

Karuah East Quarry Project Disturbance Area Modification (MP 09_0175 MOD 1)

Environmental Assessment Report Section 75W of the *Environmental Planning and Assessment Act 1979*

1 BACKGROUND

Karuah East Quarry Pty Limited (KEQ) operates the Karuah East Hard Rock Quarry (Karuah East), located approximately 5.5 kilometres northeast of Karuah township in the MidCoast local government area (LGA) (see **Figure 1**).

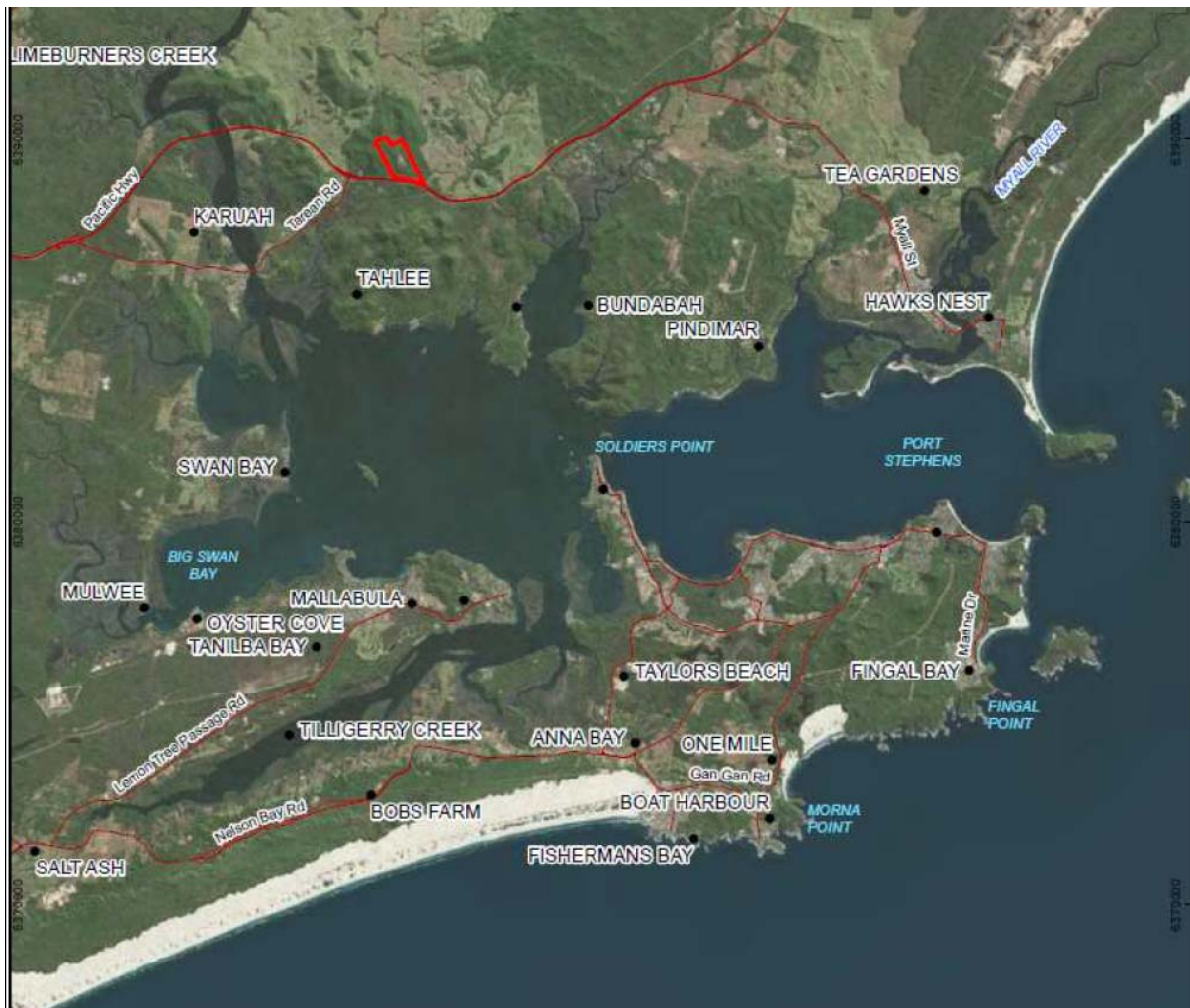


Figure 1: Location of Karuah East Quarry Project

Karuah East operates separately from the adjoining Karuah Hard Rock Quarry owned by Hunter Quarries, which was established under a Council consent in 1997. Karuah Hard Rock Quarry currently operates under a project approval granted in 2005 that allows quarrying operations until 2027.

In June 2014, KEQ was granted project approval for Karuah East (MP 09_0175). The project approval allows KEQ to extract, process and transport up to 1.5 million tonnes of quarry projects per year for up to 20 years.

2 PROPOSED MODIFICATION

On 17 August 2017, KEQ lodged a modification application for MP 09_0175 under section 75W of the *Environmental Planning and Assessment Act 1979* (EP&A Act). The proposal seeks to increase the approved site disturbance area by removing an additional 0.25 hectares (ha) of vegetation as shown in **Figure 2**.

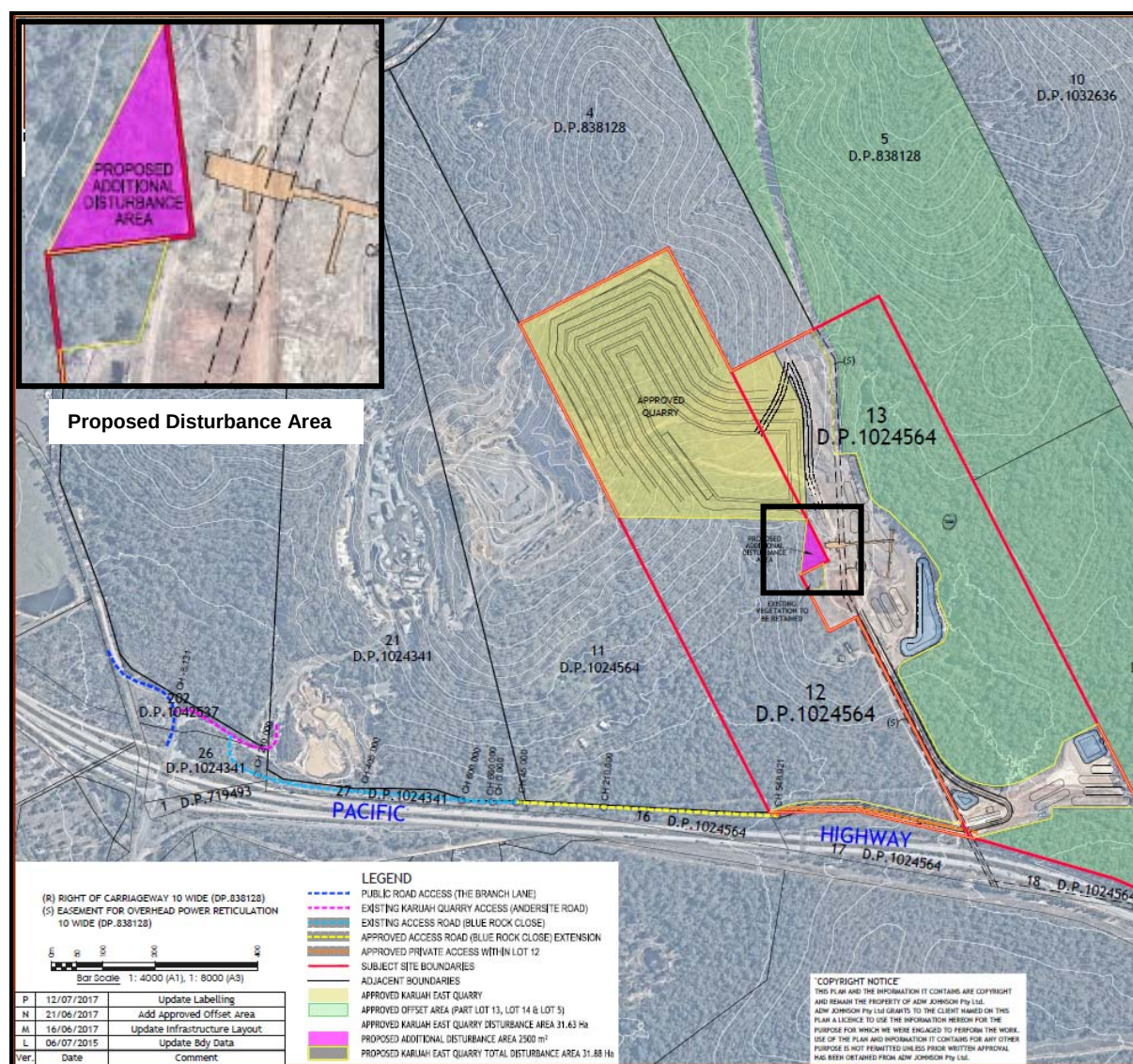


Figure 2: Proposed modification

The proposal would constitute less than a 1 percent increase to the total disturbance area. KEQ stated that the proposed vegetation removal would improve vehicle manoeuvring and reduce the amount of vehicular movements within the site, thereby reducing dust and noise emissions and improving operational efficiencies.

A detailed description of the modification is included in KEQ's Environmental Assessment (EA, see **Appendix A**).

3 STATUTORY CONTEXT

3.1 Section 75W

MP 09_0175 was approved on 17 June 2014 under Part 3A of the EP&A Act. The project is a transitional Part 3A project under Schedule 2 to the *EP&A (Savings, Transitional and Other Provisions) Regulation 2017*. The power to modify transitional Part 3A projects under section 75W of the EP&A Act, as in force immediately before its repeal on 1 October 2011, has been discontinued. However, because the request for this modification was made before the ‘cut-off date’ of 1 March 2018, the provisions of Schedule 2 (clause 3) of this Regulation continue to apply and the application must be dealt with under the former section 75W of the Act.

The proposed modification is of a minor nature. Consequently, the Department is satisfied that the proposal is within the scope of section 75W, and may be determined accordingly.

3.2 Approval Authority

The Minister for Planning is the approval authority for the application. However, under the Minister’s delegation of 11 October 2017, the Director Resource Assessments may determine the application as no objections were received from the public, Council did not object to the proposal and KEQ reported no political donations.

3.3 Environmental Planning Instruments

Several environmental planning instruments (EPIs) apply to the modification, including:

- *State Environmental Planning Policy (SEPP) (State and Regional Development) 2011*;
- *SEPP (Mining, Petroleum and Extractive Industries) 2007*;
- *SEPP 33 (Hazardous and Offensive Development)*;
- *SEPP 44 – Koala Habitat Protection*;
- *SEPP 55 – Remediation of Land*;
- *SEPP (Infrastructure) 2007*; and
- *Great Lakes Local Environmental Plan 2014*.

The Department considered the modification application against the relevant provisions of these EPIs, as well as KEQ’s review of these matters. The Department is satisfied that the modification is permissible and that the project, if modified, could operate in a manner that is generally consistent with the aims, objectives and provisions of these EPIs.

3.4 Objects of the EP&A Act

The Minister or delegate must consider the objects of the EP&A Act when making decisions under the Act. The objects of the EP&A Act changed on 1 March 2018. The Department has assessed the proposed modification against the current objects of the EP&A Act. The objects of most relevance to the decision of whether or not to approve the proposed modification are found in section 1.3. They are:

- Object 1.3(a): *to promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State’s natural and other resources*;
- Object 1.3(b): *to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment*;
- Object 1.3(c): *to promote the orderly and economic use and development of land*;
- Object 1.3(e): *to protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats*;
- Object 1.3(f): *to promote the sustainable management of built and cultural heritage (including Aboriginal cultural heritage)*;
- Object 1.3(i): *to promote the sharing of the responsibility for environmental planning and assessment between the different levels of government in the State*; and
- Object 1.3(j): *to provide increased opportunity for community participation in environmental planning and assessment*.

The Department is satisfied that the proposed modification encourages the proper management and development of resources (Object 1.3(a)) and the promotion of the orderly and economic use of land (Object 1.3(c)), since the modification:

- involves a permissible land use on the subject land;
- would be carried out within the existing quarry site; and

- would maintain socio-economic benefits to the community of NSW.

The Department has considered the principles of ecologically sustainable development (ESD, Object 1.3(b)) in its assessment of the proposed modification. The Department has also noted KEQ's consideration of these matters in the EA for the initial application, and considers that quarrying operations would remain consistent with the principles of ESD under the proposed modification. The Department's assessment has sought to integrate all significant environmental, social and economic considerations.

Consideration of the protection of the environment and heritage (Objects 1.3(e) and(f)) is provided in **Section 5** of this report. The Department believes that the modification as proposed has been designed to minimise potential environmental and heritage impacts where practicable, including avoidance of direct disturbance to threatened biodiversity and Aboriginal cultural heritage.

The Department exhibited the modification application and made the accompanying EA publicly available (Object 1.3(j)). No public or special interest group submissions were received.

4 CONSULTATION

Under section 75W of the EP&A Act, the Department is not required to exhibit the modification application. However, after accepting the application, the Department placed a public exhibition notice in the *Port Stephens Examiner* and publicly exhibited the application and supporting documents from 8 February until 22 February 2018 on the Department's website and at:

- MidCoast Council's office in Forster; and
- Nature Conservation Council's office in Sydney.

The Department invited comment from the **Environment Protection Authority (EPA)**, **Department of Industry – Water (DoI – Water)**, the **Office of Environment and Heritage (OEH)**, **Division of Resources and Geoscience** of the Department (DRG), **Local Land Services (LLS)** and **MidCoast Council (MCC)**. **Port Stephens Council (PSC)** was also invited to comment due to the site's proximity to the Midcoast and Port Stephens LGA boundary.

No public submissions were received.

4.1 Agency Submissions

The Department received five submissions from agencies (see **Appendix B**).

DRG and **PSC** both provided submissions. Neither agency raised concerns over the proposal.

DoI – Water did not raise concern over the proposal. It recommended a condition to establish a program for monitoring groundwater levels and quality be implemented to provide background data and demonstrate compliance with the *NSW Aquifer Interference Policy (AIP)*. No changes are needed to the project approval as groundwater monitoring is required by condition 21 of Schedule 3. Following its review of the RTS, DoI – Water stated that its concerns had been addressed and no further action was required.

OEH was satisfied with the assessments of Aboriginal cultural heritage, biodiversity, and surface water included in the EA and supporting information. OEH recommended that the disturbance area be integrated into the approved Heritage Management Plan (HMP) (see **Section 5.2**). OEH also advised that the conservation agreement should include a ledger clearly showing the allocation of the offset credits to the impacts of the original project and the proposed modification to ensure any future modifications do not utilise allocated offset lands. The Department's consideration of biodiversity impacts is discussed in **Section 5.1**.

EPA advised that the minor nature of the proposal would not require the environmental protection licence (EPL 20611) issued for Karuah East to be amended. EPA was satisfied that existing Dam 1 located within Karuah East has capacity to accept the predicted 3.5% increase in surface water run-off. EPA also accepted that run-off from the additional disturbance area would be captured and treated by Karuah East's dirty water management system and supported KEQ's proposal to install appropriate erosion and sediment controls. EPA acknowledged that noise monitoring results demonstrated that KEQ had maintained compliance with existing construction and operational noise criteria and that additional noise was not likely to result from the proposal. EPA recommended ongoing air quality

monitoring and regular watering together with gravel cover of the additional site disturbance area to mitigate dust generation. No changes are required to the project approval as EPA's recommendations fall within the scope of condition 13 of Schedule 3 of the project approval.

No comments were received from **MCC** or **LLS**.

4.2 Response to Submissions (RTS)

On 9 March 2018 KEQ submitted its RTS (see **Appendix C**). KEQ provided responses to the submissions received from five state agencies, particularly concerning the conditions recommended to be included in the modified project approval.

5 ASSESSMENT

In assessing the merits of the proposal, the Department has considered the:

- EA for the original project;
- existing conditions of approval;
- modification application, EA, submissions and RTS;
- relevant EPIs, policies and guidelines; and
- requirements of the EP&A Act, including the objects of the Act.

The Department considers that the key assessment issues relate to biodiversity, Aboriginal cultural heritage and air quality. The key findings of Department's assessment are summarised below.

5.1 Biodiversity

KEQ prepared a Flora and Fauna Impact Assessment (FFIA) that assessed the biodiversity impacts of the proposal. The *Threatened Species Conservation Act 1995* was repealed by the *Biodiversity Conservation Act 2016* (BC Act) on 25 August 2017. This proposal was submitted on 12 July 2017, prior to the legislation change and therefore, the former planning provisions continue to apply, in accordance with the *Biodiversity Conservation (Savings and Transitional) Regulation 2017*. However, the Department refers to the BC Act for the purposes of its assessment.

The FFIA highlighted that the proposal not only requires approval from the Department under the BC Act, but also from the Commonwealth Department of the Environment and Energy (DoEE) under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

KEQ's current EPBC approval (2014/7282) would need to be amended as the proposed vegetation clearance falls outside its current EPBC approval area. However, KEQ has chosen to approach DoEE independently of its application to the Department, rather than seek assessment under the Bilateral Agreement between the NSW and Commonwealth Governments.

The FFIA focussed on the study area shown in **Figure 3** below. The study area included the proposed disturbance area, identified as the 'Subject Site' in **Figure 3**, as well as a 50-metre buffer zone immediately adjacent to the disturbance area.

5.1.1 Flora Impacts

The FFIA included a targeted survey of threatened flora species within the study area as shown in **Figure 3**. Field surveys were conducted on 26 July, 11 September and 10 October 2017.

Vegetation within the proposed disturbance area consists mainly of Smooth-barked Apple – Red Bloodwood Open Forest. While this vegetation does not form part of a threatened ecological community, the FFIA identified that Karuah East's existing approval requires KEQ to offset its vegetation clearance at a ratio of 4.6:1. This ratio would be maintained due to additional vegetation having been mapped within the surveyed boundaries of the Biodiversity Offset Area (see **Section 5.1.4**).

Within the disturbance area, 13 *Tetradlea juncea* (Black-eyed Susan) individuals were also observed and a further 16 individuals were observed elsewhere in the area that could be indirectly impacted by the proposal (see **Figure 3**). This species is listed as Vulnerable under both the BC Act and the EPBC Act.

The FFIA included an assessment of significance for Black-eyed Susan. Given the relatively small area of disturbance proposed, and the presence of a larger population within the adjacent Biodiversity Offset

Area, the assessment concluded that the proposal is unlikely to have a significant impact on the local population.

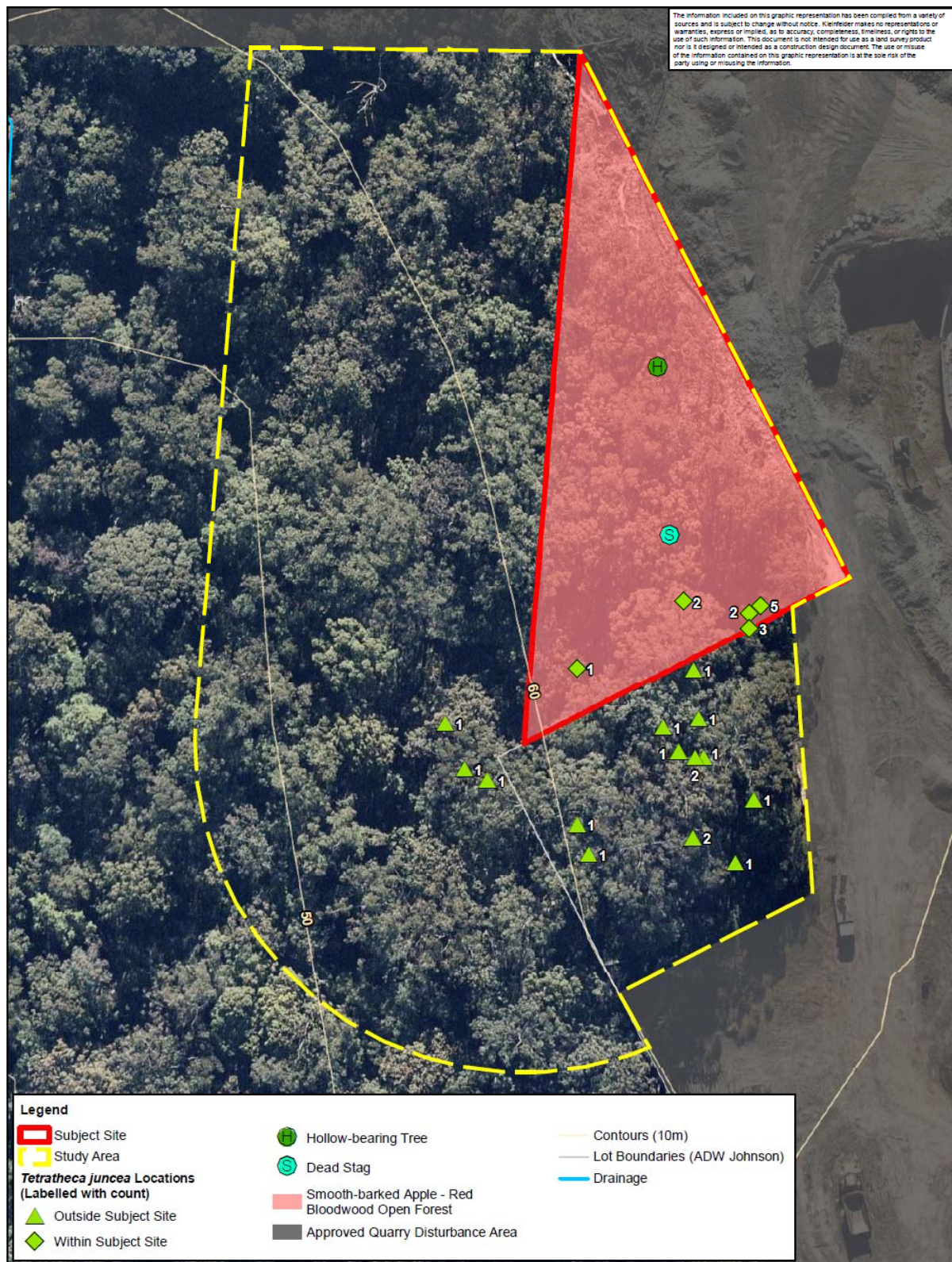


Figure 3: Threatened flora species study area and findings

5.1.2 Koala Habitat

Vegetation surveys also identified that the disturbance area contained *Eucalyptus punctata* (Grey Gum) and *Eucalyptus microcorys* (Tallowwood), which are listed in Schedule 2 of SEPP 44 as preferred feed tree species for Koalas. Under SEPP 44, potential Koala habitat is defined as “areas of native vegetation where the trees of the types listed in Schedule 2 constitute at least 15% of the total number of trees in

the upper or lower strata of the tree component". The FFIA indicated that while the number of feed trees within the disturbance area did not constitute 15% of the total number of trees in the upper and lower strata of the tree component, it was possible that the feed trees would constitute 15% when accounting for the wider locality. As a result, KEQ conservatively assessed these trees as potential Koala habitat. However, the proposed disturbance area was not considered to contain core Koala habitat.

Neither OEH or MCC raised concerns regarding impacts on potential Koala habitat. The Department considers that impacts on potential Koala habitat would be minimal, given the relatively small size of the disturbance area and low risk of habitat fragmentation. The Department also considers that the impact on potential Koala habitat would be further reduced over time as the site is progressively rehabilitated.

Therefore, the Department is satisfied that the impacts of the proposal on Koala habitat are likely to be minimal and could be appropriately mitigated under existing project approval conditions.

5.1.3 Fauna impacts

Fauna surveys were conducted on 11 September 2017. These surveys targeted fauna listed under either the BC Act and/or EPBC Act that could be present in the proposed disturbance area. The FFIA identified 18 threatened fauna species listed under the BC Act that could potentially be impacted by the proposal (see **Table 1**).

Table 1: Fauna listed under the BC Act and /or EPBC Act

Fauna Species	Legislation	Listing Status
Regent Honeyeater	BC Act/ EPBC Act	Critically endangered
Dusky Woodswallow	BC Act	Vulnerable
Glossy Black-Cockatoo	BC Act	Vulnerable
Varied Sittella	BC Act	Vulnerable
Little Lorikeet	BC Act	Vulnerable
Swift Parrot	BC Act/ EPBC Act	Critically endangered
Powerful Owl	BC Act	Vulnerable
Masked Owl	BC Act	Vulnerable
Spotted-tailed Quoll	BC Act/ EPBC Act	Endangered
Eastern False Pipistrelle	BC Act	Vulnerable
Little Bentwing-bat	BC Act	Vulnerable
Eastern Bentwing-bat	BC Act	Vulnerable
Eastern Freetail-bat	BC Act	Vulnerable
Koala	BC Act	Vulnerable
Long-nosed Potoroo	BC Act	Vulnerable
Grey-headed Flying-fox	BC Act	Vulnerable
Greater Broad-nosed Bat	BC Act	Vulnerable
Eastern Cave bat	BC Act	Vulnerable

The FFIA included assessments of significance for each of the above species. These assessments concluded that the proposal is unlikely to have a significant impact on any listed species, as the amount of proposed clearing is relatively small, no fragmentation of habitat is predicted, and all species are highly mobile.

OEH considered that the assessment of fauna impacts was satisfactory and no further assessment was required.

The Department considers that the proposal would have a negligible impact on fauna. No additional conditions are recommended to be included in the project approval.

5.1.4 Biodiversity Offsets

The original EA for the project included a conceptual Biodiversity Offset Strategy (BOS), which proposed the establishment of a 129.32 ha offset area immediately adjacent to the quarry (see **Figure 4**).

The conceptual offset strategy did not apply the BioBanking Assessment Methodology (BBAM). Instead, offset requirements were initially calculated based on a ratio of 4.6:1. However, KEQ prepared a BBAM assessment as part of its Preferred Project Report (PPR) dated July 2013. This assessment concluded that the proposed offset area exceeded offsetting requirements under BBAM.

Existing conditions require KEQ to establish the offset area shown in **Figure 4**, and to make appropriate arrangements for its long-term security. Following the initial project approval, KEQ commissioned a survey of the offset area. The survey determined the actual area of the offset to be 138.22 ha (including 131.44 ha of native vegetation).

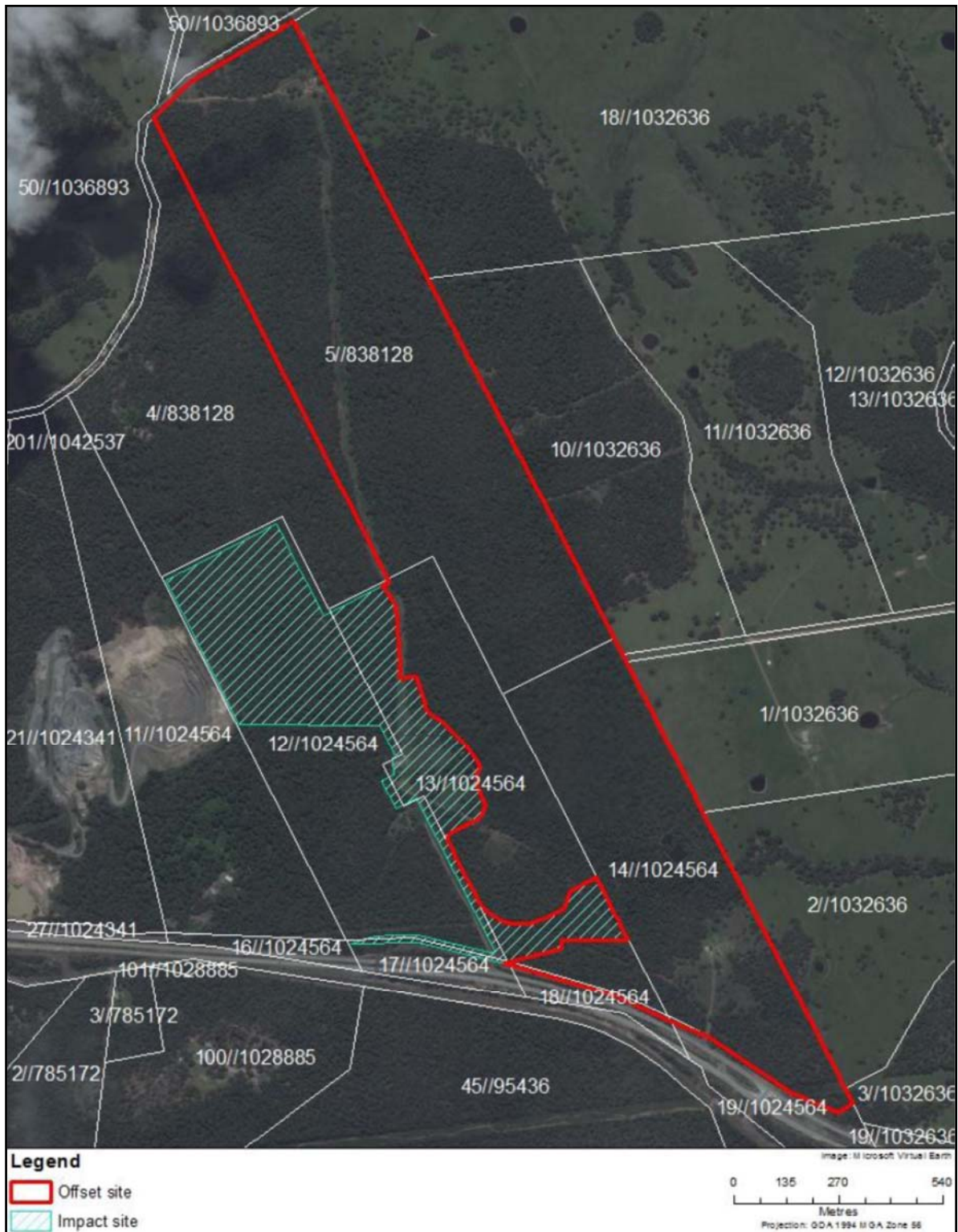


Figure 4: Approved Biodiversity Offset Area

KEQ submits that the existing offset is sufficient to offset the impacts of the proposed modification, on the basis that it exceeds the requirements of the current project approval and EPBC approval, and that it generates a surplus of species credits under BBAM.

The modified project would involve the removal of 28.43 ha of vegetation. Based on the original ratio of 4.6:1, an offset of 130.36 ha would be required. As the existing offset area contains 131.44 ha of native vegetation, no further offsets would be required.

The Department recommends including the revised vegetation offset area calculation in condition 28 of Schedule 3 increasing the minimum offset area from 129.32 ha to 130.36 ha.

The original BBAM assessment calculated that 23,162 species credits were required to offset the direct and indirect impacts of the project on Black-eyed Susan. The assessment concluded that 29,952 species credits were available within the conceptual offset area, thereby creating a surplus of 6,790 species credits. Following the project approval, KEQ acquired an additional parcel of land (Lot 5) that was surveyed and found to contain 583 clumps of Black-eyed Susan, further increasing the available surplus species credits.

The current proposal would directly and indirectly impact 29 clumps of Black-eyed Susan. This would require an offset of 426.59 species credits, which would be easily satisfied by the available credits within the existing offset area.

OEH agreed with the conclusions of the FFIA. OEH recommended conditions requiring that the conservation agreement include a ledger clearly showing the allocation of offset credits for the original project and the proposed disturbance area. In its RTS, KEQ has stated that it has agreed to amend its current conservation agreement to include a ledger showing the allocation of offset credits, as required by condition 29 of Schedule 3 of the project approval. OEH has expressed that it is satisfied with this approach.

The Department is satisfied that the biodiversity impacts of the modified proposal would be sufficiently offset by the existing offset area. The Department considers that condition 29 of Schedule 3 sufficiently addresses OEH's recommendation that a ledger is established clearly showing the allocation of the offset credits. OEH can also further pursue this matter via its conservation agreement.

5.2 Aboriginal Cultural Heritage

KEQ provided an Aboriginal Cultural Heritage Assessment (ACHA) to support the proposal. The disturbance area was surveyed for attributes typically associated with Aboriginal uses. These included:

- fresh water flowing streams;
- open and flat land (worked areas, camping sites, middens);
- types of rocks suitable for traditional purposes; and
- trees of a type and age coinciding with construction of canoes or bowls.

Additionally, OEH's Aboriginal Heritage Information Management System (AHIMS) database was searched for records of Aboriginal objects within the disturbance area.

The survey of the disturbance area did not reveal any Aboriginal objects of cultural importance, nor did the search of the AHIMS database. The ACHA concluded that the lack of any finds was due to the:

- disturbance area being located along a steep hillside covered in exposed jagged rocks which is difficult to navigate because of thick, overgrown vegetation;
- vegetation being less than 100 years old and not of a suitable type for canoe making;
- rock types observed in the study area would not be suitable for traditional purposes; and
- limited access to fresh water flowing creeks.

OEH was satisfied with the ACHA and recommended that KEQ update its HMP to include the disturbance area. Existing conditions would require KEQ to update its HMP following the modification, in order to incorporate the additional disturbance area. The Department considers that the potential impacts of the proposal on Aboriginal cultural heritage would be suitably managed under existing conditions and an updated HMP.

5.3 Air Quality

The increased disturbance area would potentially increase air quality impacts. KEQ assessed air quality impacts based on the Air Quality Assessment (AQA) provided in the original EA for the project.

The 2013 AQA predicted worst-case operational dust emissions would comply with applicable air quality criteria, as set out **Table 2**.

Table 2: Short and long-term impact assessment criteria for particulate matter and deposited dust

<i>Pollutant</i>		<i>Averaging period</i>	<i>Criterion</i>
Total suspended particulates (TSP)		Annual	90 µg/m³
Particulate matter < 10 µm (PM ₁₀)		Annual	30 µg/m³
Particulate matter < 10 µm (PM ₁₀)		24 hour	50 µg/m³
<i>Pollutant</i>	<i>Averaging period</i>	<i>Maximum increase in deposited dust level</i>	<i>Maximum total deposited dust level</i>
Deposited dust	Annual	2 g/m² /month	4 g/m² /month

The AQA proposed dust attenuation measures to ensure ongoing compliance with the air quality criteria, including:

- water spraying of product stockpiles and unsealed roads;
- enclosure of the crusher; and
- progressive rehabilitation of disturbed areas.

The Department also imposed conditions requiring KEQ to apply best practice air quality management on site and to prepare and implement an Air Quality Management Plan (AQMP).

The proposal would expose an additional 0.25 ha of land capable of generating dust, either from wind or onsite vehicle manoeuvring. While KEQ has predicted that there would be no additional air quality impacts as a result of the proposal, its EA included the mitigation measures listed above to ensure Karuah East maintains compliance with the approved air quality assessment criteria. In accordance with condition 5 of Schedule 5, KEQ's AQMP would require review if the project approval is modified. Its AQMP would therefore need to be updated to include the increased disturbance area.

EPA did not raise concerns regarding the air quality impacts of the proposal.

The Department considers that the existing conditions appropriately manage and/or mitigate air quality impacts. Existing conditions would require KEQ to update its AQMP to reflect the additional disturbance area. The updated AQMP would include a monitoring program to be implemented to ensure compliance with the air quality criteria in **Table 2**.

The Department is satisfied that there would be a negligible increase in dust generation from the increased disturbance area, provided that dust attenuation measures are appropriately implemented. The Department is satisfied that these impacts could be suitably managed under existing conditions.

5.4 Other Impacts

Other impacts associated with the modification include potential impacts on noise and water resources.

Table 3 summarises the Department's assessment of these impacts.

Table 3: Other impacts

Issue	Impact and Consideration	Recommendation
Noise	• No changes proposed to the haul route, approved number of vehicle movements or quarrying operations. • On this basis, the noise impacts of the proposal would be negligible. • Existing conditions require KEQ to implement best practice noise management and to prepare a Noise Management Plan and Noise Monitoring Program for the site.	• No changes considered necessary.
Surface Water	• The proposed disturbance area would contribute an additional 3.5 percent to Karuah's Dam 1 catchment. • Existing conditions require KEQ to review and if necessary, amend its Water Management Plan (WMP) for the site following the modification. The WMP must include an Erosion and Sedimentation Control Plan and Surface Water Management Plan.	• No changes considered necessary.

Issue	Impact and Consideration	Recommendation
Groundwater	- There are no predicted additional groundwater impacts associated with construction and operations in the proposed extension area. - Existing conditions would require KEQ to review, and if necessary, amend its Groundwater Monitoring Program (GWMP) for the site following the modification.	No changes considered necessary.

6 RECOMMENDED CONDITIONS

The Department has drafted a notice of modification (see **Appendix D**) and a consolidated project approval (see **Appendix E**) as it is proposed to be modified. The Department considers that the environmental impacts of the proposal can be appropriately managed under existing and modified conditions.

There are no significant changes to the conditions of the project approval. An updated calculation for the required total biodiversity offset area is recommended. The Department has also taken the opportunity to update existing conditions to reflect current drafting standards, including providing further clarity on compliance and applicability of guidelines.

KEQ has accepted the modified conditions of approval.

7 CONCLUSION

The Department has assessed the merits of the proposed modification in accordance with the requirements of the EP&A Act. This assessment has shown that the environmental impacts of the proposal would be minor, and would be suitably managed under existing and modified conditions.

The Department notes that the project provides regional benefits through the supply of construction materials, namely high-quality andesite, to both private and Government construction projects. The Department considers that the proposed modification would increase operational efficiency on site, without significantly increasing the environmental impacts of the project.

The Department is therefore satisfied that the proposed modification is in the public interest and should be approved, subject to conditions.

8 RECOMMENDATION

It is RECOMMENDED that the Director, Resource Assessments, as delegate of the Minister for Planning:

- **considers** the findings and recommendations of this report;
- **determines** that the modification request falls within the scope of section 75W of the EP&A Act;
- **approves** the modification application MP 09_0175 MOD 1, subject to conditions; and
- **signs** the attached notice of modification (**Appendix D**).

Recommended by:



27.4.18

Anthony Barnes
Senior Environmental Assessment Officer
Resource Assessments

Recommended by:



27/4/18

Lauren Evans
Senior Environmental Assessment Officer
Resource Assessments

9 DECISION

Approved by:



Howard Reed

Director

Resource Assessments

27-4-18

APPENDIX A: MODIFICATION APPLICATION/ENVIRONMENTAL ASSESSMENT

See: http://www.majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=8620

APPENDIX B: SUBMISSIONS

See: http://www.majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=8620

APPENDIX C: RESPONSE TO SUBMISSIONS

http://www.majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=8620

APPENDIX D: NOTICE OF MODIFICATION

http://www.majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=8620

APPENDIX E: CONSOLIDATED APPROVAL

http://www.majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=8620