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Peppertree Quarry BUSHFIRE MANAGEMENT PLAN

October 2020



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2	May 2020	Daniel Osborne		review by RFS
3	June 2020	Tracey Tjahjadi	Sharon Makin	addition of Mod 6 references
4	Oct 2020	Sharon Makin	Michael Higgins	wording change “shall” to “will”

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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. 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, 2016 and 2019) 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 October 2019, the Project Approval was modified for the fifth time (hereafter referred to as Modification 5) under Section 75W of the EP&A Act, to allow the development of a new overburden area (South-West Overburden Emplacement – SWOE) south of the existing Western Overburden Emplacement (WOE) in the north-western corner of the Limestone Mine and extension of the consent boundary to the south to encompass the SWOE along with construction of new infrastructure to link with the SWOE.

This was followed in April 2020, with the Project Approval modified for the sixth time (hereafter referred to as Modification 6) under Section 4.55 (1A) of the EP&A Act, to allow the replacement of the existing air filtration network with two baghouse air filtration units and associated ducting attached to the existing and approved secondary and tertiary processing facilities (i.e. crushing and screening plant). The baghouses are located within the current operating plant footprint.

This Bushfire Management Plan (BMP) has been prepared in accordance with Schedule B Part B Condition B76 of the Conditions of Approval (CoA):

“B76. The Proponent must:

- (a) prepare a Fire Management Plan in consultation with NSW RFS Southern Tablelands District Office, within six months of the approval of Modification 5.*
- (b) ensure that the project:*
 - (i) provides for asset protection in accordance with the relevant requirements in the Planning for Bushfire Protection (RFS, 2006) guideline; and*
 - (ii) ensure that there is suitable equipment to respond to any fires on the site; and*
- (c) assist the RFS and emergency services to the extent practicable if there is a fire in the vicinity of the site.”*

It is the first version of the BMP under the Project Approval and it will be updated as required throughout the duration of quarry operations, which has been approved until December 2038.

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 March) 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 as well as limited rural/residential land holdings.

An incoming bushfire has the potential to impact Boral in the following manner:

- Damage to exposed buildings
- Isolation from the general community
- Loss of regenerative plantings
- Loss of electricity supply

This BMP outlines the risks, controls and emergency response for Boral Peppertree Quarry operations.

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 granodiorite 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. The mobile crusher/conveyor system can be positioned close to the extraction location, thereby facilitating in-pit works to be “truck-less”. Blasted rock is 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 and screening. Product material is stored in the various covered storage bins prior to being dispatched off-site by train.

The proposed layout of the project is shown in Figure 1.

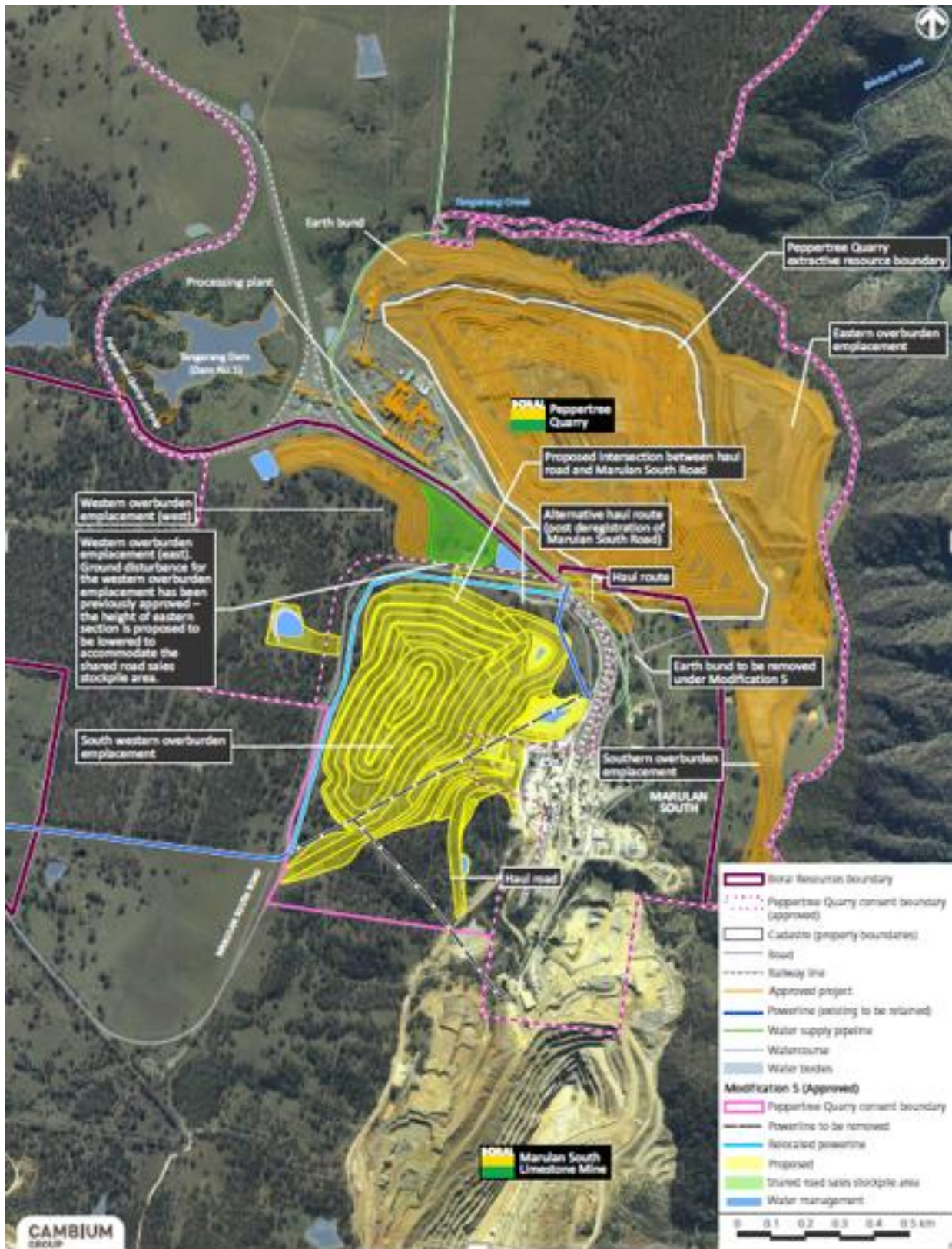


Figure 1. Site layout.

1.3 SCOPE

This BMP applies to all land within the approved Quarry consent boundary, as shown in Figure 1.

The BMP provides the framework and guidance for Quarry activities to be conducted in a manner whereby

- (a) Appropriate control measures are implemented to minimise the potential for adverse impacts on the quarry during the bushfire season,
- (b) Appropriate control measures are implemented to minimise the potential for quarry activities to cause a bushfire, and
- (c) To meet compliance requirements of Schedule 2 Part B Section B76 of the Project Approval.

1.4 RESPONSIBILITY FOR IMPLEMENTATION

1.4.1 Quarry Manager

The Quarry 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, licenses 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 Brigade Captain and the NSW RFS Southern Tablelands Zone;
- Ensure firefighting equipment is as compatible as possible with the NSW RFS; and
- Ensure a liaison meeting with the NSW RFS takes place at least once a year.

1.4.2 Environmental Advisor

The Environmental Advisor will report to the Quarry Manager. This role will be responsible for ensuring the Bushfire Management Plan is reviewed and that other site roles are aware of their responsibilities in regards to procedures detailed in this management plan.

1.4.3 Superintendents and Supervisors

These roles will have the following responsibilities:

- Implementation of the procedures contained in the management plan
- Undertake regular inspections and arrange maintenance (as required) of the bushfire protection measures
- Ensure that staff and contractors are aware of the emergency response plan in regards to Bushfires
- Ensure that staff and contractors are tool boxed and informed daily, if necessary on RFS warnings and Alerts and limits to quarry activities.

1.5 CONSULTATION

In accordance with Schedule 2 Part B Section B76, consultation has been undertaken with the NSW RFS Southern Tablelands District Office. A draft of the BMP was issued to the Office for comment. The BMP was updated accordingly following recommendations. Refer Appendix 1.

Marulan Rural Fire Service Captain Jim Divall and members of the Brigade visited Peppertree Quarry on the 3rd December 2019. This was to inspect the site and review the emergency response plan. Changes were made to the plan based on advice at the time of inspection and has been incorporated into this BMP.

1.6 ALIGNMENT WITH OTHER PLANS

The Aboriginal Heritage Management Plan, Biodiversity and Rehabilitation Management Plan and the Environment Management Strategy are aligned with this BMP.

1.7 DOCUMENT STRUCTURE

The structure of the BMP is outlined in Table 1.

Table 1. Structure of the management plan.

Section	Content
1	Provides an overview of the project and objects of the plan
2	Details the statutory requirements
3	Describes the Bushfire Risk
4	Details Bush fire protection and asset zones
5	Bushfire management controls
6	Outlines the response plan
7	Financial provisions for the work required
8	Specifies training requirements
9	Outlines the reporting and review requirements
10	References

2 STATUTORY REQUIREMENTS

2.1 ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

The project 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 five 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;
- 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; and
- Modification 5 (2019): approved for the development of a new overburden area (SWOE) south of the existing WOE in the north-western corner of the Limestone Mine, among other minor amendments to the site.
- Modification 6 (2020) approved for the replacement of existing dust extraction units with two baghouses and associated duct work.

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 relevant to bushfire management under the provisions of the EP&A Act shown in Table 2 below.

Table 2. Conditions of Approval (Project Approval – Modification 6).

CoA	Condition of Project Approval	Addressed in Section
A17	<p>EVIDENCE OF CONSULTATION</p> <p>Where conditions of this approval require consultation with an identified party, the Proponent must:</p> <ul style="list-style-type: none"> (a) consult with the relevant party prior to submitting the subject document; and (b) provide details of the consultation undertaken including: <ul style="list-style-type: none"> (i) the outcome of that consultation, matters resolved and unresolved; and (ii) details of any disagreement remaining between the party consulted and the Proponent and how the Proponent has addressed the matters not resolved. 	Section 1.5
B76	<p>BUSHFIRE MANAGEMENT</p> <p>The Proponent must:</p>	Sections 1 -8

	<ul style="list-style-type: none"> (a) prepare a Fire Management Plan in consultation with NSW RFS Southern Tablelands District Office, within six months of the approval of Modification 5. (b) ensure that the project: <ul style="list-style-type: none"> (i) provides for asset protection in accordance with the relevant requirements in the Planning for Bushfire Protection (RFS, 2006) guideline; and (ii) ensure that there is suitable equipment to respond to any fires on the site; and (c) assist the RFS and emergency services to the extent practicable if there is a fire in the vicinity of the site.” 	
D4	<p>MANAGEMENT PLAN REQUIREMENTS</p> <p>Management plans required under this approval must be prepared in accordance with relevant guidelines, and include:</p> <ul style="list-style-type: none"> (a) a summary of relevant background or baseline data; (b) details of: <ul style="list-style-type: none"> (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 project 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: <ul style="list-style-type: none"> (i) impacts and environmental performance of the project; and (ii) effectiveness of the management measures set out pursuant to condition D4(d); (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 project over time; (h) a protocol for managing and reporting any: <ul style="list-style-type: none"> (i) incident, non-compliance or exceedance of the impact assessment criteria or performance criteria; (ii) complaint; or (iii) failure to comply with statutory requirements; (i) public sources of information and data to assist stakeholders in understanding environmental impacts of the development; (j) a protocol for periodic review of the plan; and (k) a document control table that includes version numbers, dates when the management plan was prepared and reviewed, names and positions of people who prepared and reviewed the management plan, a description of any revisions made and the date of the Secretary’s approval. 	Sections 1 - 8

2.2 RURAL FIRES ACT 1997

Boral has a duty as a landholder under Section 63(2) of the Rural Fires Act 1997 to prevent the occurrence of bushfires and minimise the danger of the spread of bushfires on the land that they manage. A number of measures are in place and outlined in Section 4.

Pursuant to Section 99 of the Rural Fires Act 1997, and in accordance with gazette exemptions under Schedule 18, exemption can be made for the lighting of certain classes of fires during a Total Fire Ban.

These exemptions are gazetted in the lead up to the Total Fire Ban. "Mining Operations" are generally exempt such that a

"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."*

However, before proceeding with any works, it is strongly recommended that you confirm the exemption applies to any particular Total Fire Ban declaration.

The NSW RFS Commissioner may exclude exemptions from time to time on the Total Fire Ban.

To check this, you can call the Bush Fire Information Line on 1800 679 737 on the day.

Even with such an exemption, Risk assessments are undertaken on site and special permitting is required before any such works can be conducted.

2.3 CRITERIA AND GUIDELINES

The relevant legislation and standards applicable to the management of bushfire and maintenance of equipment include the following:

- Rural Fires Regulation, 2002;
- Australian Standard 1851.1-1995 Maintenance of Fire Protection Equipment;
- Planning for Bushfire Protection, 2006, and
- Australian Standard 1019-2000 Internal Combustion Engines – spark emission control devices.

2.4 PERMITS

The lighting of fires is not permitted on the Boral site as it is seen as a breach of the Environmental Protection licence in regards to air quality and pollution.

Should a need arise however, for hazard reduction burning, discussions would be held with the EPA, NSW RFS and DPIE.

It is noted that a fire permit is not required for hazard reduction fires outside the statutory bushfire season, however the relevant firefighting authority (NSW RFS) and adjoining neighbours must be notified 24 hours prior to lighting the fire.

A fire permit must be sought from the Marulan Brigade Captain for fires during the Bushfire Danger Period. This permit is free and can be issued for up to 21 days. It is automatically revoked in the event of a Total Fire Ban or if the Fire Danger Rating reaches Very High or above.

Should a Hazard reduction burn need to occur, the following would be adhered to...

- DO NOT burn on days declared as a Total Fire Ban or when the Fire Danger Rating reaches Very High or above as advised by the RFS;

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- DO NOT burn on a “no burn day as declared by the Department of Environment and Conservation;
- DO NOT burn unless the necessary approvals and/or permits have been sought (Southern Tablelands Zone must be notified 24 hours before a hazard reduction burn takes place, during business hours on 02 6226 3100);
- DO NOT burn if neighbours and the relevant fire authority (Brigade Captain) have not been notified 24 hours prior; and
- DO NOT leave the burn unattended.

3 BUSHFIRE RISKS

3.1 POTENTIAL FIRE SOURCES OFFSITE

Boral Peppertree Quarry and the Marulan South Limestone Mine are economic assets with the potential to experience major consequences as a result of a bushfire.

The bushfire hazards which have been identified as posing a significant risk to the site are as follows.

a) The habitat management area and rehabilitated overburdens

Overburden emplacements have been constructed to the east, west and south of the crushing operations. These areas are in various stages of rehabilitation but provide a potential source of fuel for any potential bushfire entering from adjacent farm or bush land. A road network is in place and allows for easy access and fire suppression if needed.

b) Morton and Bungonia National Parks

The land located to the east of the site is steep gorge country and supports a large contiguous area of eucalyptus forest and woodland as part of the Morton National Park, with Bungonia National Park situated to the south. A significant fire burning in this area has potential to spread onto the Peppertree site under east to south-east winds through a direct run of fire or by spot fires caused by wind-blown embers.

c) Marulan South

Prevailing winds for the site are predominantly Northerly and westerly. Ignition of a bushfire on any farming land to the north or west of the site has the potential to spread to the quarry either through a direct run of fire or by spot fires from wind-blown embers.

3.2 POTENTIAL FIRE SOURCES ONSITE

Potential fire sources of ignition on site include:

- Quarry activities including
 - Ignition of fuel or other flammable material on working equipment;
 - Ignition of fuel or flammable materials during equipment or plant maintenance, e.g. welding, electrical maintenance;
 - Train and track maintenance such as grinding
- Vehicle movements resulting in Ignition of vegetation leaf litter within uncleared areas, or areas under rehabilitation
- Electricity Transmission lines. High Voltage Power lines feed the quarry site from the west traversing through the Habitat Management Area. During hot weather, lines may sag and / or in windy conditions come into contact with each other or other structures causing arcing. This could cause sparks to ignite vegetation in the vicinity of the lines.
- Lightning during intense storm events
- Inappropriate disposal of cigarettes butts.

4 BUSHFIRE PROTECTION

4.1 ASSETS

The preparation of the BMP is core to ensuring people are kept safe in the event of a bushfire. Significant assets would also be impacted by bushfire and are also required to be managed and protected where possible. These assets are outlined below.

4.1.1 Economic Assets

Significant quarry assets include:

- Rail loop and loading facilities;
- Power lines;
- Administration, staff, store and workshop buildings;
- Aggregate and sand stockpiles;
- In-pit mobile crushing plant; and
- Processing plant.

4.1.2 Environmental Assets

The project area is in the South Eastern Highlands Interim Biogeographic Regionalisation for Australia Bioregion. A mix of native woodland, gully forest vegetation and areas of exotic pasture grasses can be found across the site.

Two endangered ecological communities, Yellow Box - Blakely's Red Gum grassy Woodland and Coast Grey Box – Stringybark dry woodland have been identified. *Solanum Celatum*, (an endangered plant species) is also known to occur on the perimeter of the quarry site.

Habitat for Koala and the Large Eared Pied Bat is also present.

4.1.3 Cultural Assets

The Marulan South area has a rich Aboriginal and post-colonial history. It holds significance for many Indigenous people including the Ngunawal and Gundungarra, and is within the boundaries of the Pejar Aboriginal Land Council. Previous studies at the Quarry and surrounding area have documented an Aboriginal archaeological record consisting of frequent and sometimes dense stone artefact sites.

A number of significant Aboriginal sites occur within the Marulan region in close proximity to Peppertree Quarry.

4.1.4 Property

Boral owns a number of properties adjacent to the quarrying operations. These are leased for agricultural purposes.

4.2 ASSET PROTECTION ZONES (APZ)

As outlined in the "Planning for Bushfire Protection 2019 (RFS)", an APZ is a fuel-reduced area surrounding a building or structure. It is located between the building or structure and the bush fire hazard.

An APZ provides: a buffer zone between a bush fire hazard and an asset; an area of reduced bush fire fuel that allows for suppression of fire; an area from which back burning or hazard reduction can be conducted; and an area which allows emergency services access and provides a relatively safe area for firefighters and home owners to defend their property.

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APZ's are in place for the majority of the assets listed.

Quarry Economic assets are located in cleared, graded hard stand areas with little vegetation. Rail infrastructure is installed across open grassland pasture with wide clearances to bushland. Private property assets are also located in rural lands and surrounded by grazing land.

Known Aboriginal sites located on quarry lands are associated with bushland locations. Should bushfire threaten these areas the Aboriginal Heritage Management Committee for the Peppertree Quarry are advised as per the Aboriginal Heritage Management Plan. Any ground disturbances for fire breaks are advised to the Committee.

Environmental assets will be protected where possible however as they are predominantly bordering the national parks and heavily vegetated zones, APZs are only managed through management access roads on the perimeter of the site and overburdens.

5 BUSHFIRE MANAGEMENT CONTROLS

5.1 OBJECTIVES AND PERFORMANCE CRITERIA

The primary objectives of the Bushfire Management Plan are to provide guidance and direction for Quarry activities to be conducted in a manner whereby appropriate control measures are implemented to minimise the impacts of bushfires and to meet compliance requirements of the CoA of the Project Approval.

The performance criteria used to assess the success of the management actions are outlined in Table 3.

Table 3. Bushfire management objectives and performance criteria.

Objective	Performance Criteria
Implement best reasonable and feasible bushfire management practices	Management controls in the BMP in place
Identify triggers for implementation of additional management emergency response measures when required	Management plan and procedures reviewed after any bushfire event potentially impacting the quarry
Assess the effectiveness of bushfire management	Regular audits and emergency drills
Continue close relationship with local RFS to liaise and support the RFS should an outbreak of fire occur	At a minimum, an Annual meeting to review BMP

5.2 GENERAL MANAGEMENT CONTROLS

5.2.1 Risk Assessment

An annual bushfire risk assessment will be undertaken on the site before the bushfire season begins, which typically occurs between October and March. However, factors such as fuel load, rainfall history and climatic conditions may bring forward or extend the bushfire season. This will be taken into account as to the timing of the risk assessment. The bushfire risk assessment will consider:

- Fuel loads on Boral land;
- Advice from the NSW Rural Fire Service;
- Climatic conditions (particularly rainfall) of the previous year; and
- Methodologies of bushfire risk assessment.

5.2.2 Bushfire Management Plan Map

A map will be prepared and maintained of the Quarry operations, containing at least the following data:

- Boundaries of Boral holdings;
- High risk assets;
- Access points;
- Water points;
- Locations of hazardous materials
- Access roads and tracks; and

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- Any previous fires or hazard reductions.

A table will be appended to the map with the following information:

- In case of fire call 000;
- Southern Tablelands Zone RFS contacts;
- Marulan RFS Brigade contacts; and
- Boral key contacts.
- The address of each quarry;
- GPS location in Australian Map Grid; and
- GPS location in latitude and longitude.
- NSW RFS escalating warning system and its meanings; and
- NSW fire danger levels and their meanings.

The basis of the map, with the emergency services locations is shown in Figure 2.

This information will be reviewed as part of the risk assessment prior to the bushfire seasons.



Figure 2. Emergency services location map.

5.3 SPECIFIC MANAGEMENT MEASURES

5.3.1 Mowing

Asset Protection Zones associated with infrastructure and where vegetation is present will be mown on a regular basis. The mowing timeframe will be assessed based on weather conditions and may be more frequent as the bushfire season approaches.

Mowing will not take place on days of very high fire danger or above. Mowers will 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. During summer, mowing or slashing works will not be undertaken in the heat of the day, to lessen the risk of ignition.

5.3.2 Firebreaks and Perimeter Tracks

The risk of bushfires in adjacent lands spreading to Boral assets will be minimised by the provision of slashed/mowed fire breaks and an access track along boundary fences or adjacent to overburden emplacements. Access tracks will be inspected and maintained as necessary.

Any area beside the access tracks will be cut or slashed extending firebreaks as required. Existing firebreaks will be maintained. Maintenance or the extension of firebreaks will not be undertaken on days of Very High or above Fire Danger.

Access dams and water supplies will be inspected and maintained if necessary. The installation of additional firebreaks will be considered as part of the risk assessment in conjunction with the NSW Rural Fire Service and following the relevant environmental approval being obtained.

5.3.3 Quarry Activities

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. Designated hot work areas will have completed a "Designated Hot Work Area Risk Assessment HSEQ-6-06-F01". All total fire bans, as determined by the NSW Rural Fire Service will be adhered to by employees, contractors and service providers, which is enforced by Boral Management.

Ralline maintenance activities will be conducted with adequate firefighting equipment available. No track work will be undertaken on Total Fire Ban days.

5.3.4 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 will not be used in or over vegetation on days of Extreme Fire Danger.

Diesel powered vehicles and equipment will not be used in or over vegetation on days of Extreme Fire Danger.

5.3.5 Electricity Transmission Lines

Electricity transmission easements will be inspected regularly to ensure regenerating vegetation does not have the potential to interfere with power lines that sag. Boral power line easements are fenced 12.5m from the line creating an area 25m wide. Mowing and clearing of regrowth occurs the width of the fenced corridor.

5.3.6 Lightning

In the event of a lightning strike at least two persons will keep a regular check on the location for at least the next 48 hours.

5.3.7 Smoking

The risk of accidental bushfire ignition from lit cigarettes will be incorporated in site inductions.

5.3.8 Firefighting Equipment

Boral has a wide range of facilities that will be made available to control and extinguish bushfires. The equipment includes but is not limited to:

- Fast fill hoses and connections;
- Two water carts – one equipped with water cannon;
- Clean water dams with maintained access points;
- Emergency firefighting tanks and pumps with fixed system in the main plant area;
- Earthmoving equipment – grader, dozer...etc.;
- Water pumps;
- Portable radios;
- Fire alarms; and
- First aid supplies.

This equipment will be made available on request to the NSW RFS for use within the quarry and surrounding areas as needed.

6 RESPONSE PLAN

6.1 FIRE INCIDENTS

Any incidents of unplanned bushfire will be reported directly to Triple Zero. The Boral Environmental Officer, Site Managers, and WHS Business Partner will be notified as soon as possible. Contact information is shown below in Table 5.

Table 5. Bushfire Contact List.

Name and Position	Mobile	Phone	Email/Radio Channel
Michael Higgins – Peppertree Quarry Manager	0401 894 082	02 4841 1701	michael.higgins@boral.com.au
Sharon Makin – Peppertree Environment Advisor	0401 894 185	02 4841 1701	sharon.makin@boral.com.au
Mark McCarthy – Limestone Site Manager	0401 894 248	02 4820 3006	mark.mccarthy@boral.com.au
Southern Tablelands RFS		02 6226 3100 Bush Fire Information Line 1800 679 737	Southerntableland.zone@rfs.nsw.gov.au
Marulan RFS Brigade Captain	0407 227 047	02 4841 1555	UHF Channel 16

6.2 RESPONSE

Information on the bushfire danger period and fire activity are monitored using the “Fires Near Me” App. All management team members have alerts set for the Marulan South watch area.

6.2.1 Total Fire Bans

On days of Total Fire Ban the following activities will take place:

- Check operation of firefighting equipment;
- Toolbox the warning to all persons on site;
- Monitor Fires Near Me App regularly; and
- On low visibility days (e.g. days of high smoke volumes) the Production Supervisors will complete regular inspections of the site to check for any fire activity.

On days of Total Fire Ban the following activities will NOT take place:

- Open air hot work;

- Driving of petrol vehicles on or over vegetation;
- Mowing/slashing; and
- Earthworks in vegetation.
- Any grinding activities on the rail.

6.2.2 Fire Conditions

The NSW RFS has established Fire Danger Ratings with recommended actions to be taken for each stage. These are shown below in Figure 3.


FIRE DANGER RATING	WHAT YOU SHOULD DO
 <p>CATASTROPHIC</p>	<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>
<p>EXTREME</p>	<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>
<p>SEVERE</p>	<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>
<p>VERY HIGH</p>	<p>Review your bush fire survival plan with your family. Keep yourself informed and monitor conditions. Be ready to act if necessary.</p>
<p>HIGH</p>	
<p>LOW MODERATE</p>	

Figure 3. NSW RFS Fire Danger Ratings.

On days of Severe Fire Conditions the following activities will take place in addition to Total Fire Ban activities:

- A risk assessment of all operations;
- A risk assessment on closing the plant and sending people home;

- An assessment of all firefighting equipment; and
- Establishment of communications with the NSW Rural Fire Service. The UHF Channel for the Marulan RFS can be monitored if required.

On days of Extreme Fire Conditions the following activities will NOT take place in addition to Total Fire Ban activities:

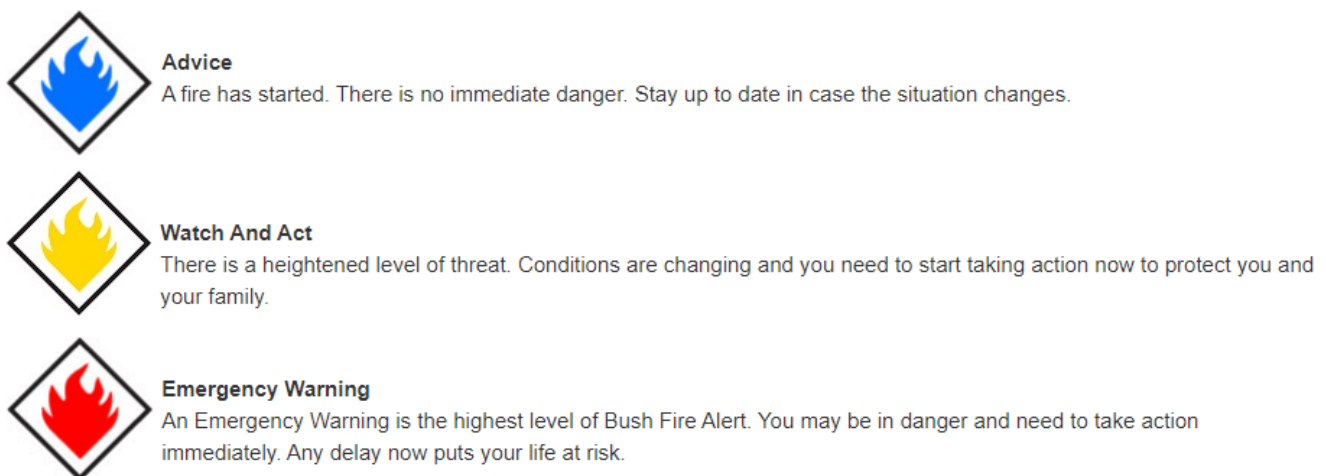
- Hot work;
- Driving in or on vegetation in any vehicle;
- Explosions other than pre-charged holes; and
- Train despatch wherever possible.

6.3 EMERGENCY WARNINGS

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. Directions of the RFS will be followed at this time.

Emergency warnings are broadcast over local public radio stations and the designated public emergency channel is 666 ABC Canberra. On receipt of any warnings in the immediate area the Site Manager or their delegate will inform our immediate neighbours.

The NSW RFS has a warning system in place which is shown in Figure 4.



For some fires, you may hear a warning message over your radio or television, such as a siren, or you may receive an [Emergency Alert text message or phone call](#). Other fires may start so quickly that there will be no time for any warning at all.

Figure 4. NSW RFS Alert Levels.

6.3.1 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 will:

- Check on the availability and operation of firefighting equipment; and

- Warn all persons on site of the “advice” via daily toolbox or the two way radio and advise them to monitor their work area for any fire activity.

6.3.2 Watch and Act

“There is a heightened level of threat and you need to start taking action now.”

On receipt of this warning Boral will:

- Activate and check all firefighting equipment;
- Ensure all persons on site are aware of the warning via toolbox or two way radio;
- If the fire has impact potential, risk assess and act on evacuation of workers to their home; and
- If evacuation is required, initiate the Emergency Management Plan and follow evacuation procedures, relevant duty cards and the instructions of the Incident Controller. The Incident Controller will contact emergency services to advise them that the site has been evacuated and that everyone has been accounted for.
- Pacific National rail will be advised.

6.3.3 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 will:

- Follow the emergency site procedure.
- Risk assess to stop persons leaving the site, if required (i.e. if access/egress has been impacted);
- Assemble and account for all persons in the planned safe location; and

7 FINANCING AND PROVISION

Funding of works associated with the BMP will be from operational and capital budgets associated with the quarry operations.

8 TRAINING

8.1 INDUCTION

All employees and contractors working onsite must be inducted.

Key staff will be trained in the emergency response procedures.

8.2 COMMUNICATIONS

All employees, contractors and service providers will be made aware of the emergency procedures applicable on the Boral site.

Regular communication and liaison will occur between the Peppertree site, Southern Tablelands RFS and the Marulan Brigade Captain.

This communication is to occur:

- Annually, either via a site inspection or meeting;
- 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 and to have local RFS volunteers aware of the site.

8.3 PLAN DISSEMINATION

All employees on site will be informed of the response requirements of this plan and receive a refreshment of these requirements at the start of each bushfire season. Copies of the plan will be disseminated those listed in Table 7.

Table 7. Plan dissemination contacts.

Name	Position	Address
Michael Higgins	Peppertree Quarry Manager	843 Marulan South Road, Marulan South
Mark McCarthy	Limestone Site Manager	Hume St, Marulan South
Sharon Makin	Peppertree Environmental Advisor	843 Marulan South Road, Marulan South
Jim Divall	Marulan RFS Brigade Captain	Cnr Portland and Goulburn Ave (PO Box 201) Marulan
NSW RFS	Southern Tablelands Zone	Zone Fire Control Centre 1410 Laidlaw Street, Yass NSW 2582 (PO Box 597)

8.4 SPECIFIC TRAINING

Where identified by management, additional specific training such as the correct use of fire extinguishers, may be implemented and delivered to relevant personnel and contractors. Appropriate staff will be trained in the relevant standard operating procedures.

9 REPORTING AND REVIEW

9.1 REGULATORY COMPLIANCE

The site will remain aware of regulatory state bushfire regulations through contact with the NSW Rural Fire Service.

9.2 REPORTING

The site Environmental Advisor is responsible for managing the environmental reporting program and arranging specialist consultants to prepare reports, as required. The activities and performance outcomes of the BMP will be presented in the Annual Review.

9.3 INCIDENT REPORTING

Incident notification and reporting will be conducted in accordance with Condition D9, Schedule 2, where by *“The Proponent must immediately notify the Secretary and any other relevant agencies of any incident”*.

An incident as defined in the Project Approval, Schedule 1 is deemed to be “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”

Incident reporting will also be undertaken in accordance with Condition R2 of the EPA Environment Protection Licence which states *“The licensee or its employees must notify all relevant authorities of incidents causing or threatening material harm to the environment immediately after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.”*

In accordance with Appendix 8 of the Approval, written incident notification and reporting must be undertaken once Boral becomes aware that an incident has taken place, within 7 days of becoming aware of the incident.

9.4 AUDITING

In accordance with the requirements of CoA D13 (Schedule 2), within 3 years of the date of the commencement of construction and every 3 years thereafter, unless the Secretary directs otherwise, Boral will commission and pay the full cost of an Independent Environmental Audit of the project. The adequacy of this BMP will be included in the Environmental Audit. An Independent Audit of the Quarry was conducted in 2018 and the next Audit is due in 2021.

9.5 REVIEW OF MANAGEMENT PLAN

The BMP is to be reviewed in line with Condition D6 and D7 of the Project Approval which requires a review within 3 months of:

- The submission of an incident report;
- The submission of an Annual Review;
- The submission of an Independent Environmental Audit;

- The approval of any modification of the conditions of this approval (unless the conditions require otherwise);
- Notification of a change in project stage; or
- The issue of a direction of the Secretary which requires a review.

If necessary, to either improve the environmental performance of the project, cater for a modification or comply with a direction, this plan must be revised, to the satisfaction of the Secretary. The proponent will continue to apply existing management plans, strategies or monitoring programs prior to the determination of a modification until the approval of a similar plan, strategy or program.

9.5.1 Review Objectives

This BMP will be reviewed periodically by suitably qualified persons to determine the efficacy of the plan and ensure it continues to fulfil its intended purpose. This will allow for and promote adaptive management through progressive stages of future quarry operations.

Bushfire management actions and performance will be measure through regular performance reviews. These will be based on the measurable outcomes identified in this management plan and key performance criteria outlined in Section 2.2. The reviews will be used to assess progress in meeting BMP objectives and performance criteria, and will be undertaken by the site Environmental Advisor in response to new or revised Boral Project approvals and to any major changes in site conditions or work methods.

10 REFERENCES

Planning for Bushfire Protection 2019, Rural Fire Service

Boral Cement Limestone Mine Operation Bushfire Management plan 2019

11 APPENDIX 1 CONSULTATION



Makin, Sharon <sharon.makin@boral.com.au>

RE: Boral Peppertree Quarry Bushfire Management Plan

1 message

Daniel Osborne <Daniel.Osborne@rfs.nsw.gov.au> 8 May 2020 at 14:32
To: "Makin, Sharon" <sharon.makin@boral.com.au>
Cc: Cherie Roach <Cherie.Roach@rfs.nsw.gov.au>, "Jim Divall - Marulan (JLDIVALL@YAHOO.COM.AU)" <JLDIVALL@yahoo.com.au>

Good afternoon Sharon,

We have completed the review of the Bush Fire Management Plan for the Boral Peppertree Quarry as requested. Several amendments and comments are contained on the attached document for your consideration.

We would appreciate a copy of the finalised document when available. I am contactable during business hours on (02) 6226 3100 should you wish to discuss this matter.

Best regards,

Daniel.

Daniel Osborne | Operational Officer | Southern Tablelands

NSW RURAL FIRE SERVICE

From: Makin, Sharon <sharon.makin@boral.com.au>
Sent: Wednesday, 6 May 2020 12:07 PM
To: Daniel Osborne <Daniel.Osborne@rfs.nsw.gov.au>
Cc: Cherie Roach <Cherie.Roach@rfs.nsw.gov.au>
Subject: Re: Boral Peppertree Quarry Bushfire Management plan

Thank you for the offer to update as you go!

word version attached.

SHARON MAKIN
Stakeholder and Environment Advisor - Marulan South

Telephone: 02 484 11701
Mobile: 0401894185
Email: Sharon.Makin@boral.com.au



Peppertree Quarry
843 Marulan South Road, Marulan NSW 2579

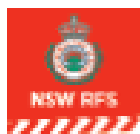
Peppertree Quarry: Bushfire Management Plan

On Wed, 6 May 2020 at 11:35, Daniel Osborne <Daniel.Osborne@rfs.nsw.gov.au> wrote:

Good morning Sharon,

I have begun reviewing the draft Bushfire Management Plan for the Boral Peppertree Quarry at Marulan. I have a number of suggested changes to make to the document. Could you please send me the draft document in Word format, so that I can make the necessary changes and send back to yourself?

Many thanks,
Daniel.



Daniel Osborne | Operational Officer | Southern Tablelands

NSW RURAL FIRE SERVICE
1410 Yass Valley Way, Yass NSW 2582

P 02 6226 3100 **F** 02 6226 3716 **M** 0409 368 282 **E** Daniel.Osborne@rfs.nsw.gov.au

www.rfs.nsw.gov.au | www.facebook.com/nswrfs | www.youtube.com/nswrfs

PREPARE. ACT. SURVIVE.

From: Makin, Sharon <sharon.makin@boral.com.au>
Sent: Thursday, 30 April 2020 2:55 PM
To: Daniel Osborne <Daniel.Osborne@rfs.nsw.gov.au>
Subject: Boral Peppertree Quarry Bushfire Management plan

Hi Daniel,

As discussed the Boral Peppertree Quarry has recently had an approval granted for the construction of an overburden emplacement at the quarry located in South Marulan.

One of the conditions of consent is to prepare a bush fire management plan in consultation with the Southern Tablelands District Office.

The quarry has had a bushfire emergency response plan in place since its operation but has not had to prepare a bush fire management plan as such.

We have attempted to prepare this document in house so I'm open to any suggestions that you may have on improving the plan.

With the bushfires in the region over January, we were in contact with Marulan RFS fairly regularly and have shaped the plan based on our experiences and learnings over that time.

Peppertree Quarry: Bushfire Management Plan

happy to discuss as needed and appreciate you taking out the time to review,


regards

SHARON MAKIN
Stakeholder and Environment Advisor - Marulan South

Telephone: 02 484 11701
Mobile: 0401894185
Email: Sharon.Makin@boral.com.au



Peppertree Quarry
843 Marulan South Road, Marulan NSW 2579
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 **RF3 Amended - Mod 6 Bushfire Management Plan 2020 draft.docx**
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