JOINT REGIONAL PLANNING PANEL
(Northern)

JRPP No	2014NTH005
DA Number	T6-14-67
Local Government Area	Kempsey Shire
Proposed Development	Establish an extractive industry on a former extractive industry site, with a quarry area of about 9.0ha, and extending about 17m below the existing depth with annual production of 450,000 tonnes with a quarry life of up to 30 years.
Street Address	204 Crescent Head Road, South Kempsey Lot 1 DP 914805, Lots 14 and 16 DP 1157615 and Lots 186, 187 and 189 DP 754400
Applicant/Owner	Applicant: NSW Quarry Services PL Owner: Kempsey Shire Council
Number of Submissions	9
Regional Development Criteria (Schedule 4A of the Act)	Clause 8 of Schedule 4A lists determination of applications for extractive industries that are designated development to be a council function that is able to be conferred on a JRPP. Under clause 21 of State Environmental Planning Policy (State and Regional Development) 2011, the JRPP is the consent authority for the determination of any application for an extractive industry that is designated development.
List of All Relevant s79C(1)(a) Matters	• Kempsey Local Environmental Plan 2013 • SEPP (Mining, Petroleum Production and Extractive Industries) 2007 • SEPP (State and Regional Development) 2011 • SEPP 44 Koala Habitat Protection • Kempsey Development Control Plan 2013 • EPA Regulation 2000: Schedule 3
List all documents submitted with this report for the panel's consideration	NSW EPA General Terms of Approval 5 June 2014 and supplementary advice 6 November 2014 NSW Office Water General Terms of Approval 30 April 2014 NSW RMS Responses 7 May 2014 and 19 November 2014
Recommendation	Approval subject to conditions
Report by	Tony Blue, Blueprint Planning Consultants

Assessment Report and Recommendation

1. EXECUTIVE SUMMARY

1.1. Reason for consideration by Joint Regional Planning Panel

The development application has been referred to the Joint Regional Planning Panel pursuant to Clause 8, Schedule 4A of the Environmental Planning and Assessment Act, 1979 (the Act) as the development is classified as an Extractive Industry and Designated Development pursuant to Clause 19, Schedule 3 of the Environmental Planning and Assessment Regulation, 2000.

1.2. Reason for assessment by independent planner

The proposed quarry is located on land owned by Council.

To avoid any perceived conflict of interest between Council's commercial interests and its regulatory responsibilities, an external and independent town planning consultant was engaged to undertake the assessment.

Council staff have provided technical advice in respect to road intersection design and traffic safety, current Council methodology in respect to section 94 contributions for road maintenance levy on extractive industries and advice on Council's procedures for securing koala habitat offsets under the Kempsey Comprehensive Koala Plan of Management. Council have provided input into the drafting of consent conditions to ensure clarity for any subsequent implementation or enforcement process and also provided access to legal advice in respect to some of the consent conditions.

1.3. Brief description of proposed development

The application seeks consent to establish a quarry on a former quarry site involving:

- Annual extraction of 450,000 tonnes,
- A quarry footprint of about 9.0ha,
- Increase in depth from the lowest existing level by about 17m, and
- A total resource of an estimated 4,000,000 tonnes and a life of between 20 and 30 years depending on demand.

1.4. History of Development

The EIS states that quarrying operations at the site date back to 1903. Aerial photography confirms a quarry existed on the site in 1955 and had expanded substantially by 1960. Ownership of the land appears to have passed to Council in the 1970s and was used by Council to source material for local road maintenance and construction activities.

It appears that the quarry ceased operation in the late 1990s or early 2000s.

1.5. Permissibility of Development

The site is zoned R5 Large Lot Residential under Kempsey Local Environmental Plan 2013. Extractive industries are permissible with consent within the zone.

1.6. Designated Development

Extractive industries are declared to be designated development in clause 19 of Schedule 3 of the Environmental Planning and Assessment Regulation 2000 if they exceed certain thresholds or are in certain locations. The proposed development is designated development as it will process more than 30,000m^3 of extractive material per year and will disturb more than 2ha of land by clearing.

1.7. Integrated Development

The proposed development is integrated development as it will require a licence under the Protection of the Environment Operations Act 1997 to carry out scheduled development work and a controlled activity approval under the Water Management Act 2000.

1.8. Public Exhibition and Notification

The application was exhibited and notified in accordance with designated development provisions of the Act. Nine submissions were received, with six objecting to the development. Copies of the submissions are contained in Annexure 3. Issues raised in objections are assessed in detail within the body of this report.

1.9. Recommendation

That consent be granted subject to the conditions of consent contained in Annexure 1.

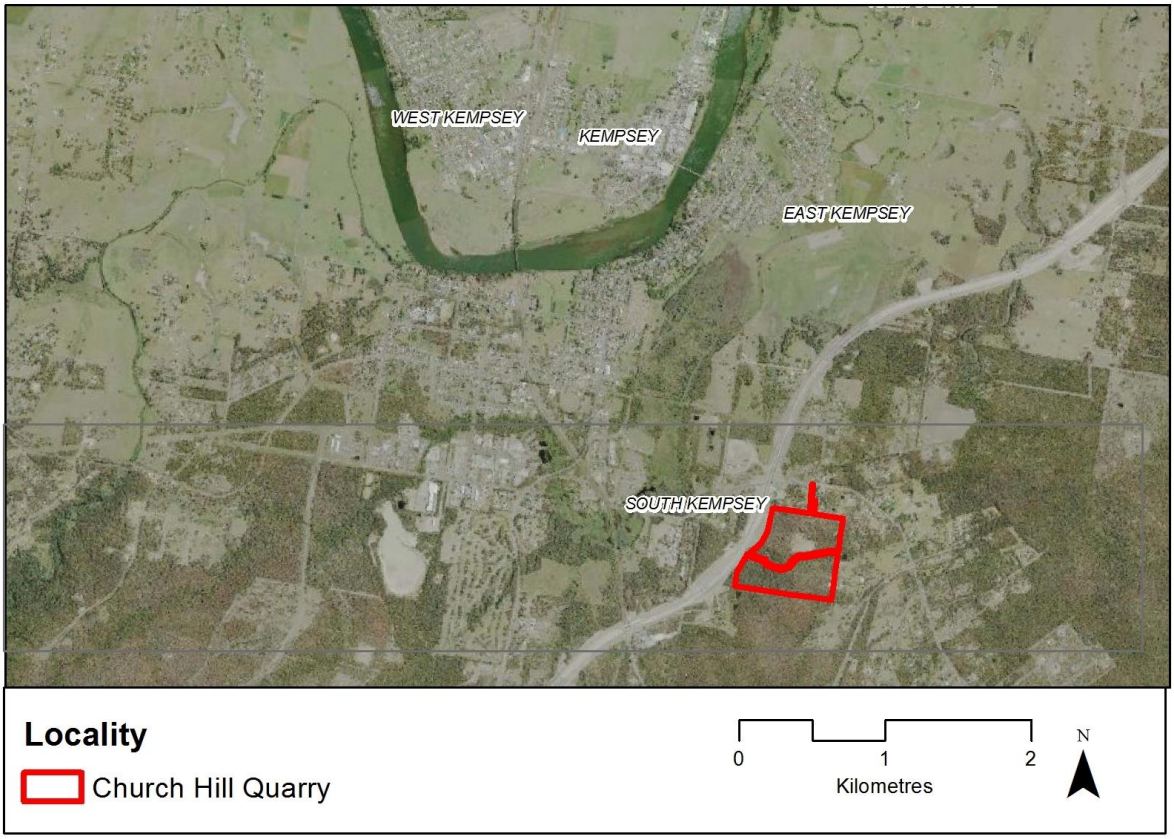
1.10. Annexures

Annexure 1	Proposed Conditions of Consent.
Annexure 1A	General Terms of Approval – EPA, and supplementary advice, 6 November 2014.
Annexure 1B	General Terms of Approval – Office of Water.
Annexure 2	RMS Letters 7 May 2014 and 19 November 2014.
Annexure 3	Submissions.

2. SITE AND PROPOSED DEVELOPMENT

2.1. Location

The development site is 204 Crescent Head Road, which is about 2.5km south east of Kempsey central business district.

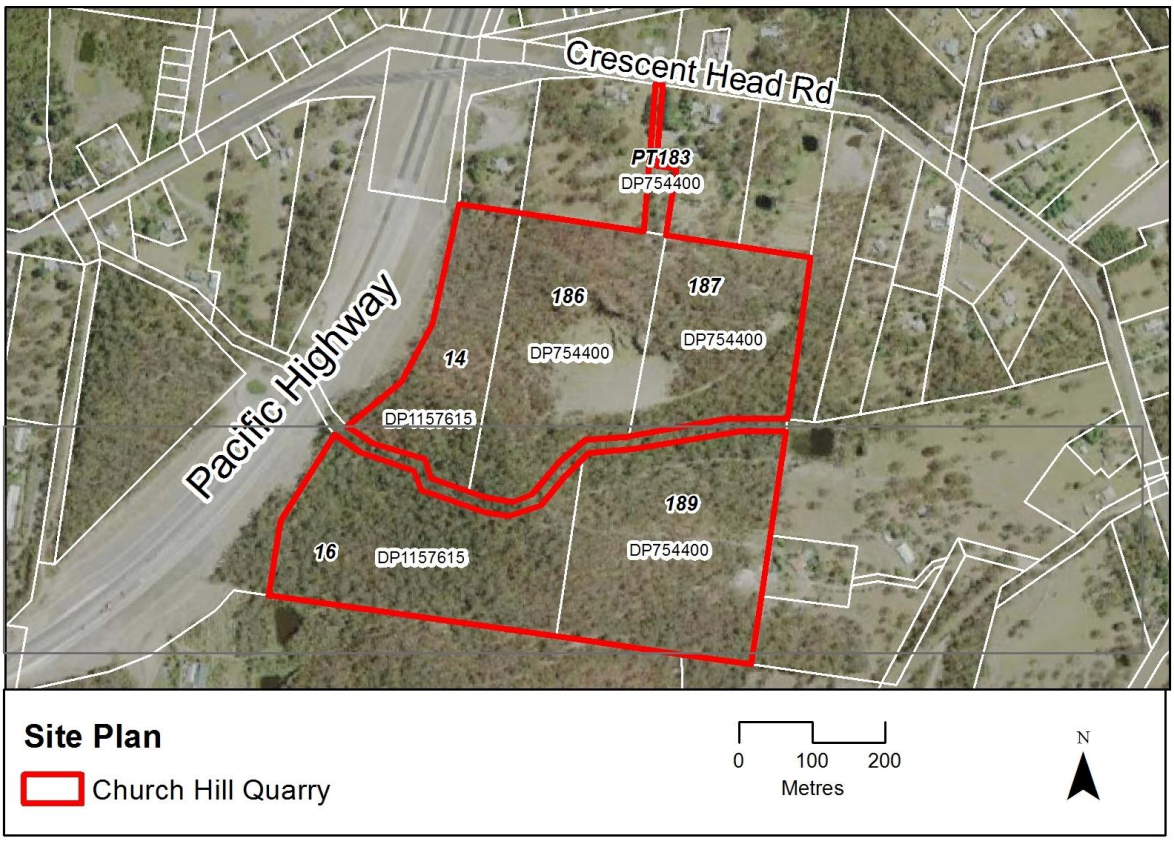


2.2. Site Description

The site comprises six land parcels, being Lot 1 DP 914805, Lots 14 and 16 DP 1157615 and Lots 186, 187 and 189 DP 754400. The site has a total area of 31.5ha. The western boundary of the site adjoins the new alignment of the Pacific Highway. The site is located to the south of properties on the southern side of Crescent Head Road, with an access handle (Lot 1 DP 914805) providing access to Crescent Head Rd via a 10m frontage. The adjoining properties between the site and Crescent Head Road and properties to the east are used for rural residential purposes with lot sizes ranging from 1ha to 10ha. Land to the south has an area of over 120ha and is used for a rural industry.

There is a disused quarry on the site that has an area of about 3ha.

The site is generally covered by native vegetation other than the disused quarry area and access track, although there is a much higher level of disturbance and partial clearing in the northern area of the site.



2.3. Proposed Development

(a) Quarry Footprint

The proposed quarry footprint is about 9ha and includes the disused quarry area. It is proposed to extend outward from the existing quarry, to the west, north and east, but is restricted along the south eastern side due to a watercourse that supports an endangered ecological community (EEC).

(b) Annual Output

The output is proposed to be up to 450,000 tonnes per year.

The high extraction rate is primarily required to meet the demands of the Pacific Highway upgrade. The quarry is located to potentially supply the part of the upgrade between Port Macquarie and Nambucca Heads for a distance of approximately 130 kilometres. The upgrade is expected to take place over a timeframe of approximately 5 years, depending on availability of funds from the Federal Government. This section of the upgrade is reported to require in the order of 8,600,000 tonnes of imported material.

The quarry would also supply material to the local market.

(c) Quarrying Activities

The proposed quarry operation would be carried out in stages and in response to demand.

Stage 1 includes the construction of a new section of the access to the quarry floor, cutting in to the site up to 7.5m deep to provide a noise barrier between the internal haul road and houses to the east. Stage 1 extraction is proposed to lower the existing disused quarry floor by about 2m from RL44m AHD to RL 42m AHD and extending to the south and west.

Stage 2 is to extend the quarry floor to the north and east at RL 42m AHD.

Stage 3 is to lower the floor level for Stages 1 and 2 to a final level of RL 27m AHD.

As the extraction develops, the method of extraction would leave benches running north/south generally parallel to the western boundary. On the other sides, there is no requirement for intermediate benches with the final wall face being up to 17m high.

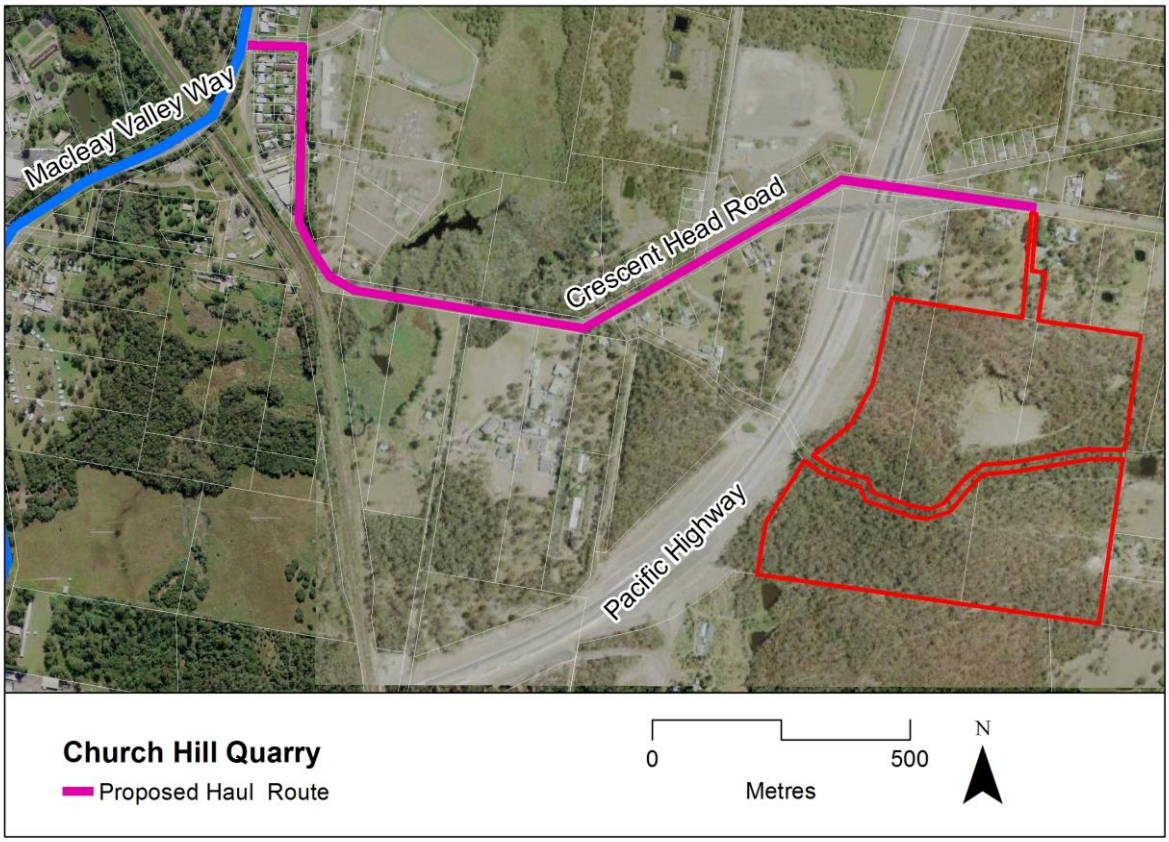
(d) Processing, Crushing and Stockpiling

The material would be excavated, crushed, passed through a screen and stockpiled. Crushing would be about one third primary grade (i.e. approximately 100mm diameter) and two thirds secondary grade (i.e. less than 50mm diameter).

The materials are stockpiled on the quarry floor and numbered. Samples from each stockpile are analysed for compliance with RMS specifications before being transported offsite. This process takes approximately 20 days, per stockpile.

(e) Haulage Route

The proposed haulage route is about 2km in length along Crescent Head Road and then onto Macleay Valley Way. The route passes the Kempsey Adventist School at 198 Crescent Head Rd, however there is no alternative route to avoid this.



(f) Truck Movements

Truck and dog trailer combinations have a capacity of about 32 tonnes. At an average daily production, which would generate a win and haul of approximately 1,500 tonnes, the quarry is expected to generate about 50 truck and dog loads or 100 truck movements per day. At its peak, the quarry is expected to win and haul about 3,000 tonnes per day which would involve about 90 truck and dog loads or 180 truck movements per day.

(g) Hours of Operation

The proposed hours of operation would depend on demand with some periods of high activity and other times when activity is limited to the occasional loading of haulage trucks. The proposed hours of operation are:

Blasting	Monday to Friday	9am-3pm
Drilling	Monday to Friday	7am-6pm
	Saturday	8am-1pm
Crushing and Screening within Quarry Pit	Monday to Friday	7am-6pm
	Saturday	8am-1pm
Stockpiling and Loading	Monday to Friday	7am-6pm
	Saturday	8am-1pm
Transport (empty trucks in)	Monday to Friday	7am-6pm
	Saturday	8am-1pm

Transport (loaded trucks out)	Monday to Friday	7am-6pm
	Saturday	8am-1pm
Staff Maintenance and Servicing of Plant and Equipment Onsite	As required	
Emergency	As required	

(h) Rehabilitation

It is anticipated that the excavation would fill with water following completion of the quarry operations. To rehabilitate the remaining disturbed area, a rehabilitation plan has been developed and is provided in Appendix C of the EIS.

2.4. EIS and Supporting Documents

The application was accompanied by an EIS generally conforming to the Director's specifications. The following additional documents were also considered in the assessment of the application.

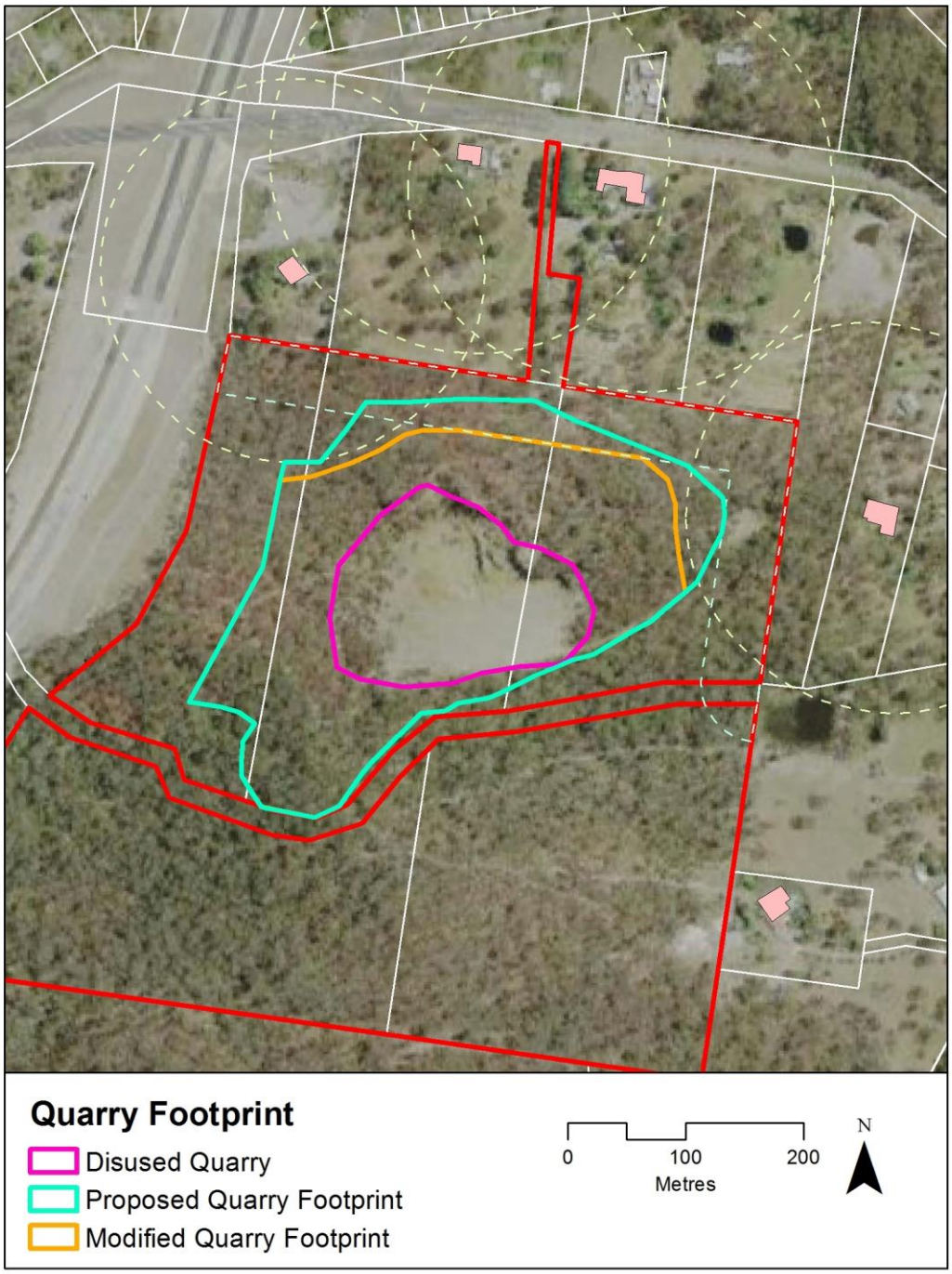
- Advice from Australian Department of Environment (18 June 2014) regarding EPBC Act 1999 confirming that the proposal is not a controlled activity,
- Response to request for additional information by GHD dated 3 July 2014,
- Greenhouse Gas Assessment report, GHD (July 2014),
- Blast Management Plan and Control, Heilig & Partners (July 2014) and supplementary email response to questions (21 October 2014),
- Amended quarry plan proposal received 17 July 2014,
- Road Safety Audit, GHD (August 2014),
- Response to Road Safety Audit Findings by GHD dated 15 August 2014,
- Email response to request for additional information regarding threatened species impacts, Ecologist at GHD dated 27 August 2014,
- Response to noise concerns by GHD dated 5 September 2014, including letter from owners of Lot 2 DP 598164, Dwelling house R2 in the EIS stating they have no concerns about noise from the quarry,
- Offset Proposal letter by GHD dated 14 November 2014,
- Response to draft condition restricting haulage trucks during school bus movements on haulage route by Director of Infrastructure Services, Kempsey Shire Council dated 2 December 2014.

2.5. Recommended Modifications

The assessment of the application resulted in the following recommended modifications to the development:

- Reduction of the quarry footprint to exclude any land within 150m of any existing residence,
- Reduction in the quarry footprint to provide a minimum 50m setback from the northern boundary of Lots 186 and 187 DP 754400, and
- Adjustment to the location of the internal access road so that the construction is not closer than 140m to dwelling R5.

The effect of these changes is shown below.



3. LEGISLATIVE REQUIREMENTS

3.1. ENVIRONMENTAL PROTECTION AND BIODIVERSITY CONSERVATION ACT 1999 (EPBC Act)

The EPBC Act is Commonwealth legislation that requires an assessment of the proposal to determine if it should be referred the Federal Department of Environment.

The EIS recommended that the proposal be referred due to potential impact on critical habitat for the Koala and Grey-headed Flying-fox. It is the proponent's responsibility to refer the application.

The applicant has provided confirmation from the Australian Department of the Environment that the proposal is not a controlled action under the EPBC Act.

3.2. ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979 (EPA Act)

(a) Consent Authority

Under clause 21 of State Environmental Planning Policy (State and Regional Development) 2011, the JRPP is the consent authority for the determination of any application for an extractive industry that is designated development.

Consequently, the consent authority for this application is the JRPP.

(b) Designated Development

Section 77A of the EPA Act provides for development to be declared as designated development by regulation. Schedule 3 of the EPA Regulation lists extractive industries as designated development that:

- process more than 30,000m^3 of extractive material per year,
- disturb a total surface area of more than 2ha, or
- located within 40m of a natural water body.

The proposed quarry will satisfy all three of these criteria and is determined to be designated development.

(c) Integrated Development Approval – Section 91 Approvals

Section 91 of the EPA Act identifies development that requires development consent and one or more approvals under specified other legislation. The proposed quarry requires approvals in the form of:

- An Environmental Protection Licence (EPL) under the Protection of the Environment Operations Act 1997 and
- An activity approval under section 91 of the Water Management Act 2000 as it is proposed to undertake quarrying activities within 40m of a waterway.

General Terms of Approval (GTAs) have been provided for the EPL from the Environmental Protection Agency and for the activity approval from the NSW Office of Water. These GTAs have been attached to the recommended conditions of development consent.

(d) Evaluation – Section 79C Matters

Section 79C of the Act specifies matters for consideration when assessing development applications. Section 4 of this report documents the assessment of the application under section 79C.

4. RELEVANT ENVIRONMENTAL PLANNING INSTRUMENTS

4.1. Kempsey Local Environmental Plan 2013 (KLEP 2013)

(a) Zone

The site is zoned R5 Large Lot Residential under KLEP 2013. Extractive industries are permissible with consent in the zone.

The zone objectives are:

- To provide residential housing in a rural setting while preserving, and minimising impacts on, environmentally sensitive locations and scenic quality.
- To ensure that large residential lots do not hinder the proper and orderly development of urban areas in the future.
- To ensure that development in the area does not unreasonably increase the demand for public services or public facilities.
- To minimise conflict between land uses within this zone and land uses within adjoining zones.

The zone objectives require the proposed use to give proper consideration to the impacts on housing on adjoining land. Consideration of impacts from noise, dust, blasting and truck movements are considered in the following sections.

Provided these potential impacts are able to be adequately mitigated, the proposed development is not inconsistent with the zone objectives.

(b) Clause 7.4 Koala habitat

Clause 7.4 applies to land identified as "Area Subject to Koala Management Plan" on the Koala Management Plan Map identify. The site is identified as land subject to the Koala Management Plan. The objective of this clause is to effectively manage koala habitat including:

"(a) minimising the potential for adverse impacts within current and future areas of core koala habitat, and

(b) ensuring that preferred koala food trees are effectively managed and conserved across all land where possible."

The clause requires that development consent must not be granted unless the consent authority is satisfied that the development is in accordance with the Comprehensive Koala Plan of Management for Eastern Portion of Kempsey Shire LGA Volume I—The CKPoM (Working Provisions), published in April 2011.

See Section 5.5 Koala Habitat.

4.2. State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007

The SEPP requires the consent authority to consider a range of matters before determining the application.

(a) Compatibility with Other Land Uses

Clause 12 requires:

- consideration of existing and approved uses of land in the vicinity of the development, whether or not the development is likely to have a significant impact on uses that are likely to be preferred uses in the vicinity and any ways the development may be incompatible with existing, approved or likely preferred uses, and
- evaluation and comparison of respective public benefits of the development and other land uses in the vicinity and any measures proposed by the applicant to avoid or minimise any incompatibility.

Rural Residential Uses

Adjoining land is within Zone R5 Large Lot Residential.

Dust, noise and blasting impacts at residential receivers are addressed in detail in sections 5.1, 5.2 and 5.3 of this report. The implementation of management and mitigation measures discussed in sections 5.1, 5.2 and 5.3 is considered adequate to ensure no significant impacts from the quarry operations when measured at the neighbouring dwelling houses.

Consent conditions require additional mitigation measures if established criteria for acceptable levels are exceeded and acquisition if mitigation is impractical or ineffective.

Road traffic noise and traffic safety issues have the potential to impact on land uses along the haulage route. These issues are assessed in section 5.9 and 5.10 of this report.

Dwelling houses R1 and R2 have their rear boundaries adjoining the quarry site. The impacts of blasting, noise and air quality is measured at the dwelling house. Both R1 and R2 are located at the front boundary of the lots and the area between the house and rear boundary provides private open space for residents. It is considered that the residents have a reasonable expectation for use of private open space without significant impacts from noise and dust from operation of the quarry. To provide some separation, it is recommended that there be a minimum 50m setback from residential boundaries to the quarry footprint.

Haul Route Impacts

In addition to rural residential uses, the haul route has the potential to impact on the Kempsey Adventist School and residential uses in South Kempsey.

There is no alternative route to avoid these uses.

Road traffic noise and traffic safety issues have the potential to impact on these land uses. Refer to sections 5.9 and 5.10 of this report.

(b) Natural Resources and Environmental Management

Clause 14 of the Mining SEPP requires the consent authority to consider whether

conditions should be imposed to ensure:

- Impacts on significant water resources are avoided or minimised to the greatest extent possible,
- Impacts on threatened species and biodiversity are avoided or minimised to the greatest extent possible,
- Greenhouse gas emissions are minimised to the greatest extent practical. In determining this, the consent authority must consider an assessment of greenhouse gas emissions, including downstream emissions, of the development.

Water quality is addressed in section 5.4. Threatened species and biodiversity are addressed in sections 5.5 Koala Habitat and 5.6 Flora and Fauna. Greenhouse gas emissions are addressed in section 5.11.

(c) Resource Recovery

Clause 15 requires the consent authority to consider the efficiency of the extractive industry in terms of resource recovery and must consider whether conditions should be applied aimed at optimising efficiency or resource recovery and the reuse or recycling of material.

Information provided by a representative of the proposed quarry operator states that all material won from the quarry will be used for road construction purpose, meaning there is 100% resource recovery and there is material that will be required to be reused or recycled.

Vegetation clearing and stockpiling of topsoil is to be managed by consent conditions.

(d) Transport

Clause 16 requires the consent authority to:

- consider whether conditions should be applied to
    - limit or preclude truck movements on roads in residential areas or near to schools, or
    - require preparation and implementation of a code of conduct relating to the transport of materials on public roads.
- provide a copy of the application to the RMS and take into consideration any response received (and provide a copy of the determination).

The proposed haul route cannot avoid residential areas or the Kempsey Adventist School. A condition of consent is recommended that requires the quarry operator to ensure haulage trucks do not operate during the period that school buses traverse the haul route.

A condition of consent is also recommended requiring a code of conduct addressing transport of materials to minimise traffic noise and improve traffic safety. See sections 5.9 and 5.10.

Advice from the RMS is attached (Annexure 2) and advises that:

- a road safety audit should be prepared to assess safety risks due to increased heavy vehicles, including consideration of the location of bus routes and rural bus

stops,
- consent should be subject to preparation of a Code of Conduct for haulage operators addressing safety issues,
- upgrade to the quarry access intersection with Crescent Head Rd,
- contributions towards the maintenance of the road network,
- no direct access to the Pacific Highway,
- provision of a sufficient buffer between the highway boundary and the excavation area with fly rock and blasting to be contained within the site.

A Road Safety Audit was subsequently submitted by the applicant. See section 5.9. The RMS was requested to comment on the adequacy of the Road Safety Audit and advised (19 November 2014) that "It would be desirable for any road safety audit/assessment to identify safety risks in areas where there is a higher level of activity by vulnerable road users (namely residential areas and school zones) along the proposed haulage routes. This information could be used to inform a Drivers Code of Conduct."

Conditions of consent are proposed for upgrading of the quarry access road intersection, preparation of a Road Safety Audit for the haulage route and preparation of a subsequent Drivers' Code of Conduct and contributions towards road maintenance. A buffer between the highway boundary and the proposed quarry footprint is included in the proposal.

(e) Rehabilitation

Clause 17 requires the consent authority to consider whether conditions should be applied aimed at ensuring rehabilitation of the land, in particular, whether the conditions should require:

- Preparation of a plan that identifies the end use and landform once rehabilitated,
- Waste generated to be dealt with appropriately,
- Any soil contamination to be remediated,
- Steps to be taken to ensure the state of the land does not jeopardise public safety.

Section 5.12 of this report provides an assessment of the proposed rehabilitation of the site.

Section 5.13 of this report provides an assessment of waste management, including management of any contaminated soil.

Access to the site will be controlled to prevent public access, which is considered to adequately address any issues of public safety.

4.3. State Environmental Planning Policy (State and Regional Development) 2011

The SEPP identifies State significant development and State significant infrastructure, and confers functions on joint regional planning panels to determine development applications.

Clause 7 of Schedule 1 of the SEPP specifies that State significant development includes extractive industries that:

- extract more than 500,000 tonnes per year, or
- extract from a total resource of more than 5 million tonnes.

The application proposes to extract a maximum of 450,000 tonnes per year. The quarry is estimated to have a resource volume in the order of 4,800,000 tonnes.

The proposal is below the thresholds for State significant development.

Clause 21 identifies extractive industries that are designated development to be Regional Development.

As noted in section 3.2(a), clause 21 confers the determination role for this application on the JRPP.

4.4. State Environmental Planning Policy No 44 Koala Habitat Protection

The SEPP requires preparation of koala plans of management before development consent can be granted in areas of core koala habitat. Kempsey Shire Council has prepared the Comprehensive Koala Plan of Management for Eastern Portion of Kempsey Shire that identifies potential koala habitat and a process for identifying core koala habitat. It also sets requirements for the management of potential koala habitat that is not core koala habitat.

The land the subject of this development application is identified as potential koala habitat but is not core koala habitat. Consequently, SEPP 44 does not apply. However, the provisions of clause 7.4 of Kempsey LEP 2013 apply. See section 4.1 and 5.5.

4.5. Relevant development control plans

Kempsey Development Control Plan 2013 provides comprehensive guidelines for development assessment of all types of land uses. Relevant provisions are:

- Clause B2 – Parking, Access and Traffic Management: refer to section 5.8 and 5.9,
- Clause B4 – Earthworks and Sediment Erosion Control: refer to section 5.4,
- Clause B5 – Stormwater Management: refer to section 5.4,
- Clause B10 – Tree Preservation and Vegetation Management: refer section 5.5 and 5.6,
- Clause B11 – Koala Habitat Management: refer section 5.5.

5. LIKELY IMPACTS OF DEVELOPMENT

5.1. Air Quality

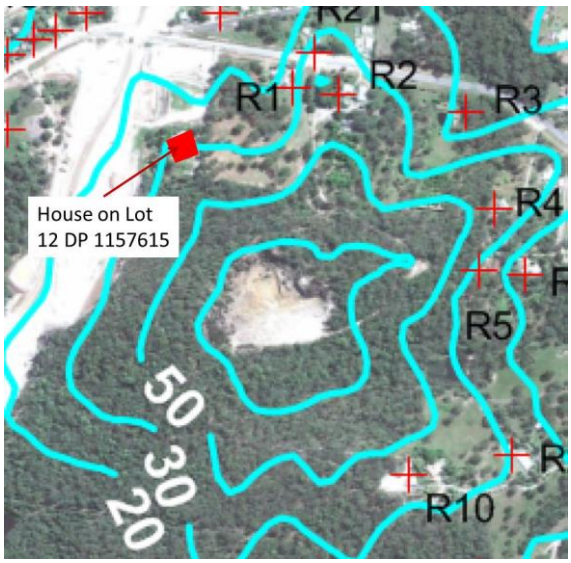
An Air Quality Impact Assessment (EIS Appendix H, GHD 2014) was prepared for the proposed development in accordance with the Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (DEC 2005).

Dispersion modelling (Ausplume) was utilised to predict ground level concentrations (glcs) of key pollutants associated with the project for a worst case scenario and the impacts on the nearest sensitive receivers. Modelling was undertaken based on no mitigation measures and with mitigation measures.

Proposed mitigation measures include sealing of the internal haul road. The EIS indicates this would be done in 2 stages, with Stage 1 to the boundary of Lot 186 (at the end of the access handle from Crescent Head Road) and Stage 2 being the entire length to the final floor level of the quarry.

The modelling indicates that, at peak production, with the Stage 1 sealing of the access road, the adopted air quality criterion is exceeded even with mitigation controls in place, at receivers R1, R2, R4, R5, R9, R10, R11 and R21. With the access road fully sealed, at peak production and with controls in place, levels are still predicted to be exceeded at R2, R4, R10 and R21.

In addition, there is an existing house on Lot 12 DP 1157615, 178 Crescent Head Rd, which is potentially affected by air quality impacts but not identified in the EIS, shown in the map below.



The applicant was requested to advise what further mitigation measures were available in the event that air quality criteria (or noise criterion) were exceeded. The applicant subsequently amended the quarry design by:

- Relocating the haul access road within the site marginally (about 6m) to the west,

and excavating the route to provide a 7m high rock face between the haul access road and houses R4, R5 and R6,

- Staging the extraction areas, commencing in the western extent, furthest from R4, R5, R6, R9 and R10.

The applicant has advised that air quality monitoring would be undertaken during Stage 1 (the western quarry extraction area) to guide the design and extent of air quality mitigation measures to enable Stage 2 to proceed, being the eastern extent of the quarry.

These measures will address potential impacts on R4 and R10 as impacts on these dwellings are associated with the quarry footprint. Impacts on R2 and R21 are associated with the haul access road and are predicted to exceed the impact criterion by 1µg/m^3 during peak production and assuming worst case scenario meteorological conditions.

Air quality impacts are measured at the house location. The private open space area for R1 and R2 is located closer to the quarry footprint and will be subject to air quality impacts at increasing levels towards the boundary adjoining the quarry.

It is recommended that the following additional measures be imposed by condition of consent:

- Sealing of the full length of the access road to the current floor level prior to commencement of haulage operations,
- Reduction of the quarry footprint to exclude any land within 150m of any existing residence,
- Reduction in the quarry footprint to provide a minimum 50m setback from the northern boundary of Lots 186 and 187 DP 754400,
- Adjustment to the location of the internal access road so that the construction is not closer than 140m to dwelling R5,
- Stage 2 of the quarry shall not commence until a detailed monitoring program for air quality is completed. A report prepared by a relevant expert shall be submitted comparing recorded air quality results from Stage 1 with predicted results of the Air Quality Impact Assessment Report (GHD February 2014). The report shall identify any required quarry design modifications and mitigation measures required to achieve environmental compliance. Stage 2 shall only proceed if it can be demonstrated that air quality criteria will be achieved.

The EPA has reviewed the EIS and has provided General Terms of Approval (GTAs) for the development. The GTAs include a special condition for dust management, requiring a Dust Management Plan to be prepared prior to commencement of quarrying activities.

It is considered that air quality targets are reasonably able to be achieved through careful operation and management of the quarry with detailed air quality assessment to be undertaken for the areas of the quarry closest to residential receivers to ensure targets are achieved. The imposition of appropriate conditions will ensure no significant air quality impacts from the development.

In addition, a recommended consent condition provides for the owners of adjoining land with residences closest to the proposed quarry to lodge a complaint with the developer

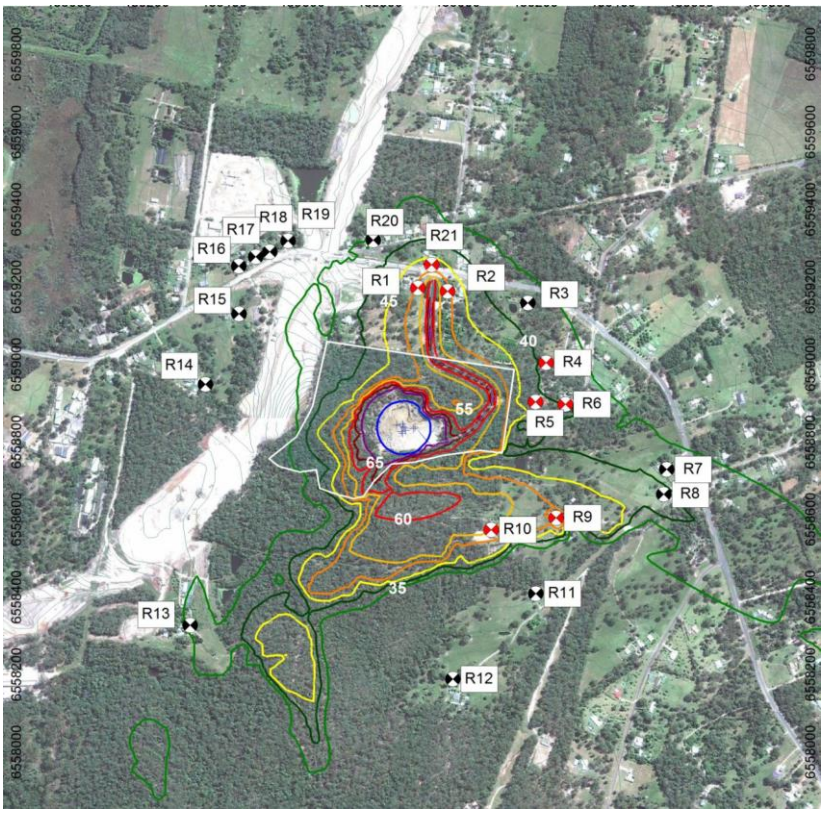
and require air quality monitoring if the adjoining land owner believes that the air quality criteria is being exceeded. The developer is required to engage an independent and appropriate consultant to undertake monitoring and assess the validity of the complaint. If air quality targets are shown to be exceeded, the developer is required to implement additional mitigation measures. If the quarry breaches air quality, noise or blasting criteria on three or more occasions in any 2 year period at any of the nearest residences there is a condition that enables a landowner to require the developer to acquire their land.

5.2. Noise

Operational Noise

A Noise Impact Assessment (EIS Appendix G, GHD 2014) was prepared for the proposed development, establishing project specific noise goals having regard to the NSW OEH publications *Industrial Noise Policy* (2000). Noise modelling of the predicted sound pressure levels was undertaken based on the maximum annual production rate of 450,000 tonnes.

Eight houses – R1, R2, R4, R5, R6, R9, R10 and R21 - are potentially affected by noise at peak operation and based on current quarry shape (worst case scenario) if no mitigation measures are imposed as shown in the following noise contour map.



The Noise Impact Assessment identified that houses R9 and R10 are primarily affected by noise from the crushing and screening plant while R1, R2, R4, R5, R6 and R21 are primarily impacted by truck movements on the haul access road.

Proposed noise mitigation measures include the erection of acoustic barriers adjacent the haul access road between the noise source and receivers and adjacent the crushing and screening plant.

Model results indicate that noise levels generated from quarry operations, after the implementation of noise barriers/mounds, are predicted to comply with the noise criterion at most receivers. Four houses are identified as potentially affected at peak production even with mitigation measures, being R2, R5, R10 and R21. The predicted noise levels still exceed the noise criterion by up to 2dB(A) at peak daily production. R5 is predicted to exceed the noise criterion at average daily production.

It is noted that the modelling is based on the location of crushing and screening plant in the centre of the site, together with the other associated machinery. The plant is mobile and moved to be as close as possible to the current area of quarrying within the footprint. Consequently, there is increased potential for noise impacts when quarrying moves towards the northern and eastern boundaries of the site.

The applicant was requested to advise what further mitigation measures were available in the event that the noise criterion was exceeded. The applicant subsequently amended the quarry design by:

- Relocating the haul access road within the site marginally (about 6m) to the west, and incising the haulage access route to provide a rock wall up to 7.5m high to provide noise mitigation from truck movements for houses R4, R5 and R6 (see Construction Noise below for consideration of this issue),
- Staging the extraction areas, commencing in the western extent, furthest from R4, R5, R6, R9 and R10.

Following consideration of the Blast Management Plan and Control Report (see section 5.3 Blasting) it is proposed to recommend conditions of consent that require:

- Reduction of the quarry footprint to exclude any land within 150m of any existing residence,
- Reduction in the quarry footprint to provide a minimum 50m setback from the northern boundary of Lots 186 and 187 DP 754400.

In addition, having regard to the potential impact of noise on houses R4, R5 and R6, it is proposed to recommend a condition of consent requiring the haul access road to be relocated further to the west, adjacent to the amended quarry footprint and not less than 140m from dwelling R5.

These mitigation measures, together with effective site management, are considered capable of achieving noise criterion at houses R4, R5, R6, R9 and R10.

Houses R1, R2 and R21 are most likely to be affected by noise from truck movements due to their proximity to the haul road. However, these houses are also located in close proximity to Crescent Head Rd. Existing road traffic noise levels were recorded as 48 dB(A) at a location adjacent to R2 while predicted noise levels from truck movements at peak production are 44 dB(A) at R1, 45 dB(A) at R2 and 45 dB(A) at R21. This indicates that

existing road traffic noise at R1, R2 and R21 is greater than the predicted noise levels from the operation of the quarry at peak production.

It is also noted that the owners of R2 have provided written confirmation that they are not concerned with noise from the proposed quarry.

The EPA has reviewed the EIS and has provided General Terms of Approval (GTAs) for the development.

The GTAs include special conditions for preparation of a noise management report detailing noise mitigation works and measures that will be undertaken so that the operation complies with the project specific noise levels. Mitigation measures are to be installed prior to commencement of noise generating activities and a compliance noise monitoring report is to be submitted to the EPA within 2 months of commencement of quarrying activities.

It is considered that the imposition of appropriate conditions to require mitigation measures to be undertaken will ensure that no significant noise quality impacts from the development are likely to occur.

In addition, a consent condition provides for the owners of adjoining land with residences closest to the proposed quarry to lodge a complaint with the developer and require noise monitoring if the adjoining land owner believes that the noise criteria is being exceeded. The developer is required to engage an independent and appropriate consultant to undertake monitoring and assess the validity of the complaint. If noise criteria are shown to be exceeded, the developer is required to implement additional mitigation measures. If the quarry breaches air quality, noise or blasting criteria on three or more occasions in any 2 year period at any of the nearest residences there is a condition that enables a landowner to require the developer to acquire their land.

Construction Noise

As indicated above, following initial assessment, noise impact on houses R4, R5 and R6 was identified as an issue requiring further consideration and the applicant was requested to further consider the design arrangements for noise walls along the haulage access road and the location of site facilities.

An amended plan was submitted providing for the construction of an incised haulage access road that creates a rock wall barrier up to 7.5m high to act as a noise barrier between the haulage access road and houses to the east.

The amended design introduces a short construction phase for the development. The applicant was requested to provide information about the construction period and the construction methods and the EPA was requested to review the information and to advise if there was any change to the GTAs already issued. By letter dated 6 November 2014, the EPA advised that there was no need to amend the GTAs. The EPA did advise that the Interim Construction Noise Guideline allows noise levels to be 5dB(A) higher than the

levels for operational noise.

Consequently, consent conditions will need to reflect the allowable noise levels during the construction of the haulage access road.

5.3. Blasting

The Noise Impact Assessment (Appendix G, GHD 2014) included an assessment of impacts from blasting based on the ANZECC Guidelines to Minimise Annoyance due to Blasting Overpressure and Ground Vibration. This guideline specifies recommended human comfort criteria for blasting activities.

The ANZECC recommended maximum level for airblast overpressure is 115 dB(L) peak. This level may be exceeded on up to 5% of the total number of blasts over a period of 12 months. However, the airblast overpressure must not exceed 120 dB(L) peak for any blast.

Ground-borne vibration levels should not exceed 5 mm/sec Peak Particle Velocity (PPV). The recommended PPV level may be exceeded on up to 5% of the total number of blasts over a period of 12 months. However, the level should not exceed 10 mm/sec at any time.

In undertaking the blast impact assessment, a blast monitoring report of a blast at another quarry site located about 8km west of the subject quarry (Bates Quarry, 593 Gowings Hill Rd Dondingalong) was used to predict ground vibration and airblast over pressure for blasts at the site. Table 1 provides an indication of overpressure levels and ground vibrations at increasing distance from the blast.

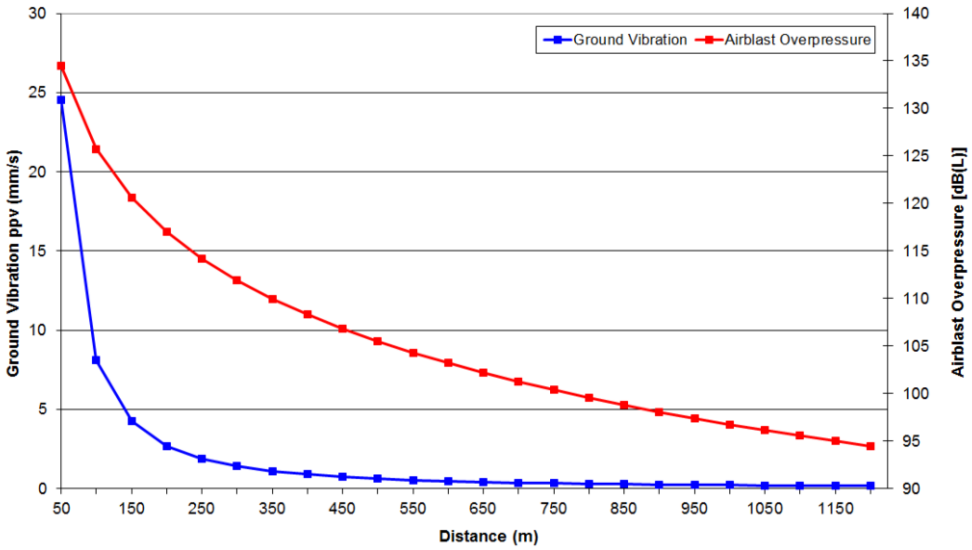


Table 1 - Ground Vibration and Airblast Overpressure

The assessment concluded that criteria for ground vibration and overpressure were achievable for the nearest receivers provided appropriate mitigation measures are applied during each blast.

Due to inconsistencies between the report and site conditions, including the proximity of nearest houses, a supplementary blasting report was submitted by the applicant: Blast Management Plan and Control, Church Hill Quarry by Heilig & Partners PL, July 2014 (the

Heilig Report).

The objectives for blasting activities at the site, adopted by the Heilig Report, are to:

- Minimise the impact of vibration and airblast overpressure associated with blasting activities to acceptable levels;
- Protect the amenity of residents;
- Prevent damage to adjacent public utilities, structures and buildings resulting from vibration and air overpressure;
- Minimise the environmental impact by minimising noise, vibration and airblast overpressure to comply with the New South Wales environmental guidelines

The Heilig Report identifies blast method options to ensure noise, airblast overpressure and vibration levels are achieved as well as strict controls to eliminate flyrock. The options include bench height, blast hole diameter and the power of the explosive charge. In effect, the closer blasting is to existing houses, the greater care required in blasting design with smaller charge sizes, smaller blast holes and an increase in the number of holes and charges. The cost of blasting increases sharply as the proximity approaches existing houses.

The report indicates that any blasting within 150m of existing houses are likely to be limited to charge sizes approaching 20% of the allowable charge size at locations furthest from existing houses.

From Table 1, based on the blast monitoring report used to predict blast impacts, it can be seen that predicted ground vibration levels are close to the permitted level of 5 mm/sec PPV at a distance of 150m from the blast, and that predicted airblast overpressure levels are close to the permitted 115 dB(L) at 250m.

The Heilig Report provide a series of recommendations for the elimination of flyrock including increased minimum uncharged collar lengths, all design criteria are measured, documented and achieved prior to any blast and the stemming of blast holes in accordance with best practice.

Blueprint Planning Consultants contacted John Heilig with draft proposed conditions of consent for comment. The draft conditions were:

1. Reduction of the quarry footprint to exclude any land within 150m of any existing residence,
2. Reduction in the quarry footprint to provide a minimum 50m setback from the northern boundary of Lots 186 and 187 DP 754400,
3. Prior to any blasting for quarrying purposes, a series of single hole blast trials shall be completed to define the vibration-distance and overpressure-distance relationships for the site. A report prepared by a relevant expert shall be submitted analysing the results compared with the predicted results of the Heilig Report. If there is a variation between the predicted results and the actual results, a revised model is to be prepared that identifies quarry design modifications required to achieve environmental compliance.
4. No blasting shall occur within 250m of any residence until a detailed monitoring

program for both vibration and air overpressure levels is completed. The design of any blasting within 250m of any residence shall be in accordance with a Blast Management Plan based on the results of monitoring and demonstrating that environmental compliance will be achieved.

In response, John Heilig advised:

1. A reduction of the quarry footprint to maintain a minimum separation distance of 150 metres will allow for blasting with an explosive weight per delay of around 15 kilograms. Based on quarry bench height, this will allow for a 4 metre bench height as per Design Option A of Table 1 of my report. This will allow all areas to be blasted , albeit some with a small bench height.
2. The minimum set back describes a value although the key issue is the distance between the potential blasting area and the residence. Compliance at the residence is normally required, although sometimes the point of compliance is specified as the boundary of the property.
3. The concept of a series of single hole trial blast is welcomed. This is well aligned with best practices and ensues that the scale of blasting is designed in accordance with the permissible vibration criterion.
4. This is again consistent with best practices. In addition to confirming that the blasting will be compliant with vibration and air overpressure limits, the blast monitoring program should also provide an assessment for flyrock. Understandably, no guidelines or standards exist that identify quantitative criterion for flyrock control, however the plan should provide qualitative comment.

Based on an assessment and analysis of the Heilig Report and the response to the draft conditions suggested, it is recommended that the following restrictions apply to the quarry operation:

- Reduction of the quarry footprint to exclude any land within 150m of any existing residence,
- Reduction in the quarry footprint to provide a minimum 50m setback from the northern boundary of Lots 186 and 187 DP 754400,
- Prior to any blasting for quarrying purposes, a series of single hole blast trials shall be completed to define the vibration-distance and overpressure-distance relationships for the site. A report prepared by a relevant expert shall be submitted analysing the results compared with the predicted results of the Heilig Report. If there is a variation between the predicted results and the actual results, a revised model is to be prepared that identifies quarry design modifications required to achieve environmental compliance.
- No blasting shall occur within 250m of any residence until a detailed monitoring program for both vibration and air overpressure levels is completed. The design of any blasting within 250m of any residence shall be in accordance with a Blast Management Plan based on the results of monitoring and demonstrating that environmental compliance will be achieved.

The EPA has reviewed the EIS and included in the GTAs a requirement that blasting must not exceed the maximum overpressure levels and ground vibration levels at the closest receivers.

It is considered that the imposition of appropriate conditions to require mitigation measures to be undertaken will ensure no significant impacts from the development.

In addition, a recommended consent condition requires monitoring of all blasting events. The developer is required to provide a report on the results of blasting events to the land owners of the nearest residences.

Due to the proximity of existing dwelling houses to the proposed quarry footprint, it is recommended that the developer prepare predevelopment dilapidation reports for any house within 250m of a proposed blasting area. Where required by a land owner, a post blasting dilapidation report is to be prepared to document any damage caused by blasting.

If the quarry breaches air quality, noise or blasting criteria on three or more occasions in any 2 year period at any of the nearest residences there is a recommended consent condition that enables a landowner to require the developer to acquire their land.

5.4. Water Quality

Water quality standards for the development are required to comply with EPA licencing requirements and Kempsey DCP 2013 Clause B4 Earthworks and Sediment Erosion Control and Clause B5 Stormwater Management.

A Surface and Ground Water Assessment (EIS Appendix F, GHD 2014) was prepared for the proposed development, that assessed water quantity and quality impacts associated with the proposed works, including an annual site water balance and water budget. In addition, local and regional flood conveyance matters were considered.

The EPA has reviewed the EIS and provided GTAs for water quality criteria to be achieved.

The GTAs include special conditions for the preparation of a Soil and Water Management Plan prior to the commencement of quarry activities.

It is considered that water quality criteria are able to be achieved for the development and that the imposition of appropriate conditions will ensure no significant water quality impacts from the development.

5.5. Koala Habitat

<u>Requirements of the Comprehensive Koala Plan of Management</u>

SEPP 44 requires an assessment of the impact of the development on core koala habitat. Assessment of the site determined it did not contain core koala habitat.

Clause 7.4 of Kempsey LEP 2013 requires that development consent must not be granted unless the consent authority is satisfied that the development is in accordance with the Comprehensive Koala Plan of Management for Eastern Portion of Kempsey Shire LGA Volume I—The CKPoM (Working Provisions), published in April 2011 (the CKPoM).

A Flora and Fauna Impact Assessment (EIS Appendix I, GHD 2014) assessed the vegetation

on the site and identified 6.97 ha of preferred koala habitat will be removed at full development of the proposed quarry footprint. The assessment concluded the vegetation was not core koala habitat.

The CKPoM requires the provision of an offset that is no less than two times the total area of potential koala habitat to be removed and that habitat compensation should be undertaken on the same site as clearing where possible.

The Habitat Compensation Measures must take the form of a valid legally binding agreement between the proponent of the development and any person being the lawful owner of the land.

The area to be secured as compensation must comprise no more than half existing preferred koala habitat, the remaining area comprising cleared or partially cleared land for revegetation purposes.

Areas being the subject of the compensation measures must be protected by a valid legally binding agreement that ensures the protection of the habitat compensation area in perpetuity through the rezoning of land for habitat protection and/or the application of restrictive covenants on title. Development Consent must be conditional upon the agreement being in place (ie signed registered or otherwise as per the legal requirements of the relevant agreement) prior to any work related to the Development Application occurring on the site.

The agreement must include, to the satisfaction of Council, a Vegetation Management Plan.

The EIS identifies that the total area of koala habitat to be removed is about 6.97ha, requiring an offset of 13.94ha, made up of no more than 6.97ha of existing vegetated area and 6.97ha of cleared or partially cleared land to be revegetated.

Applicant's Offset Proposal

The applicant has submitted a koala habitat offset proposal that provides for the following:

- About 21ha of offset land contained within the quarry site being substantially in excess of the 13.94ha required,
- The area to be offered as an offset comprises a mixture of quality of vegetation, consisting of about 14.8ha of preferred koala habitat and about 6.2ha of partially cleared and disturbed vegetation requiring revegetation works, which is marginally less than the required 6.97ha of cleared or partially cleared land required under the KPoM,
- Securing of the offset site by way of either reclassification as Community Land or creation of a protective covenant under a section 88B instrument and rezoning of the offset land as a combination of E2 Environmental Conservation and E3 Environmental Management when Council next undertakes a general review of Kempsey LEP 2013.

The quarry site is composed of five lots, with the proposed quarry footprint straddling three lots, being Lot 186 and 187 DP 754400 and Lot 14 DP 1157615. Lot 189 DP 754400 and Lot 16 DP 1157615 have a combined area of 15.1ha and will not contain any of the quarry footprint.

Securing Offset Land in Perpetuity

The CKPoM requires koala habitat offset land to be protected by a legally binding agreement that ensures protection in perpetuity through the rezoning of land and/or the application of restrictive covenants on title.

It is an understatement to say that "in perpetuity" is a very long time and it is difficult to devise any mechanism that would guarantee such an outcome.

The rezoning of land to an environmental conservation zone would ensure any proposal to remove an environmental zone would go through public exhibition and would require final approval from the state government planning authority (under current legislation). The difficulty with this approach is that rezoning is unable to be required by conditions of consent, the process takes considerable time and becomes an additional administrative burden on Council to implement.

The use of restrictive covenants on title, with Council having the power to vary the restriction, is Council's current usual practice for securing offset land. This approach is reasonably practical and convenient compared with other mechanisms, such as Property Vegetation Plans under the Native Vegetation Act 2003 or Conservation Agreements under the Threatened Species Conservation Act 1995. There are a number of limitations with restrictive covenants. These include:

- Land purchasers may misunderstand or misinterpret the title restriction or not be adequately informed when purchasing the land and have an expectation that they will be able to obtain approval to clear, or fail to maintain the land for conservation outcomes,
- Council maintaining a record of land subject to restrictions into the future,
- The transparency and public access to an information layer showing all land "secured" as a koala habitat offset,
- The burden on Council to undertake legal action for a breach of the title restriction,
- Conflict between the title restriction and land owner entitlements for exempt clearing under the Native Vegetation Act 1995 and the 10/50 Code of Practice under the Rural Fires Act 1997.

Rezoning is considered the most effective mechanism for securing conservation land although the practicality and appropriateness of a patchwork mosaic of small areas of environmental zones may not be desirable for achieving strategic land use outcomes. A far more effective and strategic approach would be for Council to develop a strategically located land bank of koala offset land supply and for development proposals to "purchase' offset land credits similar to the biobanking scheme under the Threatened

Species Conservation Act 1995. Such a scheme would be a significant undertaking for any local government authority.

Having regard to the difficulties associated with the various options available, it is considered that Council's usual practice to use a title restriction under section 88B should generally be utilised although it is suggested that Council should review the effectiveness of this practice when it undertakes a future review of the CKPoM.

Council as Land Owner Issues

The use of restrictive covenants on title to secure koala offset land where Council is both the land owner and the authority empowered to vary the restriction was raised as a potential conflict of interest with the applicant and Council's Director of Infrastructure Services, who represents the Council's land owner interests.

As a means to address this conflict of interest, and to ensure Council met its responsibilities for probity and transparency, it was suggested that Council consider the reclassification of the koala habitat offset site to "Community Land" under the Local Government Act 1993. Reclassification from operational to community land is able to be achieved by a simple Council resolution, subject to a 28 day public notification period prior to the resolution. To reverse this classification, to reclassify community land to operational land requires preparation of a local environmental plan, public exhibition process and final approval by the state planning authority, which would provide an independent third party approval, ensuring Council could not unilaterally remove the community land classification.

Legal advice on this approach indicated that reclassification could not be required by condition of consent but could be required by way of a deferred commencement consent requirement.

Recommended Method of Securing Koala Offset Land

In determining the recommended method for securing the koala offset, the following factors were taken into consideration:

- Under the CKPoM, it is the developer's responsibility to secure the offset and undertake the associated revegetation and management works,
- Reclassification of the offset land is likely to result in the responsibility for preparation of the Vegetation Management Plan under the CKPoM to pass to Council, as there would be a requirement to prepare a Plan of Management under the Local Government Act 1993. This would be contrary to the intent of the CKPoM,
- The lease agreement between Council as landowner and the proposed developer (NSW Quarries) applies to the land containing the proposed offset area,
- There are likely to be legislative complications associated with requiring land subject to a lease agreement to be classified as community land,
- The probity and transparency issues associated with the development application assessment process due to Council being both land owner and consent authority,

are satisfied through the independent assessment of the application and determination by the JRPP. Any probity issues associated with compliance with the conditions of consent and ensuring the protection of koala offset land are matters to be managed by Council post development consent.

In the circumstances, it is recommended that the koala offset be secured by section 88B restriction on title consistent with Council's usual approach. It will be Council's responsibility to manage probity issues post development consent.

Offset Requirements – Amended Quarry Footprint

The recommendation to modify the quarry footprint by excluding any land within 150m of any existing residence and to provide a minimum 50m setback from the northern boundary will result in the reduced quarry footprint causig an overall loss of 6.1ha of koala habitat. The proposed offset will comprise about 18ha of forest that is existing good quality koala habitat and about 4.5ha of partially cleared habitat to be revegetated or rehabilitated as forest.

	Required	Proposed
Revegetation Area	6.1ha	4.5ha
Total Offset	12.2ha	22.5ha

While the offset proposal provides less than the required revegetation area (about 74% of the requirement), it provides substantially more than the total offset required (184%). On balance, this is considered to satisfy the requirements of the CKPoM.

Other Requirements of CKPoM

The requirement under the CKPoM for a legally binding agreement between the developer and the owner of land to be used as the offset is satisfied by the lease agreement between NSW Quarries and Council, which applies to the five land parcels containing the quarry footprint and the offset land.

The existing vegetated offset area is required to be fenced to exclude access by recreation vehicles and actively managed to restore the structural integrity of the forest. The partially cleared area of the offset must be planted out with a species mix equivalent to the area being cleared, with not less than 15% preferred koala feed trees, not less than half the replanted koala trees being tallowwood. Recommended conditions of consent specify these requirements.

The requirement for a legally binding agreement to secure the offset will be achieved by consent condition requiring creation of a section 88B restriction on title. A Vegetation Management Plan (VMP) is required by condition of consent satisfying the requirements of the CKPoM. The VMP is required to be referenced in the title restriction as a positive covenant.

5.6. Flora and Fauna

Assessment of impacts on flora and fauna are required to consider the provisions of the Threatened Species Conservation Act 1995, Environmental Protection and Biodiversity Conservation Act 1999 and Kempsey DCP 2013 Clause B10 Tree Preservation and Vegetation Management.

The Flora and Fauna Impact Assessment (EIS Appendix I, GHD 2014), in addition to assessing koala habitat impacts, assessed potential impacts on all other flora and fauna as a result of full development of the quarry footprint. The assessment identifies 6.97ha out of a total of 32.04ha of vegetation on the site is to be removed.

A total of 3.5ha of Endangered Ecological Community vegetation types is mapped on the site. None of this vegetation is to be removed.

The Flora and Fauna Impact Assessment identified that the proposed clearing was unlikely to have a significant effect on threatened species, despite an estimated loss of up to 140 hollow-bearing trees. The EIS states that the quarry footprint was modified to avoid direct impacts on aquatic habitats and riparian areas and therefore avoids areas along drainage lines and low lying areas which were assessed as containing the highest densities of woody debris, mature trees and large hollows and therefore the highest habitat values.

As noted in section 5.5, these higher habitat value areas are proposed to be protected through the koala habitat offset requirement. Protection of these areas will also offset impacts on other threatened species.

Due to the predicted loss of up to 140 hollow bearing trees identified in the EIS, the author of the flora and fauna impact assessment report was contacted to discuss the justification for the conclusion that there would be no significant impact on threatened species.

Additional advice was provided as further justification, as follows:

- Hollows are present in greater densities and larger sizes along the drainage lines and in lower topographic areas rather than on the higher topographic areas and within the quarry footprint,
- Hollow bearing trees were associated with the drainage line in the south west of the study area as well as approaching the dam to the east of the site and vegetation in these areas appears to be less disturbed by historical fire and logging,
- Vegetation along the western edge of the site is heavily influenced by the Pacific Highway upgrade construction which has resulted in a loss of connectivity to the west, increased noise and vibration levels and weed infestation,
- Hollow bearing trees within the quarry footprint are generally smaller trees and contain smaller size hollows, with the majority only 2-3cm in diameter and so limited in habitat value.

The following mitigation measures were recommended:

- Comprehensive pre-clearing surveys to accurately determine the number, types

and sizes of hollows that would be removed. Based on this information, an appropriate number and range of nest-boxes would be installed in suitable retained habitats elsewhere on site (or as discussed, in adjoining properties or the offset site) prior to clearing being undertaken.

- Implementation of a tree-dwelling fauna management protocol in order to minimise injury or mortality to individuals roosting within the proposal site.

Having regard to the findings of the EIS and the supplementary information provided, it is considered that the proposed development will not have a significant effect on threatened species or their habitats. The proposed mitigation measures will assist in ensuring no significant effect. The koala habitat offset proposal for the protection and management of the retained vegetation on site will further provide for the minimisation of impacts on threatened species.

It is considered that with the measures proposed together with the consent conditions, the development will satisfy the requirements of clause 14 of the Mining SEPP in terms of minimising impacts on threatened species and biodiversity to the greatest extent possible.

5.7. Stability of Quarry Face

The proposed quarry footprint extends to within 12m of the northern boundary of the site. In accordance with the considerations in section 5.3 regarding blasting impacts, it is proposed to impose a minimum setback of 50m from the northern boundary of the site to the quarry footprint. This setback will also provide adequate separation from the quarry face, the internal access road and the adjoining properties in the event that the quarry face is subject to potential sliding, toppling or wedge failures in the rock strata.

5.8. Access and Parking

Access

The design of access to the site is required to consider the requirements of Kempsey DCP 2013 Clause B2 – Parking, Access and Traffic Management, relevant Australian Standards and Ausroads guidelines. Works within the road reserve will require approval under the Roads Act 1993 which is generally required by condition of consent and prior to commencement of operations.

A Traffic Impact Assessment (EIS Appendix J, GHD 2014) assessed available sight distance at the intersection of the quarry access road and Crescent Head Road as required by Ausroads guidelines. Required sight distances were determined to be 146m to the east and 151m to the west and are achievable subject to removal of vegetation in the road verge to the east.

A concept design for the upgrade to the quarry access road intersection was submitted which demonstrated the intersection was capable of being constructed within the current road reserve. Appropriate consent conditions are recommended for works to be completed prior to truck movements commencing under the proposed consent.

Parking

Kempsey DCP 2013 Clause B2 – Parking, Access and Traffic Management sets standards for a range of land uses in terms of parking provision and design of parking. No parking provision rates are specified for extractive industries. It is considered that there is adequate site area available for vehicle parking and manoeuvring and provided all internal access ways and parking areas are subject to sediment and erosion controls and stormwater management provisions, sufficient parking will be provided on the site. A consent condition is recommended to require sediment and erosion control measures are in place, including for internal access ways and parking areas, prior to commencement of operation.

5.9. Traffic Safety

The development proposes to generate up to 90 truck and dog loads per day being a total 180 movements in and out, along the haul route to Macleay Valley Way. The haul route passes through rural residential, residential and industrial areas and truck movements have the potential to impact on traffic safety along this route.

A Road Safety Audit assessed safety issues associated with the proposed haulage route and identified the need to upgrade the site haul access and Crescent Head Road intersection to CHR(S) type intersection, including sealing the northern gravel shoulder, improving sight distance by removal of tree in the south eastern verge, line marking, guideposts and signage.

It is noted that the RMS advice of 19 November indicated that "It would be desirable for any road safety audit/assessment to identify safety risks in areas where there is a higher level of activity by vulnerable road users (namely residential areas and school zones) along the proposed haulage routes. This information could be used to inform a Drivers Code of Conduct."

Conditions of consent are proposed for upgrading of the quarry access road intersection, preparation of a Road Safety Audit for the haulage route and preparation of a subsequent Drivers' Code of Conduct. In addition, a condition of consent is recommended that prevents haulage truck movements on the haulage route during the time that school buses traverse the route.

It is considered that the proposed upgrade to the intersection and conditions of consent will ensure an acceptable level of traffic safety is maintained during operation of the quarry.

Haulage Trucks and School Buses

The haulage route passes through a school zone for the school at 98-108 Crescent Head Rd. It is noted that the Infrastructure SEPP requires a limit or preclusion of truck movements on roads in residential areas or near to schools. A draft condition was prepared, consistent with the JRPP's practice of prohibiting haulage trucks on the haulage

route for the period of time that the school buses traverse the haulage route. The applicant was provided a copy of the draft condition for comment.

In response, the Director of Infrastructure Services of Kempsey Shire Council, representing Council as landowner, made a request to not impose the condition for the following reasons:

- Crescent Head Rd is:
  - a regional road,
  - constructed to a high standard able to accommodate greater traffic loads including heavy vehicles,
  - approved for B-Doubles from Macleay Valley Way to a point east of the quarry access road,
- Existing heavy vehicle movements exceed 300 per day, which is about 10% of all traffic,
- During the construction of the Pacific Highway upgrade, it is estimated that heavy vehicle movements on Crescent Head Rd increased by about 200 vehicles per day, which is more than the increase proposed by maximum operation of the quarry,
- No limit on heavy vehicles was imposed during the construction of the Highway upgrade,
- There are designated locations for school buses to pull over,
- School buses have been recently observed as travelling along the bus route from 8.10am to 8.50am and from 2.40pm to 3.30pm. Prohibiting haulage truck movements during these periods would be a significant restriction to competitive operation of the quarry.

On the basis of the submission, it is considered that the proposed draft condition for restricting truck movements during the period of school bus traversing the haulage route is not necessary in the circumstances.

5.10. Traffic Noise

The Noise Impact Assessment (Appendix G, GHD 2014) included a predictive assessment of the increase in traffic noise resulting from trucks generated by the development traveling along the haulage route.

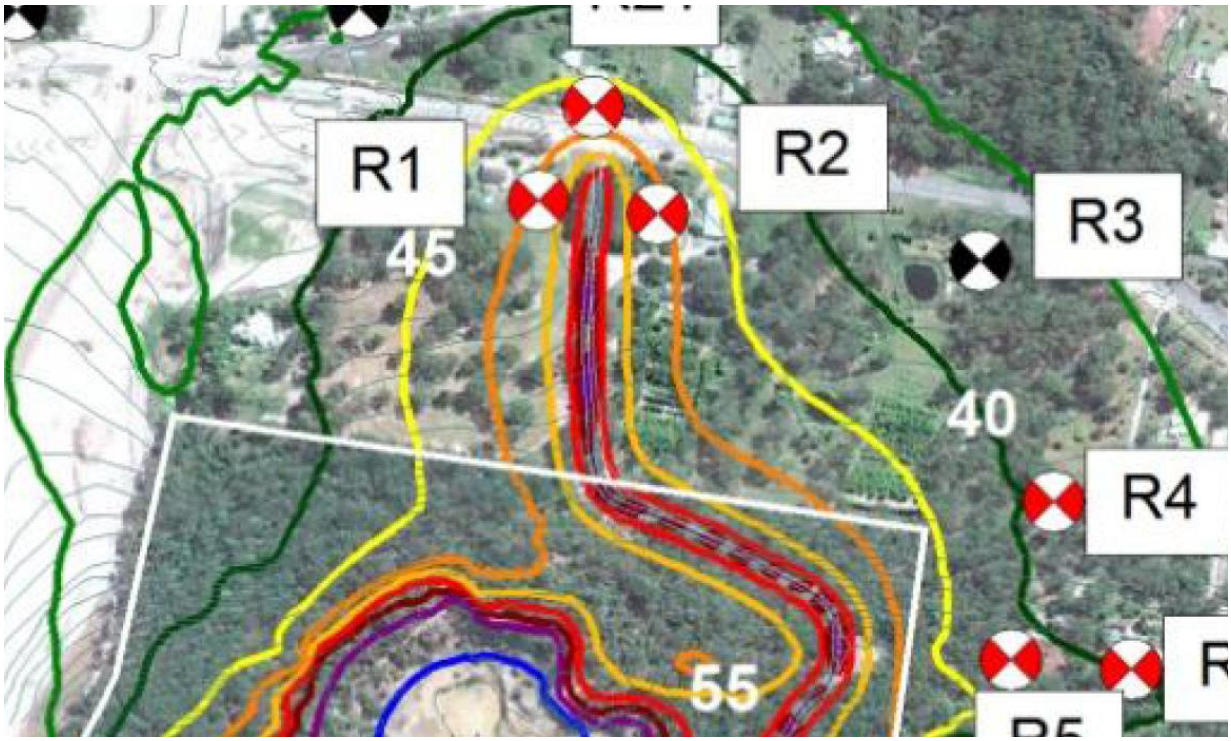
The NSW Road Noise Policy (EPA, 2011) provides non-mandatory road traffic noise target levels for land use developments with a potential to create additional traffic on public roads. The traffic noise target level at residential receivers on a sub-arterial road is 60dB(A) for day time hours.

The target level is substantially higher than the target under the Industrial Noise Policy for residential receivers and recognises that a public road such as Crescent Head Road provides access to a large area.

The Noise Impact Assessment predicted that road traffic noise levels would only increase by 1dB(A) based on an increase in total traffic of about 8.1% on Crescent Head Road.

Analysis of the modelled noise contours from the access road within the quarry site

indicates that the predicted 60dB(A) contour is very close to the road edge. This indicates traffic noise is unlikely to exceed the 60dB(A) noise target for houses setback more than 10m from the road pavement as a result of trucks generated by the development.



Extract from Figure 5.3 of EIS –Predicted Operational Sound Pressure Levels at Peak Production

5.11. Greenhouse Gas Emissions

Following initial review of the EIS, a supplementary report titled Greenhouse Assessment Proposed Expanded Quarry (GHD July 2014) was submitted to satisfy clause 14(1)(c) and (2) of the Mining SEPP. The assessment determined that the emissions from the proposal are minor compared with total emissions for NSW and Australia. The report recommends the following mitigation measure:

- Optimisation of operational activities and logistics,
- Use of more efficient plant and vehicles,
- Use of biodiesel should be further investigated and used, where possible, on the proposal.

It is recommended that these requirements be incorporated in the Environmental Management Plan required for the development.

5.12. Rehabilitation

The EIS provides a preliminary rehabilitation plan (Appendix C). The plan consists of:

- Revegetation of the area between the northern boundary and the quarry footprint to provide a visual screen between the quarry and neighbouring residences,
- Fencing the perimeter of the quarry footprint at the end of quarrying activities,
- Allowing the excavated quarry area to progressively fill with water from rainfall,
- Ripping the above-water level surfaces to enable keying in of top soil,

- Using stockpiled top soil to spread across the ripped areas,
- Hand seeding and planting of natives,
- Maintaining sediment and erosion controls until establishment.

A consent condition is recommended that requires the quarry operator to ensure implementation of the rehabilitation plan.

5.13. Waste Management

The EIS identifies various waste streams generated by the development including excavation waste, vegetation waste, packaging materials and liquid wastes and proposes to minimise waste by re-use or recycling on site. Waste is proposed to be managed in accordance with the requirements of the Waste Avoidance and Resource Recovery Act 2001, the Protection of the Environment Operations Act 1997, the OEH Waste Classification Guidelines 2009 and the "principles of waste management hierarchy. Mitigation measures are detailed in the EIS (section 5.9 and table 5-48). A proposed condition of consent requires implementation of the measures identified in the EIS.

5.14. Developer Contributions – Road Maintenance Levy

The haulage of up to 450,000 tonnes of extractive material per year will have a significant impact on the pavement of the road haulage route.

Kempsey Shire Council's *Local Roads and Traffic Infrastructure Developer Contributions Plan 2009"* (effective from 12 January 2010) specifies the following requirement:

> *5.3.4 Haulage Provisions*
>
> *Extractive and rural industries where land use is intensified and results in heavy vehicle movements on local roads will be subject to a contribution under this plan for the upgrade of the roads being used by the development. The contribution is calculated on gross tonnage hauled. Contributions payable are calculated on receipt of the development application and are unique to each application.*

The NSW Independent Pricing and Regulatory Tribunal has issued the *Local Infrastructure Benchmark Costs – Costing Infrastructure in Local Infrastructure Plans Final Report April 2014* to guide Council's in the calculation of fair and reasonable contribution rates. The report provides guidelines for section 94 contributions in mining areas based on the additional cost for road maintenance attributed to mining activity.

The IPART methodology specifies the following steps:

> Step 1: Determine the lifetime cost of maintenance for a typical road with an assumed natural life of 20 years.
>
> Step 2: Assume reduced lifespans resulting from mining activity using notional lower and upper bounds and convert this to an additional cost per km, per year.
>
> Step 3: Apportion costs derived at lower and upper bands on a mine by mine basis by determining the total kilometres of affected road (shared and non-shared) for the

relevant mine and allocating the total cost on a pro rata mine output basis across the different mines.

The IPART provides benchmarks of $11,101/km/year (lower bound) to $42,818/km/yr (upper bound).

Council have advised that they have undertaken recent investigations to determine the appropriate benchmark value and concluded that the upper bound value was the appropriate rate.

Based on 450,000 tonnes per year from the proposed quarry, Council have adopted a contribution rate of $0.095/tonne/km. With a haul route of 2.0km, the contribution rate is $0.19 per tonne.

Council have requested the imposition of a contribution rate of $0.19 per tonne.

The proposed method of calculation is considered to be validated through the use of the IPART methodology and benchmarks. It is recommended that a condition of consent be imposed requiring a contribution of $0.19 per tonne.

6. SUBMISSIONS

A total of nine submissions were received during the formal exhibition period, consisting of two submissions in support of the proposal, six objections to the proposal and a letter from the Member for Oxley, The Hon. Andrew Stoner MP on behalf of one of the objectors, Mr A Winkley, the resident of the house identified as R5 in the EIS.

Following receipt of the amended quarry footprint plan and the Blast Management Plan and Control (Heilig & Partners, July 2014), submitters were advised of the available additional information and invited to make further submissions. One further submission was made by Mr Winkley, which included a request to meet with the assessing officer, Council staff and the proposed developer, NSW Quarries. A meeting was held with Mr Winkley on 21 November 2014.

The issues raised in the objections are considered below.

6.1. Impacts from trucks – road pavement

Comment:

The development will have an impact on the road pavement as a result of the number of truck movements generated. Consent is subject to the payment of road contributions in accordance with Council's Contribution Plan. The contribution rates are set to ensure the cost of damage to the road caused by the development is paid for by the development.

6.2. Impacts from trucks – noise

Comment:

Road traffic noise criteria recognise the service that rural roads provide to the rural

hinterland. The noise impact assessment contained in the EIS estimated a minor increase in road traffic noise based against NSW Road Noise Policy (EPA 2011). The target noise level of 60dB(A) for sub-arterial roads is unlikely to be exceeded as a result of the development.

6.3. Impacts from trucks – traffic safety

Comment:

The main traffic safety issue identified in the Road Safety Audit was the need to upgrade the intersection of the proposed quarry access road with Crescent Head Road. It is recommended that a consent condition require the intersection to be upgraded to AusRoads standards prior to commencement of haulage activities from the site.

As part of the intersection upgrade, an informal bus stop is to be relocated by agreement with the local bus companies.

In accordance with the recommendations of the RMS, a condition of consent is recommended to require the preparation and implementation of a Code of Conduct for haulage truck drivers associated with the development.

Subject to compliance with these requirements, the development is considered to not cause a significant impact on traffic safety.

6.4. Noise

Comment:

The EIS identified that the noise from the development, with mitigation measures, has the potential to impact on four houses (R2, R5, R10 and R21) at peak production and on one house (R5) at average daily production. The predicted impact was up to 2dB(A). It is noted that R2 and R21 are adjacent Crescent Head Road and are potentially impacted by truck movements, while R10 is potentially impacted by the crushing and quarrying activities. R5 is potentially impacted by a combination of truck movements and quarrying activities.

To address these impacts, the applicant has modified the proposal to include the excising of the access road to create a rock wall barrier up to 7.5m high and to stage the extraction area commencing in the western area furthest from R5 and R10.

In addition, the recommended conditions require the quarry footprint to be a minimum setback of 150m from any existing residence and the quarry access road to be setback a minimum of 140m to R5.

The EPA has required compliance noise monitoring to be undertaken to ensure the development achieves noise standards.

It is considered that the proposed additional measures are capable of ensuring the development will achieve the noise criteria.

Recommended consent conditions require compliance and if exceeded, further mitigation

measures are required and if necessary property acquisition where noise criteria cannot be achieved. It is considered that the development will be adequately controlled to ensure compliance with noise criteria.

6.5. Dust impacts on residences

Comment:

The EIS identified that dust from the development, with mitigation measures, including sealing of the full length of the access road, has the potential to impact on four houses (R2, R4, R10 and R21) at peak production.

Additional mitigation measures proposed by the applicant, including excising the haulage access road to create a barrier up to 7.5m high, staging the extraction commencing in the western area, together with the recommendations to reduce the quarry footprint to be not closer than 150m to the nearest residence and to provide a minimum 50m setback from the northern boundary will enable achievement of air quality criteria at R4 and R10. Achievement of air quality criteria at R2 and R21 (adjacent Crescent Head Road and the haul access road) will require careful management of loaded trucks, including covered loads, wash down facilities for trucks and similar measures.

The EPA has required a Dust Management Plan to be prepared including detailed measures to address all the principal sources of dust to ensure the development achieves air quality standards.

Recommended consent conditions require compliance and if exceeded, further mitigation measures are required and if necessary property acquisition where air quality criteria cannot be achieved. It is considered that the development will be adequately controlled to ensure compliance with air quality criteria.

6.6. Blasting impacts

Comment:

Based on the assessment of blasting impacts, combined with the recommended reduction in the quarry footprint to provide a minimum 150m separation from any residence and recommendation for preparation of a detailed monitoring program, it is considered that impacts from overpressure and vibration levels at the nearest residential receivers will be kept to within established standards. Monitoring of blasting is required to demonstrate compliance.

Due to the proximity of existing dwelling houses to the proposed quarry footprint, it is recommended that the developer prepare predevelopment dilapidation reports for any house within 250m of a proposed blasting area. Where required by a land owner, a post basting dilapidation report is to be prepared to document any damage caused by blasting.

Where maximum allowable levels are exceeded, consent conditions require property acquisition by the developer.

6.7. Amenity impacts

Comment:

Impacts from noise, dust, blasting and traffic are considered to be adequately addressed. While there will be some impacts from the operation of the quarry, recommended consent conditions are considered to provide adequate measures to ensure impacts are not significant.

6.8. Ecological impacts and loss of koala habitat

Comment:

Ecological impact assessment indicates the development will not have a significant impact on threatened species and proposed mitigation measures will minimise impacts. The proposed koala habitat offset and recommended consent conditions are considered to be consistent with the requirements of the Kempsey Comprehensive Koala Plan of Management.

6.9. Water quality impacts

Comment:

Water quality treatment measures are incorporated in the development to achieve established water quality standards. Water quality monitoring and licensing with the Environment Protection Authority is required. Recommended consent conditions require the achievement of required water quality standards.

6.10. Out of character

Comment:

Extractive industries are a permissible use in the zone and are appropriately located in rural areas. The site operations will not be visible from the public road or adjoining properties and noise, dust and blasting impacts will be within accepted limits. Truck movements will increase along Crescent Head Road however the increase is considered to be within the capacity of the road.

6.11. Funerals at Church

Comment:

There is a potential conflict between the movement of haulage trucks and a funeral procession associated with the church at 98 Crescent Head Road. It is considered that the recommended consent condition for preparation and implementation of a Drivers' Code of Conduct will address these potential conflicts. .

7. THE PUBLIC INTEREST

In consideration of the management of impacts associated with the development, the need to make best use of local resources and to ensure a ready supply of material to meet

the needs for road construction for the Pacific Highway, the broader public interest will be served in approving the application.

8. RECOMMENDATION

That consent be granted to Development Application DA-T6-14-67 for the establishment of an extractive industry to extract up to 450,000 tonnes per annum on 204 Crescent Head Road, South Kempsey, Lot 1 DP 914805, Lots 14 and 16 DP 1157615 and Lots 186, 187 and 189 DP 754400 subject to the conditions of consent contained in Annexure 1.