

Peppertree Quarry **Environmental Management Strategy**

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Change History

Rev No.	Date	Prepared By	Approved By	Comments
1	December 2010	Rod Wallace(Boral)	(Boral)	First version of EMS based on 2007 approval
2	November 2016	Sharon Makin (Boral)	A Shedden	Revised Final version of EMS (Mod 4 August 2016 approval)
3	April 2017	Sharon Makin (Boral)	A Shedden	Revised Final version of EMS Including DPE comments

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1 INTRODUCTION

1.1 BACKGROUND

Boral Resources (NSW) Pty Ltd (Boral) own and operates Peppertree Quarry (the Quarry), a hard rock quarry located in Marulan South, New South Wales (refer to Figure 1). In February 2007, Boral was granted Project Approval (06_0074) to establish and operate the Peppertree Quarry under Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act). Construction of the Quarry was completed in 2013 with commercial extraction operations having commenced in 2014.

The existing Quarry operations have been constructed and operated in accordance with the Project Approval (with modifications in 2009, 2011, 2012 and 2016) and an Environment Protection Licence (EPL No. 13088).

The 2007 Project Approval required the preparation and implementation of a number of management plans detailing environmental commitment, controls and performance objectives at the Quarry throughout its operational life. In accordance with the Conditions of Approval (CoA), an Environmental Management Strategy (EMS) was first prepared by Boral in 2010.

In August 2016, the Project Approval was modified for the fourth time (hereafter referred to as Modification 4) under Section 75W of the EP&A Act, to allow an extension of in-pit operating hours and the establishment of a new overburden emplacement area.

This document is a revised version of the initial 2010 EMS and incorporates changes associated with Modification 4 and reflects the Environment Management System associated with current quarry activities. The EMS will continue to remain a dynamic document which will be updated as required over the life of quarry operations until the Project Approval end date of December 2038.

1.2 OVERVIEW OF OPERATIONS

The Quarry has an identified resource area of approximately 250 million tonnes, which dependent upon extraction rates, would allow quarrying for 70 years or more over an area of approximately 104 hectares (ha), within a 650 ha parcel of land owned by Boral.

The Quarry produces graniodorite aggregate products and manufactured sand. All quarry products and materials are transported by rail to a number of Boral rail terminals for distribution by trucks into the Sydney metropolitan area.

Typical quarrying operations involve the stripping of overburden and the extraction of hard rock using open-cut drill and blast techniques.

Overburden is stripped by dozer, loaded onto trucks using excavators and/or front end loaders and transported to the overburden emplacement areas, where it is spread and shaped by dozer.

Traditional drill and blast methods are then used to break up the hard rock. A drill rig stationed on top of each production bench drills a series of holes that are later charged with explosives, detonators and delays. Boral apply standard practice of limiting the maximum instantaneous charge to stay within the relevant noise and vibration criteria.

Blasted rock is then processed on-site using various crushers and screens to obtain the desired product. Material is initially crushed in a primary mobile crusher located within the pit, which is currently fed by an

excavator, front end loaders and trucks. In the future in-pit works will avoid the use of trucks, with blasted rock fed directly into the primary mobile crusher by excavator. After passing through the primary crusher, the crushed material is taken from the pit along a series of conveyors to the first set of screens located to the northwest of the pit and material is stockpiled in a surge pile. Material in the surge pile is reclaimed and conveyed to the main processing area where it undergoes further crushing, screening and shaping. Product material is stored in the various covered storage bins prior to being dispatched off-site by train.

1.3 SCOPE AND OBJECTIVES

This EMS applies to all activities undertaken by the Quarry including quarrying, crushing, screening, stockpiling and transportation of quarry products, maintenance activities; and associated service and support functions.

The performance of environmental management at Peppertree quarry will be managed through an EMS that is being rolled out across all of Boral's businesses within the BCM Division. The EMS will be tailored specifically to Peppertree quarry, and integrate the management plans and monitoring programs that will progressively be prepared in response to conditions of the Project Approval.

This Report has been prepared to meet the scope and objectives of Development Consent Condition 1 (Schedule 5) requirement for the development and implementation of an Environmental Management Strategy (EMS). The strategy must

- (b) provide the strategic framework for the environmental management of the project;
- (c) identify the statutory approvals that apply to the project;
- (d) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the project;
- (e) describe the procedures that would be implemented to:
 - keep the local community and relevant agencies informed about the operation and environmental performance of the project;
 - receive, handle, respond to and record complaints;
 - resolve any disputes that may arise during the course of the project;
 - respond to any non-compliance; and
 - respond to emergencies; and
- (f) include:
 - copies of any strategies, plans and programs approved under the conditions of this approval; and
 - a clear plan depicting all the monitoring to be carried out under the conditions of this approval.

The EMS is structured around the Plan-Do-Check-Review framework and Continual Improvement objectives outlined in the international environmental management standard ISO-14001.

1.4 RESPONSIBILITY FOR IMPLEMENTATION

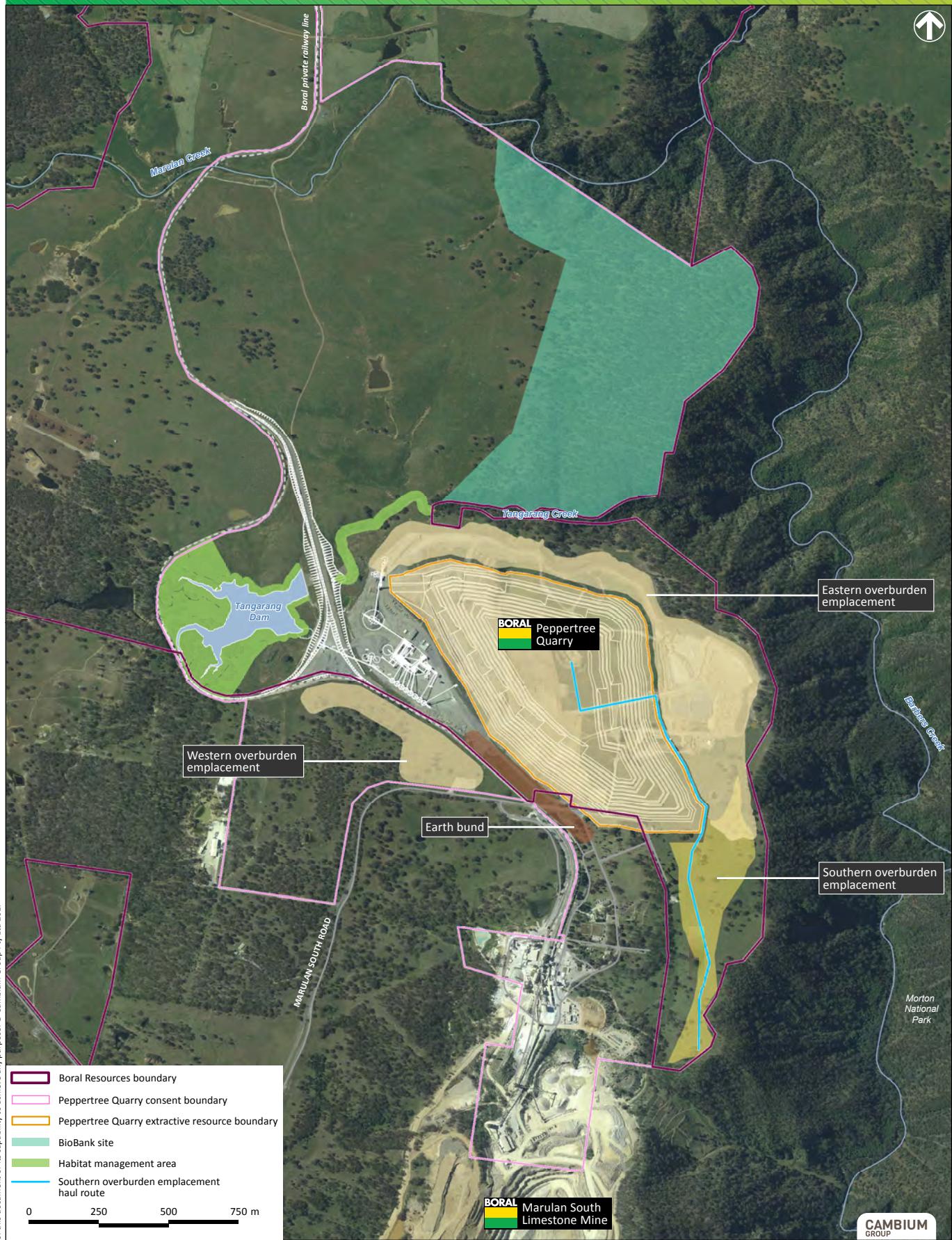
The Quarry Manager carries ultimate responsibility for the ongoing development and implementation of this EMS and providing the necessary resources as required. The site Environmental Officer is responsible for carrying out and/or coordinating the monitoring and reporting requirements of this plan, document review and updates and stakeholder engagement.

Operations personnel (Quarry Supervisors) are responsible for implementing the measures and onsite actions contained in the strategy.

Figure TBA

Site layout

Annual Environmental Management Report / Peppertree Quarry



1.5 ALIGNMENT WITH OTHER PLANS

This document is a revised version of the EMS initially prepared by Boral (2010). This EMS document outlines the overarching strategy of which the other environmental management plans – Air Quality, Water, Aboriginal Heritage, Noise and Blast, and Biodiversity and Rehabilitation form a part of.

1.6 DOCUMENT STRUCTURE

The structure of the Management plan is outlined in Table 1.

Table 1: Structure of the Management plan

Section	Content
1	Provides an overview of the project, and objectives of the plan
2	Outlines the management system
3	Policy and Planning components of the system
4	Implementation components of the system
5	“Checking and review” components of the system
6	Summaries the management actions to be undertaken
7	Lists references used in the plan preparation

2 CONTEXT FOR ENVIRONMENTAL MANAGEMENT

2.1 OVERVIEW

The context for environmental management at Peppertree quarry 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 location 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 Peppertree quarry will seek to meet these expectations and earn a social licence to operate from the local community.

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

2.2 BORAL INTEGRATED HSEQ MANAGEMENT SYSTEM

Peppertree Quarry 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 HSEQ MS provides structure and guidance on:

- Company environmental objectives;
- identification, monitoring and management of environmental aspects and
- impacts associated with all Boral operations
- Regulatory compliance;
- Roles and responsibilities; and
- Community expectations.

The HSEQ MS includes the following nine Environmental Standards:

- Environmental Aspects and Impacts;
- Water Management;
- Land Management;
- Waste Management;
- Noise Management;
- Air Management;
- Spill Management;
- Ecosystem and Biodiversity Conservation; and
- Culture and Heritage Protection.

The Boral HSEQ MS is aligned with the international standard ISO-14001, and contains the elements associated with Policy and Planning, Implementation and Maintenance, and Checking and Review.

Each element contains the following and is detailed in this Strategy Document.

Planning

- Preparation of an Environmental Aspects and Impact register that will, through a process of risk rating, determine what measures need to be implemented to minimise the environmental impacts identified.
- Identify the legal requirements that apply to the quarry.
- Setting of objectives and targets and associated improvement programs

Implementation and Maintenance

- Identification of site roles and responsibilities for environmental management.
- Identification and scheduling of targeted environmental awareness training for each employees level of responsibility
- Communication strategies both internally and externally with government agencies and the community.
- Documentation and its control.

- Operational Controls
- Emergency response and preparedness.

Checking and review

- Regular review of monitoring and management initiatives
- Internal audits undertaken annually for internal due diligence purposes
- external auditing
- Incident and complaint reporting.
- Annual management review of the EMS.

3 POLICY AND PLANNING

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

3.1 ASPECTS AND IMPACTS

Key Boral Document: GRP-HSEQ-1-03 Hazard Identification and Risk Management and

GRP-HSEQ-8-01 Environmental Aspects and Impacts

The identification and control of environmental risks at Peppertree Quarry is undertaken in accordance with the HSEQ MS Standards which aligns with Australian & New Zealand Standard AS/NZS 31000:2009 Risk Management - Principles and Guidelines.

In accordance with the HSEQ MS, every Boral operational site is required to develop an aspects and impacts register with the implementation of appropriate controls to minimise environmental risks associated with site based activities, products and services.

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

Peppertree Quarry as an Aspects and Impacts register in place.

3.2 STATUTORY REQUIREMENTS

Key Boral Document: GRP-HSEQ-1-04 Legal Compliance and Other Requirements

Operations 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 established on the company's intranet.

Peppertree Quarry operates under the compliance requirements of a number of statutory approvals, modifications and a NSW EPA Environmental Protection Licence. The key statutory instruments which therefore apply to Peppertree Quarry include the following:

3.2.1 Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)

Under the EPBC Act, approval from the Minister for the Environment is required for any action that would result in a significant impact on Matters of National Environmental Significance (MNES).

The nine MNES are:

- World heritage properties;
- National heritage places;
- Wetlands of international importance (Ramsar wetlands);
- Nationally threatened species and ecological communities;
- Migratory species;
- Commonwealth marine areas;
- The Great Barrier Reef Marine Park;
- Nuclear actions (including uranium mining);
- A water resource, in relation to coal seam gas development and large coal mining development.

It has been identified that one Endangered Ecological Community (EEC) would be impacted by future quarry work namely 'White Box Yellow Box Blakely's Red Gum Grassy Woodland', which is listed as an EEC under the NSW Threatened Species Conservation Act 1995 (TSC Act) and Critically Endangered Ecological Community (CEEC) under the Commonwealth EPBC Act.

The appropriate assessments have been conducted and concluded that the quarry operations are unlikely to significantly impact the EEC.

3.2.2 National Greenhouse & Energy Reporting Act 2007 (NGER Act)

The 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 Quarry.

3.2.3 Environmental Planning and Assessment Act 1979

Peppertree Quarry was declared a 'major development' under the provisions of Part 3A of the Environmental Planning and Assessment Act 1979 (EP&A Act) and State Environmental Planning Policy (SEPP Major Development) 2005. Since Project Approval was granted in 2007, there have been four approved modifications (with conditions), as detailed below:

- Modification 1 (2009) approved for exploratory blasting and test pitting in order to verify the design of the processing plant;
- Modification 2 (2011) approved for the construction of a new rail line rather than use the existing rail facilities to the Limestone Mine; and
- Modification 3 (2012) approved the construction of a high voltage power line from an existing substation to the processing plant and to provide a rail siding near the junction with the Main Southern Railway Line.
- Modification 4 (2016) approved for the extension of daily in-pit operating hours and Establishment of a new overburden emplacement area.

The quarrying operations will continue to be subject to the provisions of the EP&A Act for any subsequent changes or modifications to the operations. Additionally, the operations will need to be able to demonstrate compliance against the current CoA of the Project Approval under the provisions of the EP&A Act.

3.2.4 Protection of Environment Operations Act 1997

The objectives of the *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, Peppertree Quarry 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. 13088).

The EPL is issued for the scheduled activity of Crushing, Grinding, Separation and Extractive activities for tonnages greater than 2 million tonnes per annum.

3.2.5 Water Management Act 2000

3.2.5.1 Water Sharing Plan

The *Water Management Act 2000* (WM Act) is intended to ensure that water resources are conserved and properly managed for sustainable use, benefiting both present and future generations. Water sharing plans (WSP) prepared in accordance with the WM Act include rules for protecting the environment and administrating water licencing and trading.

Peppertree Quarry is located within the area of the Greater Metropolitan Region Unregulated Area WSP, and three surface water sources within the WSP as follows:

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

Peppertree Quarry is located within the Barbers Creek Management Zone and has a Water Access Licence issued under the WM Act to extract up to 145 megalitres of surface water from Tangarang Creek per year (Licence Number 10WA102701). The licence also allows for the construction and use of a 110 ML dam. In addition, a water bore licence (10WA116000) was transferred to the quarry allowing an annual extraction of up to 15 ML from surface water from Tangarang Creek per year.

3.2.5.2 Harvestable Rights

The WM Act provides formal means for the protection and enhancement of the environmental qualities of waterways and their in-stream uses as well as to provide for the protection of catchment conditions. Chapter 3, Part 1 identifies basic landholder rights including harvestable water rights and when access licences are required. The harvestable water right has been defined in terms of an equivalent dam capacity called the Maximum Harvestable Right Dam Capacity (MHRDC). Any capacity of the total of all dams on the property greater than the MHRDC may require a licence.

Schedule 1 of the *Water Management (General) Regulation 2004* (WM Regulation) identifies classes of dam which are exempt from licensing requirements. Dams solely for the capture, containment and recirculation of drainage and/or effluent, consistent with best management practice or required by a public authority to prevent the contamination of a water source, provided such dams are located on a minor stream referred to in section 53 (3)(b) of the Act. Based on the NSW Department of Water & Energy, *Farm Dams – Do you need a licence* (2008): “*Minor streams are defined by the Strahler stream ordering method as 1st and 2nd order streams that do not have permanent river flow*”.

As the on-site pits (dams) receive water from intermittent overland and through flow as opposed to a permanent river flow, the water source for the pits can be classed as minor stream. Therefore, the provisions of Schedule 1 (3) of the WM Regulation are satisfied and the pits (dams) are exempt from the need to obtain a licence under the WM Act.

3.2.6 SEPP (Sydney Drinking Water Catchment) 2011

Peppertree is located within the Sydney Drinking Water Catchment. The *State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011* (SEPP) aims to provide for healthy water catchments, delivering high quality water while permitting development that is compatible with that goal. The Policy also aims to support the maintenance or achievement of the water quality objectives for the Sydney

drinking water catchment and requires developments to demonstrate a neutral or beneficial effect (NorBE) on water quality.

3.2.7 National Parks and Wildlife Act 1974

The NPW Act is the primary piece of legislation for the protection of Aboriginal cultural heritage in New South Wales. The Office of Environment and Heritage (OEH) administer the NPW Act. The NPW Act provides statutory protection for Aboriginal objects by making it illegal to harm Aboriginal objects and Aboriginal places.

Under Section 86 of the NPW Act, a person must not harm or desecrate an Aboriginal object or place. In cases where harm to Aboriginal objects or places cannot be avoided, an Aboriginal Heritage Impact Permit (AHIP) may be sought under Section 90 of the Act. An AHIP is not required for Part 3A approvals in accordance with Section 75U of the EP&A Act. Peppertree quarry was assessed and approved under Part 3A of the Environmental Planning and Assessment Act, 1979 (EP&A Act).

Part 3A has since been repealed by the NSW Government; however, many of its functions still remain under transitional provisions. Part 3A provided developers with ‘comprehensive’ approval for development, without the need for obtaining further approvals under different Acts. The Part 3A approval process involved requirements established by the Director General of NSW Planning to ensure all environmental factors are adequately considered and addressed.

Accordingly, an Aboriginal Heritage Management Plan has been developed to manage heritage impacts associated with Peppertree Quarry.

3.2.8 Native Vegetation Act 2003

All clearing of native vegetation needed for the quarry has already been assessed and approved by the Minister for Planning. Any clearing of native vegetation beyond what is approved, is regulated by the Office of Environment and Heritage, under this Act.

3.2.9 Threatened Species Conservation Act 1995 (TSC Act)

The TSC Act aims to protect biological diversity of NSW and lists threatened or endangered flora and fauna species and ecological communities. Under the EP&A Act, impacts on threatened species listed under the TSC Act are required to be assessed.

A Biodiversity Assessment has been undertaken of the disturbance footprint of the proposed southern overburden emplacement area. The assessment identified that approximately 8.1 ha of the Endangered Ecological Community (EEC) ‘White Box Yellow Box Blakely’s Red Gum Grassy Woodland’ listed under the TSC Act would be impacted by the Project. Additionally, eleven threatened fauna listed under the TSC Act are considered to be potentially impacted by the modification.

A Biodiversity Offset Strategy has been formulated in accordance with the requirements of the Framework for Biodiversity Assessment: NSW Offsets Policy for Major Projects (2014) (FBA). The strategy is outlined within the Biodiversity Assessment Report and is required in order to offset unavoidable impacts to the EEC and potential habitat of threatened fauna species. The offset package would be implemented following approval of the proposed modification and prior to any clearing of native vegetation associated with the Southern Overburden Emplacement.

3.2.10 Heritage Act 1977 (Heritage Act)

This Act includes provisions relating to the protection and management of heritage items (historic heritage). A Historic Heritage Impact Assessment has been undertaken of the disturbance footprint associated with the proposed Southern Overburden Emplacement. No historic heritage sites were identified and therefore no further approvals are required under the Heritage Act.

3.2.11 Other Statutory requirements

Other Statutory instruments to which Peppertree Quarrying operations require compliance management are:

- Dangerous Goods Act 1975
- Local Government Act 1993
- Work Health and Safety (Mines) Act 2013
- Mining Act 1992
- Threatened Species Conservation Act 1995
- Pesticides Act 1999
- Noxious Weeds Act 1993
- Soil Conservation Act 1938
- Water Management Act 2000
- Roads Act 1993
- NSW Work Health & Safety Act 2011
- Mines Health and Safety Act 2004

3.3 OBJECTIVES AND TARGETS AND ASSOCIATED IMPROVEMENT PROGRAMS

Key Boral Document: GRP-HSEQ-1-05 Objectives, Targets and Improvement Plans

As part of a continual improvement process, 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 Peppertree Quarry and are outlined in the management plans.

These are consolidated and presented in Table 2.

Table 2: Peppertree Quarry Objectives and Targets

Management Plan	Objectives	Performance criteria
Aboriginal Heritage Management Plan	Identification of the Aboriginal sites that will be conserved and those that will be impacted by quarrying.	Methodology to be followed in AHMP and listing to be maintained
Aboriginal Heritage Management Plan	Conservation of identified aboriginal sites to allow their in-situ retention during the quarry's active life time and subsequent rehabilitation (i.e. conservation for future generations).	Implementation of the management measures – fencing and signage of sites to be conserved Education and respect of indigenous values (induction / declaration)
Aboriginal Heritage Management Plan	Management with integrity of aboriginal sites to be impacted by quarrying with through a combination of Aboriginal community involvement and archaeological excavation	All identified sites managed as per AHMP

Peppertree Quarry: Environment Management Strategy

Management Plan	Objectives	Performance criteria
Aboriginal Heritage Management Plan	ongoing consultation and involvement of the Aboriginal communities in the conservation and management of Aboriginal cultural heritage on the site	Follow protocol as per AHMP
Aboriginal Heritage Management Plan	Manage identification of any new Aboriginal objects or relics discovered during the operation of the quarry	Follow protocol as per AHMP
Water Management Plan	Compliance with regulatory requirements including water licences, Project Approval and EPA Environment Protection Licence	No non compliances
Water Management Plan	Minimisation of dirty water generation by implementation of appropriate erosion and sediment controls	Erosion and sediment controls in place
Water Management Plan	Maintain water balances for sustainable use and provision of environmental flows to Tangarang Creek;	10% environmental flow to Tangarang creek achieved 100% of the time.
Water Management Plan	Protection of surface and groundwater quality and availability	Controls as outlined in this WMP in place
Water Management Plan	Ensure appropriate water control systems are planned and established prior to commencement of any new quarrying activities with potential to impact water	Controls in place
Water Management Plan	Conduct appropriate and representative monitoring for verification that WMP is effectively implemented and meeting its objectives	Undertake monitoring as outlined in WMP
Water Management Plan	Having contingencies and resources for mitigating adverse impacts to surface and groundwater from quarrying activities.	Protocol as outlined in WMP to be in place and trained
Air quality Management Plan	Compliance with regulatory requirements including Project Approval and EPA Environment Protection Licence	No non compliances
Air quality Management Plan	implement best reasonable and feasible management practices to minimise off-site odour, fume and dust emissions	Management controls in the AQMP in place
Air quality Management Plan	minimise visual air pollution generated by the activities	Management controls in the AQMP in place
Air quality Management Plan	identify triggers for implementation of additional management response measures where required	SOP in place regarding dust suppression activities

Peppertree Quarry: Environment Management Strategy

Management Plan		Objectives	Performance criteria
Air quality Management Plan	implement best reasonable and feasible management practices to minimise off-site odour, fume and dust emissions	Management controls in the AQMP in place	
	assess the effectiveness of air quality control measures	Monthly review of air monitoring data including complaints	
Air quality Management Plan	quantify changes to air quality at residences and private properties near the site	Undertake monitoring as outlined in AQMP	
Air quality Management Plan	ensure dust concentrations and deposition levels remain below relevant air quality criteria at the nearest residences	Monthly review of air monitoring data including complaints Management controls in the AQMP in place	
Air quality Management Plan	obtain information to provide a basis for assessing the ongoing impact of Peppertree Quarry on air quality;	Monitoring undertaken as per the AQMP	
Noise and Blast Management Plan	Compliance with regulatory requirements including Project Approval and EPA Environment Protection Licence	No non compliances	
Noise and Blast Management Plan	implement best reasonable and feasible management practices to minimise noise levels emitted by the operations	Management controls in the NBMP in place	
Noise and Blast Management Plan	Identify potential noise sources and their relative contribution to noise impacts from the development	Monthly review of noise and blast monitoring data	
Noise and Blast Management Plan	Ensure air-blast overpressure and ground vibration levels during blasting events comply with the relevant assessment criteria in the Project Approval;	Monthly review of noise and blast monitoring data	
Noise and Blast Management Plan	assess the effectiveness of noise and blast control measures	Monthly review of monitoring data including complaints	
Noise and Blast Management Plan	Provided data suitable to demonstrate compliance with the CoA of the Project Approval and subsequent modifications.	Monitoring undertaken as per the MP	
Noise and Blast Management Plan	ensure noise , ground vibration and over pressure remain below relevant criteria at the nearest residences	Monthly review of monitoring data including complaints Management controls in the NBMP in place	

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Management Plan	Objectives	Performance criteria
Landscape and Rehabilitation Management Plan	Achieve successful revegetation and rehabilitation	<ul style="list-style-type: none"> • minimal disturbance to the HMA as a result of construction activities; • all disturbed areas replanted in accordance with this plan; • areas of failed plantings are replaced promptly; and • a low percentage of weeds present in the HMA.
Landscape and Rehabilitation Management Plan	Minimise impacts during vegetation removal	<ul style="list-style-type: none"> • no native vegetation that is to be retained is damaged or removed inadvertently; • all pre-clearing protocols are followed; and • no native animals are killed or injured during clearing.
Landscape and Rehabilitation Management Plan	Effective development of habitat connectivity	Maintaining health of vegetation within the perimeter bund.
Landscape and Rehabilitation Management Plan	Undertake successful management of Significant species	<ul style="list-style-type: none"> • monitoring results show persistence of <i>S. celatum</i> at the site; • native habitats are retained; • hollow-bearing trees outside of disturbed areas are retained on site; and • the HMA is managed and natural regeneration occurs.
Landscape and Rehabilitation Management Plan	Ensure successful rehabilitation of the site proactive site management	<ul style="list-style-type: none"> • natural regeneration occurring within 12 months of revegetating within HMA and on bunding; • no erosion of soils and no sedimentation of creek lines; • no weeds recorded in the HMA or on bunding within 18 months of revegetation; and • Bushfire Management Plan prepared and implemented in consultation with RFS and NPWS

4 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 1.3 above.

4.1 ROLES AND RESPONSIBILITIES

Key Boral Document: GRP-HSEQ-2-01 Organisational Roles, Responsibilities and Resources

Overall responsibility for environmental management and performance of Peppertree quarry is placed on the Quarry Manager. The Quarry Manager will be accountable for ensuring appropriate resources and training is made available to achieve compliance with the Project Approval, relevant legislation, and implement and maintain the EMS.

An Environmental Advisor will be based at the quarry to coordinate the implementation of the conditions of Project Approval together with EMS implementation and management. This role will also take the lead and be the primary contact with government agencies and community relations as well as site environmental training.

Site Supervisors will be responsible for environmental controls being employed during operations, responding to environmental incidents that occur on site, and coordinating resources to resolve them. Supervisors will also toolbox employees daily during the toolbox on aspects of the operation that might have specific environmental impacts on that day.

Quarry employees will be responsible for good house keeping and maintaining the areas in which they work. This includes alerting Supervisors to adverse environmental impacts as a result of quarry operations and responding to incidents such as spills and repairing environmental controls.

4.2 ENVIRONMENTAL TRAINING AND AWARENESS

Key Boral Document: GRP-HSEQ-2-03 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 undertake an annual site induction which covers both 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.

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

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

The Quarry Manager and shift supervisors provide environmental information through the regular toolbox talk presentations.

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 monthly report on environmental compliance and performance is prepared by the site environmental advisor. The report is presented to the management team at Peppertree for review and action where necessary.

The Boral State and Group Environmental Advisors are also provided with a monthly overview of any significant matters which may be escalated to Board level.

4.3 STAKEHOLDER COMMUNICATION AND ENGAGEMENT

Key Boral Document: GRP-HSEQ-2-02 Communication and Consultation

A key commitment within the Boral Environmental Policy 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".

4.3.1 Government Agencies

As with all of Boral Quarries NSW operations, open and frequent dialogue will be maintained with the DPE and other government agencies.

Regulatory authorities such as NSW EPA and Department of Planning and Environment will be informed of key operational activities in addition to the annual reporting required through Annual Returns, Annual Environmental Management Reports and website publishing of environmental monitoring data.

4.3.2 Community Relations

Peppertree Quarry has actively engaged with the local community since the commencement of the 2006 Environmental Assessment for the project. Ongoing communication and engagement with the community will include:

- Continued representation on the Community Consultation Committee;
- 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; and
- Actively managing and resolving community issues as they arise

The Quarry Manager and Environmental Advisor will be available to respond to any stakeholder enquiry or complaint. Signage at the Quarry entrance provides relevant contact details for general enquiries and environmental complaints.

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

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

A Stakeholder Engagement plan, available on the website, outlines our commitment to events and involvement in the community.

Overall, these management measures facilitate the effective environmental management of the quarry.

4.3.3 Community Consultative Committee (CCC)

A CCC was established prior to the commencement of construction activities to inform interested members of the local community of quarry development, operations and environmental performance.

The CCC has been established and continues to operate in accordance with the Terms of Reference which have been prepared in recognition of Schedule 5 Conditions 8 and 9 of the Project Approval and the DPE guidelines for CCC's.

The agenda of the CCC meetings includes updates on environmental performance, external stakeholder involvement and updates on operations. Minutes of the meetings are published to the website and provided to the CCC representatives to share with their relevant communities.

4.3.4 Access to Information

Boral will, during the life of quarry operations, 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 Schedule 5, Condition 12 and 13 of the Project Approval, copies of all documentation required by the Project Approval will be made available at the quarry office, for members of the local community to view. Additionally, the company website

http://www.boral.com.au/article/marulan_operations_homepage.asp will contain all of this information for anyone to access.

4.3.5 Community Complaints

Complaints about the environmental performance of quarry construction, development and operation will be received through a complaint phone line which will be posted on the quarry's website and regular newsletters. Complaints will also be received via the website and sent to the Environmental Advisor and Quarry Manager. Initial contact with a complainant will be made within 24 hours of the complaint being received by the Environmental Advisor or Quarry manager.

The Environmental Advisor will record each complaint in the sites complaint register and posted on the company's incident reporting database for internal reporting 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;
- the method by which the complaint was made;
- any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect;
- the nature of the complaint;
- the action taken by the licensee 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 AEMR.

4.3.6 Dispute Resolution

In the event that an environmental complaint or other matter of concern associated with Peppertree Quarry 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 practicable actions have been undertaken to resolve the matter. All relevant stakeholders will be advised in writing of the meeting outcomes and on any further actions able to be undertaken 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, in the event that a matter cannot be resolved directly with Boral, landowners have the ability to initiate the Independent Review process outlined in Schedule 4, Conditions 2 to 5 in the Project Approval. The decision made by the DPE once this process is followed will be final.

4.4 DOCUMENT CONTROL

Key Boral Document: GRP-HSEQ-2-04 Document Control and Records Management

The Quarry Manager and Environmental Advisor 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 any one 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.

4.5 OPERATIONAL CONTROL

Documentation in relation to how operational control will be undertaken includes but is not limited to Management plans, standard operating procedures, safe work method statements and checklists.

The Boral HSEQ system has a number of 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 standards of required operation as per these Boral HSEC documents are incorporated in the applicable Peppertree Quarry Management plan as discussed below.

4.5.1 Environmental Management Plans

Peppertree Quarry has developed and implemented a number of Management Plans which provide the framework for measuring, monitoring and managing environmental performance and compliance.

Copies of the Plans and Programs are maintained on-site as well on the website and are the subject of periodic environmental training and compliance auditing. Site specific procedures are further developed where required to detail the operational controls needed.

4.5.1.1 Air Quality Monitoring Plan

The Air Quality Monitoring Plan was prepared in 2011 with a review completed in November 2016. The key objectives of the Plan are to:

- Implement management response measures to ensure air quality meets statutory requirement;
- Monitor effectiveness of air quality control measures in meeting statutory requirements and performance objectives in ensuring quarry operations do not adversely impact the amenity of neighbouring residences; and
- Development of trends for ongoing assessment and management of air quality.

4.5.1.2 Noise and Blast Monitoring Program

The Noise and Blast Monitoring Program was prepared in 2011 with a review completed in November 2016. The key objectives of the Program are to:

- Management of noise levels for compliance with applicable statutory criteria;
- Identify, monitor and assess potential noise sources to ensure the amenity of neighbouring residences is preserved; and
- Implement methodologies to control noise with considerations to monitoring frequencies and locations; weather conditions; seasonal and quarry operational variations and measurement techniques.

4.5.1.3 Landscape and Rehabilitation Management Plan

The Landscape and Rehabilitation Management Plan was prepared in 2011 with a review programmed for February 2017, to include key identified Biodiversity offset area. The key objectives of the Plan are to:

- Control and rehabilitation of disturbed areas;
- Management of remnant vegetation; and
- Revegetation and landscaping of bunds and overburden with suitable species

4.5.1.4 Water Management Plan

The Water Management Plan was prepared in 2011 with a review completed in November 2016. The key objectives of the Plan are to:

- Implementation of a water balance strategy that includes details on water management, water saving measures and potential impacts on surrounding environment.
- Detail erosion and sediment controls;
- Include a surface water management program in relation to environmental flows, monitoring of water quality and response actions to exceedances of statutory and performance criteria; and
- Implementation of a groundwater monitoring program

4.5.1.5 Aboriginal Heritage Management Plan

The Aboriginal Heritage Management Plan was prepared in 2011 with a review completed in 2013 and again in November 2016. The key objectives of the Plan are to identify, protect, conserve, present and transmit Aboriginal heritage values associated with land on which quarrying operations are undertaken.

4.5.1.6 Inactive Plans

During the development and construction stages of Peppertree Quarry a Traffic Management Plan and Construction Noise Management Plan were developed and implemented. As the quarry is now fully operational, the objectives of these Plans are not relevant at this point in time. However, the Plans may

be reviewed, revised and implemented should any further significant development activities be conducted.

A Monitoring plan was also previously required which captured all the monitoring requirements of the site.

The need for this plan was removed from the Approval issued in August 2016 in regards to Modification 4.

4.6 EMERGENCY RESPONSE AND PREPAREDNESS.

Key Boral Document: GRP-HSEQ-2-09 Emergency Preparedness and Response

As part of the Peppertree Quarry EMS, an Emergency Response procedure 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) has been implemented at Peppertree Quarry, as well, that includes:

- 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; and
- Annual testing and review of the PIRMP.

The Environmental Advisor 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.

5 CHECKING AND REVIEW

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

5.1 MONITORING PROGRAM

Key Boral Document: GRP-HSEQ-3-01 Monitoring and Review

Peppertree Quarry has developed and implemented an Environmental Monitoring Program (EMP) that consolidates the statutory compliance requirements with Consent and EPL monitoring conditions. The site-based Environmental Advisor has the responsibility to ensure all monitoring and reporting is completed in accordance with Statuary requirements and EMS objectives. A summary of monitoring is presented in Table 3.

Results from the monitoring are reported monthly to the Peppertree Quarry Management team, on a regular basis to the CCC and placed on the website as part of the EPL requirements.

Table 3: Peppertree Statutory Compliance Monitoring

Monitoring Conducted	Regulatory Requirement	Frequency
Noise (LAeq 15 and 1min)	Consent conditions 4,5 and 10	Quarterly – January, April, July, October
Blasting (Overpressure and Peak particle Velocity)	Consent conditions 12,13 and 16	Each blast event
Air Quality <ul style="list-style-type: none"> • TSP and PM10 • Dust Deposition 	Consent conditions 17,18 and 20 Consent conditions 17,18 and 20	24 hours / day 6 in 7 day cycle monthly
Surface water Quality	Consent conditions 26 and 29	Quarterly - March, June, September, December
Environmental flow	Consent conditions 24	continuous
Ground water	Consent conditions 26 and 29	Quarterly – January, April, July, October
Meteorological conditions	Consent condition 21	continuous
Landscape and rehabilitation	Consent condition 34	monthly
waste	Consent conditions 41	As generated

5.1.1 Cumulative Impact Management

Boral is committed to reducing cumulative impacts created by the collective operation of local industry including Peppertree quarry, the BC Limestone Mine (and associated) processing plant and Aglime Fertilisers processing facility.

Effective management of cumulative impacts of noise and dust will be achieved by continuous improvement of quarry practices to minimise the individual contribution of the quarry. The analysis of quarry monitoring programs will also be compared to those for the adjacent BC Limestone Mine 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 AEMR.

5.2 AUDITING AND INSPECTIONS

Key Boral Document: GRP-HSEQ-3-03 Performance Assessments and Audits

5.2.1 Internal Audits and Inspections

The Quarry 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 Quarry Manager and Environmental Advisor 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 are reported to the relevant Regulatory Authorities 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.

5.2.2 External Audits

In accordance with Condition 4 (Schedule 4) of Development Consent (DA 140-6- 2005) an Independent Audit is conducted at Peppertree Quarry every 5 years, however the revised Approval following application for Modification 4 now requires an Independent audit every 3 years.

An Independent Audit was completed in August 2015. The next Independent Audit is scheduled to be undertaken in 2018.

Independent Auditors are suitably qualified and experienced whose appointment has been endorsed by the Director-General.

5.3 MANAGEMENT OF NON-COMPLIANCES AND INCIDENTS

Key Boral Document: GRP-HSEQ-3-02 Incident Reporting, Investigation and Action Management

Boral have 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 is implemented at Peppertree Quarry.

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

5.3.1 Administrative Non-Compliances

Non-compliances associated with administrative requirements with no potential for environmental harm will be reported to the DPE and EPA in accordance with Schedule 5, condition 6 of the Approval. It is the aim to report administrative non compliances within 7 days of identification of the noncompliance. Notification will be made through phone calls (and/or emails) and as part of annual reporting requirements. If required, a report will be prepared and supplied.

5.3.2 Incidents with Actual or Potential for Environmental Harm

Incident reporting will be conducted In accordance with Condition 8, Schedule 5, where by

“The Proponent must immediately notify the Secretary and any other relevant agencies of any incident.

Within 7 days of the date of the incident, the Proponent must provide the Secretary and any relevant agencies with a detailed report on the incident, and such further reports as may be requested.”

An incident as defined in the Approval, Schedule 1 is deemed to be “a set of circumstances that:

- Causes or threatens to cause material harm to the environment ‘; and or
- Breaches or exceeds the limits or performance measures /criteria in this approval.”

Under Part 5.7A of the *Pollution of the Environment Operations Act 1997* (POEO Act), a Pollution Incident Response Management Plan (PIRMP), which also requires immediate reporting of incidents, has been implemented at the Quarry. This 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 an incident to ARAs and neighbours;
- Staff training on their roles and responsibilities under the PIRMP; and
- Annual testing and review of the PIRMP.

The Quarry 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 Department of Environment and Planning 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.

5.4 MANAGEMENT REVIEW

The Boral HSEQ MS is reviewed on a regular basis.

The Peppertree 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 Department of Planning and Environment or other regulatory authorities; and
- Changes to the Boral HSEQ MS Standards as part of its continual improvement objectives

This Management plan document and the strategy are to be reviewed in response to Schedule 5 (Condition3) of the Project Approval which requires a review within 3 months of:

- An Annual review under Schedule 5 (Condition 9) of the Project Approval;
- Submission of an incident report in accordance with Schedule 5 (Condition 8) of the Project Approval;
- Of an Independent Audit under Schedule 5 (Condition 11) of the Project Approval; and
- Upon approval of any future Modifications to the Project Approval

If any of the above reviews result in any revisions, a revised EMS must be provided to the Secretary within 4-weeks for approval.

6 SUMMARY OF MANAGEMENT ACTIONS

The EMS provides the framework and guidance for the Quarry activities to be conducted in a manner that appropriate control measures are implemented to minimise the potential for adverse impacts on the amenity, property and safety of quarry neighbours and meet compliance requirements of the CoA of the Project Approval. A number of management actions have been put in place to assist in meeting these objectives.

These actions are summarised in Table 4.

Table 4: Summary of Management actions

Management action ref ID	Environmental management measure	Indicative timeframe	responsibility	Section
PLANNING				
PTQ-EMS-01	Boral Environment policy in place and displayed	ongoing	Quarry Manager	3
PTQ-EMS-02	Boral HSEQ system in place and implemented	ongoing	Quarry Manager	3
PTQ-EMS-03	Aspects and Impacts register in place and reviewed	Ongoing, reviewed annually	Quarry Manager	3
PTQ-EMS-04	Applicable legislation identified	Ongoing,	Quarry Manager	3
PTQ-EMS-05	Objectives and targets in place and measured	Ongoing, Annual review in AEMR	Quarry Manager	3
PTQ-EMS-06	Preparation of monthly report for management review	monthly	Quarry Manager	3
IMPLEMENTATION AND MAINTENANCE				
PTQ-EMS-7	All staff and contractors to be inducted. The induction will cover management of environmental impacts.	Annual (January)	Quarry Manager	4

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PTQ-EMS-8	Staff and contractors trained in Environmental procedures as required.	As required	Quarry manager	4
PTQ-EMS-9	Community Consultative Committee to be in place	Regular meetings	Quarry Manager	4
PTQ-EMS-10	Operate website and make available documents as required.	ongoing	Environment Advisor	4
PTQ-EMS-11	Maintain engagement in the community as outlined in the Stakeholder Engagement plan	ongoing	Quarry Manager	4
PTQ-EMS-12	Maintain community complaints phone line and register	ongoing	Environment advisor	4
PTQ-EMS-13	In accordance with EPL No. 13088, all data associated with monitoring of dust, noise and blasting events is posted onto the dedicated website for the Quarry.	monthly	Environment advisor	4
PTQ-EMS-14	An EPL Annual Return which provides a statement of compliance with the licence conditions within 60-days after the Anniversary Date.	Annually (September)	Environment advisor	4
PTQ-EMS-15	Management plans in place and supporting SOPs as operational controls	ongoing	Quarry Manager	4
PTQ-EMS-16	PIRMP and emergency response plan in place	ongoing	Quarry Manager	4
PTQ-EMS-17	PIRMP and emergency response drills undertaken	annually	Quarry Manager	4
PTQ-EMS-18	Incident / non-compliance reporting system to be in place	ongoing	Quarry Manager	4
CHECKING AND REVIEW				
PTQ-EMS-19	Undertake environmental monitoring as per table 3 and conditions of approval	ongoing	Quarry Manager	5

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PTQ-EMS-20	Monthly internal report to be prepared which identifies criteria exceedances or equipment failures	monthly	Environmental advisor	5
PTQ-EMS-21	Include a EMS progress report in the AEMR	Annual (March)	Environment advisor	5
PTQ-EMS-22	Undertake internal audit of the Peppertree quarry EMS	annual	Quarry Manager	5
PTQ-EMS-23	Complete an environmental incident report in the event a non compliance is identified during monitoring	As required	Environment advisor	5
PTQ-EMS-24	Undertake a review of the EMS: <ul style="list-style-type: none"> • Every 3 years • Following an audit • Following approval of a modification • Following an incident • Or as otherwise deemed necessary 	Review required within 3 months	Environment advisor	5
PTQ-EMS-25	Within 3 years of the date of the commencement of construction and every 3 years thereafter, unless the Secretary directs otherwise, the Proponent must commission and pay the full cost of an Independent Environmental Audit of the project	2018	Environment advisor	5

7 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

8 APPENDICES

APPENDIX 1

Boral Environment Policy

Environment Policy

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.



Mike Kane
Chief Executive Officer & Managing Director

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