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Karuah East Quarry MOD2

Due Diligence Report



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Approval for issue

Name	Signature	Date
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1 Introduction

Karuah East Quarry Pty Ltd engaged RPS to prepare a due diligence assessment for a modification to the Karuah East Quarry project approval. RPS prepared the due diligence assessment with reference to the Karuah East Quarry Heritage Management Plan (HMP) (RPS 2015) and the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* (Due Diligence Code) (2010).

1.1 MOD2

MOD2 is an application for a modification to the Karuah East Quarry Project Approval 09_0175 granted by the Planning Assessment Commission on 17 June 2014. It is a minor amendment to expand the area of disturbance of the Karuah East Quarry adjacent to the western edge of the quarry by 1.133ha (Figure 1.1).

MOD2 will include:

- Improved water management along the north south internal haulage road;
- Widening of the narrow north south internal haulage road to substantially improve operational safety; and,
- An additional area for product stockpiling to improve operational efficiencies.

1.2 Authorship

RPS Senior Heritage Consultant Georgia Wright prepared the report. RPS Draftsperson Natalie Wood provided technical assistance and RPS Acting Heritage Manager Alexandra Byrne reviewed the report.

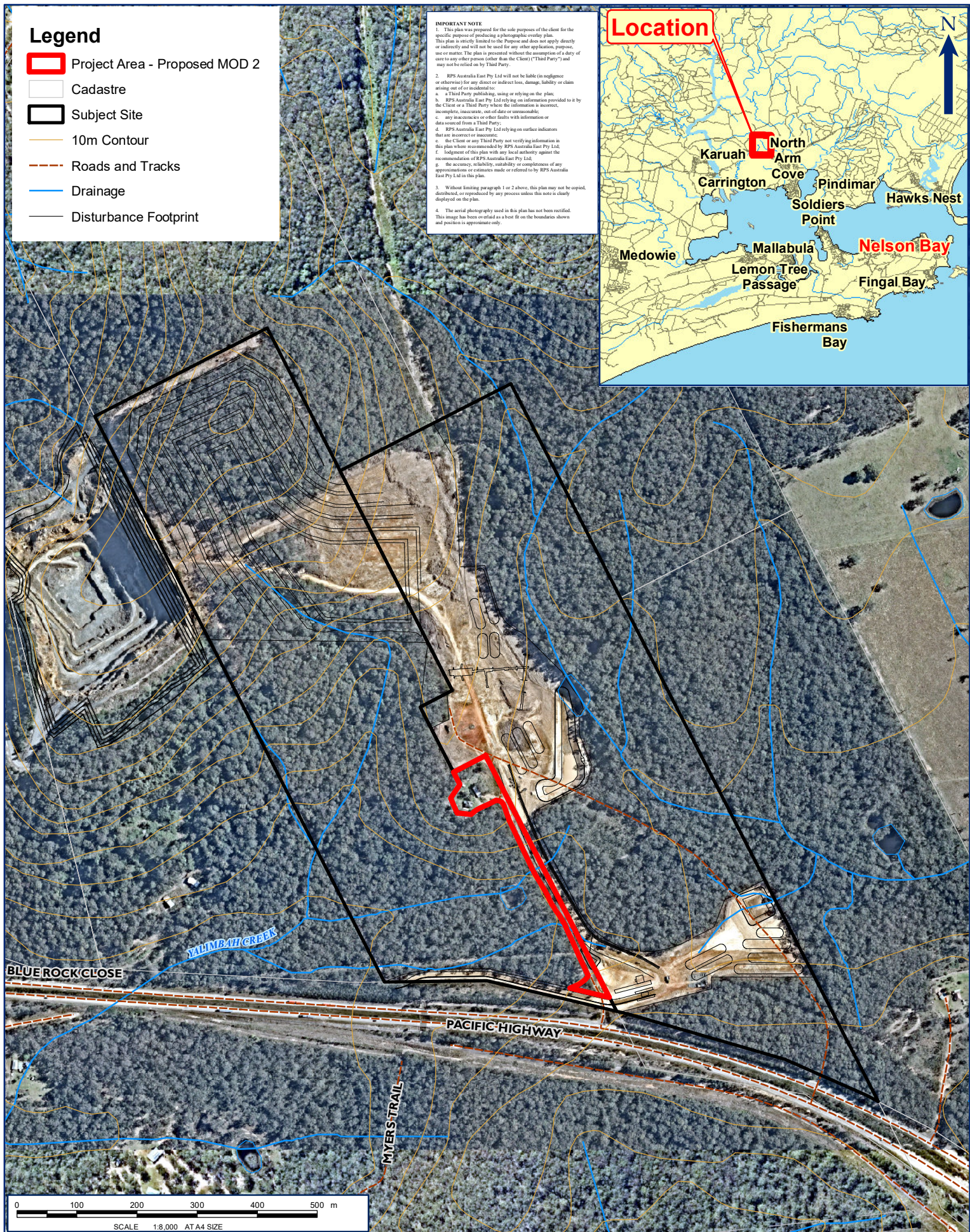


FIGURE 1: PROJECT AREA LOCATION

LOCATION: KARUAH EAST
QUARRY

DATUM: GDA84
PROJECTION: MGA Zone 56

JOB NO.: PR 141021

Data Sources:
RPS, Client
Nearmap 7/4/2018

PURPOSE: HERITAGE

Technician: Natalie Wood

Date: 20/08/2018

CLIENT: KARUAH EAST QUARRY PTY LTD
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2 Statutory context

The statutory context is provided for the information purposes of the client; it should not be interpreted as legal advice. RPS will not be liable for any actions taken by any person, body or group as a result of the summary below and recommends that specific legal advice be obtained from a qualified legal practitioner prior to any action as a result of the information provided.

In NSW, several Acts that relate to the protection and management of Aboriginal cultural heritage. The applicable Acts include:

- *National Parks and Wildlife Act 1974* (NPW Act);
- *National Parks and Wildlife Regulation 2009*; and
- *Environmental Planning and Assessment Act 1979* (EPA Act).

The NPW Act protects Aboriginal cultural heritage (objects and places) in NSW. The EPA Act regulates a system of environmental planning and assessment for NSW and requires an assessment of Aboriginal cultural heritage as part of the planning and approvals process. Within the EPA Act, Parts 3, 4 and 5 relate to Aboriginal cultural heritage.

2.1 National Parks and Wildlife Act 1974

The NPW Act provides protection for Aboriginal cultural heritage in NSW. Section 86 of the NPW Act states:

- “A person must not harm or desecrate an object that the person knows is an Aboriginal object”
- “A person must not harm an Aboriginal object”
- “A person must not harm or desecrate an Aboriginal place”

Under the NPW Act, it is an offence to harm an Aboriginal object or place. Harming an Aboriginal object or place may result in a fine of up to \$550,000 for an individual and imprisonment for two years; and in the case of a corporation, a fine of up to \$1.1 million. The fine for a strict liability offence (s86 [2]) is up to \$110,000 for an individual and \$220,000 for a corporation.

Harm under the *National Parks and Wildlife Act 1974* harm is defined as any act that; destroys defaces or damages the object, moves the object from the land on which it has been situated, causes or permits the object to be harmed. However, it is a defence from prosecution if the proponent can demonstrate 1) that harm was authorised under an Aboriginal Heritage Impact Permit (AHIP) or 2) that the proponent exercised due diligence in respect to Aboriginal cultural heritage. The ‘**due diligence**’ defence states that if a person or company has exercised due diligence in relation to Aboriginal cultural heritage, then liability from prosecution under the *National Parks and Wildlife Act 1974* will be removed or mitigated if it later transpires that an Aboriginal object was harmed.

2.2 National Parks and Wildlife Regulation 2009

The National Parks and Wildlife Regulation 2009 provides for the management of Aboriginal objects and places. The National Parks and Wildlife Regulation 2009 outlines the recognised due diligence codes of practice, procedures for AHIP applications and all requirements relating to Aboriginal cultural heritage consultation, as well as other legal processes.

2.3 Environmental Planning and Assessment Act 1979

The EPA Act regulates a system of environmental planning and assessment for NSW. The EPA Act requires an assessment of the environmental impact of a proposal. The NPW Act therefore protects Aboriginal cultural heritage, and the EPA Act requires an assessment of Aboriginal cultural heritage as part of the planning and approvals process.

2.3.1 Karuah East Quarry MOD2

MOD2 is an application to extend the Karuah East Quarry area of disturbance by 1.133ha in accordance with Section 75W of the EP&A Act. Section 75W of the EP&A Act remains applicable under the transitional provisions identified in Schedule 2 of the Environmental Planning and Assessment (Savings, Transitional and other Provisions) regulation 2017, in particular clause 3BA.

On 1st October 2011, Part 3A of the EP&A Act was repealed by the Environmental Planning & Assessment (Part 3A Repeal) Act 2011 No. 22. Despite this, Part 3A continues to apply to the MOD2 proposal based on the transitional provisions identified in Schedule 2 of the EP&A (Savings, Transitional and other Provisions) regulation 2017. Clause 3 of Schedule 2 of the EP&A (Savings, Transitional and other Provisions) regulation 2017, states that the provisions of any State Environmental Planning Policy (SEPP) or other instrument implemented under Part 3A continue to apply in respect of a transitional Part 3A project.

2.3.2 Karuah East Quarry Heritage Management Plan

The Karuah East Quarry HMP (RPS 2015) sets out the minimum standards and processes for the management of Aboriginal cultural heritage. It also sets out the processes for consultation with registered Aboriginal parties (RAPs).

The HMP was endorsed by the NSW DPE Secretary on 14 December 2015. It is understood that the HMP will be updated in due course following the recent approval of MOD1 to the Karuah East Quarry Project Approval (09-0175), which was approved by the NSW DPE on 27 April 2018. MOD1 approves a nominal expansion to the approved quarry footprint of 2,500m² directly to the west of the quarry plant.

3 Landscape context

The purpose of the landscape context is to provide an understanding of the landform, available resources, and the potential for Aboriginal objects. It is an important aspect of the definition and interpretation of Aboriginal land use across a landscape.

3.1 Geology

The Nerong Volcanics underlie the MOD2 Project Area. The Nerong Volcanics consist of carboniferous siliceous volcanic flow of rhyolitic and dacitic ignimbrites, with occasional interbeds of tuffaceous sandstone and conglomerate (Murphy 1995:25-28).

The MOD2 Project Area provided a source of ignimbrites, rhyolite and tuffaceous rock often used for the manufacture of artefacts.

3.2 Soils

The soil landscape represented within the MOD2 Project Area is the North Arm Cove soil landscape. The North Arm Cove soil landscape is a residual soil landscape consisting of sand or clay loam above clay (Table 3.1). It is associated with a high erosion hazard.

Table 3.1 North Arm Cove soil landscape (Murphy 1995:25-28)

Dominant soil material	Description
A ₁ horizon	Dark variable sand to clay loam with gravel to stone sized substrate rock inclusions.
A ₂ horizon	Bleached hard setting sand clay loam with gravel to stone sized substrate rock inclusions.
B horizon	Mottled clay with gravel sized substrate rock inclusions.
A ₂ horizon	Sporadic bleaching on root traces.
B horizon	Mottled dark brown fine sand clay loam with occasional fine gravel sized charcoal inclusions.

3.3 Topography

Karuah East Quarry and the MOD2 area form part of an undulating landscape with broad (greater than 200 metres) crests and moderately inclined slopes. Local relief is up to 50 metres. Slope gradients are less than 15 per cent. Minor areas of steep slopes occur, which are associated with a rock-strewn surface (Murphy 1995:25-28).

3.4 Hydrology

Yalimbah Creek and numerous tributaries traverse the immediate landscape. The Karuah East Quarry required the course of tributaries to be modified.

3.5 Flora and fauna

The MOD2 Project Area is within a landscape of heavily disturbed and cleared open-forest to tall closed-forest. Indicative species include *Angophora costata* (smooth-barked apple), *Eucalyptus signata* (scribbly gum), *Eucalyptus gummifera* (red bloodwood), *Allocasuarina torulosa* (forest oak) and *Eucalyptus acmenoides* (white mahogany). A dry sclerophyll shrub understorey is often associated with *Banksia*

spinulosa var. *collina* (hill banksia), *Lambertia formosa* (mountain devil), *Banksia oblongifolia* and *Persoonia levis* (broad-leaf geebung). In sheltered areas, a tall open forest with *Eucalyptus maculata* (spotted gum), *Eucalyptus paniculata* (grey ironbark) and *Angophora costata* (smooth-barked apple), and *Eucalyptus microcorys* (tallowwood) occur. Various *Melaleuca* spp. (paperbarks) occur along watercourses (Murphy 1995:25-28). The plant communities within the MOD2 Project Area provided habitat for various fauna and would have provided potential food and raw material sources for past Aboriginal people.

3.6 Summary

The MOD2 Project Area is within a resource rich area with a source of ignimbrites, rhyolite and tuffaceous often used for the manufacture of artefacts. The landscape is undulating, with minor areas of steep slopes. Numerous tributaries associated with Yalimbah Creek dissect the landscape and provide an ephemeral source of water.

4 Archaeological context

The purpose of the archaeological context is to provide an understanding of the nature and range of Aboriginal objects within the local area, to provide context for the interpretation of any Aboriginal objects, and to understand the cumulative impact to Aboriginal cultural heritage.

4.1 Aboriginal Heritage Information Management System

A search of the Aboriginal Heritage Information Management System (AHIMS) on 10 July 2018 identified two Aboriginal objects within the searched coordinates (GDA Zone 26 E 405508-408842 N 6387774-6391074 with a 200-metre buffer) (Table 4.1).

No Aboriginal objects are recorded within the MOD2 Project Area (Figure 4.1).

Table 4.1 Aboriginal objects within the searched coordinates

Type	Frequency	Percent
Artefact	1	50
Scarred tree	1	50
Total	2	100

4.2 Previous archaeological assessments

Insite 2004 Proposed Extension to the Karuah 'Red' Hard Rock Quarry

In 2004, Insite assessed a proposed extension of the Karuah 'Red' Quarry. The assessment noted that the survey of the Karuah 'Red' Quarry conducted in 1997 identified no evidence of Aboriginal land use due to prior clearing and the steep nature of the landscape unit (Insite 2004:8). The model developed as part of the 2004 assessment identified the potential for:

- Isolated or a low-density of artefacts, as the landform of the proposed extension area would not be conducive to extended Aboriginal land use, unless of a ceremonial nature;
- Scarred trees, with old growth remaining within the proposed extension area;
- Quarries, as the proposed extension area is associated with outcropping volcanic rock suitable for the manufacture of artefacts; and
- Stone arrangements, with stone arrangements recorded in the North Arm Cove area, where local tradition indicated that Aboriginal people modified circular arrangements of rock formed by trees growing through within boulder strewn surfaces.

The inspection of the proposed extension of the Karuah 'Red' Quarry in 2004, immediately east and up slope of the Karuah 'Red' Quarry identified a scarred tree (spotted gum) west of the proposed extension area, three kilometres west of the Karuah River and 500 metres south east of the extensive wetlands associated with Yalimbah Creek.

RPS 2011 Karuah East Hard Rock Quarry

In 2011, RPS prepared an Aboriginal cultural heritage assessment for the proposed Karuah East Quarry in accordance with the Director-General's Requirements (DGRs) for the project. The assessment identified no Aboriginal objects within the proposed Karuah East Quarry. The assessment noted the absence of old growth and the presence of introduced weeds such as lantana, indicated the area had been cleared and assessed the potential for *in situ* Aboriginal objects as unlikely.

Karuah Local Aboriginal Land Council, 2018, Karuah East Quarry Project – Modification Application (Mod.1). Cultural Heritage Assessment

Karuah Local Aboriginal Land Council were engaged by Karuah East Quarry Pty Ltd to assess the possible impact of an additional disturbance area of 2,500m². The assessment found that the land surveyed during the visual inspection showed little sign of potential use due to:

- Overgrown vegetation limiting surface visibility;
- The area comprised juvenile trees less than 100 years old;
- The area is located on a steep hillside;
- The composition of rocks at the location was not suitable for any traditional purpose;
- Limited nearby water sources; and,
- No other sites of importance have been identified nearby.

The visual inspection revealed nothing of cultural importance and the Aboriginal elder present during the survey indicated that due to the aforementioned factors there would be little hope of finding anything. No further investigations were recommended, and the report concluded that the proposal may proceed.

4.3 Summary

The density and distribution of Aboriginal objects as identified on the AHIMS reflects transitory Aboriginal land use. Inspection of the Karuah East Quarry in 2011 prior to project approval identified no Aboriginal objects or areas of Aboriginal archaeological sensitivity and noted ground disturbance associated with land clearing. A cultural survey near to the current Project Area by an Aboriginal elder also indicated that the area was not likely to be heavily occupied and sites are unlikely to be identified.

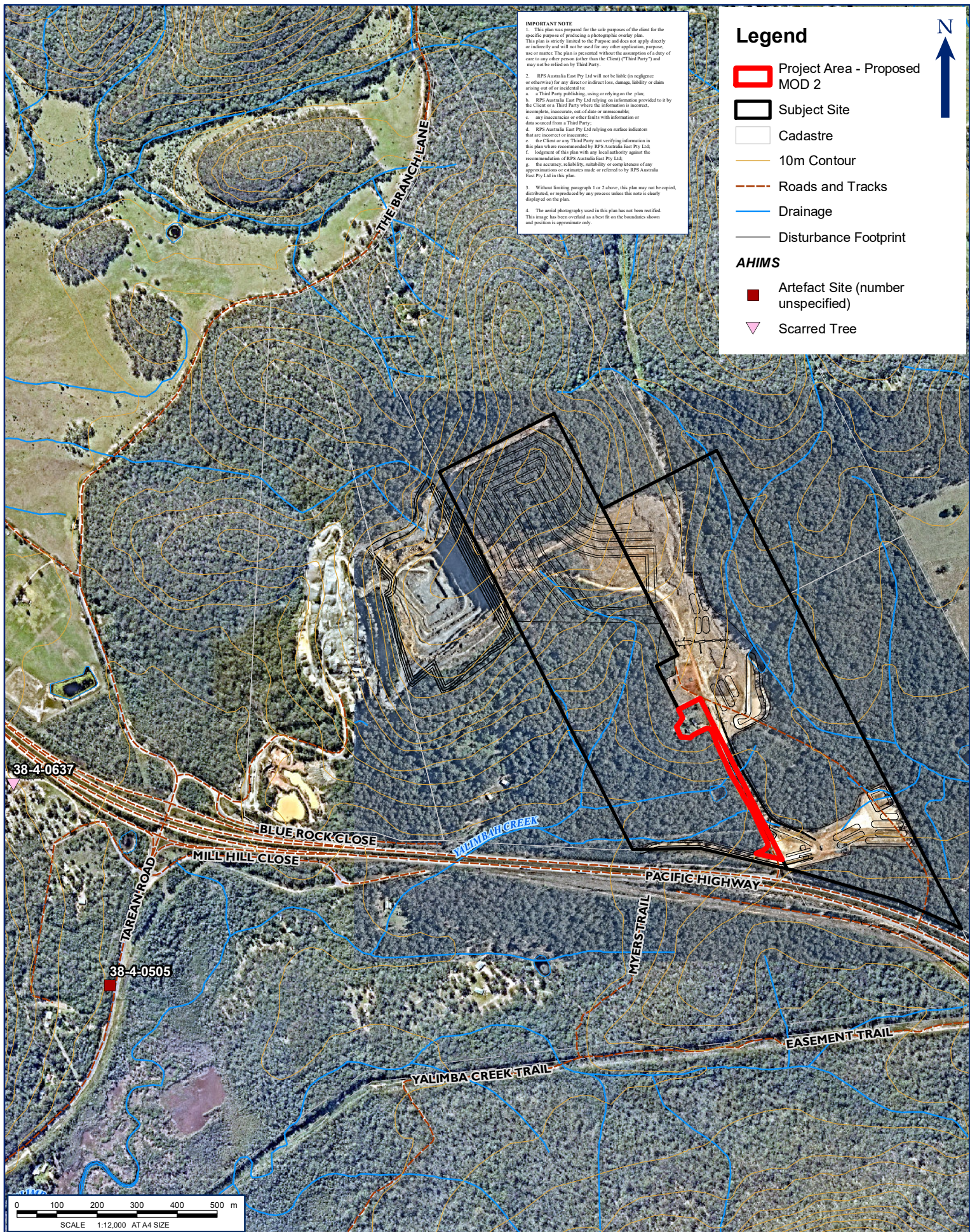


FIGURE 2: PROJECT AREA WITH AHIMS

LOCATION: KARUAH EAST QUARRY	DATUM: GDA94
JOB NO.: PR 141021	PROJECTION: MGA Zone 56
PURPOSE: HERITAGE	Data Sources: RPS, Client
Technician: Natalie Wood	Nearmap 7/4/2018
Date: 20/08/2018	

CLIENT: KARUAH EAST QUARRY PTY LTD
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5 Inspection

In accordance with the Karuah East Quarry HMP, RPS conducted an inspection of the Project Area to identify any Aboriginal objects and to assess the Aboriginal archaeological sensitivity of the Project Area. RPS conducted the inspection on 24 July 2018.

5.1 Project Area

The Project Area is a cleared area directly adjacent to the western edge of the Karuah East Quarry (Plate 5.1-Plate 5.3). The Project Area demonstrated a high degree of ground disturbance associated with an existing dwelling, an access road to the existing dwelling and a redundant electricity easement, all located within the MOD 2 Project Area.



Plate 5.1 MOD2 Project Area, facing north



Plate 5.2 MOD2 Project Area, facing south



Plate 5.3 Dwelling within Project Area, facing north west

5.2 Assessment of Aboriginal archaeological sensitivity

The inspection of the Karuah East Quarry in 2011, identified no Aboriginal objects or areas of Aboriginal archaeological sensitivity within Karuah East Quarry (RPS 2011). Further inspection of the MOD2 area by RPS in July 2018 confirmed that the archaeological sensitivity of the MOD2 area is low.

Based on the inspection of the Project Area in 2011 and 2018 and available landscape and archaeological information, the Aboriginal archaeological sensitivity of the MOD2 Project Area is assessed as low.

6 Impact assessment

6.1 MOD2

MOD2 is an application for a modification to the Karuah East Quarry Project Approval 09_0175 granted by the Planning Assessment Commission on 17 June 2014. It is a minor amendment to expand the area of disturbance of the Karuah East Quarry by 1.133ha adjacent to the western edge of the quarry.

MOD2 will include:

- Improved water management along the north south internal haulage road;
- Widening of the narrow north south internal haulage road to substantially improve operational safety; and,
- An additional area for product stockpiling to improve operational efficiencies

6.2 Impact assessment

MOD2 is within a heavily disturbed area consisting of an existing dwelling, an access road for the existing dwelling and a redundant electricity easement. The MOD2 site is located directly adjacent to the existing Karuah East Quarry (largely adjacent to the established internal north south quarry haulage road). Inspection of the Karuah East Quarry in 2011 identified no Aboriginal objects or areas of Aboriginal archaeological sensitivity. Based on the 2011 and 2018 inspections and an understanding of the archaeological landscape, the risk of harm to Aboriginal objects associated with MOD2 is low.

7 Conclusions and recommendations

In accordance with the Karuah East Quarry HMP, the assessment considered the available landscape and archaeological information for the MOD2 Project Area, the land condition, and the potential impact of MOD2.

7.1 Conclusions

The search of the AHIMS identified two Aboriginal objects within one kilometre of the MOD2 Project Area. Based on the available landscape and archaeological information, the MOD2 Project Area formed part of an area of transitory Aboriginal land use.

The MOD24 Project Area is located directly adjacent to the existing Karuah East Quarry (largely adjacent to the established internal north south quarry haulage road). MOD2 is within a heavily disturbed area consisting of an existing dwelling, an access road for the existing dwelling and a redundant electricity easement. The inspection of the Karuah East Quarry in 2011 identified no Aboriginal objects or areas of Aboriginal archaeological sensitivity within Karuah East Quarry (RPS 2011). The inspection of the MOD2 area conducted in July 2018 by RPS confirmed that the archaeological sensitivity of the MOD2 Project Area is assessed as low. Based on the 2011 and 2018 inspections, and the available landscape and archaeological information, the Aboriginal archaeological sensitivity of the MOD2 Project Area is assessed as low.

7.2 Recommendations

Recommendation 1

In accordance with Condition 36(c) of Project Approval 09_0175 for the Karuah East Quarry and the approved HMP (RPS 2015), RAPs must be provided the option to monitor initial surface disturbance within the MOD2 Project Area for the identification of unrecorded Aboriginal objects. RAPs must be notified 14 days in advance of work.

Recommendation 2

If any Aboriginal objects are identified, work must cease immediately within that area and the area cordoned off. The Karuah East Quarry Manager must be notified, and the Aboriginal objects managed in accordance with the Karuah East Quarry HMP.

Recommendation 3

If human remains are identified, work must cease immediately within that area and the area cordoned off. The Karuah East Quarry Manager must contact the NSW Police. The NSW Police will assess if the remains are part of a crime scene or possible Aboriginal remains. If determined to be Aboriginal remains, the NSW Police will contact OEH and OEH will confirm the determination in writing. If determined to be a NSW Police matter, NSW Police instructions must be followed. Clearance to recommence work must be sought from the NSW Police. If OEH confirms the remains are Aboriginal, OEH in consultation with RAPs will develop a management plan. The Karuah East Quarry Manager must document the implementation of the plan.

Recommendation 4

The approved heritage management Plan (RPS 2015) is to be updated, as necessary, to reflect the MOD2 increase to the disturbance footprint.

Appendix A

AHIMS

SitelD	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
38-4-0637	KA28	AGD	56	405370	6388950	Open site	Valid	Modified Tree (Carved or Scarred) : -		102741
	<u>Contact</u>	<u>Recorders</u>	Navin Officer Heritage Consultants Pty Ltd							<u>Permits</u>
38-4-0505	KA 8	AGD	56	405610	6388450	Open site	Valid	Artefact : -	Open Camp Site	
	<u>Contact</u>	<u>Recorders</u>	Kerry Navin,Mr.Kelvin Officer							<u>Permits</u>