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Peppertree Quarry Aboriginal Heritage Management Plan

April 2017



Document Control

Document Information

Document Name	Peppertree Quarry Aboriginal Heritage Management Plan
Document Filename	April2017PTreeAHMP.final
Document Location	G:\090 Metro Quarries Marulan\Marulan\OPERATIONAL\03. OHSE\1.04 compliance with legislation\approval PA 06_0074\SCH 3-ENV PERF CONDS\32. Aboriginal Heritage\compliance

Change History

Author	Date	Change Description	Approved by	Version
ERM	20/01/2011	Original Final		1.0
Boral - R Wallace	20/07/2012	1 st Review Final Draft for Boral		2.0
Boral - R Wallace	03/08/2012	2 nd Review Final Draft for AMC		3.0
Boral - R Wallace	25/01/2013	3 rd Review Final Draft for		4.0
Boral – S Makin	7/11/ 2016	1 st Review Mod 4 draft for Boral	A Shedden	5.0
Boral – S Makin	4/4/17	Final AHMP submitted (including DP&E OEH and mgt committee comments)	A Shedden	6.0

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Introduction

1.1 BACKGROUND

Boral Resources (NSW) Pty Ltd (Boral) was granted Project Approval (06_0074) to establish and operate the Peppertree Quarry (a granodiorite hard rock quarry, formerly called the Marulan South Quarry) including all in-pit quarrying activities and supporting infrastructure such as a rail siding and loading facility, processing plant and water supply dams under Part 3A of the Environmental Planning and Assessment Act, 1979 (EP&A Act) in February 2007.

The Project Approval in 2007 required the preparation and implementation of a number of management plans to guide the environmental management of the quarry throughout its operational life. In accordance with the Conditions of Approval (CoA), a Aboriginal Heritage Management Plan (AHMP) was first prepared by ERM for Boral in 2011.

In August 2016, the Project Approval was modified for the fourth time under Section 75W of the Environmental Planning and Assessment Act 1979 (EP&A Act), to allow an extension of in-pit operating hours and the establishment of a new overburden emplacement area (hereafter referred to as Modification No. 4).

As a result of the initial AHMP actions, field and salvage works identified the importance of the heritage of the site. The cultural value of the area was also recognised and Boral initiated additional topsoil monitoring.

This AHMP has therefore been prepared in response to Schedule 3, Condition 32 of the Project Approval and represents the second review of the document since originally submitted to the DP&E in January 2011. It has been prepared to outline the ongoing works and commitment Boral has with the AMC and to meet the requirements of the Approval.

1.2 OVERVIEW OF OPERATIONS

Peppertree 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 Project Approval was issued for an initial operation period of 30 years, commencing in the northern portion of the resource area with an area of approximately 70 ha (refer Figure 1) which is bordered by a densely vegetated area to the east, which flanks a steep gorge that extends into Morton National Park. A rail spur runs adjacent to the western site boundary and there are a small number of rural properties to the north and west of the quarry. The nearest residences are located around 1.5 km from the quarry to the west in Marulan South and to the east on Long Point Road. The Boral Cement limestone mine is located immediately south of the quarry.

Quarry construction commenced in 2011 with operations commencing in early 2014. In 2014 and 2015 the quarry produced around 257,173 tonnes and 1,645,517 tonnes of aggregate respectively. The anticipated production for 2016 to 2017 is 2 million tonnes however, rates will be dependent on market demand and production levels at other Boral hardrock quarries.

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

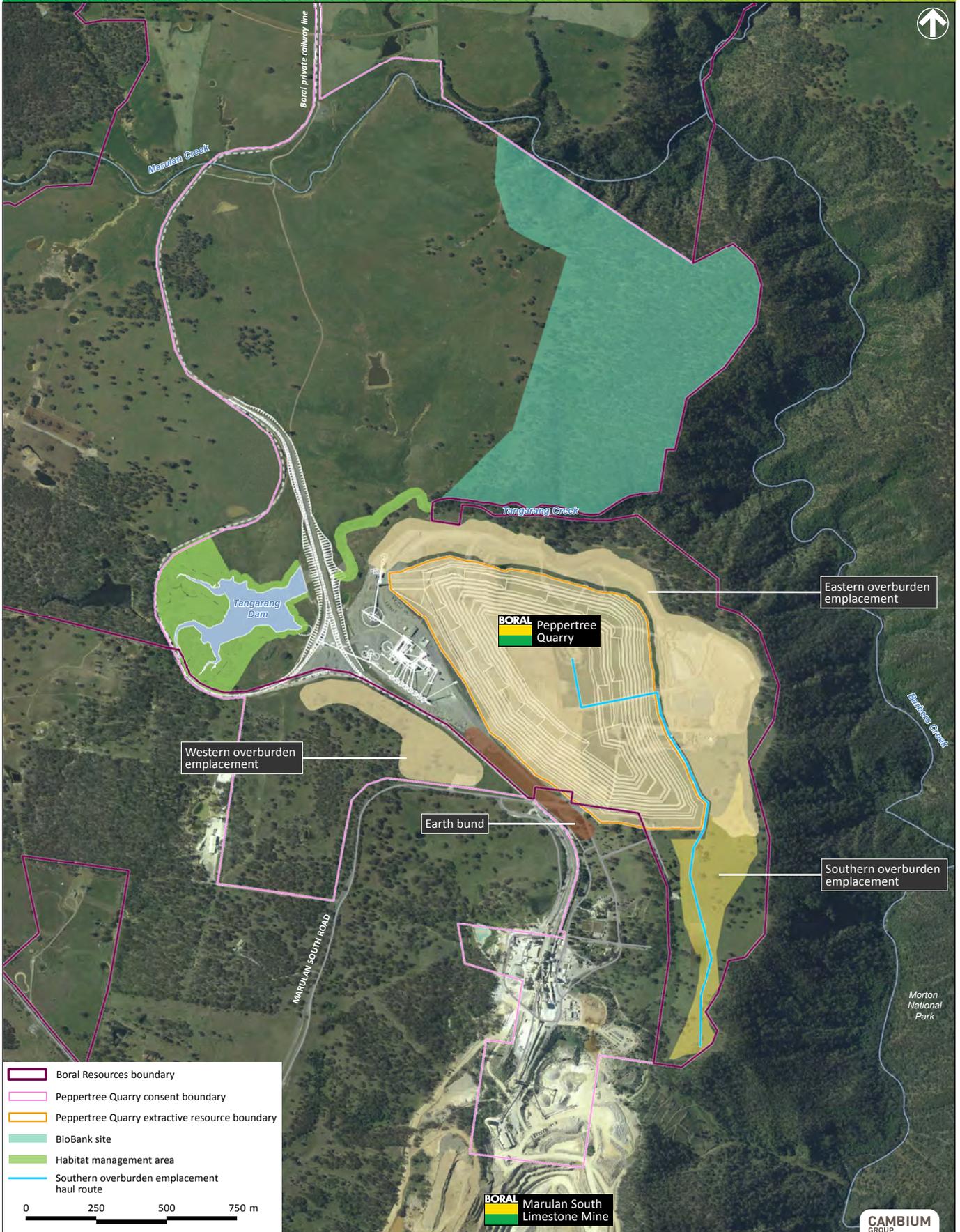
Overburden is stripped by dozer, loaded onto trucks using excavators and/or front end loaders and transported to the overburden emplacement areas, where it is spread and shaped by dozer.

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 onsite 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 offsite by train.

Figure 1
Site layout

Aboriginal Heritage Management Plan / Peppertree Quarry



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1.3 SCOPE AND OBJECTIVES OF THIS AHMP

In line with the principles of the Australia ICOMOS Charter for the Conservation of Places of Cultural Significance (The Burra Charter 1999) the primary objectives of this AHMP are to identify, protect, conserve, present and transmit the Aboriginal heritage values associated with the land, on which Boral's Peppertree quarry will be excavated.

As required by the condition of consent, the plan B

- Identifies the Aboriginal sites that will be conserved and those that will be impacted by quarrying.
- For Aboriginal sites to be conserved, a series of management measures have been developed that will allow for their *in situ* retention during the quarry's active life time and subsequent rehabilitation (i.e. conservation for future generations).
- As a number of Aboriginal sites will be impacted by the proposed quarry, this AHMP provides management measures designed to offset the impacts through a combination of Aboriginal community involvement and archaeological excavation.
- Identifies the protocol for the ongoing consultation and involvement of the Aboriginal communities in the conservation and management of Aboriginal cultural heritage on the site and
- Describes the measures that would be implemented if any new Aboriginal objects or relics are discovered during the project

Authorship

The original AHMP was prepared by environmental consultants Environmental Resources Management Australia in January 2011. The second version of the AHMP (October 2013), and this revision of the document, has been prepared by Boral in consultation with the AMC.

1.4 CONSULTATION

1.4.1 ABORIGINAL CONSULTATION

Community consultation for the preparation of the January 2011 AHMP stemmed from Aboriginal stakeholder groups that registered an interest in the 2006 Environmental Assessment preparation. The Aboriginal stakeholder groups that responded to the invitation to be consulted on the AHMP were Pejar Local Aboriginal Land Council, Buru Ngunawal Aboriginal Corporation and Ngunawal Heritage Aboriginal Corporation.

Representatives from these three stakeholders groups subsequently formed the membership of the Aboriginal Heritage Management Committee (AMC) for Peppertree Quarry.

In accordance with the requirements of CoA 32(b), consultation has been undertaken with the Office of Environment and Heritage (OEH) as well as the Aboriginal Heritage Management Committee (AMC).

This revision of the AHMP has been prepared following a meeting with members of the AHMC and representatives from Boral held at Peppertree earlier in 2016.

Following preparation of the draft document, copies were provided to the AMC representatives for further review and a subsequent meeting arranged held to discuss changes. This meeting and review was held at Peppertree quarry on the 5th December 2016.

Table 1 outlines the representatives who attended and provided comment on the plan.

Table 1: AHMP review meeting attendance

Name	Organisation/Position	March 2016	December 2016
Wally Bell	BNAC 6Director	attended	attended
Dean Delponte	NHAC 6Director	attended	attended
Justin Boney	PLCL (present at initial review meeting)	attended	Unavailable
Delise Freeman	PLCL 6CEO	attended	Unavailable but hard copy of document provided for review
Sharon Makin	Boral 6 Environmental Advisor Peppertree Quarry	attended	attended

1.4.2 OEH CONSULTATION

The Project Approval stipulates that preparation of this AHMP should involve the OEH. The (OEH) (formerly DECCW) was contacted for the January 2011 AHMP through Dimitri Young, Area Manager Landscape and Aboriginal Heritage Protection of the OEH Queanbeyan office.

Unfortunately, the OEH had a policy that they “do not approve or endorse these documents (HMPs) or become involved in their preparation”.

Following the preparation of the first revision of the AHMP, a copy was provided to the OEH by DP&E for their records. Feedback was provided to DP&E (refer Appendix 1). Concerns expressed in the correspondence have been considered in this revision.

The 2016 drafted AHMP was issued to Jackie Taylor at OEH.

Comments in regards to the plan were provided on the third of February 2017 (refer Appendix 2) and have been included in the plan.

OEH representatives Allison Treweek and Jackie Taylor visited Peppertree Quarry on the 1st March 2017 to inspect the site and to discuss their recommendation “that a reassessment of the significance of Aboriginal objects within the Peppertree Quarry area” be undertaken as part of the AHMP review.

It was outlined that a proposal was being developed to prepare both a scientific and cultural report which would assess the significance of the artefacts as well as describe the “story” of the area. This will be conducted independent to the salvage works and the AHMP review. OEH and the AMC will be consulted as this brief and report is developed.

OEH are satisfied with the approach and the works completed to date.

1.5 RESPONSIBILITY FOR IMPLEMENTATION

The Quarry Manager carries ultimate responsibility for the implementation of this AHMP 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.

Operations personnel (Quarry Supervisors) are responsible for arranging work as required under the plan and responding to adverse conditions. Quarry operations, are to be adjusted as appropriate to minimise impacts on heritage. Other site personnel are responsible for stopping work and reporting any possible heritage finds to the shift Supervisor immediately.

All staff are responsible for adhering to the conditions of the Site Declaration (refer Appendix 8) and respecting Aboriginal culture at all times.

1.6 ALIGNMENT WITH OTHER PLANS

This document builds upon information included in the existing AHMP prepared and approved in 2013.

This plan also aligns with the Biodiversity and rehabilitation plan which acknowledges management of Aboriginal heritage in relation to topsoil removal.

Where applicable, the management actions in other plans associated with the site recognise the significance of Aboriginal heritage and incorporates or references the relevant management actions from the AHMP.

1.7 DOCUMENT STRUCTURE

The structure of the Management plan is outlined in Table 2.

Table 2: Structure of the Management plan

Section	Content
1	Provides an overview of the project, and objectives of the plan
2	Details the statutory requirements as outlined in the conditions of consent dated August 2016
3	Describes the existing environment of the site and indigenous works undertaken to date
4	Describes the management actions to be undertaken to implement and manage the heritage values of the area
5	Outlines incident planning and responses
6	Summaries the management actions to be undertaken
7	Financial provisions for the work required
8	Outlines the monitoring, reporting and review requirements

9	Specifies training requirements
10	Lists references used in the plan preparation

2 STATUTORY REQUIREMENTS AND GUIDELINES

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 (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 (Mod 4) issued under the provisions of the EP&A Act.

Table 3 summarises the relevant to "post-construction" CoA of Project Approval, presented in Schedule 3 of the Project Approval (DPE, 2016).

Table 3: Conditions of Approval (DPE, 2016)

CoA	Condition of Project Approval	Referenced in AHMP
32	<p>The Proponent shall prepare and implement an Aboriginal Heritage Management Plan for the project to the satisfaction of the Director-General. The plan must:</p> <ul style="list-style-type: none"> (a) be submitted to the Director-General for approval prior to the commencement of construction; (b) be prepared in consultation with the OEH and relevant Aboriginal communities; and (c) include a: <ul style="list-style-type: none"> • description of the measures that would be implemented for the mapping, and salvage or relocation of the archaeological relics in the Tangarang Creek Dam 1 area; • description of the measures that would be implemented if any new 	<p>1.3</p> <p>3.0, 4.0</p> <p>5.0</p>

	<p>Aboriginal objects or relics are discovered during the project; and</p> <ul style="list-style-type: none"> • protocols for the ongoing consultation and involvement of the Aboriginal communities in the conservation and management of Aboriginal cultural heritage on the site. <p>The Proponent must implement the approved management plan as approved from time to time by the Secretary.</p>	3.0, 4.0
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2.1.1 STATEMENT OF COMMITMENTS

The Initial Statement of Commitments contained in the 2006 EA outlined the following in regard to Aboriginal cultural heritage:

“The Aboriginal cultural heritage value of those areas immediately adjacent to proposed Dam 1 will be managed through an archaeological salvage recovery prior to impact by excavation and inundation.

This will include salvage excavation testing of the confluence of Tangarang Creek in Dam 1 followed by further excavation of the site(s) with the highest potential to allow recovery of representative archaeological features. Salvage will be undertaken by archaeologists and representatives of the Aboriginal groups registered for this assessment. Records of location details and will be lodged on the DEC Aboriginal site register.”

Details of compliance against this commitment are presented in **Section 3**.

In addition to the Statement of Commitments and Project Approval requirements, the scope of this AHMP has been determined through consultation with the AMC and observations and experiences during the excavation and salvage as well as monitoring during construction works to date.

2.2 NSW NATIONAL PARKS AND WILDLIFE ACT, 1974 (NPW ACT).

In NSW, Aboriginal cultural heritage is managed primarily under the *NSW National Parks and Wildlife Act, 1974* (NPW Act). However, the Peppertree project 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.

Approval through Part 3A means that an Aboriginal Heritage Impact Permit (AHIP) is not required under Section 86 or 90 of the NPW Act. Accordingly, this AHMP is the appropriate document to manage heritage impacts associated with Peppertree Quarry.

2.3 GUIDELINES

Assessments of cultural heritage on the site and the methodologies outlined have been prepared in accordance with best practice and using the following guidelines:

- *Draft guidelines for Aboriginal cultural heritage impact assessment and community consultation* (DEC 2005) the guideline required for Part 3A matters;
- *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (DECCW 2011); and
- *Code of practice for archaeological investigation of Aboriginal objects in NSW* (the Code) (DECCW 2010)

2.4 OVERVIEW OF MODIFICATION No.4

The building and construction industry in NSW and particularly Sydney has seen a great deal of growth in the last year, with this growth forecast to continue. The NSW Government, together with Federal funding, has committed to significant infrastructure projects, including the Badgery's Creek Airport, new rail lines, and major road construction and upgrading. This has created a significant demand for hard rock aggregates from the main construction material suppliers. Boral is, and will be supplying a number of these projects with concrete and asphalt, that includes aggregates and sand from Peppertree Quarry on rail through terminals at St Peter's and Enfield.

Modification No. 4 was approved in August 2016, allowing an increase of inpit operating hours by 6 hours per day, 7 days a week in order to meet annual production volumes up to the approved limit of 3.5 million tonnes per annum. The modification also incorporates a proposed new Southern Overburden Emplacement that has been designed as an extension to the existing Eastern Overburden Emplacement and is located entirely within both Boral owned land and the quarry's development consent boundary.

An Aboriginal and Historic Heritage Impact Assessment was undertaken as part of the Modification approval application which considered the potential impacts associated with the construction of the southern Overburden Emplacement and increased operating hours on Aboriginal artefacts. The Assessment identified two Aboriginal sites in the study area, namely MQ25 (an artefact scatter previously collected) and MQ120 (a culturally modified tree). Management of these sites in line with the management plans was recommended.

It was also identified that there were some areas of moderate archaeological potential recorded within the study area, and that the placement of overburden on such sites could potentially cause damage.

However, it was recognised that the previous investigations in the area and namely those associated with the Peppertree Quarry had already provided a comprehensive picture of the Aboriginal archaeological landscape and as such, further investigation in the area subject to the modification is not considered warranted.

2.5 BORAL COMMITMENTS TO CULTURE AND HERITAGE MANAGEMENT

2.5.1 INTEGRATED MANAGEMENT SYSTEM

The Quarry operates under a Boral integrated Health, Safety, Environment and Quality Management System (HSEQMS). The HSEQMS has commitments to the Boral Environmental Policy through established standards and procedures which require internal conformance to high levels of environmental performance with continual improvement objectives.

Boral have an established corporate and divisional risk based audit program that periodically assess operational sites for conformance with HSEQMS requirements. In addition, the Quarry must be the subject of an Independent Audit every three years. An Independent Audit of the Quarry was most recently conducted in 2015 and the next Audit is due in 2018.

The HSEQMS Cultural and Heritage Protection Standard (GRP6HSEQ08-09) require each Boral operation quarry to preserve and maintain natural and man made heritage values, infrastructure and culturally significant artefacts and places. This is to be done through ensuring that

- Cultural or heritage impacts of a site's activities shall be identified and where required, a Cultural and/or Heritage Management Plan shall be implemented.
- Employees involved in the management of; artefacts or places of cultural or heritage significance or, works that may potentially impact on artefacts or places of cultural or heritage significance, shall receive appropriate training to understand and meet their obligations.
- A Cultural and Heritage Management Plan shall be developed where required.

3 SITE CONTEXT

3.1 SITE DESCRIPTION

The Quarry is located in Marulan South, 10 kilometres (km) southeast of Marulan, 35 km east of Goulburn and approximately 175 km southwest of Sydney, within the Goulburn Mulwaree Local Government Area (LGA) in the Southern Tablelands of NSW (Figure 1). Access is via Marulan South Road, which connects the Quarry and Boral's Marulan South Limestone Mine with the Hume Highway approximately 9 km to the northwest (Figure 1). Boral's private rail line connects the Quarry and Limestone Mine with the Main Southern Railway approximately 6 km to the north.

The Quarry is located on Boral owned land approximately 650 hectares (ha) in size, which includes the Quarry site, approximately 70ha in size, additional granodiorite resources to the north and south and surrounding land. The site is zoned RU1 – Primary Production zone under the Goulburn Mulwaree Local Environmental Plan (LEP) 2009. Mining and extractive industries are permissible in this zone with consent.

3.2 LAND USE

The Quarry is bordered to the south by the Limestone Mine, to the east by Morton National Park and by rural properties to the north and west. Surrounding land uses include mining, grazing, rural properties including an agricultural lime manufacturing facility, fireworks storage facility, turkey farm and rural residential. The main access for these properties is via Marulan South Road. Rural residential properties are also located to the northeast of the Quarry along Long Point Road. These properties are separated from the Quarry by the deep Barbers Creek gorge.

3.3 TOPOGRAPHY

Peppertree quarry is located on a plateau in the Southern Tablelands area of New South Wales. The maximum altitude of this plain is 700 m. The deeply incised Bungonia Gorge lies immediately to the east of the quarry and rugged hilly terrain occurs beyond this.

The quarry area itself is relatively flat to gently undulating.

3.4 HYDROLOGY

Peppertree quarry site lies within the catchment of the Shoalhaven River which is located approximately 5.5 km to the south east. Other creeks within the local area include Barbers Creek 500 m to the east, Marulan Creek 2 km to the north, Kerillon Creek 3 km to the south west, and Bungonia Creek 4 km to the south. Small intermittent creeks run 200 m to the south, north and west, and Tangarang Creek runs west to east bordering the quarry operations.

Two smaller tier 2 surface water drainage channels cut across the footprint of the quarry and previously collected drainage from offsite.

Clean water diversion drains are now in place to manage this flow away from the site.

3.5 ABORIGINAL CULTURAL HERITAGE VALUES

3.5.1 HERITAGE WORK UNDERTAKEN TO DATE

Figure 2 presents the locations of artefacts found and heritage work undertaken through to 2013.

2006 - Environmental Assessment

The outcomes of the survey were a series of 'open' sites comprising one or more Aboriginal flaked stone artefacts. In general the archaeological evidence suggested a low density of stone artefacts spread widely across the landscape. However, the areas immediately surrounding Tangarang Creek (located within the inundation area of a proposed water storage dam) were identified as having a higher density with a range of artefacts that warranted further investigation if they were to be impacted.

Eight sites were located within the proposed quarry footprint. The eleven sites in the proposed Dam 1 reservoir area were assessed as having high potential to contain subsurface deposits and moderate scientific significance for the density and frequency of artefacts (including the raw materials and artefact types) across the different landforms, which have the potential to contribute to archaeological research in the region.

2010 - Geotechnical works

Geotechnical works (19622, 26630 July 2010), monitored by an archaeologist (19621 July) and the Aboriginal representatives (whole period), resulted in the identification of ten new Aboriginal sites within the PAA.

The new Aboriginal sites were located across a range of landforms. The majority of these sites were salvaged.

2011 - Excavation and salvage

In accordance with the AHMP, archaeological excavation was undertaken across Aboriginal sites MQ8–10, 12–17, 19, 23 and 24 (refer to Figure 2). Archaeological excavation was divided into two phases: 1) testing; and 2) open area excavation. This occurred across two time periods between 12 January 2011 to 9 February (20 days) and 28 February to 4 March 2011 (5 days).

The excavation team was led by archaeologists from ERM with involvements from members of the AMC and other representatives from their respective Aboriginal stakeholder groups.

The first phase involved laying out transects within the landscape in and around Tangarang Creek for test pitting to determine the areas for open excavation. The transect locations were determined through knowledge gathered during earlier archaeological assessments and through consultation with members of the AMC.

Following the definition of the extent of the Aboriginal archaeological deposit, the open area location(s) were determined. A total of ten open area trenches were initially expanded beyond the 500mm by 500mm test pit size. Of these, eight trenches were expanded beyond 1m by 1m. In total 122m² of open excavation was undertaken within the study area.

A total of 2,089 pieces of artefactual stone were recovered from the test excavation and 20,956 pieces of artefactual stone recovered from open excavation—a total of 22,610 pieces of artefactual stone, representing 16,170 minimum number of individual artefacts.

Of the objects salvaged, the vast majority of artefacts were stone flakes, the resulting by-product of stone tool manufacture, indicating a strong Aboriginal occupation over the study area. Other significant features were identified located adjacent to Dam 1.

2011/2012 – Pre-development topsoil monitoring

Immediately following the archaeological excavation and salvage during January and February 2011, Boral invited members of the AMC to monitor topsoil in areas to be impacted by initial quarry development. This included aspects of the noise bund, initial quarry pit, the processing plant area and the approaches to the rail embankment.

Objects salvaged during the topsoil monitoring included a hammer stone, two cooking stones, red and white ochre, a number of stone core's and large number of stones used for cutting and their by-products during manufacture.

2012 – Construction site topsoil monitoring

Throughout the construction phase, the AMC was involved in monitoring stockpiled topsoil which was spread on finished batters and landforms around the initial quarry pit, rail embankment and processing area.

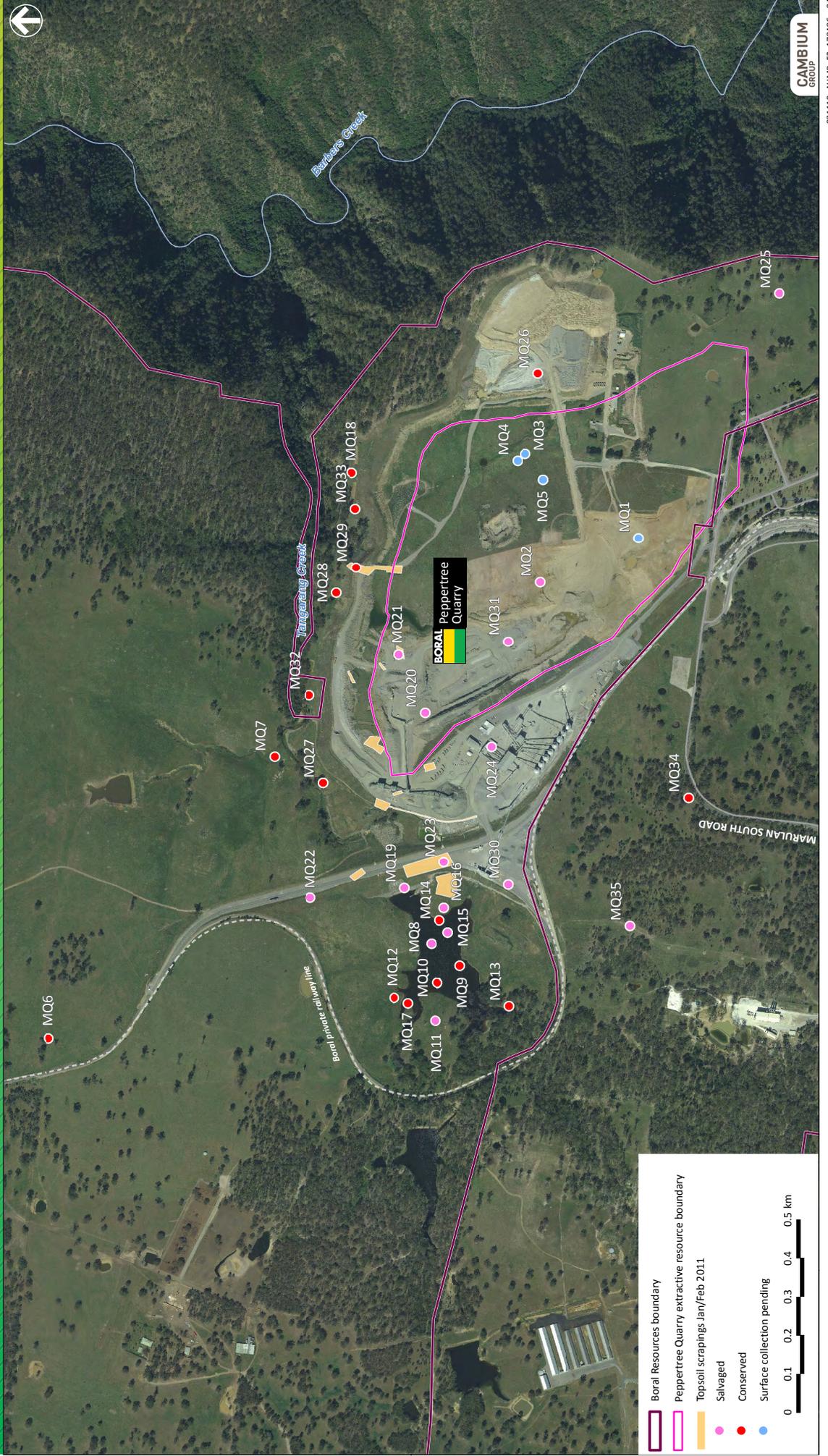
Approximately 7506 artefacts were salvaged during this period.

2012 – Tangarang Creek rehabilitation

Following a large rain event in February 2012, and in consultation with the EPA, sediment from within Tangarang Creek was removed and stabilised. The AMC were invited to monitor the works due to the high Cultural heritage significance of the creek line and surrounding area.

No artefacts were uncovered during the works and all vehicle movements were kept away from identified heritage sites on adjacent banks.

Figure 2
Aboriginal sites and monitoring - 2013
Aboriginal Heritage Management Plan / Peppertree Quarry



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2012-2013 – Modification 3 topsoil monitoring

In August 2012, Boral lodged a modification with the DP&E for a high voltage power line to supply the new processing plant and a minor extension to an existing rail siding a few kilometres north of the quarry. Members of the AMC were involved in the field work as part of the Environmental Assessment and were invited to inspect the ground disturbance in connection with the installation of the high voltage line, once the modification was approved.

Twenty two (22) artefacts were salvaged at the northern end of the high voltage line. These were found during the drilling for the installation of a pole.

2014-2016 – pit footprint topsoil monitoring (as per AHMP)

As detailed in the 2013 AHMP, topsoil monitoring works are required within a 50 metre radius of an identified artefact location or 100 metres of the first or second order stream.

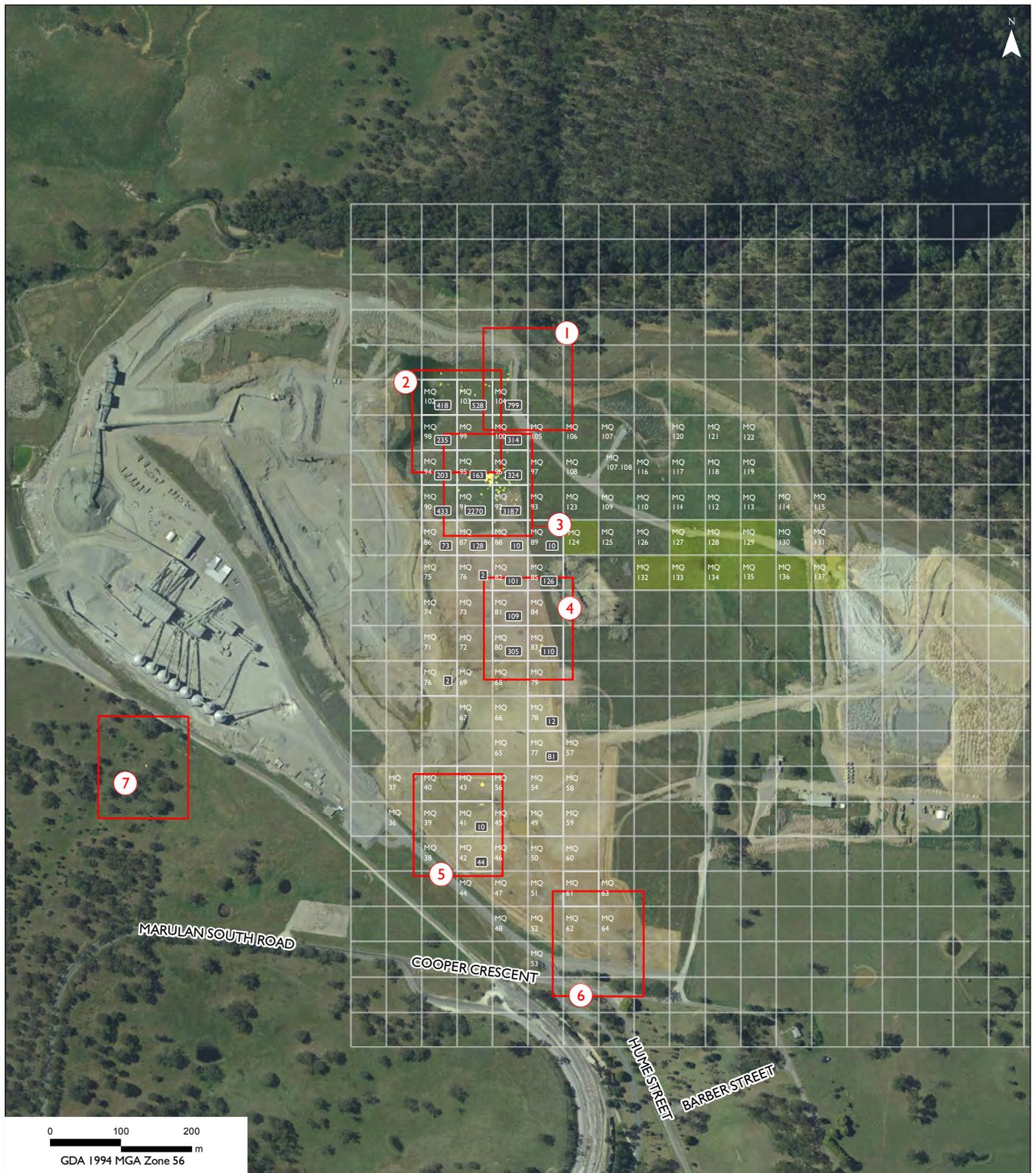
Overburden removal and pit development were associated with the two surface water drainage channels traversing the site and therefore triggering the need for top soil monitoring.

Work commenced in 2014 and continued through to June 2016.

In total over 90 000 artefacts had been salvaged by the end of June 2016.

Figure 3 presents the areas of topsoil monitoring and salvage that occurred from 2014 to 2016.

Detail of the quadrants is contained in Appendix 3.



KEY

1m x 1m excavation squares

Map extent

MQ boundary (50m x 50m)

Not yet salvaged

Number of artefacts collected from grader scrapes within MQ boundary

8



Archaeological salvage results - overview

Peppertree Quarry Aboriginal Heritage Management Plan



Figure 3

Table 4 presents the details of all Aboriginal sites identified to date

Table 4: Aboriginal sites identified

Site	Contents	Management	Status
Environmentally sensitive site	confidential	Conserved	In situ – protective fenced
Scarred tree (2011)	Tree trunk	Destroyed	AMC advised not a scar tree
2011 (AHMP excavation)	22,610 stone artefacts	salvaged	onsite storage
Drainage line (2015)	420 stone artefacts	salvaged	onsite storage
Stockpile area (2014)	297 stone artefacts	salvaged	onsite storage
Mechanical sieve	541 stone artefacts	salvaged	onsite storage
MQ1	1 silcrete	Excavated and salvaged	onsite storage
MQ2	3 red silcrete (20 artefacts Oct 12)	Excavated and salvaged	onsite storage
MQ3	1 silcrete, 1 quartz	Surface collection pending (2017)	artefacts still onsite
MQ4	1 grey silcrete	Surface collection pending (2017)	artefacts still onsite
MQ5	1 grey silcrete	Surface collection pending (2017)	artefacts still onsite
MQ6	2 silcrete	Conserved	artefacts still onsite
MQ7	2 silcrete (7 further in 2010)	Conserved	artefacts still onsite
MQ8	4 silcrete, 2 quartz, 1 chert, 2 heat shatter	Excavated and salvaged	onsite storage
MQ9	3 chert, 1 silcrete,	Conserved	artefacts still onsite
MQ10	1 silcrete, 1 quartz	Conserved	artefacts still onsite
MQ11	4 silcrete, 2 chert, 2 quartz	Excavated and salvaged	onsite storage
MQ12	1 silcrete	Conserved	artefacts still onsite
MQ13	2 quartz, 2 silcrete	Conserved	artefacts still onsite
MQ14	1 silcrete	Conserved	artefacts still onsite
MQ15	1 granodiorite	Excavated and salvaged	onsite storage
MQ16	1 silcrete, 1 quartz	Excavated and salvaged	onsite storage
MQ17	2 quartz, 1 silcrete	Conserved	artefacts still onsite

Site	Contents	Management	Status
MQ18	'a number' of quartz & silcrete	Conserved	artefacts still onsite
MQ19	18 stone artefacts	Excavated and salvaged	onsite storage
MQ20	3 stone artefacts	Salvaged 6topsoil monitoring	onsite storage
MQ21	3 stone artefacts	Salvaged 6topsoil monitoring	onsite storage
MQ22	1 stone artefacts	Salvaged 6surface collection	onsite storage
MQ22b	1 stone arrangement (Nov 11)	Conserved	artefacts still onsite
MQ23	80 stone artefacts	Excavated and salvaged	onsite storage
MQ24	50 stone artefacts	Excavated and salvaged	onsite storage
MQ25	29 stone artefacts	Excavated and salvaged	onsite storage
MQ26	2 stone artefacts	Surface collection pending	artefacts still onsite
MQ27	29 stone artefacts	Conserved	artefacts still onsite
MQ28	8 stone artefacts	Conserved	artefacts still onsite
MQ29	10 stone artefacts	Partial salvage under bund, undisturbed area conserved	Partially salvaged
MQ30	55 stone artefacts	Salvaged	onsite storage
MQ31	146 stone artefacts	Salvaged	onsite storage
MQ32	4 stone artefacts	Conserved	artefacts still onsite
MQ33	3 stone artefacts	Conserved	artefacts still onsite
MQ34	2 stone artefacts	Conserved	artefacts still onsite
MQ35	2 stone artefacts	Salvaged	onsite storage
MQ36	36 stone artefacts	Salvaged	onsite storage
MQ37	23 stone artefacts	Salvaged	onsite storage
MQ38	15 stone artefacts	Salvaged	onsite storage
MQ39	10 stone artefacts	Salvaged	onsite storage
MQ40	2435 stone artefacts	Salvaged	onsite storage
MQ41	162 stone artefacts	Salvaged	onsite storage
MQ42	523 stone artefacts	Salvaged	onsite storage
MQ43	286 stone artefacts	Salvaged	onsite storage
MQ44	44 stone artefacts	Salvaged	onsite storage
MQ45	6 stone artefacts	Salvaged	onsite storage

Site	Contents	Management	Status
MQ46	22 stone artefacts	Salvaged	onsite storage
MQ47	4 stone artefacts	Salvaged	onsite storage
MQ48	2 stone artefacts	Salvaged	onsite storage
MQ49	16 stone artefacts	Salvaged	onsite storage
MQ50	5 stone artefacts	Salvaged	onsite storage
MQ51	2 stone artefacts	Salvaged	onsite storage
MQ52	0 stone artefacts	nil	Not applicable
MQ53	3 stone artefacts	Salvaged	onsite storage
MQ54	7 stone artefacts	Salvaged	onsite storage
MQ55	5 stone artefacts	Salvaged	onsite storage
MQ56	5 stone artefacts	Salvaged	onsite storage
MQ57	3 stone artefacts	Salvaged	onsite storage
MQ58	10 stone artefacts	Salvaged	onsite storage
MQ59	31 stone artefacts	Salvaged	onsite storage
MQ60	14 stone artefacts	Salvaged	onsite storage
MQ61	133 stone artefacts	Salvaged	onsite storage
MQ62	0 stone artefacts	nil	Not applicable
MQ63	18 stone artefacts	Salvaged	onsite storage
MQ64	4 stone artefacts	Salvaged	onsite storage
MQ65	2 stone artefacts	Salvaged	onsite storage
MQ66	26 stone artefacts	Salvaged	onsite storage
MQ67	7 stone artefacts	Salvaged	onsite storage
MQ68	25 stone artefacts	Salvaged	onsite storage
MQ69	0 stone artefacts	nil	Not applicable
MQ70	0 stone artefacts	nil	Not applicable
MQ71	0 stone artefacts	nil	Not applicable
MQ72	34 stone artefacts	Salvaged	onsite storage
MQ73	28 stone artefacts	Salvaged	onsite storage
MQ74	0 stone artefacts	nil	Not applicable

Site	Contents	Management	Status
MQ75	56 stone artefacts	Salvaged	onsite storage
MQ76	91 stone artefacts	Salvaged	onsite storage
MQ77	81 stone artefacts	Salvaged	onsite storage
MQ78	31 stone artefacts	Salvaged	onsite storage
MQ79	750 stone artefacts	Salvaged	onsite storage
MQ80	305 stone artefacts	Salvaged	onsite storage
MQ81	109 stone artefacts	Salvaged	onsite storage
MQ82	101 stone artefacts	Salvaged	onsite storage
MQ83	112 stone artefacts	Salvaged	onsite storage
MQ84	280 stone artefacts	Salvaged	onsite storage
MQ85	121 stone artefacts	Salvaged	onsite storage
MQ86	82 stone artefacts	Salvaged	onsite storage
MQ87	128 stone artefacts	Salvaged	onsite storage
MQ88	101 stone artefacts	Salvaged	onsite storage
MQ89	4260 stone artefacts	Salvaged	onsite storage
MQ90	314 stone artefacts	Salvaged	onsite storage
MQ91	30344 stone artefacts	Salvaged	onsite storage
MQ92	13358 stone artefacts	Salvaged	onsite storage
MQ93	43 stone artefacts	Salvaged	onsite storage
MQ94	214 stone artefacts	Salvaged	onsite storage
MQ95	163 stone artefacts	Salvaged	onsite storage
MQ96	690 stone artefacts	Salvaged	onsite storage
MQ97	0 stone artefacts	nil	Not applicable
MQ98	235 stone artefacts	Salvaged	onsite storage
MQ99	109 stone artefacts	Salvaged	onsite storage
MQ100	1228 stone artefacts	Salvaged	onsite storage
MQ101	0 stone artefacts	nil	Not applicable
MQ102	1149 stone artefacts	Salvaged	onsite storage
MQ103	1097 stone artefacts	Salvaged	onsite storage

Site	Contents	Management	Status
MQ104	2826 stone artefacts	Salvaged	onsite storage
MQ105	1179 stone artefacts	Salvaged	onsite storage
MQ106	171 stone artefacts	Salvaged	onsite storage
MQ107	448 stone artefacts	Salvaged	onsite storage
MQ108	1615 stone artefacts	Salvaged	onsite storage
MQ109	76 stone artefacts	Salvaged	onsite storage
MQ110	40 stone artefacts	Salvaged	onsite storage
MQ111	49 stone artefacts	Salvaged	onsite storage
MQ112	6 stone artefacts	Salvaged	onsite storage
MQ113	24 stone artefacts	Salvaged	onsite storage
MQ114	7 stone artefacts	Salvaged	onsite storage
MQ115	0 stone artefacts	nil	Not applicable
MQ116	26 stone artefacts	Salvaged	onsite storage
MQ117	42 stone artefacts	Salvaged	onsite storage
MQ118	3 stone artefacts	Salvaged	onsite storage
MQ119	0 stone artefacts	nil	Not applicable
MQ120A	10 stone artefacts	Salvaged	onsite storage
MQ121	91 stone artefacts	Salvaged	onsite storage
MQ122	5 stone artefacts	Salvaged	onsite storage
MQ123	5 stone artefacts	Salvaged	onsite storage
MQ124	26 stone artefacts	Salvaged	onsite storage
MQ125	47 stone artefacts	Salvaged	onsite storage
MQ126	45 stone artefacts	Salvaged	onsite storage
MQ127	Not yet excavated		
MQ128	Not yet excavated		
MQ129	Not yet excavated		
MQ130	98 stone artefacts	Salvaged	onsite storage
MQ131	13 stone artefacts	Salvaged	onsite storage
MQ120 (Mod 4)	Environmentally sensitive site	conserved	In situ 6 fenced

4 IMPACTS TO ABORIGINAL CULTURAL HERITAGE SITES - MANAGEMENT ACTIONS

4.1 ABORIGINAL HERITAGE MANAGEMENT OBJECTIVES AND PERFORMANCE CRITERIA

The primary objectives of this AHMP are to identify, protect, conserve, present and transmit the Aboriginal heritage values associated with the land, on which Boral's Peppertree quarry will be excavated.

The performance criteria will be used to assess the success of the management actions and are outlined in Table 5.

Table 5: Aboriginal Heritage Management Objectives and Performance Criteria

Objective	Performance criteria
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
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)
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
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
Manage identification of any new Aboriginal objects or relics discovered during the operation of the quarry	Follow protocol as per AHMP

4.2 PROPOSED DEVELOPMENT

Quarry development to date has comprised the establishment of the initial quarry pit with the overburden used to construct the northern section of the noise bund, construction of Dam 1, rail embankment and the processing plant area.

The pit has continued to develop in a south eastern direction with a further overburden campaign undertaken in 2015 and 2016, with the overburden being emplaced as an extension of the noise bund to the south.

Within the next two years, the pit will extend more to the east with the overburden emplacement extending further to the south.

4.3 ABORIGINAL SITES ALREADY SALVAGED

Extensive salvage work has been undertaken since the excavation works in January / February 2011. Works have occurred in 2012, 2013, and extensive topsoil monitoring in 2014, 2015 and 2016. No further salvage works are required in the Habitat Management area / Tangarang Creek Area. Future salvage areas are located in the footprint of the pit (refer section 4.5).

The sites already salvaged are MQ1, MQ2, MQ 8, MQ11, MQ 15, MQ16, MQ19, MQ20, MQ21, MQ22, MQ23, MQ24, MQ25, MQ30, MQ31 and MQ35 through to MQ 111. Details are shown in Table 4.

4.4 ABORIGINAL SITES TO BE CONSERVED

Aboriginal sites to be conserved have been fenced (MQ6, MQ7, MQ27, MQ28, MQ29, MQ 32 and MQ 34). These primarily occur along the Tangarang Creek.

Sites MQ9, MQ10, MQ12, MQ13, MQ14, and MQ17 are located within the Habitat Management Area / Tangarang Creek Area and were not targeted during the excavation and salvage in January / February 2011. It is intended that these sites will remain in situ and be conserved within the HMA. Some of these sites may have been flooded with the creation of dam 1.

These sites have, and will be managed in line with the management measures presented in Section 4.9.

Sites MQ18 and MQ26 were left in situ beneath overburden emplacement for noise bunds as agreed by the AMC. At the time, it was recognised that the artefacts were better left in contact with the earth rather than be disturbed.

Site MQ22b was identified as a stone marker arrangement. This arrangement was preserved in situ under the rail corridor at the request of the AMC representatives.

A potentially significant site was identified in 2011. This area occurs within the HMA and is double fenced for protection.

A scarred tree was identified on site initially by a consulting archaeologist. AMC representatives have inspected the tree and agree that it is not an indigenous scarred tree.

MQ 120 identified as part of the Modification 4 heritage assessment will be fenced and sign posted.

4.5 ABORIGINAL SITES TO BE IMPACTED

Aboriginal sites that are yet to be impacted are within the 30 year resource area, and are MQ3, MQ4, and MQ5. These sites will be managed in accordance with the management measures outlined in Section 4.8.

The area to be used for the southern overburden emplacement has been identified as having some areas of moderate archaeological sensitivity. It is anticipated that the Southern Overburden Emplacement may result in disturbance to artefacts through soil compaction during overburden deposition. Buried Aboriginal objects, if they exist, have the potential to be compacted, disturbed and moved a short distance during overburden emplacement, resulting in a loss of context and spatial patterning.

However, the type of landscape in which the southern overburden emplacement area is located (ridgeline) has been previously investigated in excavations for Peppertree Quarry, the Limestone Mine and throughout the wider Southern Tablelands region. These results have found that areas of ridgelines generally contain artefact densities of less than five artefacts per square metre and a low background scatter of artefacts. It is highly likely that similar low density scatters may be present and that the overburden area would therefore not be able to provide information additional to what has been uncovered in the region, particularly the approved Peppertree Quarry disturbance area, which has been subject to detailed archaeological investigation and which has provided a comprehensive picture of the Aboriginal archaeological landscape.

The potential for unavoidable harm to Aboriginal objects is acknowledged as a result of the proposed Southern Overburden Emplacement and this area will therefore be managed in accordance with section 4.10.

4.6 ABORIGINAL COMMUNITY CONSULTATION

4.6.1 ABORIGINAL MANAGEMENT COMMITTEE (AMC)

In accordance with the initial AHMP, Boral established an AMC for Peppertree Quarry. The AMC has, and will continue to be the primary mechanism that Boral will use to consult with members of the Aboriginal community.

The primary responsibilities and actions of the AMC are to:

- approve this AHMP (and subsequent reviews) and confirm that its content has been followed during the preparation and operation of the quarry;
- select relevant personnel to participate site topsoil monitoring when required in accordance with Section 4.6.2;
- determine the appropriate care of Aboriginal objects, that have and will be recovered during future development works;
- review of the Aboriginal cultural heritage awareness training within the Peppertree Quarry site inductions; and
- participate in environmental auditing processes as required for compliance with designated points of contact for the AMC groups.

The membership of the AMC is as follows:

Organisation	Name	Best Contact	Email
Pejar Local Aboriginal Land Council	Delise Freeman		pejar1@bigpond.com
Buru Ngunawal Aboriginal Corporation	Wally Bell (Alternate Karen Denny)		walbell@bigpond.net.au kazdenny@hotmail.com.au
Ngunawal Heritage Aboriginal Corporation	Dean Delponte (Alternate Graeme Dobson)		ngunawalhac@gmail.com

All correspondence with the abovementioned organisations will take place through these nominated representatives in the first instance. In the event that the designated contact is unavailable, the alternate members will be contacted.

Details of when to contact the nominated AMC representatives are presented in Section 4.6.2.

4.6.2 WHEN TO CONTACT THE AMC

Boral will contact the nominated AMC representatives following a number of possible triggers, as presented in Table 6.

Table 6: Triggers for AMC involvement

Action/Event	activity
Review of the AHMP	Following the AHMP's preparation for signoff, prior to issuing to the DP&E.
Involvement in initial topsoil excavation	One member from each AMC group to be offered an invitation to monitor.
Development and review of Aboriginal cultural heritage awareness training	To be coordinated by the Environmental Advisor and reviewed by the AMC.
Annual Review	AMC to be provided with a copy of the Annual Review.
Changes to the quarry and/or infrastructure plans for the quarry (that could impact known or unknown Aboriginal heritage sites)	AMC to be contacted during the planning stage for any changes that would be sought for a Project Approval modification.

In the event of any unexpected discovery of Aboriginal materials of significance on site	Immediately following discovery and reporting.
--	--

It is recognised that from time to time, mobile equipment may need to access parts of the 30 year quarry area for maintenance activities or to access certain parts of the site. Where possible, existing tracks will be utilised, however, in the event that existing tracks can't be used, Boral will choose paths that avoid known Aboriginal sites and minimise any ground disturbance.

4.6.3 TERMS OF ENGAGEMENT WITH THE AMC

To provide consistency across the various groups within the AMC, and to align charging rates with current industry practice, Boral will pay an agreed daily rate for a day's fieldwork or attendance at meetings per member, including travel.

Boral will allow trainees to attend site accompanied by the nominated AMC representative however they must be over the age of 18 and will not be paid.

Boral will continue to investigate opportunities to provide training to members.

Work will be conducted onsite if a minimum of 2 representatives from 2 different organisations of the AMC are available.

Representatives will always work as a team. No individual representatives are to work alone on any sites.

4.7 MAPPING OF ABORIGINAL SITES

Maps of the quarry site showing Aboriginal objects as presented in this AHMP will be easily accessible to site staff, visitors and contractors. If new sites are discovered in areas not approved for disturbance, then the site maps will be updated to ensure that they are not disturbed.

Mapping of the salvage works is also to be undertaken.

During periodic reviews of this AHMP, any new Aboriginal objects identified and salvaged during approved quarry development, will be identified on AHMP maps.

4.8 TOPSOIL STRIPPING

Further topsoil stripping of the 30 year quarry footprint will need to occur at various stages throughout the life of the quarry. The monitoring of topsoil during these campaigns will be performed by members of the AMC, assisted by archaeologists as required.

The aim of the monitoring of topsoil stripping is to further understand the distribution of artefacts in the landscape and the materials used for artefact production.

Eight Aboriginal sites were identified within the quarry footprint, from the original 2011 assessment. Five sites (MQ 20, MQ 21, MQ 31 and MQ 2, MQ 1,) have been salvaged through extensive topsoil monitoring (see Sections 2 and 3), with the remaining three sites (MQ3, MQ 4 and MQ 5) to be salvaged in 2017.

Over the past 5 years topsoil monitoring and salvage of artefacts has covered approximately 45 ha, with a total of 90 000 artefacts being collected.

Consulting archaeologists were on site to support the AMC when extensive finds were identified.

A further 4.6 ha is required to be monitored due to its location within 100m of a second order stream which transverses the quarry footprint.

4.8.1 AREAS TO BE SUBJECT TO MONITORING

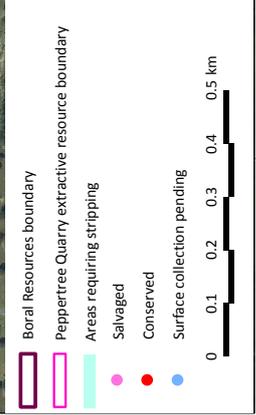
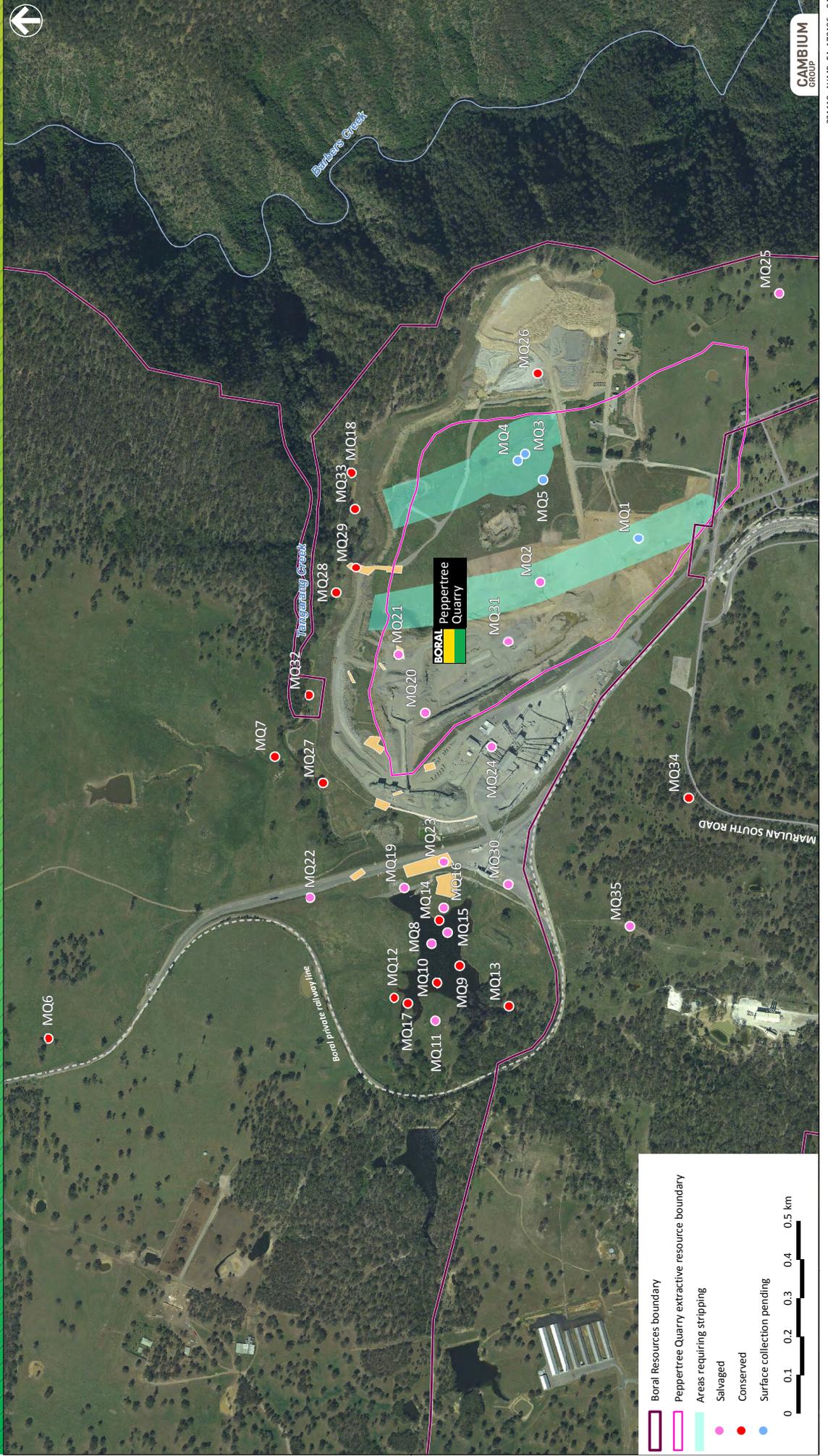
The focus for the monitoring of topsoil stripping will be those areas within the quarry footprint with potential to contain archaeological deposit and therefore assist in satisfying the aim stated above, including:

- areas within 100 m of second order or lower streams; and
- a 50 m² zone around previously identified sites (with the identified site being the centre of the 50 m² zone).

The above list represents the areas with the greatest potential to contain archaeological deposit based on an analysis of the landscape of the quarry footprint and a review of previous archaeological surveys in the Quarry area and the wider region.

The areas to be monitored during topsoil stripping are shown in Figure 4, (Figure 3 in the previous AHMP), with the landscape analysis prepared by EMGA Mitchell McLennan presented in Appendix 4.

Figure 4
Indicative areas requiring stripping
Aboriginal Heritage Management Plan / Peppertree Quarry



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4.8.2 METHOD

To ensure that monitoring of the topsoil stripping in these areas is conducted in safe and scientifically rigorous manner the following steps will be followed during topsoil monitoring.

The remaining area to be monitored will be divided into grid of 50 m² squares. Coordinates for each square will be recorded from the centre of the square and each square will be given a number. Monitoring of each square will be recorded on an Archaeological Excavation Recording Form (see Appendix 5)

The grader or excavator will strip the grid square to be monitored, as per the instructions of the AMC.

When the equipment has completed the grid square or nominated section, the AMC representatives will investigate and assess the grid square for Aboriginal material.

Any Aboriginal material found will be placed in a sturdy plastic bag, labelled with the following information:

- Topsoil Monitoring;
- the date e.g. 16/10/12;
- the grid square number e.g. 1; and
- the bag number e.g. Bag 1 of 2.

Aboriginal material recovered from the same grid square will be placed in the same bag.

The grid square which has been monitored will be marked on the working topsoil monitoring map (see Appendix 6). Detailed mapping of High densities will be maintained and updated at the end of the working day.

Both these maps will be placed on the wall in the work room to be available to everyone for updating.

An update of works will be maintained and be visually available.

A handover meeting will occur at the beginning of each day to ensure all site representatives are aware of the progress of work.

Should more than 10 artefacts be located in an area of 50cm square this area will be identified as a High Density (HD). A new collection bag will be used and marked with the HD details as above. Photographs will be taken of the High Density before work commences and during the hand excavation.

The HD area will be marked out to a 1 m by 1m square. This will be hand dug and sieved to identify the nature of the High Density. Hand digging will be in "spits" of no more than 10cm and identified in numerical order spit 1 ,2 etc. Artefacts collected from each slit in the HD square will be bagged together. Spits will continue until clay is reached or till determined by the AMC.

Should a total of 50 artefacts be identified in the 1m² HD area then 1m² areas will be marked out on each side of the original square. These squares will be hand dug and sieved.

Should more than 50 artefacts be identified in any of these squares then the 1 m² HD procedure continues around the identified square until a level less than 50 artefacts occurs in the pit or a total of 9m² is reached (a total of 9 pits) or as determined by the AMC

This process allows for the mapping of the extent of High Densities across the sites.

Monitoring forms will be collated at the end of the day. All bags will be checked to ensure they have the correct labelling and will be placed in identified boxes.

Following rain events, pre worked sites shall be reinspected. Surface artefacts collected will be bagged as per the above procedure and the number added to the total for that identified grid square.

On agreed completion of each grid, an Aboriginal Heritage Clearance Sheet (see Appendix 7) is to be completed. The Clearance sheet will be signed by

- the Boral nominated representative; and
- the members of the AMC (as listed in Section 1.3).

Artefacts collected during the monitoring of stripping will be managed according to the future curation of all Aboriginal materials recovered from the site as detailed in Section 4.11. The artefacts will be recorded and the information incorporated into the existing artefact database to allow the results to be compared to other archaeological work.

If human remains or significant Aboriginal material as described in Table 7 are uncovered during monitoring the process detailed in Section 5 should be followed.

The AMC will be given 2 week's notice to attend topsoil stripping campaigns for the purpose of topsoil monitoring. In the event that a topsoil stripping campaign is not planned, and due to operational urgency, 2 weeks notice cannot be given, Boral will use best endeavours to arrange the soonest possible time for the AMC to attend. Boral will allow 1 month from the start of monitoring before stripping commences.

4.9 HABITAT MANAGEMENT AREA (HMA)

The Habitat Management Area (Figure 2) has been established adjacent to the western end of Dam 1. This area is likely to contain Aboriginal archaeological deposits, being located within a landscape that has high archaeological potential for Aboriginal objects. As such the establishment and management of the Habitat Management Area should seek a collaborative approach with the AMC.

The AMC will be consulted and be involved where relevant with:

- planning the future management of this area;
- locations of planting;
- advice regarding ongoing care and management of the revegetated woodland areas;
- undertaking interpretation of the area, especially with reference to Indigenous use of species within the Box Gum Woodland; and
- determining access agreements into this area, for Aboriginal and non-Aboriginal peoples.

All conserved sites within the HMA are fenced within the area and signposted as an “environmentally Sensitive site”.

Areas of planting and planting methodologies have been discussed with the AMC to minimise disturbance to the soil and known artefacts.

The creation of the Habitat Management Area represents an opportunity for long term engagement between Boral and the local Aboriginal community.

4.10 OVERBURDEN EMPLACEMENTS

Soil will not be disturbed within the footprint of the overburden emplacements. Overburden areas have been assessed for the heritage potential and emplacement of overburden over undisturbed land has been agreed as part of the August 2016 modification and with the AMC representatives.

Earthworks associated with the overburden such as drainage, sediment dams or roads will be managed as per Section 4.

4.11 MANAGEMENT OF RECOVERED ABORIGINAL OBJECTS

Discussion with the AMC has defined the communities’ requirements for future curation of all Aboriginal materials recovered from the site.

All salvaged artefacts from the site will remain on site, under Boral management in a secured area prior to being returned to the HMA and buried within designated locations. The specific location for reburial is not decided and will be determined with the AMC.

The reburial will be managed and undertaken by the AMC. The locations of the reburied objects will be registered with the OEH through lodgement of an AHIMS card. Should it be required, a “Care Agreement” will be enacted under Section 85A of the NPW Act.

Future access to the HMA and location of artefact reburial should be allowed by Boral for cultural and education reasons. Boral will notify the nominated AMC representatives for approval prior to access to the area.

Artefacts will be allowed for display and educational purposes only if approved by ALL of the nominated AMC representatives.

No artefacts are to be taken offsite, unless approved by ALL nominated AMC representatives. Should it be identified that artefacts have been removed from site, without permission, the offending person will not be allowed to return to site.

4.12 ACCESS TO ABORIGINAL HERITAGE SITES

During the life of the quarry, members of the Aboriginal community wishing to access the Peppertree Quarry Habitat Management Area will be provided access to do so. The nominated AMC’s representatives will be notified. Boral’s responsibilities for the health and safety of all people who come to Peppertree Quarry means that access to the HMA will need to be managed like all contractors and visitors that come to site.

Accordingly, any person wishing to access the HMA should use the following protocol:

- Contact the Peppertree Quarry Office on 4841 1701 preferably 24 hours before wishing to access the Habitat Management Area to organise for someone to be available to escort them.
- On the day of site access, report to the quarry office reception and sign in upon arrival.
- Contact the Site Administrator to coordinate the appropriate site personnel to provide escort to the Habitat Management Area.
- Complete a visitor safety induction (if not already inducted)
- Boral requires all site visitors to comply with the site safety requirements and wear the appropriate personal protective equipment (Hi&visibility clothing, full length pants and shirt, safety boots, hard hat and safety glasses).
- The nominated site escort will then drive members to and from the Habitat Management Area as required.
- Sign out upon departure

4.13 MANAGEMENT OF SENSITIVE CULTURAL HERITAGE INFORMATION

Sensitive Aboriginal cultural information may include, but is not limited to:

- the specific location of Aboriginal sites;
- details pertaining to traditional Aboriginal activities; and
- Aboriginal ceremonial details.

The 2006 EA and this AHMP contain such details. Relevant senior and functional Boral personnel will be required to understand and know the contents of these documents. These reports should only be further distributed with the approval of the AMC. Where sensitive cultural heritage information is referenced, an amended version of this report will be placed on the quarry website for compliance with the Project Approval. The amended version of the AHMP will have culturally sensitive information and contact details removed.

This AHMP has included requirements for fencing Aboriginal sites that will be conserved. These areas can be described in future documents or site plans as 'environmentally sensitive area'.

The management of any sensitive new information relating to Aboriginal cultural heritage will be discussed with the AMC on a case by case basis.

4.14 SEEKING EXTERNAL HERITAGE ADVICE

In the case of new and/or unforeseen Aboriginal heritage discoveries of significance, the procedures detailed in Section 5 should be followed.

External heritage advice may be sought when:

- reviewing technical aspects of this AHMP;
- archaeological expertise is legally required;
- advice may be needed on the recording and logging of Aboriginal objects;

- advice may be needed for the interpretation of any heritage values; and
- in the event that discussions between the AMC and Boral may require independent guidance or advice.

Following discussions with the AMC representatives and an extensive tender process, EMM are the preferred consultant for site heritage salvage works.

4.15 INTERPRETATION OF HERITAGE VALUES

The interpretation of Aboriginal heritage values has been considered through the following mediums:

- representation by a delegated member of the AMC to share information at meetings of the Peppertree Quarry Community Consultative Committee;
- provide opportunities for local community groups and schools to either visit the site;
- involvement of voluntary participation by university students to assist in heritage work or cataloguing of Aboriginal objects
- invitations to government bodies, such as DP&E and OEH to attend future heritage work;
- display non-sensitive Aboriginal cultural heritage information on the Peppertree Quarry website or visitor facilities.

4.16 BUSHFIRE AND EMERGENCY ACCESS MANAGEMENT

Peppertree Quarry is bordered by native vegetation to the north, east and west and is therefore in a bushfire prone area. Much of the site has natural (cleared pasture) or recently constructed features (such as noise bunds) that act as fire breaks which will minimise potential bushfire impacts. In the event that the site is threatened by bushfire, it will be necessary for Boral to protect its people and quarry assets (plant and equipment). It is also necessary to protect and minimise impacts of the Cultural Heritage values outlined in this plan.

In the event of a bushfire threatening the Peppertree Quarry site, it may be necessary for Boral (or the Rural Fire Service) to establish further fire breaks to stem the spread of the fire on the site, and to adjoining properties. A firebreak method, such as grading, would disturb the ground surface and potentially disturb Aboriginal sites.

Where bush fire management preparation work is required, representatives of the AMC will be consulted prior to the works and be present for site works, should Aboriginal sites be likely to be disturbed.

If a bushfire situation arises, and emergency fire break or disturbance activities are required to protect plant and equipment, known Aboriginal sites will be avoided in the first instance. Maps of Aboriginal sites will be used by site staff or provided to the relevant personnel involved in management of firebreaks.

If disturbance cannot be avoided, best endeavours will be used by Boral to keep members of the AMC informed of the fire break activities to ensure impacts are minimised.

4.17 PRE-WORK DAILY REVIEW

During construction, as the site and work was constantly changing a process was in place to undertake a daily pre-work checklist to ensure that matters of Aboriginal cultural heritage were considered prior to daily site works.

With the quarry site in production and the majority of work now in the pit, processing or designated overburden area, as well as the majority of identified areas salvaged there is a reduced risk, as to the disturbance of identified sites.

The areas still to be monitored will be fenced and sign posted to limit any disturbance.

Regular fencing audits are conducted and not only assess boundary fences but “environmentally sensitive site” fencing as well. This ensures that fencing is maintained in a good condition.

Should an area be disturbed, work will be stopped, the area assessed for heritage potential as per this AHMP and if required AMC representatives advised.

A Daily tool box discussion is conducted by the Site Supervisor prior to each shift starting. If it is determined that previously undisturbed topsoil would be disturbed by works to be conducted on the day, these works will be delayed for 2 weeks until members of the AMC can be present for topsoil monitoring.

5 STOP WORK PROCEDURES

5.1 NEW ABORIGINAL SITES OF SIGNIFICANCE

It is noted that prior to quarrying activities occurring in new areas, topsoil will be monitored for Aboriginal objects. This monitoring will be conducted by members of the AMC.

Should new Aboriginal objects of significance (as outline in Table 7) be identified (or suspected) within any part of the quarry footprint, then work in that area will cease.

In the first instance the Boral site manager will be consulted, who can confer with the Environmental Advisor. If the material is suspected to be Aboriginal, an exclusion zone and temporary fence of 5 metres x 5 metres established around the object so that the site works can continue while the AMC is consulted for appropriate action.

If the material is confirmed as Aboriginal and an object of significance, then management options should be sought from a suitably qualified practitioner, in conjunction with the advice of the AMC.

If the material is a human skeletal remain, then the procedures in the following section are to be followed.

Table 7: Aboriginal objects of significance

Object of significance	Action
High density of stone tool artefacts or their byproducts (10 or more artefacts in a 500mm x 500mm area)	<p>The AMC members on site at the time of the monitoring to salvage the artefacts appropriately. Details about the material and GPS location will be recorded by the Environmental Advisor.</p> <p>If the area is outside of the designated monitor area, works are to cease.</p> <p>A 5 metre x 5 metres exclusion zone and temporary fence to be established around the material for works to continue while the Environment advisor confers with AMC to determine appropriate action prior to salvage.</p> <p>On the day of discovery, the advisor will email each of the AMC members with photos of the material and seek their confirmation in writing of the acceptance of required action.</p>
Stone axes	
Hammer stones	
Stone ovens	
Stone arrangements	
Suspected burial site	Refer to procedures in the following section

Once the AMC are satisfied with the action taken to salvage the identified objects, an Aboriginal Heritage Clearance Sheet will be completed and signed off to document that the AMC is satisfied that all matters of Aboriginal heritage have been dealt with and quarrying works can proceed without further topsoil monitoring requirements.

The Aboriginal Heritage Clearance Sheet is attached as Appendix 7.

5.2 DISCOVERY OF HUMAN SKELETAL REMAINS

In NSW the following legislation may apply to the management of human skeletal remains:

- the Coroner's Act, 1980;
- the Public Health Act, 1991 and the Public Health (Disposal of Bodies) Regulations, 2002;
- National Parks and Wildlife Act, 1974; and
- the NSW Heritage Act, 1977.

The following actions should be undertaken, depending upon whether the suspected human skeletal material is revealed during quarry development activities.

Should possible human skeletal material be uncovered during site works or by natural erosion within any part of the project area, the following actions are required:

- all site works in the area surrounding the suspected burial site should cease;
- any soils excavated from the location of the burial (including all soils that have been recently removed from the works site) should be immediately identified, recovered (if removed from site) and stored adjacent to the potential burial;
- the area containing the suspected human skeletal material should be fenced off and isolated from access;
- the find should be reported to the local Police (required under law) and OEH;
- the relevant local Aboriginal elders (the AMC) should be contacted;
- it may be necessary to consult with a suitably qualified archaeologist;

If, following consultation, the remains are identified as Aboriginal, and more than 100 years old, then the AMC, Boral, the police and the OEH should discuss management of the burial.

Options may include: relocation of the remains to a designated off-site keeping place; or reburial at a location near to the original, but within an area that will not be impacted by the quarry. The wishes of the Aboriginal community will help guide the actions. An AHIMS site card will then be completed and submitted to the OEH.

If the skeletal remains are suspected to be less than 100 years old and/or not Aboriginal, then direction for their management should be determined by the Police, OEH Heritage Branch, NSW coroner and, if relevant, the Aboriginal community.

If the skeletal remains are not human, then they should be dealt with archaeologically, in the context of their taphonomy (the study of decaying organisms over time and how they become fossilized).

6 MODIFICATION 4 – ABORIGINAL HERITAGE MANAGEMENT

The building and construction industry in NSW and particularly Sydney has seen a great deal of growth in the last year, with this growth forecast to continue. The NSW Government, together with Federal funding, has committed to significant infrastructure projects, including the Badgery's Creek Airport, new rail lines, and major road construction and upgrading. This has created a significant demand for hard rock aggregates from the main construction material suppliers. Boral is, and will be supplying a number of these projects with concrete and asphalt, that includes aggregates and sand from Peppertree Quarry on rail through terminals at St Peter's and Enfield.

Modification No. 4 was approved in August 2016, allowing an increase of in-pit operating hours by 6 hours per day, 7 days a week in order to meet annual production volumes up to the approved limit of 3.5 million tonnes per annum. The modification also incorporates a proposed new Southern Overburden Emplacement that has been designed as an extension to the existing Eastern Overburden Emplacement and is located entirely within both Boral owned land and the quarry's development consent boundary.

The Aboriginal and Historic Heritage Impact Assessment undertaken for the modification identified two Aboriginal sites in the study area, namely MQ25 (an artefact scatter previously collected) and MQ120 (a culturally modified tree). Some areas of moderate archaeological potential were also recorded within the study area.

Site MQ120 is outside the disturbance area and will not be impacted by the Southern Overburden Emplacement. It is recommended that this site is fenced to avoid disturbance.

It is anticipated that the Southern Overburden Emplacement may result in disturbance to previously unidentified Aboriginal sites through soil compaction during overburden deposition. Buried Aboriginal objects, if they exist, have the potential to be compacted, disturbed and moved a short distance during overburden emplacement, resulting in a loss of context and spatial patterning.

A portion of the identified areas of moderate archaeological sensitivity will be subject to impact as a result of the Southern Overburden Emplacement. However, the type of landscape in which the emplacement area is located (ridgeline) has been previously investigated in excavations for Peppertree Quarry, the Limestone Mine and throughout the wider Southern Tablelands region. These results have found that areas of ridgelines generally contain artefact densities of less than five artefacts per square metre and a low background scatter of artefacts. These areas have been adequately tested and the information from previous excavations can be extrapolated to the study area, where it is highly likely that similar low density scatters may be present. The study area would therefore not be able to provide information additional to what has been uncovered in the region, particularly the approved Quarry disturbance area, which has been subject to detailed archaeological investigation and which has provided a comprehensive picture of the Aboriginal archaeological landscape. As such, further investigation in the area subject to the modification is not considered warranted.

The potential for unavoidable harm to Aboriginal objects is acknowledged as a result of the proposed Southern Overburden Emplacement. The impacts to Aboriginal heritage in the Southern Tablelands region are not substantial, as the current balance at the Quarry between preservation of some areas of Aboriginal sites and landscapes ensures that harm is only partial across the Quarry area and retains some of the most significant sites identified. It does not represent a total

loss of the Aboriginal archaeological records in the area and any unidentified Aboriginal sites that are potentially impacted, are predicted to continue outside the study area.

7 FINANCES AND PROVISION

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

8 TRAINING

8.1 CULTURAL HERITAGE AWARENESS TRAINING - INDUCTION

Boral, in consultation with the AMC, has prepared and been delivering Aboriginal cultural heritage awareness training to all site personnel and contractors who work at the quarry. This training will continue to form part of the site induction process.

The training package includes (but is not limited to) the following:

- an overview of Aboriginal cultural heritage values of the local area;
- details pertaining to the types of Aboriginal sites and artefacts that are likely to be found within the project area;
- areas where no ground disturbance activities are to occur
- an attitude of 'stop work and ask first', rather than possibly impact an area, if a worker is uncertain whether the area has Aboriginal heritage value;
- procedures for stopping work and consulting the Boral project/environmental manager for cases detailed in Section 6; and
- information related to the relevant legislation for the protection of Aboriginal sites (offences under Section 86 NP&W Act, 1974) and penalties for knowingly or unknowingly disturbing and/or destroying an Aboriginal site (this should be included irrespective of this project's Part 3A status).

Every employee and contractor are asked to sign a Declaration to be able to commence work at the site (see Appendix 8)

8.2 SITE SPECIFIC TRAINING

Where identified by the environmental advisor or AMC representatives, additional site specific training may be developed and implemented and delivered to relevant personnel and contractors.

9 MONITORING, REPORTING AND REVIEW

9.1 MONITORING THE AHMP

This AHMP will be reviewed periodically by suitably qualified persons and representatives of the AMC to determine the efficacy of the plan and to ensure it continues to meet its objectives.

The management actions will be measured through regular environmental performance reviews and will be undertaken by the environment advisor, in discussion with the Quarry Manager.

The reviews will be used to assess progress in meeting the objectives and performance criteria.

Boral is required to prepare an Annual Review each year to report on the environmental performance of the site against the requirements within the Project Approval. The Annual Review is provided to the DP&E and OEH. The Annual Review will include an assessment of Boral's required actions against the AHMP requirements.

The Annual Review will also identify gaps where this AHMP has not been implemented and provide guidance and recommendations to address identified gaps.

Should a non-conformance to the plan be identified a report will be completed within the Boral incident management system.

9.2 REPORTING

9.2.1 ABORIGINAL HERITAGE REPORT

Due to the extensive nature and significance of Aboriginal Heritage, a report will be prepared on the completion of all salvage works.

This will detail the salvage works, findings, cultural values and significance of the Peppertree site. The report will be prepared by a suitably qualified professional in consultation with the AMC.

9.2.2 AHIMS

Due to the number of artefacts collected across over one hundred identified sites, consultant advice has been to submit one AHIMS card for the Peppertree site as a whole.

A review of the current AHIMS cards available will be undertaken.

The data and review will be undertaken by a suitably qualified professional.

Advice and recommendations will be discussed with OEH prior to submitting the card.

9.2.3 ANNUAL REVIEW

In line with the Project Approval, Boral will prepare an Annual Review to report on the environmental performance of the quarry against the Project Approval conditions. The Annual Review will also report on compliance with this AHMP with copies provided to the AMC.

9.2.4 INCIDENT REPORTING

Schedule 5, Condition 8 of the Project Approval details the reporting requirements for identified impacts/incidents and the states that:

“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.”

Should a breach of the requirements of the Approval in regards to the aboriginal heritage occur, both DP&E and OEH will be the following actions will be taken:

- the Department of Planning and Environment (DP&E), OEH and the nominated AMC representatives will be notified of the breach within seven days of its identification;
- an investigation will be undertaken to establish the root cause of the breach.
- subject to the findings of the investigation actions will be taken to minimise any reoccurrence and
- the identified cause of the breach and the selected response will be formally documented in an incident response report and electronically recorded in the Boral incident management system.

Boral maintains a safety and environmental incident reporting system. Any incidents that occur with reference to Aboriginal heritage will be entered into this system within 24 hours of occurrence. 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.

All logged incidents should be reported to the AMC.

9.3 REVIEW

9.3.1 REVIEW OF MANAGEMENT ACTIONS

Any non-compliances identified will be highlighted and an incident report completed. The Boral incident management process will be followed to ensure the non-compliance is understood and actions put in place to resolve the non-compliance.

9.3.2 REVIEW OF MANAGEMENT PLAN

Any revision of the AHMP will be reviewed by the AMC, with the final document being reviewed and approved by the Director General of the Department of Planning & Environment.

As per the Condition of Consent, Schedule 5, condition 3, this plan will be reviewed

Within 3 months of the submission of an:

- Annual Review
- incident report
- audit report; and
- any modifications to this approval,

The plan will also be reviewed should a non-compliance occur.

9.4 RESPONSIBILITIES

The implementation of this AHMP will primarily be led by the site Environmental Advisor; however, the Quarry Manager will carry the ultimate responsibility for implementation. Table 8 details all relevant roles and responsibilities.

Table 8: AHMP roles and responsibilities

Person/Position	Company	Site Responsibilities
Quarry Manager	Boral	<p>Responsible for providing adequate resources for the implementation of this AHMP and protective measures for areas identified for conservation.</p> <p>Submission of information to authorities including OEH</p>
Environmental Advisor	Boral	<p>Coordination of the preparation, implementation and reviews of this AHMP.</p> <p>Responsible for the ongoing protection of Aboriginal sites to be conserved within the approved project area.</p> <p>Responsible for Aboriginal cultural heritage inductions for all site workers.</p> <p>Review of information for submission to authorities</p>
Indigenous liaison officer	Boral	<p>Establish and assist in maintaining good relationships with the AMC representatives</p> <p>Advising Boral staff on indigenous affairs and appropriate behaviours</p> <p>Mediate in the event of disputes</p>
AMC (Aboriginal representatives)	Representatives from PLALC, BNAC and NHAC	Responsible for ongoing management and discussion of issues related to Aboriginal cultural heritage values and sites.
Archaeologist	Suitably qualified archaeologist	<p>Providing advice to Boral and the AMC where legally required</p> <p>Preparation of information for submission to authorities including OEH</p> <p>Analysis of artefacts</p> <p>Assisting in salvage works and methodology design</p> <p>Preparation of final site report</p>

10 SUMMARY OF MANAGEMENT ACTIONS

The primary objectives of this AHMP are to identify, protect, conserve, present and transmit the Aboriginal heritage values associated with the land, on which Boral's Peppertree quarry will be excavated.

A number of management actions have been put in place to assist in meeting these objectives.

These actions are summarised in Table 9.

Table 9: Summary of Management actions

Management action ref ID	Environmental management measure	Indicative timeframe	responsibility	Section
CONSERVED SITE MANAGEMENT				
PTQ-AHMP-01	Sites to be identified on map	On the working map on a daily basis	Environment advisor	4.7
PTQ-AHMP-02	Sites to be fenced and signposted "environmentally sensitive site"	Within 2 weeks of identification	Environment advisor	4.9
ABORIGINAL COMMUNITY CONSULTATION				
PTQ-AHMP-03	Maintain AMC in place	On going	Environment advisor	4.6
PTQ-AHMP-04	Seek review of any revision of the AHMP from the AMC	2 weeks	Environment advisor	4.6
PTQ-AHMP-05	AMC to be involved in top soil monitoring	Minimum 2 weeks notification prior to work commencing	Environment advisor	4.62
PTQ-AHMP-06	AMC to be involved in the development of training materials		Environment advisor	4.62

Management action ref ID	Environmental management measure	Indicative timeframe	responsibility	Section
PTQ-AHMP-07	AMC to be notified of any changes in operations modifications	As soon as changes are known	Environment advisor	4.62
PTQ-AHMP-08	AMC to be notified of any unexpected discoveries	As soon as possible	Environment advisor	4.62
PTQ-AHMP-09	Access to site by Aboriginal communities is permitted following usual visitor protocol	As required	Environment advisor	4.12
PTQ-AHMP-10	Sensitive cultural heritage information is not to be published as determined by the AMC	As required	Environment advisor	4.13
PTQ-AHMP-11	External archaeologist advice to be sort through EMM in discussion with AMC	As required	Environment advisor	4.14
PTQ-AHMP-12	AMC to be advised if bush fire management works are required in areas that may have heritage potential	As soon as works are known	Environment advisor	4.16
PTQ-AHMP-13	AMC to be advised if emergency bushfire work is required that might disturb a site	As soon as works are known	Environment advisor	4.16
DISTURBED SITE MANAGEMENT				
PTQ-AHMP-14	Top soil monitoring to be undertaken in areas identified in Figure 4	As required	Environment advisor	4.8

Management action ref ID	Environmental measure	management	Indicative timeframe	responsibility	Section
PTQ-AHMP-15	Areas yet to be monitored as shown in Figure 4 to be fenced to limit any unauthorised disturbance		Within 2 weeks	Environment advisor	4.8.1
PTQ-AHMP-16	Methodology as per 4.8 to be followed for top soil monitoring		During monitoring	Environment advisor	4.8.2
PTQ-AHMP-17	Aboriginal Heritage Clearance forms to be signed on the completion of an identified salvage area		On completion of an area	Environment advisor	5.1 / 4.82
PTQ-AHMP-18	Overburden to be placed on undisturbed land.		ongoing	Environment advisor	4.10
PTQ-AHMP-19	Regular review of fencing of "environmentally sensitive sites" to be scheduled in EAM and undertaken		6 monthly	Environment advisor	4.17
RECOVERED ARTEFACTS					
PTQ-AHMP-20	Recovered artefacts to be stored safely and securely		Ongoing	Environment advisor	4.11
PTQ-AHMP-21	Recovered artefacts to remain on site		ongoing	Environment advisor	4.11
PTQ-AHMP-22	Recovered artefacts to be Returned to Country by AMC on the Peppertree quarry site in the HMA		End of salvage program 2018	Environment advisor	4.11
PTQ-AHMP-23	Recovered artefacts are only to be used for display and / or		ongoing	Environment advisor	4.11

Management action ref ID	Environmental management measure	Indicative timeframe	responsibility	Section
	educational purposes if approved by ALL AMC representatives			
STOP WORK PROCEDURES				
PTQ-AHMP-24	Work will be stopped immediately if Aboriginal items as outlined in Table 7 are suspected or identified.	immediately	Environment advisor	5.1
PTQ-AHMP-25	AMC, OEH and the police to be notified as per AHMP section 5.2 should human skeletal remains be identified	immediately	Environment advisor	5
MONITORING, REPORTING AND REVIEW				
PTQ-AHMP-26	Include a AHMP progress report in the AEMR	annual	Environment advisor	
PTQ-AHMP-27	Complete an environmental incident report in the event a non compliance is identified during monitoring	As required	Environment advisor	
PTQ-AHMP-28	Undertake a review of the AHMP: <ul style="list-style-type: none"> • Every 3 years • Following an audit • Following approval of a modification 	Review required within 3 months	Environment advisor	

Management action ref ID	Environmental management measure	Indicative timeframe	responsibility	Section
	<ul style="list-style-type: none"> • Following an incident • Or as otherwise deemed necessary 			
PTQ-AHMP-29	Review the adequacy of site specific environmental safe guards and management measures on a regular basis	monthly	Environment advisor	
PTQ-AHMP-30	All staff and contractors involved with the quarry must complete induction training and sign the declaration associated with respect of indigenous culture		Environment advisor	
PTQ-AHMP-31	An incidents register will be maintained and include any outcomes from incidents		Environment advisor	
PTQ-AHMP-32	An Aboriginal Heritage Report to be prepared	At end of salvage – May 2018	Environment advisor	
PTQ-AHMP-33	Submission of AHMIS card on completion of salvage works and associated review of current cards with OEH		Environment advisor	

11 APPENDICES

- Appendix 1 OEH Correspondence
- Appendix 2 OEH Correspondence February 2017
- Appendix 3 2014 to 2016 topsoil monitoring quadrants
- Appendix 4 landscape analysis prepared by EMGA Mitchell McLennan
- Appendix 5 Archaeological Excavation Recording Form
- Appendix 6 working topsoil monitoring map
- Appendix 7 Aboriginal Heritage Clearance Sheet
- Appendix 8 Aboriginal Heritage declaration

Appendix 1

OEH Correspondence



Your reference : 06_0074
Our reference : DOC14/5179
Contact : Philip Boot
(02) 62297088

Ms Elle Donnelley
Planner
Mining & Industry Projects
Planning & Infrastructure
GPO Box 39
Sydney NSW 2001

Dear Ms Donnelley

RE: Boral Peppertree Quarry Aboriginal Heritage Management Plan – Major Project 06_0074

I refer to your email and the copy of the Peppertree Quarry Aboriginal Heritage Management Plan (AHMP), dated October 2013, received by the Office of Environment and Heritage (OEH) on 17 January 2014. I apologise for the delay in replying.

OEH has reviewed the AHMP and provides the following comments for your consideration;

1. Under Section 2.1 – Heritage work undertaken to date of the AHMP (page 9 of 25); OEH notes that a range of archaeological investigations and activities have been undertaken at the Peppertree Quarry site since the submission of the Environmental Assessment in 2006. To date OEH has not received any reports on the progress and results of archaeological assessment related to the activities listed below:
 - a) 2010 - Geotechnical works
 - b) 2011/2012 – Pre development topsoil monitoring
 - c) 2012 - Construction site topsoil monitoring
 - d) 2012 – Tangarang Creek rehabilitation
 - e) 2012-2013 - Modification 3 topsoil monitoring

With the range of activities listed above, OEH is also concerned that there is no reference in the AHMP as to how the results of these activities have been recorded. OEH advises that reports on the results of salvage and monitoring activities conducted prior to and after the archaeological excavation program should be provided to OEH in order for Aboriginal site records to be updated in the Aboriginal Heritage Information Management System (AHIMS). Submission of the results of these activities, OEH Aboriginal Heritage Impact Record Forms, and any associated reports, is essential to maintain and improve the body of knowledge about site distribution patterns associated with Aboriginal use of the Marulan area and the surrounding landscape in pre-contact times.

2. OEH is concerned about the large amount of monitoring that appears to be occurring as part of the AHMP. Monitoring of areas during the construction/ earthworks stage is not generally appropriate (except in specific circumstances, such as the possibility of burials) and should never be used as an

alternative to sub-surface testing. The issue of archaeological or potential archaeological sensitivity should have been resolved as part of the investigation stage, not during the development construction process. As such, OEH would like to be provided with information on the impacts that have occurred to Aboriginal objects during components of the project that were not previously considered in the Environmental Assessment (EA).

3. OEH is also concerned about the proposal to undertake further test excavation, after the EA has been submitted, within a number of proposed ancillary facilities (Table 7.59, page 371). OEH considers that all test excavation should be undertaken at the EA stage to ensure an adequate understanding of the Aboriginal heritage values prior to Project approval and to allow for appropriate management measures to be considered before the Project design is completed.
4. OEH Aboriginal Site Record cards have not been provided for sites MQ30, MQ31, MQ32, MQ33, MQ34 and MQ35. This notification is a requirement of Section 89A of the *National Parks and Wildlife Act 1974* (NPW ACT) (which is not turned off by Part 3A of the EP&A Act). The provision of Aboriginal site recording forms to the AHIMS Registrar allows OEH to adequately assess the cumulative development impacts to the archaeological heritage of the area.
5. There are discrepancies between Table 2.1 and the data held in AHIMS that should be noted and corrected. These are:
 - MQ1 to MQ5, MQ8 to MQ18, MQ20 to MQ26 and MQ27 to MQ28 are listed as destroyed on AHIMS.
 - MQ6, MQ7, MQ19 and MQ27 are the only undisturbed sites listed on AHIMS within the development area.
 - Two additional sites that are shown on AHIMS to be within the AHMP boundary are not listed in Table 2.1. These are Peppertree Burial 01 (AHIMS # 52-4-0264) and Peppertree Scarred Tree 02 (AHIMS # 52-4-0265).
6. OEH is concerned about the statement in Section 3.3 that sites are considered to have been conserved beneath overburden emplacement for noise bunds. Recent archaeological investigation of this issue on Hume Highway duplication development sites has shown that placement of large piles of soil on top of open surface/sub-surface archaeological deposits actually causes severe irreversible harm to Aboriginal objects and is not a suitable conservation method.
7. Section 3.3 also contradicts the current AHIMS records and AISR forms for sites MQ9, 10, 12, 13, 14 and 17 as it indicates that they will be conserved when the AISR forms state that the sites were subjected to salvage excavation undertaken in accordance with the Aboriginal Heritage Management Plan.
8. Given the large number of Aboriginal objects recovered during excavation and monitoring, OEH remains to be informed about the current and future management of those objects. What has happened to the excavated and salvaged objects and who currently holds them? If they are to be returned to the Aboriginal community then a Care Agreement between Aboriginal custodians, the development proponent and OEH is required under section 85A of the NPW Act.
9. OEH notes that under Section 5.2 and Figure 3 additional monitoring is proposed for site works that involve stripping of topsoil. As OEH has not been provided with a copy of the results of the previous archaeological monitoring activities it is not possible to provide advice as to whether further monitoring is warranted as proposed in Appendix E. Given that the aim of monitoring outlined in the AHMP is to further understand the distribution of artefacts in the landscape, OEH questions whether there has been an adequate consideration of cumulative impacts to Aboriginal cultural heritage values during development. Given the large number and high densities of artefacts recorded within the Peppertree Quarry area there is some potential that the Aboriginal heritage values of the area

are higher than previously recognised. A reassessment of the significance of Aboriginal objects within the Peppertree Quarry area should be undertaken by the proponent.

10. Section 5.2 contains no discussion of the roles of each individual involved in the archaeological monitoring. Who will be responsible for producing monitoring reports? OEH notes that the stated aim for monitoring is to understand the distribution of artefacts in the landscape and the materials used for artefact production. Who will undertake this analysis and who will be responsible for preparation and provision of AHIMS site record cards to OEH?
11. Section 5.3 includes a proposal to revegetate. Does proposed planting activity have any potential to impact recorded Aboriginal sites and archaeological deposits? Has the archaeological potential of the revegetation areas been assessed?
12. Section 6.2 discusses protocols for discovery of human skeletal remains at page 24. Confirmation and management of any Aboriginal burials must be undertaken with OEH and NSW Police. Boral must also consult with the OEH Heritage Branch if skeletal remains are suspected to be less than 100 years old and non-Aboriginal.
13. At Section 7 responsibilities for undertaking analysis of artefacts and submitting information to OEH should be clarified and clearly delineated.
14. Are the copies of clearance forms at Appendix D compiled to assist with salvage reporting?
15. The AHMP does not include a references section or a list of all reports prepared to date.
16. OEH advises that Aboriginal Site Impact Recording (ASIR) Forms for each Aboriginal site that has been impacted must be submitted to ensure AHIMS data can be updated. Copies of the ASIR forms are available on the OEH website at:
<http://www.environment.nsw.gov.au/resources/cultureheritage/120558asirf.pdf>

OEH is happy to discuss or clarify the above comments with you or the proponent. Please contact Dr Philip Boot on (02) 6229 7088 or via email at philip.boot@environment.nsw.gov.au if you require any further information.

Yours sincerely



ALLISON TREWEEK
Senior Team Leader, Planning - South East
Regional Operations Group
OFFICE OF ENVIRONMENT AND HERITAGE

Appendix 2

OEH Correspondence February 2017



MP 06_0074
DOC16/600426-1

Sharon Makin
Stakeholder and Environment Advisor - Marulan South
Boral Property Group
Peppertree Quarry
843 Marulan South Road
Marulan NSW 2579
via email: sharon.makin@boral.com.au

Dear Ms Makin

Aboriginal Heritage Management Plan (AHMP) for Peppertree Quarry (Marulan South)

I refer to your email to the Office of Environment and Heritage (OEH) requesting comments on the above management plan. We have reviewed the latest version of the AHMP, received on 19 January 2017, and provide the following comments for your consideration;

Section 1.3 Scope and objectives of this AHMP

We note the commitment of Boral to undertake ongoing Aboriginal heritage assessment, Aboriginal consultation and management measures in line with the conditions of the Major Project Approval.

Section 3.5.1 Heritage work undertaken to date

We note that the section under 2014-2016 – pit footprint topsoil monitoring (as per AHMP) remains to be completed in this version of the AHMP.

A number of the Aboriginal sites listed in Table 4: Aboriginal sites identified do not have artefact numbers completed in the contents column. These are: MQ18, MQ52, MQ62, MQ69, MQ70, MQ71, MQ74, MQ97, MQ101, MQ115, MQ119 and MQ123. Except for MQ18, we recommend the contents of these sites be clarified given that the status for each of them states they are now in onsite storage.

We note that, since the October 2013 AHMP, there has been a large increase in the number of Aboriginal sites now recorded for the project. In 2013, 35 sites were listed in Table 2.1: Aboriginal sites identified. In this current AHMP, there are at least an additional 96 sites listed. The sites MQ91 and MQ92 are significantly dense in size at 30344 and 13358 artefacts retrieved at each site respectively. Due to the large number and high densities of artefacts being recorded, OEH continue to question whether there has been an adequate consideration of cumulative impacts to Aboriginal cultural heritage values as part of this development. We recommend that a reassessment of the significance of Aboriginal objects within the Peppertree Quarry area be undertaken by the proponent as part of the AHMP review.

Section 4.4 Aboriginal sites to be conserved

Site MQ22b should be discussed as a site to be conserved as identified in Table 4.

Section 9.2.2 AHMIS (sic)

The acronym for the Aboriginal Heritage Information Management System is misspelt and should be AHIMS.

OEH support discussion regarding the consultant advice to submit only one AHIMS card for the Peppertree site as a whole. We would be concerned as to whether recording the entire development area as one site adequately represents the spatial and contextual background of the archaeological values.

We are happy to discuss or clarify the above comments with you. Please contact Jackie Taylor on (02) 6229 7089 or via email at rog.southeast@environment.nsw.gov.au if you require any further information.

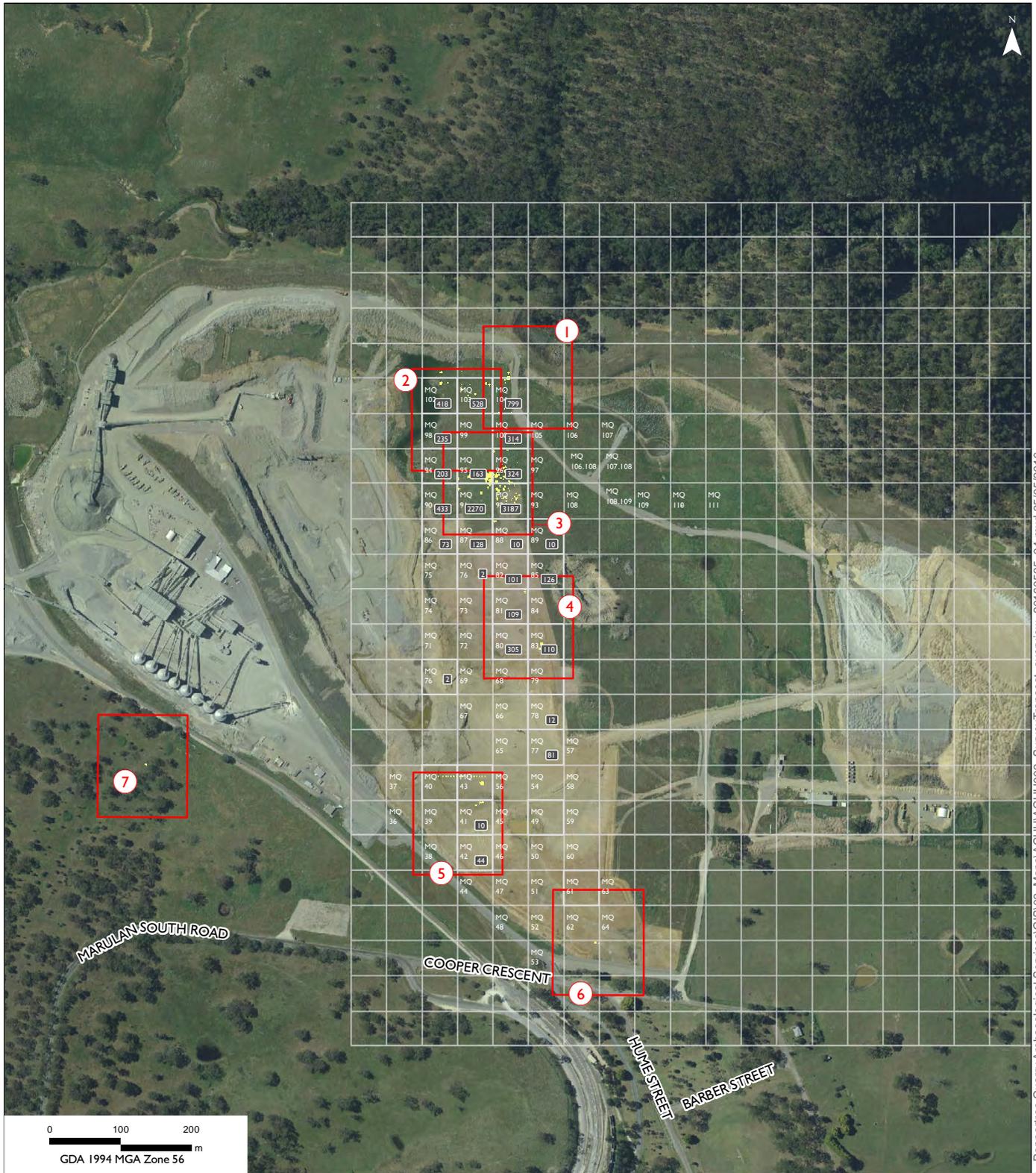
Yours sincerely



ALLISON TREWEEK 3/2/17.
Senior Team Leader, Planning - South East
Regional Operations Division

Appendix 3

2014 to 2016 topsoil monitoring quadrants



KEY

- 1m x 1m excavation squares
- Map extent
- MQ boundary (50m x 50m)
- 8 Number of artefacts collected from grader scrapes within MQ boundary



Archaeological salvage results - overview
Peppertree Quarry Aboriginal Heritage Management Plan

Figure 4

\\engammsvr1\engamm\Jobs\2015\115046 - Peppertree Quarry Archaeological Services\GIS\02_Maps\ACH\HACH002_Survey\Transect_Overview_20160525_04.mxd 25/05/2016



\\engammsvr1\hemgamm\Jobs\2015\1515046 - Peppertree Quarry Archaeological Services\GIS\02_Maps\ACHH\ACHH001_Survey\Transect_20160506_03.mxd 11/05/2016

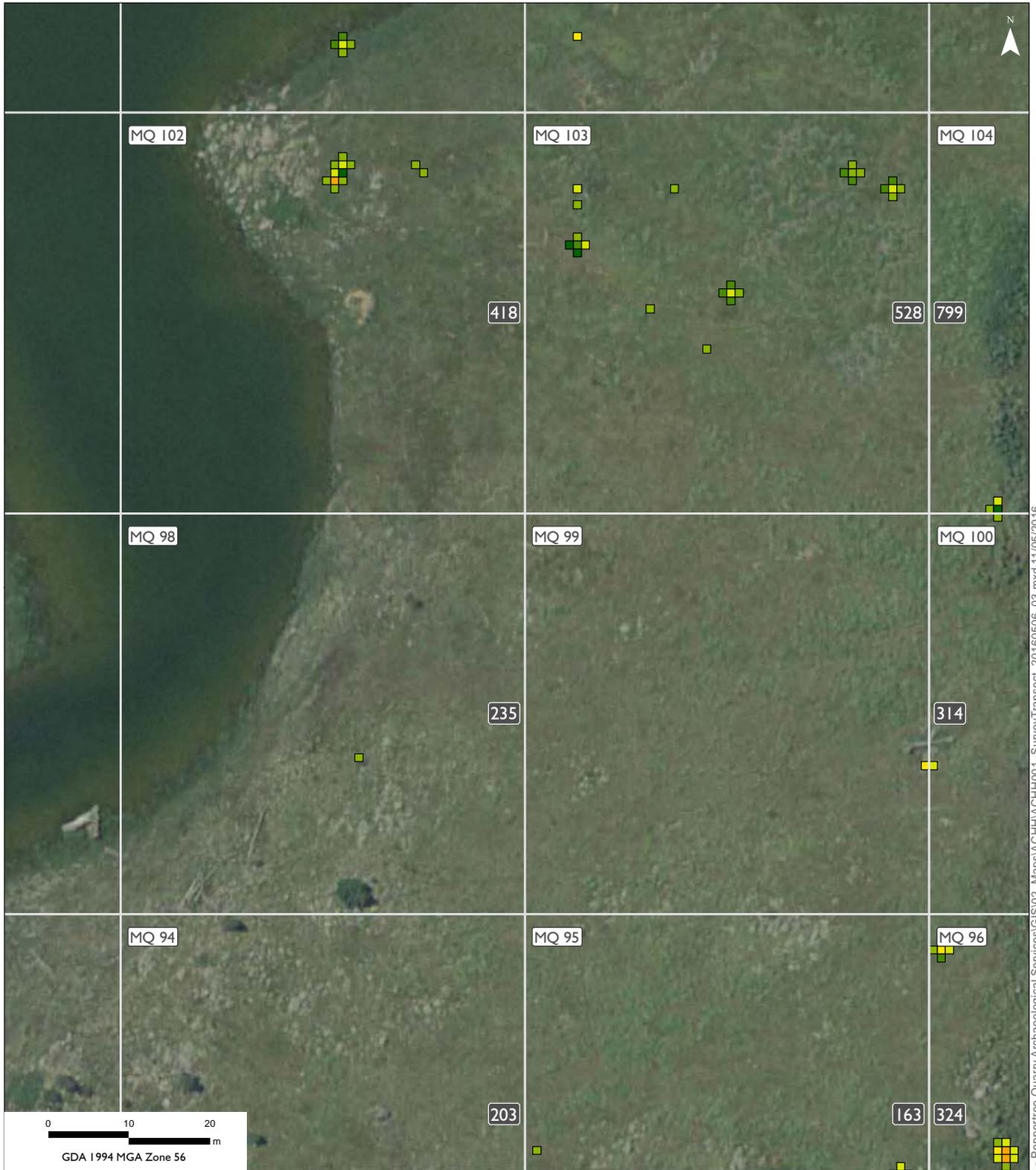
KEY

- | | | |
|--|--|--|
| Artefacts per 1m x 1m square | <ul style="list-style-type: none"> 101 - 200 201 - 500 501 - 1000 1722 | <ul style="list-style-type: none"> 8 Number of artefacts collected from grader scrapes within MQ boundary MQ8 MQ grid number MQ boundary 50m x 50m |
| <ul style="list-style-type: none"> 0 1 - 10 11 - 50 51 - 100 | | |



Archaeological salvage results - map extent I
Peppertree Quarry Aboriginal Heritage Management Plan

Figure 5

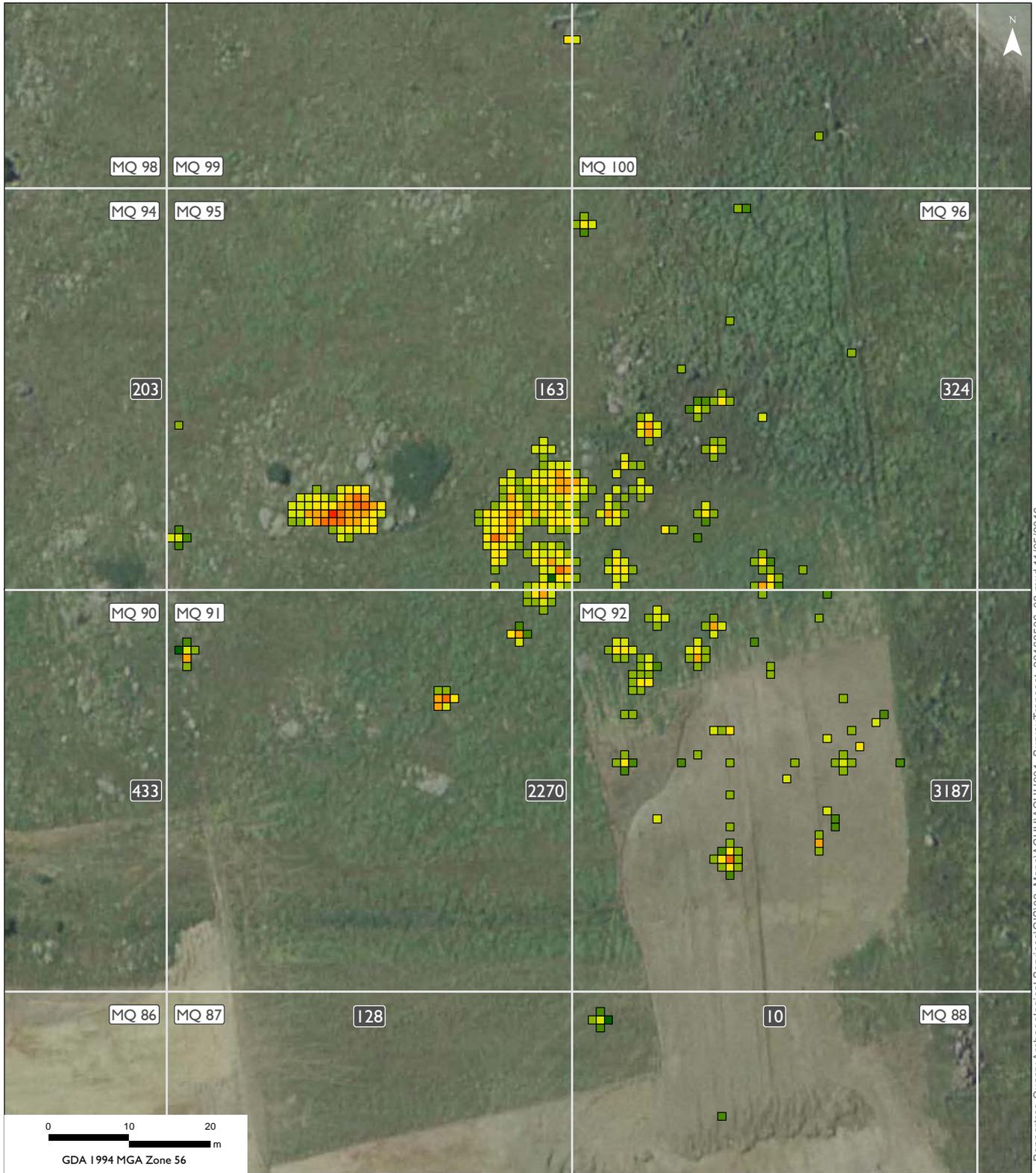


KEY

- | | | | |
|------------------------------|------------|-----|--|
| Artefacts per 1m x 1m square | 101 - 200 | 8 | Number of artefacts collected from grader scrapes within MQ boundary |
| 0 | 201 - 500 | MQ8 | MQ grid number |
| 1 - 10 | 501 - 1000 | □ | MQ boundary 50m x 50m |
| 11 - 50 | 1722 | | |
| 51 - 100 | | | |



Archaeological salvage results - map extent 2
Peppertree Quarry Aboriginal Heritage Management Plan



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KEY

- | | | |
|------------------------------|--------------|--|
| Artefacts per 1m x 1m square | ■ 101 - 200 | 8 Number of artefacts collected from grader scrapes within MQ boundary |
| ■ 0 | ■ 201 - 500 | MQ8 MQ grid number |
| ■ 1 - 10 | ■ 501 - 1000 | □ MQ boundary 50m x 50m |
| ■ 11 - 50 | ■ 1722 | |
| ■ 51 - 100 | | |

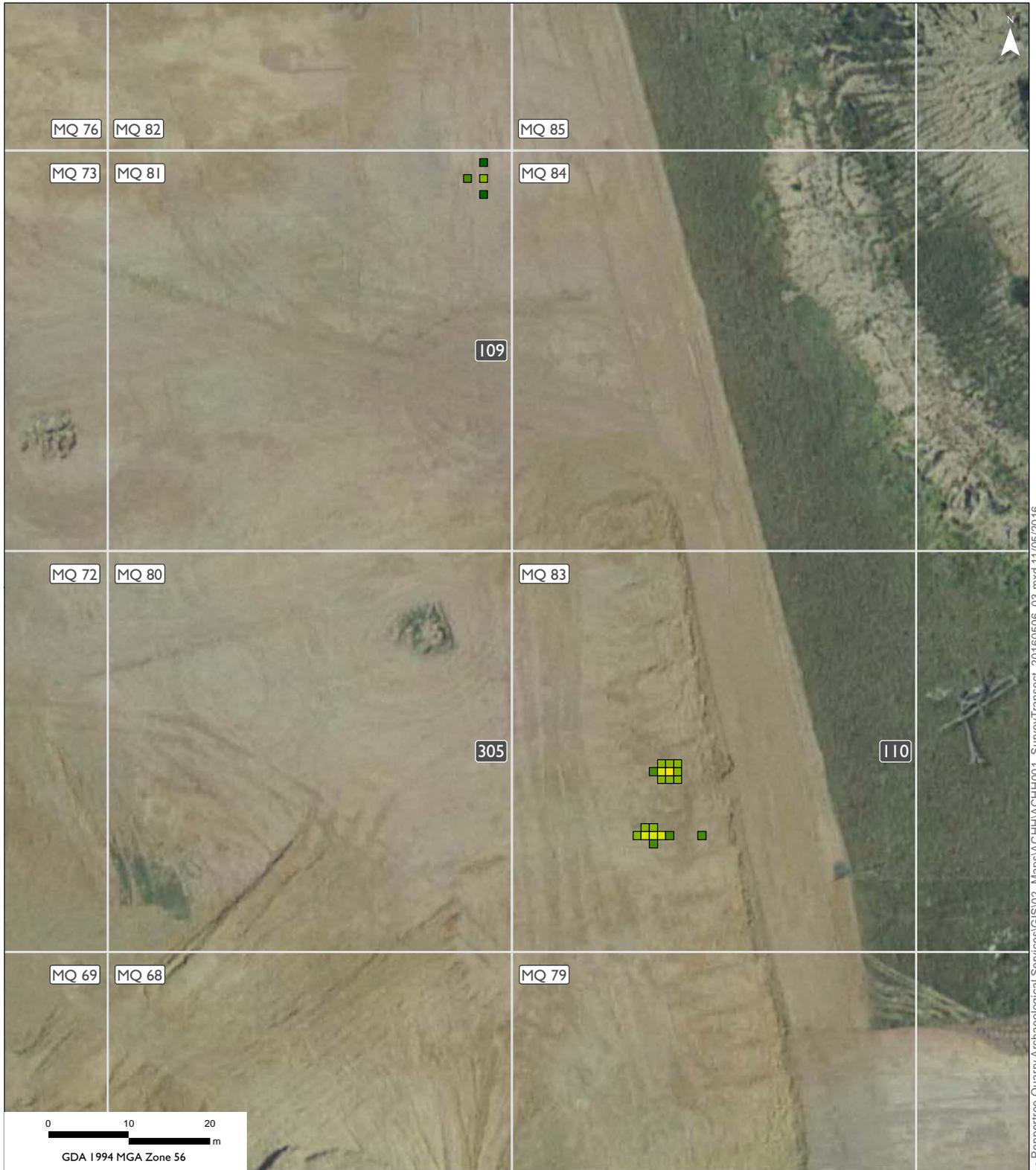


Archaeological salvage results - map extent 3

Peppertree Quarry Aboriginal Heritage Management Plan

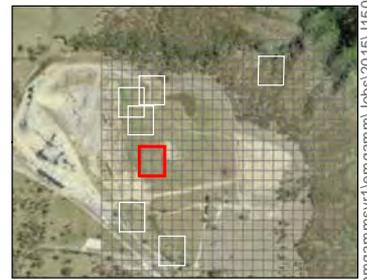


Figure 7



KEY

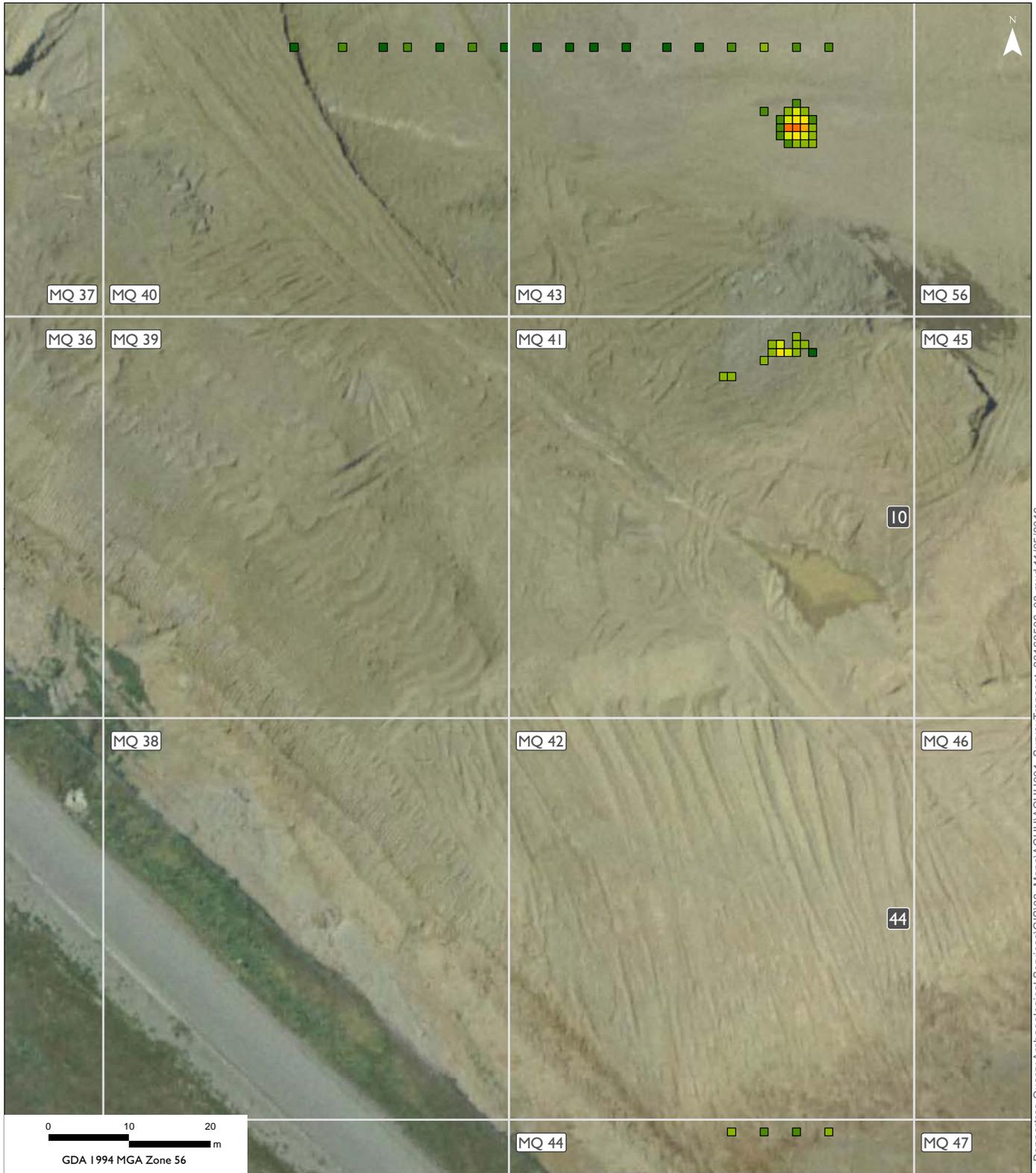
- | | | |
|------------------------------|--------------|--|
| Artefacts per 1m x 1m square | ■ 101 - 200 | 8 Number of artefacts collected from grader scrapes within MQ boundary |
| ■ 0 | ■ 201 - 500 | MQ8 MQ grid number |
| ■ 1 - 10 | ■ 501 - 1000 | □ MQ boundary 50m x 50m |
| ■ 11 - 50 | ■ 1722 | |
| ■ 51 - 100 | | |



Archaeological salvage results - map extent 4
Peppertree Quarry Aboriginal Heritage Management Plan

Figure 8

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KEY

- | | | |
|--|---|--|
| Artefacts per 1m x 1m square | ■ 101 - 200 | 8 Number of artefacts collected from grader scrapes within MQ boundary |
| ■ 0 | ■ 201 - 500 | MQ8 MQ grid number |
| ■ 1 - 10 | ■ 501 - 1000 | MQ boundary 50m x 50m |
| ■ 11 - 50 | ■ 1722 | |
| ■ 51 - 100 | | |



Archaeological salvage results - map extent 5
Peppertree Quarry Aboriginal Heritage Management Plan





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KEY

- | | | |
|---|--|---|
| Artefacts per 1m x 1m square | 101 - 200 | 8 Number of artefacts collected from grader scrapes within MQ boundary |
| 0 | 201 - 500 | MQ8 MQ grid number |
| 1 - 10 | 501 - 1000 | MQ boundary 50m x 50m |
| 11 - 50 | 1722 | |
| 51 - 100 | | |



Archaeological salvage results - map extent 6
Peppertree Quarry Aboriginal Heritage Management Plan



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KEY

- | | | |
|---|--|--|
| Artefacts per 1m x 1m square | 101 - 200 | 8 Number of artefacts collected from grader scrapes within MQ boundary |
| 0 | 201 - 500 | MQ8 MQ grid number |
| 1 - 10 | 501 - 1000 | MQ boundary 50m x 50m |
| 11 - 50 | 1722 | |
| 51 - 100 | | |



Archaeological salvage results - map extent 7
Peppertree Quarry Aboriginal Heritage Management Plan

Appendix 4

**Landscape analysis prepared by EMGA Mitchell
McLennan**



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E info@emgamm.com

www.emgamm.com

19 November 2012

Rod Wallace
Project Manager - NSW/ACT Planning & Development
Boral Property Group
Greystanes House, Level 4 South
Lot 107, Clunies Ross Street,

Prospect NSW 2148

Re: Aboriginal Heritage Management Plan - Topsoil Stripping Method

Dear Rod,

In response to your brief of 21 September 2012 please find enclosed the revised methodology for the monitoring of topsoil stripping at the Peppertree Quarry.

This method provides a clear and scientific basis for monitoring works at the Quarry. The aim of monitoring is to understand the distribution of artefacts in the landscape and the materials used for artefact production. These results will be able to be compared with previous excavations completed at the quarry and add to the knowledge of Aboriginal heritage in the area. The method includes a detailed, archaeological sound basis for monitoring based on areas of archaeological potential within the landscape.

To ensure that this method can be easily implemented a monitoring form has also been devised. It will be completed during monitoring. When compiled the monitoring forms will provide detailed information on the monitoring completed and the artefacts uncovered.

If you have any further questions regarding the method please do not hesitate to contact myself or Neville Baker.

Yours sincerely

Rebecca Moore
Archaeologist
rmoore@emgamm.com

1.1 Topsoil stripping

Further topsoil stripping of the 30 year quarry footprint will need to occur at various stages throughout the life of the quarry. The monitoring of topsoil during these campaigns will be performed either by members of the AMC or the AHA.

If the proposed AHA role is not created on the position is vacant, then the AMC will be given 2 weeks notice to attend topsoil stripping campaigns for the purpose of topsoil monitoring. In the event that a topsoil stripping campaign is not planned, and due to operational urgency, 2 weeks notice cannot be given, Boral will use best endeavours to arrange the soonest possible time for the AMC to attend. Boral will allow one month from the start of monitoring before stripping commences.

The aim of the monitoring of topsoil stripping is to further understand the distribution of artefacts in the landscape and the materials used for artefact production.

Eight Aboriginal sites were identified within the quarry footprint. Currently four sites (MQ 20, MQ 21, MQ 31 and MQ 2) have been salvaged through extensive topsoil monitoring (see Sections 2 and 3). The remaining four sites (MQ 1, MQ3, MQ 4 and MQ 5) were identified as requiring surface collection which will be completed prior to topsoil stripping.

1.1.1 Areas to be subject to monitoring

The focus for the monitoring of topsoil stripping will be those areas within the quarry footprint with potential to contain archaeological deposit and thus assist in satisfying the aim stated above, including:

- areas within 100 m of second order or lower streams; and
- a 50 m² zone around previously identified sites (with the identified site being the centre of the 50 m² zone).

The above list represents the areas with the greatest potential to contain archaeological deposit based on an analysis of the landscape of the quarry footprint and a review of previous archaeological surveys in the Project area and the wider region.

The landscape analysis considered landforms such as hills, ridges, slopes and waterways. The quarry footprint is located on a predominately flat area, with some simple slopes and no defined hills or ridges. ERM (2009:36) classified this landscape type as of low archaeological potential, based on archaeological modelling and the results of the site survey which located few sites within the flat landforms of the quarry footprint. Thus the majority of the quarry footprint does not require topsoil monitoring as artefacts are not predicted to occur.

Landscape areas which will require monitoring are those within 100 m of second order or lower streams. The majority of sites within the quarry footprint were identified within 100 m of a second order stream. The definition of stream order is based on the Strahler system with the stream number increasing based on the size and strength of the stream. Second or first order streams are characterised by intermittent flow, semi-permanent pools and may not contain a permanent flow of water. Three second order streams are present in the quarry footprint, one which has been previously monitored during topsoil stripping (NSW Land and Property Management Authority 2012). No higher order streams are present in the quarry footprint (NSW Land and Property Management Authority 2012). In archaeological terms second order streams and lower are used intermittently. Artefacts while present, are likely to be in lower concentrations, reflecting the infrequent habitation of the area. Monitoring of the topsoil stripping in these areas is warranted.

Previous archaeological surveys for the Project area and the wider region have confirmed the landscape analysis above; artefacts in the region are predominantly located within 100 m of water (ERM 2009:21; Umwelt 2005; Navin 1990; Koettig 1983; Lance and Koettig 1986). Previous archaeological survey identified eight sites within the quarry area and all were located within 100 m of a water source (ERM 2009). Based on this information, areas within 100 m of second order streams or 50 m² areas around previously identified sites are most likely to contain archaeological deposit which will be able to contribute to the overall aim of topsoil monitoring.

ERM (2009:15) also found that as distance from environmental foci such as reliable water, hill slopes and ridge tops increases artefacts are less likely to be present. High levels of disturbance were also noted within the quarry footprint which would have revealed artefacts if they were present in areas other than the sites identified. No topsoil stripping monitoring is warranted for areas over 100 m from water or which are not within 50 m² of an identified site. Stop work procedures for the discovery of new Aboriginal sites of significance will remain in place.

1.1.2 Method

To ensure that monitoring of the topsoil stripping in these areas is conducted in safe and scientifically rigorous manner the following steps will be followed during topsoil monitoring.

- The remaining area to be monitored will be divided into grid of 50 m² squares. Coordinates for each square will be recorded from the centre of the square and each square will be given a number. Monitoring of each square will be recorded on a Peppertree Quarry Cultural Heritage Topsoil Monitoring Form.
- Before monitoring commences the monitor will be provided with a copy of the Peppertree Quarry Cultural Heritage Topsoil Monitoring Form, which will be filled out during monitoring (See Appendix 5).
- The grader will strip the grid square to be monitored.
- When the grader has completed the grid square the monitor will search the grid square for Aboriginal material.
- Any Aboriginal material found will be placed in a sturdy plastic bag, labelled with the following information:
 - Topsoil Monitoring;
 - the date eg 16/10/12;
 - the grid square number eg 1; and
 - the bag number eg Bag 1 of 2.

Aboriginal material recovered from the same grid square will be placed in the same bag.

- The grid square which has been monitored will be marked on the map attached to the Peppertree Quarry Cultural Heritage Topsoil Monitoring Form.

Monitoring forms will be collated and copies of the monitoring forms will be given to the following for sign off:

- the Boral environment manager;

- the AHA; and
- the members of the AMC (as listed in Section 4.1).

Artefacts collected during the monitoring of stripping will be managed according to the future curation of all Aboriginal materials recovered from the site as detailed in Section 5.4. The artefacts will be recorded and the information incorporated into the existing artefact database to allow the results to be compared to other archaeological work.

If human remains or significant Aboriginal material as described in Table 6.1 are uncovered during monitoring the process detailed in Section 6.2 should be followed.

ERM 2009, *Marulan South Quarry Aboriginal Heritage Assessment*, report prepared for Boral Resources (NSW) Pty Ltd.

Koettig M 1983, *Goulburn Freeway By-Pass*, report prepared for Department of Main Roads.

Lance A and Koettig M 1986, *An Aboriginal Resources Planning Study for the City of Goulburn, NSW*, report prepared for Goulburn City Council.

Land and Property Management Authority 2012 *SIX viewer*, Marulan area, accessed from <http://imagery.maps.nsw.gov.au/>.

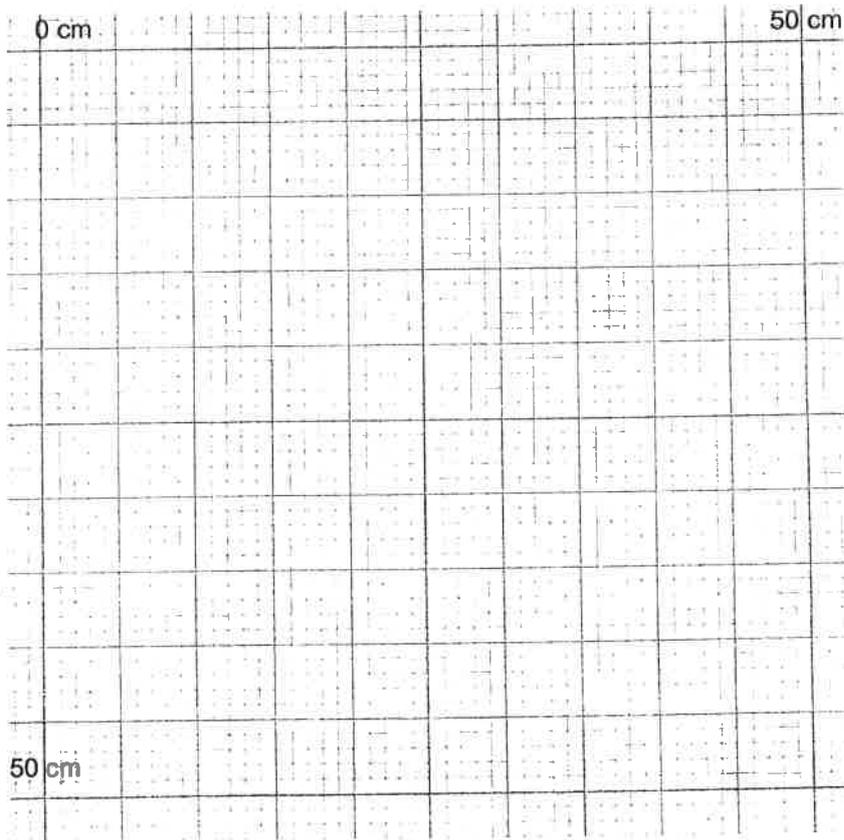
Navin K 1990, *Archaeological Survey of a Proposed Hard Rock Quarry Site near Marulan NSW*, report prepared for Quarry Technology Pty Ltd.

Umwelt 2005, *Environmental Impact Statement: Proposed Lynwood Quarry, Marulan*, report prepared for Readymix Holdings Pty Ltd.

Appendix 5

Archaeological Excavation Recording Form

Subject:



indicate north (N) or grid north (GN)

.....

.....

.....

.....

.....

.....

Appendix 6

Working topsoil monitoring map



progress of work as at
1st July 2016

30264
 SUPPLY RECORD SHEET
 DATE: 1/7/16
 PROJECT: [illegible]
 DRAWING NO: [illegible]
 SCALE: [illegible]
 SHEET NO: [illegible]

Appendix 7

Aboriginal Heritage Clearance Sheet



Peppertree Quarry Cultural Heritage Clearance Form

Clearance Form #	
Name of Site	
GPS Location	
Date clearance granted	
Salvage undertaken	Yes No
If yes	
• Salvage undertaken by	
• Number of artefacts collected	
• Site identification number (MQ)	
• Date/s of salvage	
Site card required	Yes No

Long term site use:

Cultural heritage investigation at this site has been undertaken. No further cultural heritage action is required. The area as defined above is cleared for use and development. The topsoil is cleared for re-use on site. (Please tick)

Yes

No

Further Comments:

Signed by

Organization	Name	Signature
Boral		
Buru Ngunawal		
Ngunawal		
Pejar		



Peppertree Quarry Cultural Heritage Clearance Form

Photos

Map

Appendix 8

Aboriginal Heritage declaration



ABORIGINAL HERITAGE DECLARATION

Peppertree Quarry operates under a number of environmental management plans. One such plan is the Aboriginal Management Heritage Plan. The current Aboriginal Heritage Management Plan outlines a protocol for disturbance of soil. The Plan states that a trained Boral representative or Archaeologist is to be present during disturbance and representatives of the Aboriginal Management Committee (AMC) are to be informed if artefacts of significance are identified.

Due to the findings in archaeological excavation reports it has been agreed with the representatives of the Aboriginal Management Committee (AMC) that a formal process for clearance be developed and that the AMC will be consulted prior to any soil disturbance outside of the agreed cleared areas.

Therefore no new excavation, grading or disturbance to topsoil is to be undertaken unless approved by the Quarry Manager, Angus Shedden and the Environmental and Stakeholder Advisor, Sharon Makin.

No fencing either permanent or temporary associated with "Environmentally Sensitive sites" is to be removed or fenced areas accessed without approval.

Aboriginal culture and the AMC representatives are to be respected.

Declaration

I acknowledge that I have been given a presentation on the importance and management of Aboriginal heritage at Peppertree Quarry site and understand the information provided at this presentation specifically regarding the need to gain approvals prior to the disturbance of soils and access to environmentally sensitive sites.

I agree to comply with the requirements for management of aboriginal heritage.

Name: (please print)		Company:	
Signature		Date:	

PEPPERTREE QUARRY FULL SITE INDUCTION

Business:	BCM QUARRIES (NSW)	Region/ Area:	New South Wales
Name:			
Contact No:		Job Classification:	
Site:	PEPPERTREE QUARRY	Induction Date:	
Drivers Licence No.:		Licence Expiry Date:	
Company:			
EMERGENCY CONTACT DETAILS			
Name:		Relationship:	
Mobile No:		Landline No:	

<i>✓ the box when activity completed</i>	Induction Checklist Items	
Job	<input type="checkbox"/> Overview the work area <input type="checkbox"/> Job requirements <input type="checkbox"/> SWMS <input type="checkbox"/> Authority To Work permits <input type="checkbox"/> High Risk Work permits <input type="checkbox"/> PPE	<input type="checkbox"/> MSDS <input type="checkbox"/> Competencies & Licences <input type="checkbox"/> Coordination with Boral staff and other contractors <input type="checkbox"/> Reporting to Boral supervisor <input type="checkbox"/> Authority to Drive Assessment
Workplace	<input type="checkbox"/> Overview the workplace <input type="checkbox"/> Hazards and hazard reporting <input type="checkbox"/> Incident & Injury Reporting <input type="checkbox"/> Emergency Management <input type="checkbox"/> Emergency Evacuation <input type="checkbox"/> Site Safety Rules	<input type="checkbox"/> Housekeeping <input type="checkbox"/> Traffic movement <input type="checkbox"/> Site Access & Notification <input type="checkbox"/> Signing in and out <input type="checkbox"/> Drug and Alcohol Policy <input type="checkbox"/> Corporate Policies

Declaration:

I agree the assessment purpose and outcomes were clearly explained to me by the person conducting the site induction. This includes that the process of assessment and my responsibilities were agreed, that the assessor made reasonable adjustments for my personal needs and requirements and that any additional questions that I had were answered to my satisfaction.

I acknowledge I have completed an induction for Peppertree Quarry, and agree to comply with the requirements set out in the induction by signing below.

Signature:	Date:
-------------------	--------------

PEPPERTREE QUARRY FULL SITE INDUCTION

Assessor Details & Assessment Results

ATTENTION: Have you taken photocopies of all licences and competency tickets?

Assessor Name _____ Position _____

Theory

_____ achieved the standard of knowledge required as indicated in the assessment.

Assessor Signature: _____ Date: _____

Assessor to obtain copy of drivers licence Yes No

ASSESSOR TO COMPLETE			
Score:		/25	
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>	
Print Name:		Date:	
Signature:			

Administration

Date entered into Induction register		Entered by:	
--------------------------------------	--	-------------	--

PEPPERTREE QUARRY FULL SITE INDUCTION

Assessment Questionnaire

Please tick the most correct answer to the following questions. There may be

- As part of Boral's drive towards Zero Harm, what are Safety Absolutes?
 - Peppertree site specific requirements
 - Non-negotiable rules designed to both save lives and protect our people in the workplace
 - Must be adhered to by every person on site
 - Focus on 5 key areas of risk
 - Apply to contractors only whilst on site

- Which of the following 5 key risk areas do safety absolutes focus upon?

weather conditions	
Isolation	
Mobile Plant	
High risk activities	
General footwear	

Driving	
Safety first	
Housekeeping	
Mobile phone usage	
Daily news	

- An approved Safe Work Method Statement (SWMS) is required for an Authority to Work (ATW) to be issued?
 - True
 - False
- An Authority to Work (ATW) at Peppertree Quarry is required for any high risk work task with potential to conflict other work activities?
 - True
 - False
- When should you carry out a Take 5?
 - Before you start your work
 - At the start of your shift
 - When there are no SWMS to sign on to
- Only significant injuries need to be reported to Boral.
 - True
 - False

PEPPERTREE QUARRY FULL SITE INDUCTION

7. Which of the following items of PPE must I wear or carry at all times while on site at Peppertree?

Gloves	
Hard Hat	
High Visibility Clothing	
Safety Glasses	
Hearing Protection	

Long Sleeves	
Long Pants	
Dust Mask	
Lace up safety boots	
General Sunglasses	

8. In what areas of the quarry must you wear a dust mask?

- Only when operating a vehicle
- All areas on site where signposted to do so
- All areas being accessed when plant is in operation
- At the discretion of all staff and contractors

9. What types of dust mask are suitable to wear if working inside buildings for more than 30 minutes if operating or 60 minutes if plant is switched off?

Disposable P2 masks			Half-face powered respirator		
Half-face respirator			Powered assisted particulate respirator		

10. What are the site's requirements for practicing good hygiene?

- Keep PPE uniform clean – change regularly
- Don't traipse dirt and dust into clean areas or take home
- Remove dust from clothes before amenities, lunch room or office
- Keep all areas of work, amenities and lunch room neat and tidy at all times

11. What are the main requirements to drive a light vehicle on site?

- Driver must carry out an Authority to Drive assessment
- Driver must hold a current drivers licence
- Driver must ensure that the light vehicle has been deemed fit for purpose by site

12. Heavy vehicles must give way to light vehicles?

- True
- False

PEPPERTREE QUARRY FULL SITE INDUCTION

13. The maximum vehicle speed limit within the quarry is 40kph on-site?
 True
 False
14. UHF Channel 11 is the only UHF communication channel on-site?
 True
 False
15. All light vehicles deemed "fit for purpose" on site must have a working flashing orange beacon, flag and a working UHF radio?
 True
 False
16. You can use a mobile phone when driving a vehicle on site?
 True
 False
17. Seat belts are optional when operating all plant on site?
 True
 False
18. You can use electrical equipment onsite if it has been tagged and tested:
 In the last 3 months
 In the last 2 years
 In the last 6 months
 In the last 12 months
19. List in order (1,2,3) the 3 things you must do to be sure you have isolated correctly?
(a) _____ Fit lock, tag and hasp with your details on it
(b) _____ Test the equipment does not start
(c) _____ Isolate the equipment at isolation point
20. High risk tasks requiring a permit on site include (tick correct ones):
- | | |
|---|--|
| <input type="checkbox"/> Excavation | <input type="checkbox"/> Confined spaces |
| <input type="checkbox"/> Hot work | <input type="checkbox"/> Traffic management |
| <input type="checkbox"/> Working in the rail corridor | <input type="checkbox"/> Working at heights |
| <input type="checkbox"/> Electrical work | <input type="checkbox"/> Transportation of High/Wide loads |

PEPPERTREE QUARRY FULL SITE INDUCTION

21. If you are working at heights, above what height do you need a permit?

- 1 m
- 1.5m
- 2 m
- 3 m

22. The alcohol limit for the site is 0.02 BAC, excluding rail work?

- True
- False

23. If you identify a hazard on site you should?

- Ignore it and keep working
- Make the area safe, or isolate the hazard, and report it to your supervisor
- Report it to your supervisor and let him deal with it

24. Train movements occur on site:

- 2 times a day
- Any time of the day
- 4 times a day

25. If involved in an incident that damages equipment or hurts somebody what should you do?

- Report it to your supervisor immediately
- Treat any injured persons
- Isolate the area and do not move any equipment involved
- Drive back to the office in the damaged vehicle and park it up hoping nobody will notice

ABORIGINAL HERITAGE DECLARATION

Peppertree Quarry operates under a number of environmental management plans. One such plan is the Aboriginal Management Heritage Plan. The current Aboriginal Heritage Management Plan outlines a protocol for disturbance of soil. The Plan states that a trained Boral representative or Archaeologist is to be present during disturbance and representatives of the Aboriginal Management Committee (AMC) are to be informed if artefacts of significance are identified.

Due to the findings in archaeological excavation reports it has been agreed with the representatives of the Aboriginal Management Committee (AMC) that a formal process for clearance be developed and that the AMC will be consulted prior to any soil disturbance outside of the agreed cleared areas.

Therefore no new excavation, grading or disturbance to topsoil is to be undertaken unless approved by the Quarry Manager, Angus Shedden and the Environmental and Stakeholder Advisor, Sharon Makin.

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Aboriginal culture and the AMC representatives are to be respected.

Declaration

I acknowledge that I have been given a presentation on the importance and management of Aboriginal heritage at Peppertree Quarry site and understand the information provided at this presentation specifically regarding the need to gain approvals prior to the disturbance of soils and access to environmentally sensitive sites.

I agree to comply with the requirements for management of aboriginal heritage.

Name: (please print)		Company:	
Signature		Date:	

PEPPERTREE QUARRY FULL SITE INDUCTION

AUTHORITY TO DRIVE ASSESSMENT

No	Question	Answer
1	What are the main safety requirements that your vehicle must have before driving your vehicle on site? List all requirements.	
2	What must you do when approaching an intersection?	
3	What is the speed limit around the site area?	
4	What is the distance between vehicles on all site roads?	
5	When approaching working equipment when should you notify the operator?	
6	Who has right of way? HME or light vehicles	
7	What do you need to call on the UHF in the event of an emergency?	
8	What are the requirements for vehicles operating in fog or inclement weather?	
9	If you leave your vehicle what PPE must you wear? Full listing required.	
10	If you are escorting a vehicle onto site who will grant you approval to enter?	

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