and mouse spider bites, blue-ringed octopus bite, cone shell sting</p> <p>See the Snake bite fact sheet.</p>	<p>Pressure bandaging and immobilisation</p> <ol style="list-style-type: none"> 1 If the bite or sting is on a limb, apply a broad pressure bandage (crepe preferred) over the bite site. 2 Apply a firm heavy crepe or elasticised roller bandage (10–15 centimetres wide) starting just above the fingers or toes, and moving upwards on the bitten limb as far as can be reached. 3 Apply the bandage as tightly as possible to the limb. 4 Immobilise the bandaged limb using splints. 5 Seek medical aid.
<p>For box jellyfish; Irukandji, morbakka and jimble jellyfish, or other tropical jellyfish sting</p>	<p>Vinegar</p> <ol style="list-style-type: none"> 1 Immediately flood the entire stung area with lots of vinegar for at least 30 seconds. DO NOT use fresh water. 2 If pain relief is required, apply a cold pack only after vinegar has been applied. 3 Urgently seek medical aid at a hospital if symptoms are severe.
<p>For bluebottle and other nontropical jellyfish stings; stinging fish (eg stonefish, lionfish, bullrout); stingray, crown-of-thorns starfish, sea urchin</p> <p>DO NOT use on suspected box jellyfish or Irukandji stings.</p>	<p>Hot water</p> <ol style="list-style-type: none"> 1 Check the water to ensure it is as hot as you can comfortably tolerate before treating the patient. 2 Place the stung area in hot water for 20 minutes—help patient under a hot shower, place a stung hand or foot in hot water, or pour hot water over the stung area. Do not burn the patient. 3 Remove briefly before reimmersing. 4 Continue this cycle if pain persists. 5 Urgently seek medical aid at a hospital if symptoms are severe.
<p>For red-back spider or other spider bite; bee, wasp or ant sting; tick bite; scorpion or centipede sting; jellyfish sting</p>	<p>Cold pack</p> <ol style="list-style-type: none"> 1 Apply a cold pack to the bitten or stung area for 15 minutes and reapply if pain continues. 2 The cold pack should be changed when necessary to maintain the same level of coldness. 3 See medical aid if the pain worsens.

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First aid fact sheet

Snake bite



All known or suspected snake bites must be treated as potentially life-threatening, and medical aid should be sought urgently.

Signs and symptoms

Signs of a snake bite are not always visible. In some cases, the patient may not have felt anything. Symptoms may not appear for an hour or more after the person has been bitten.

Depending on the type of snake, signs and symptoms may include some or all of the following:

- immediate or delayed pain at the bite site
- swelling, bruising or local bleeding
- bite marks (usually on a limb) that may vary from obvious puncture wounds to scratches that may be almost invisible
- swollen and tender glands in the groin or armpit of the bitten limb
- faintness, dizziness
- nausea and vomiting
- headache
- abdominal pain
- oozing of blood from the bite site or gums
- double or blurred vision
- drooping eyelids
- difficulty in speaking or swallowing
- limb weakness or paralysis
- difficulty in breathing
- occasionally, initial collapse or confusion followed by partial or complete recovery.

What to do

Pressure bandage & immobilise

- 1 Follow DRSABCD.
- 2 Call triple zero (000) for an ambulance.
- 3 Lie the patient down and ask them to keep still. Reassure the patient.
- 4 If on a limb, apply an elasticised roller bandage (10–15 cm wide) over the bite site as soon as possible.
- 5 Apply a further elasticised roller bandage (10–15 cm wide), starting just above the fingers or toes and moving upwards on the bitten limb as far as can be reached.
 - Use clothing or other material if an elasticised roller bandage is not available.
 - Apply the bandage as firmly as possible to the limb. You should be unable to easily slide a finger between the bandage and the skin.
- 6 Immobilise the bandaged limb using splints.
- 7 Keep the patient lying down and completely still (immobilised).
- 8 Write down the time of the bite and when the bandage was applied. If possible, mark the location of the bite site (if known) on the skin with a pen, or photograph the site. Do not wash venom off the skin or clothes because it may assist identification.
- 9 Stay with the patient until medical aid arrives.



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Burns



First aid fact sheet

Burn or scald



- Do not apply lotions, ointments, fat or ice to a burn.
- Do not touch the injured areas or burst any blisters.
- Do not remove anything sticking to the burn.
- If the burn is larger than a 20 cent piece, or deep, seek medical aid.

Signs and symptoms

Superficial burns The area is:

- red
- very painful
- blistered.

Deep burns The area is:

- mottled red and white
- dark red or pale yellow
- painful
- blistered.

Full thickness burns The area:

- is white or charred
- feels dry and leathery.
- Because the nerves are destroyed, the pain will not be as great as in a superficial burn.

What to do

If the patient's clothing is on fire

- 1 Stop the patient from moving around.
- 2 Drop the patient to the ground and cover or wrap them in a blanket or similar, if available.
- 3 Roll the patient along the ground until the flames are extinguished.
- 4 Manage the burn.

For all burns

- 1 Follow DRSABCD.
- 2 If the burn is severe or if it involves the airway, call triple zero (000) for an ambulance.
- 3 As soon as possible, hold the burnt area under cool running water for 20 minutes.
- 4 Remove any clothing and jewellery from the burnt area, unless they are stuck to the burn.
- 5 Cover the burn with a light, loose nonstick dressing, preferably clean, dry, non-fluffy material (eg plastic cling film).
- 6 Continue to check the patient for shock, and treat if necessary.

A 'cold' burn is actually tissue damage from extreme cold, thus treatment is different from thermal burns. See the fact sheet on frost bite.

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Diabetic Emergencies



First aid fact sheet

Diabetes emergency

Signs and symptoms

High blood sugar

- excessive thirst
- tiredness
- blurred vision
- hot, dry skin
- smell of acetone on breath

Low blood sugar

- weakness, shaking
- sweating
- headache
- faintness, dizziness
- lack of concentration
- teariness or crying
- irritability or altered behaviour
- hunger
- numbness around the lips and fingers

These may progress quickly to:

- slurred speech
- confusion
- loss of consciousness
- seizures.

What to do

High blood sugar (hyperglycaemia)

- 1 If the patient has medication, ask if they need assistance administering it. Only help the patient if they request it.
- 2 Encourage the patient to drink water.
- 3 Seek medical aid if symptoms worsen.
- 4 If the patient has not yet been diagnosed with diabetes, encourage them to seek medical aid.

Low blood sugar (hypoglycaemia)

- 1 Help the patient to sit or lie in a comfortable position.
- 2 Reassure the patient.
- 3 Loosen any tight clothing.
- 4 Give the patient sugar, such as fruit juice or a soft drink (NOT 'diet' eg Coke Zero, Pepsi Max), sugar, jellybeans, glucose tablets.
- 5 Continue giving sugar every 15 minutes until the patient recovers.
- 6 Follow with carbohydrates, eg a sandwich, milk, fresh or dry fruit, or dry biscuits and cheese.
- 7 If there is no improvement in symptoms or the patient becomes unconscious, **call triple zero (000)** for an ambulance.



If you are unsure whether the patient has low or high blood sugar, give them a drink containing sugar (DO NOT use 'diet' soft drinks, eg Coke Zero, Pepsi Max). Giving any form of sugar can save a patient's life if blood sugar is low, and will not cause undue harm if blood sugar is high.

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Electric Shock



First aid fact sheet

Electric shock



Even for a mild electric shock, encourage the patient to seek medical aid for assessment of potential effects on the heart.

Signs and symptoms

- difficulty in breathing or no breathing at all
- a weak, erratic pulse or no pulse at all
- burns, particularly entry and exit burns
- loss of consciousness
- cardiac arrest

Downed power lines

- Remain at least 6 metres from any cable.
- DO NOT attempt to remove the cable.
- If a vehicle is being touched by a high voltage cable, DO NOT go near the vehicle or try to remove the patient from the vehicle.
- Advise the patient not to move.

What to do

- 1 Check for danger to yourself, bystanders and the patient.
- 2 Switch off power, if possible, before trying to help the patient.
- 3 If the patient is in contact with high voltage lines, do not approach, but wait until power is disconnected by authorised electrical personnel.
- 4 If power cannot be switched off quickly, remove the patient from the electrical supply without directly touching them. Use a non-conductive, dry material (eg a dry wooden broom handle).
- 5 Follow DRSABCD. Call triple zero (000) for an ambulance.
- 6 Hold any burnt area under cool running water for 20 minutes.
- 7 Remove jewellery and clothing from burnt areas, unless stuck to the burn.
- 8 Cover the burnt area with a loose and light nonstick dressing, preferably clean, dry, non-fluffy material such as plastic cling film.
- 9 Seek medical aid.

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Epileptic Seizure



First aid fact sheet

Epileptic seizure

Signs and symptoms

A patient having an epileptic seizure may:

- suddenly cry out
- fall to the ground, sometimes resulting in injury
- stiffen and lie rigid for a few seconds
- have rhythmic jerking muscular movements
- look very pale and have blue lips
- have excessive saliva coming out of their mouth
- sometimes bite the tongue or cheek, resulting in blood in the saliva
- lose control of their bladder or bowel
- be extremely tired, confused or agitated afterwards.

What to do

During the seizure

- 1 Protect the patient from injury by removing any objects that could cause injury.
- 2 Protect the patient's head by place something soft under their head and shoulders.
- 3 Time the seizure.
 - DO NOT try to restrain the person or stop the jerking.
 - DO NOT put anything in their mouth.
 - DO NOT move the person unless they are in danger.

After the seizure

- 4 Put the patient in the recovery position as soon as jerking stops, or immediately if they have vomited or have food or fluid in their mouth.
- 5 Manage any injuries resulting from the seizure.
- 6 DO NOT disturb the patient if they fall asleep, but continue to check their breathing.
- 7 Calmly talk to the patient until they regain consciousness. Let them know where they are, that they are safe and that you will stay with them while they recover.
- 8 Call triple zero (000) for an ambulance if:
 - the seizure continues for more than 5 minutes or a second seizure quickly follows
 - the patient remains unresponsive for more than 5 minutes after a seizure stops
 - the patient has been injured
 - the patient has diabetes or is pregnant
 - you know, or believe it to be the patient's first seizure.

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Heart Attack



First aid fact sheet

Heart attack



- Having one or more signs or symptoms of a heart attack means this is a life-threatening emergency—call triple zero (000) for an ambulance immediately.
- It is advised NOT to drive the patient to the hospital yourself, as you may need to perform CPR.

Signs & symptoms

The warning signs of heart attack vary. Symptoms can start suddenly, or develop over time and get progressively worse.

People can have just one symptom or a combination of symptoms. The patient can feel discomfort or pain in the centre of the chest. This chest pain can:

- start suddenly, or slowly over minutes
- be described as tightness, heaviness, fullness or squeezing
- be severe, moderate or mild.

Chest pain may spread from:

- discomfort in the neck or a choking or burning feel in the throat
- an ache, heaviness or pressure around one or both shoulders
- pain, discomfort, heaviness or uselessness in one or both arms
- an ache or tightness in/around the jaw
- a dull ache between the shoulder blades
- pain, heaviness, tightness or crushing sensation in the centre of the chest.

*** Not all patients feel chest discomfort (more than 40% of women do not experience chest pain*).** The patient can also feel:

- short of breath
- nauseous
- faint or dizzy
- a cold sweat.

* The Heart Foundation, <https://www.heartfoundation.org.au>

What to do

- 1 Follow DRSABCD.
- 2 Encourage the patient to immediately stop what they are doing and rest.
- 3 Help the patient to sit or lie down in a comfortable position.
- 4 Reassure the patient. Loosen any tight clothing.
- 5 If the patient has been prescribed medication such as a tablet or mouth spray to treat episodes of chest pain or discomfort associated with angina, help them to take this as they have been directed.
- 6 Ask the patient to describe their symptoms. If any of the symptoms are severe, get worse quickly, or have lasted 10 minutes, call triple zero (000) for an ambulance and stay on the phone. Wait for advice from the operator.
- 7 Give 300 milligrams of aspirin (usually one tablet) unless the patient is allergic to aspirin or their doctor has warned them against taking aspirin.
- 8 Stay with the patient until medical aid arrives.
- 9 Be prepared to give CPR if symptoms worsen.

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Heat Stroke



First aid fact sheet

Heat-induced illness

(previously called heat exhaustion and heat stroke)



- A heat-induced illness can quickly become life-threatening.
- If the patient does not improve quickly (within 10 minutes), send for an ambulance. Call Triple Zero (000).
- First aid for a heat-induced illness is cooling and rehydration.

Signs

The patient may be hot, sweaty and breathless. Or they may be hot and dry by the time they are seen.

Gradual signs of a worsening condition may include:

- not able to continue the activity—feeling hot, exhausted and weak
- high body temperature
- dizziness and faintness
- nausea, vomiting or diarrhoea
- pale skin and other signs of shock
- rapid weak pulse
- poor muscle control or weakness, or unsteady gait
- decreasing levels of consciousness, confusion, or seizures.

If the patient is not sweating, this is a sign of serious illness.

Carbohydrate electrolyte fluids (any commercially available 'sports drink') can be an alternative to water for the management of exertion-related dehydration. As a guiding principle, oral rehydration should be guided by the patient's thirst. However, if the patient is suffering heat-induced illness and are dehydrated, they may not feel thirsty.

What to do

- 1 Follow DRSABCD.
- 2 Lie the patient down in a cool or shaded area.
- 3 **Strip** the patient of as much clothing as possible.
If the patient does not improve quickly (within 10 minutes), call Triple Zero (000) for an ambulance.
- 4 **Soak** the patient with any available water.
- 5 **Fan** the patient continuously.
- 6 Give cold water to the patient to drink if they are fully conscious and able to swallow.

If practicable, immersion in a bath of cold water is the most effective cooling means possible.

For the patient over 5 years

- 1 Immerse the patient (whole-body from the neck down) in a bath of cold water (preferably 1–7°) for 15 minutes.
- 2 Continuously observe the patient to ensure an open airway in case of any change in their level of consciousness.

If cold bath is not available, use a combination of the following as available:

- 1 Wet the patient with cool or cold water under a shower or with a hose or other source of running water.
- 2 Apply cold packs to the neck, groin, armpits, facial cheeks, palms of hands, soles of feet.
- 3 Repeatedly wet the skin with a wet cloth or spray bottle.
- 4 Fan continuously.

For the patient under 5 years

- 1 Place the patient in a bath of lukewarm water (if available) and sponge frequently.

If cold bath is not available, use a combination of the following as available:

- 1 Wet the patient with cool or cold water under a shower or with a hose or other source of running water.
- 2 Repeatedly wet the skin with a wet cloth or spray bottle.
- 3 Fan continuously.

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Hypothermia



First aid fact sheet

Hypothermia



- DO NOT rub affected areas.
- DO NOT use radiant heat such as fire or electric heaters.
- DO NOT give alcohol.

Signs and symptoms

Mild

- feeling cold
- shivering
- clumsiness and slurred speech
- apathy and irrational behaviour

Severe

- shivering ceases
- difficult to find pulse
- slow heart rate
- loss of consciousness

What to do

- 1 Follow DRSABCD.
- 2 Move the patient to a warm, dry place.
- 3 Help the patient to lie down in a comfortable position. Handle the patient as gently as possible, avoiding excess activity and movement.
- 4 Remove any wet clothing from the patient.
- 5 Place the patient between blankets or in a sleeping bag, and wrap them in an emergency blanket.
- 6 Cover the patient's head to maintain body heat.
- 7 Give the patient warm drinks if they are conscious. Do not give alcohol.
- 8 Place hot water bottles, heat packs and other sources of external heat directly on the patient's neck, armpits and groin.
Be careful to avoid burns.
Body-to-body contact may be used if other means of rewarming are not available.
- 9 If hypothermia is severe, call triple zero (000) for an ambulance.
- 10 Stay with the patient until medical aid arrives.

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Sprains and Strains



First aid fact sheet

Sprain and strain



It can be difficult to tell whether an injury is a fracture, dislocation, sprain or strain. If in doubt, always treat as a fracture.

Signs and symptoms

Sprain

- intense pain
- restricted movement of the injured joint
- rapid development of swelling and bruising

Strain

- sharp, sudden pain in the region of the injury
- usually loss of power
- muscle tenderness

What to do

- 1 Follow DRSABCD.
- 2 Follow RICE:
 - **Rest** – rest the patient and the injured part
 - **Ice** – apply an ice pack or cold pack for 15 minutes every 2 hours for 24 hours, then for 15 minutes every 4 hours for 24 hours
 - **Compression** – apply a compression bandage firmly to extend well beyond the injury
 - **Elevation** – elevate the injured part.
- 3 Avoid HARM:
 - **Heat**
 - **Alcohol**
 - **Running** or other exercise of the injured area
 - **Massage**.
- 4 Seek medical aid.

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APPENDIX P

Pollution Incident Response Management Plan

Boral Cement Limited

5 Hume Street
Marulan South NSW 2579

www.boral.com.au