

Transport Management Plan & Driver's Code of Conduct

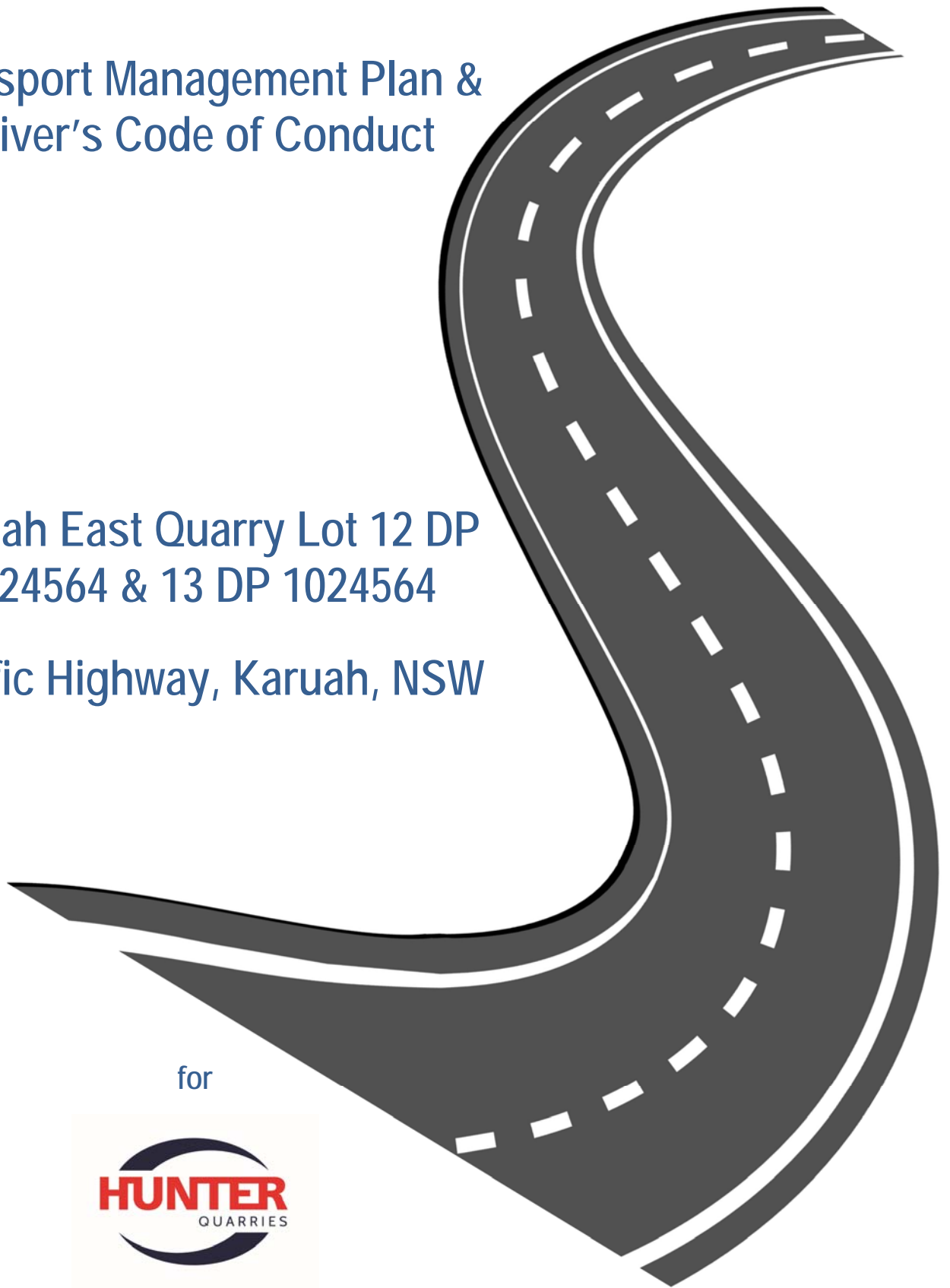
Karuah East Quarry Lot 12 DP
1024564 & 13 DP 1024564

Pacific Highway, Karuah, NSW

for



4 December 2015



Traffic Management Plan Details

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DRIVER DECLARATION

I, the undersigned, hereby agree to abide by Karuah East Quarry Pty Ltd Truck Driver Code of Practice for the transportation of Quarry products from Karuah Quarry, Pacific Highway to their final destination/s in a safe manner. I have read and understand the requirements outlined in the attached document and will, to the best of my ability, comply and assist with their implementation, requirements and ongoing administration.

The subject document to which this declaration relates is attached as part of the overall document and signing of this declaration confirms that signee has read and understood the entire document:

TRUCK DRIVER	
Full Name:	
Organisation:	
Signature:	
Date:	
KARUAH EAST QUARRY PTY LTD	
Company Witness:	
Date:	

1. TRANSPORT MANAGEMENT PLAN

1.1 Introduction

StreetWise Road Safety & Traffic Services Pty Ltd (StreetWise) has been engaged by Karuah East Quarry Pty Ltd (Karuah East) to prepare a Transport Management Plan (TMP) to satisfy the requirements of the Project Approval (PA 09_0175) granted on 17 June 2014 for the Karuah East Quarry Project (Karuah East).

2. STATUTORY REQUIREMENTS

2.1 Project Approval Requirements

Requirements of the TMP are provided in Schedule 3, Conditions 23, 24 and 26, and Schedule 5, Conditions 3,4 and 5 of the PA. The following is a reproduction of the PA schedule conditions pertaining to this TMP together with the relevant section(s) of the TMP where the requirements have been addressed.

Schedule 3 – Environmental Performance Conditions

Condition No.	Requirement	Relevant Section (TMP)
23	<p><u>Monitoring of Product Transport</u> The Proponent shall:</p> <ul style="list-style-type: none"> a) keep accurate records of: <ul style="list-style-type: none"> • The amount of quarry products transported from the site (per calendar month and year); and • The number of laden truck movements from the site (per hour, day, week, calendar month and year); and b) Publish these records on its website quarterly. 	<p>Section 3.6</p> <p>Section 3.6</p> <p>Section 3.6</p>
24	<p><u>Parking</u> The Proponent shall provide sufficient parking on-site for all project-related traffic, in accordance with Council's parking codes, to the satisfaction of the Secretary.</p>	Section 4.0
25	<p><u>Operating Conditions</u> The Proponent shall ensure that all project-related heavy vehicles:</p> <ul style="list-style-type: none"> a) enter and exit the site in a forward direction; and b) exit the site with loads covered. 	<p>Section 5.8</p> <p>Section 5.7</p>
26	<p><u>Transport Management Plan</u> The Proponent shall prepare and implement a Transport Management Plan for the project to the satisfaction of the Secretary. This plan must:</p> <ul style="list-style-type: none"> a) Be prepared by a suitably qualified traffic consultant whose appointment has been approved by the Secretary; b) Be prepared in consultation with RMS and Council, and submitted to the Secretary for approval prior to the commencement of construction activities; c) Include a Driver Code of Conduct; d) Describe the measures that would be implemented to ensure: <ul style="list-style-type: none"> • Compliance with the relevant conditions of this approval; • That drivers of project-related heavy vehicles are aware of potential safety 	<p>Section 2.3</p> <p>Appendix C</p> <p>Section 5.0</p> <p>Section 5.0</p> <p>Section 5.0</p> <p>Section 6.0</p>

	<p>issues along the haulage routes; and</p> <ul style="list-style-type: none"> • That drivers of project-related heavy vehicles comply with the Driver Code of Conduct; and <p>e) Include a program to monitor the effectiveness of these measures.</p>	<p>Section 6.3</p> <p>Section 6.0</p>
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Schedule 5 – Environmental Management, Reporting and Auditing

Condition No.	Requirement	Relevant Section (TMP)
3	<p><u>Management Plan Requirements</u></p> <p>The Proponent shall ensure that the Management Plans required under this approval are prepared in accordance with any relevant guidelines, and include:</p> <p>a) detailed baseline data;</p> <p>b) a description of:</p> <ul style="list-style-type: none"> • the relevant statutory requirements (including any relevant approval, licence or lease conditions); • any relevant limits or performance measures/criteria; and • the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the project or any management measures; <p>c) a description of the measures that would be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria;</p> <p>d) a program to monitor and report on the:</p> <ul style="list-style-type: none"> • impacts and environmental performance of the project; and • effectiveness of any management measures (see (c) above); <p>e) a contingency plan to manage any unpredicted impacts and their consequences;</p> <p>f) a program to investigate and implement ways to improve the environmental performance of the project over time;</p> <p>g) a protocol for managing and reporting any:</p> <ul style="list-style-type: none"> • incidents; • complaints; • non-compliances with statutory requirements; and • exceedances of the impact assessment criteria and/or performance criteria; and <p>h) a protocol for periodic review of the plan.</p>	<p>Section 1.0 and 2.0</p> <p>Section 2.0</p> <p>Section 6.0</p> <p>Section 3.6 Section 6.0</p> <p>Section 3.6 Section 6.0</p> <p>Section 3.6 Section 6.0</p> <p>Section 6.0</p> <p>Section 6.0</p> <p>Section 6.0</p> <p>Section 6.0</p>
4	<p><u>Annual Review</u></p> <p>By the end of March each year, the Proponent shall review the environmental performance of the project to the satisfaction of the Secretary. This review must:</p> <p>a) describe the development (including rehabilitation) that was carried out in the previous</p>	<p>Performance of the Transportation Management Plan will also form part of a broader annual review.</p> <p>Section 6.0</p>

	<p>calendar year, and the development that is proposed to be carried out over the current calendar year;</p> <p>b) include a comprehensive review of the monitoring results and complaints records of the project over the previous calendar year, which includes a comparison of these results against:</p> <ul style="list-style-type: none"> the relevant statutory requirements, limits or performance measures/criteria; the monitoring results of previous years; and the relevant predictions in the EA; <p>c) identify any non-compliance over the last year, and describe what actions were (or are being) taken to ensure compliance;</p> <p>d) identify any trends in the monitoring data over the life of the project;</p> <p>e) identify any discrepancies between the predicted and actual impacts of the project, and analyse the potential cause of any significant discrepancies; and</p> <p>f) describe the measures that would be implemented over the current calendar year to improve the environmental performance of the project.</p>	<p>Section 6.0</p> <p>Section 6.0</p> <p>Section 6.0</p> <p>Section 6.0</p> <p>Section 6.0</p>
5	<p><u>Revision of Strategies, Plans and Programs</u> Within 3 months of:</p> <p>a) the submission of an annual review under Condition 4 above;</p> <p>b) the submission of an incident report under Condition 7 below;</p> <p>c) the submission of an audit report under Condition 9 below; or</p> <p>d) any modification to the conditions of this approval, (unless the conditions require otherwise), the Proponent shall review the strategies, plans, and programs required under this approval, to the satisfaction of the Secretary. Where this review leads to revisions in any such document, then within 4 weeks of the review the revised document must be submitted for the approval of the Secretary.</p>	<p>Section 5.0 and 6.0</p>
7	<p><u>Incident Reporting</u></p> <p>a) The Proponent shall immediately notify the Secretary and any other relevant agencies of any incident that has caused, or threatens to cause, material harm to the environment. For any other incident associated with the project, the Proponent shall notify the Secretary and any other relevant agencies as soon as practicable after the Proponent becomes aware of the incident. Within 7 days of the date of the incident, the Proponent shall provide the Secretary any relevant agencies with a detailed report on the incident, and such further reports as may be requested.</p>	<p>Section 5.0 and 6.0</p>

2.2 Statement of Commitments

Karuah East Quarry Pty Ltd has made a commitment to implement construction and operational strategies relating to environmental management and mitigation measures.

The project Statement of Commitments (Appendix 6) requires that a Construction Traffic Management Plan (Statement of Commitment 2.0) be prepared prior to the commencement of construction works.

StreetWise has prepared a separate Construction Traffic Management Plan to be referenced / implemented as part of the civil construction works for the haulage road.

2.3 Qualification to Complete Transportation Management Plan

StreetWise Road Safety & Traffic Services has been provided with a copy of a letter from the Department of Planning and Environment providing the Secretary's approval of suitably qualified persons to prepare specific management plans as required in the PA conditions. (See Appendix B – Copy of Dept. of Planning & Environmental Expert Approval)

3. PROJECT DESCRIPTION

3.1 Quarry Operation

Hunter Quarries currently extract hard black andesite material from its existing quarry operation on adjoining lands. Approval was granted for this designated development on the adjoining land (Lot 12 DP 1024564 & Lot 13 DP 1024564) by the Minister as State Significant Development on 3rd June 2005 (DA265/10/2004).

The existing Karuah Quarry currently operates under development approval DA 265/2004 and is approved to extract up to 500,000 tonnes per annum (tpa) of 'andesite' basalt material suitable for use as road base, construction aggregate and concrete batching, among various other applications.

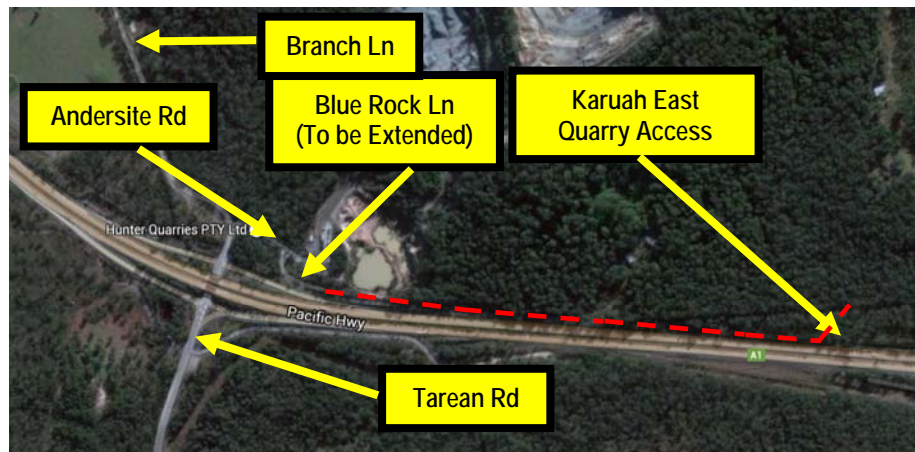
Following exploratory works adjacent to the existing approved quarry, additional resource has been identified to the east on land owned by the Proponent (Project site). On 17 June 2014 the approval was granted by the Minister for Planning and Environment (PA 09_0175) for the extraction of this additional resource through the development of Karuah East, a stand-alone operation to the existing quarry.

3.2 Site Location

The site is located approximately 4 km north of the township of Karuah in the state of New South Wales. The site is north east of the Branch Lane Interchange recently constructed as part of the Karuah Bypass.

The site is described as Lots 12 and 13 DP 1024564 and contains a total area of approximately 74 hectares. The Site is located adjacent to (to the east of) of the existing Karuah Quarry operation. The existing Karuah Quarry is accessed from Andersite Road.

Access to the Karuah East site is currently off the Pacific Highway. As detailed within the PA, access to the Karuah East Quarry will from an extension and upgrade of Blue Rock Lane (off Andersite Road) to the south western corner of the subject site (Lot 12, DP 1024564)



**Figure 1 - Shows the
Approved Karuah East Quarry Location.**

3.3 Project Description

The approved quarry to be known as Karuah East, is to be located on Lots 12 and 13 DP 1024564, off the Pacific Highway, approximately 3 km north of Karuah NSW. The quarry will be accessed from an extension and upgrade of Blue Rock Lane, which is accessed from the Pacific Highway via Andersite Road.

The resource to be extracted is a hard blue rock known as “andesite” which has a variety of uses including road base material, construction aggregate, aggregate used in concrete batching, drainage works, fill, landscaping and various other uses.

The approved development includes the following key elements:

- Staged extraction of approximately 29 million tonnes of “andesite” over a 20 year timeframe;
- Extraction of up to 1.5 million tonnes of andesite material per year;
- Removal and stockpiling of an estimated 380,000m³ of overburden (approximately 750,000 tonnes) from the quarry extraction area in accordance with the Rehabilitation Plan prepared for the project. Removal of overburden is not included in the proposed extraction rate of 1.5 million tonnes of andesite annually;
- Haulage of up to 1.5 million tonnes of andesite per year from the site to market by 25 to 30 tonne haul trucks via the Pacific Highway;
- Up to 216 laden truck loads per day at maximum production; (Traffic and Transport Study, TPK & Associates – June 2011 and Response Report April 2012)
- Implementation of water management and erosion and sediment control works to ensure no loss of sediment, dust minimisation and to control discharges from the site to ensure that all discharges are within acceptable volumetric and water quality criteria;
- Roadworks to secure access to the site including upgrade & extension of Blue Rock Lane, realignment of Andesite Road & Blue Rock Lane intersection and adjust road markings at Branch Lane & Andesite Road intersection;
- Employment of 28 on-site staff;
- Construction of new haul road and access through adjoining RMS land;
- Staged clearing;
- Drilling and blasting activities;
- Loading and hauling of extracted material;
- Crushing and screening of extracted material;
- Stockpiling of material on-site; and
- Location of plant on Lot 13 comprised of office buildings, workshops, parking areas, crushing plant, wash plant, weigh bridge and product storage areas.

3.4 Transportation of Material

3.4.1 Truck Movements

At maximum production, there will be approximately 216 laden truck loads per day, or 432 truck movements per day. (Traffic and Transport Study, TPK & Associates – June 2011 and Response Report April 2012)

The following assumptions have been made with regard to the future proposed truck movements for the expanded quarry operation:

- The extraction will be controlled at a maximum of 1.5 million tonnes per year;
- The typical truck capacity will be approximately 25-30 tonne loads;
- Haulage hours would be 7am to 6pm Monday to Friday, 7am to 1pm Saturday; and
- Haulage year has been calculated as 265 Days (no haulage on Sundays or public holidays; half day Saturday)

3.4.2 Internal Haulage Road

The approved Karuah East Quarry includes the construction of an internal haul road from the extraction area to the processing plant, through the two approved weighbridges and across the southern section of Lot 12 where it connects with Blue Rock Lane.

As previously noted, Blue Rock Lane is subject to an extension and upgrade works to provide access to the Karuah East Quarry (off Andersite Road).

3.5 Haulage Destinations

All deliveries to projects from the quarry will be along Blue Rock Lane, Andersite Road and Tarean Road north or south to the Pacific Highway via the interchange.

3.6 Records

In accordance with the Approval Condition No.23 the Quarry Management shall keep accurate records for the following:-

- The amount of quarry products transported from the site (per calendar month and year); and
- The number of laden truck movements from the site (per hour, day, week, calendar month and year); and
- The above records shall be published quarterly on its website quarterly.

3.7 Objectives of the Transportation Management Plan

The objectives of this Driver Traffic and Transport Management Plan are to:

- a) Ensure compliance with the New South Wales Department of Planning and Environmental final approval conditions, particularly numbers 24 and 26 pertaining to this management plan;
- b) Encourage compliance and acceptance of the Truck Driver Code of Practice by all heavy vehicle drivers using the quarry;
- c) Minimise impacts on the community;
- d) Foster an understanding and awareness within the company of community expectations and legislative requirements;
- e) Protect and enhance public safety through compliance with relevant road rules;
- f) Increase WH&S understanding in relation to fatigue, vehicle operation in public areas and obligation to the general public.

4. ON SITE PARKING

The PA has a requirement (Schedule 3, Condition 24) that the proposed quarry provide sufficient onsite parking to cater for quarry related traffic in accordance with Great Lakes Council parking code and to the satisfaction of the Department of Planning and Environment's Secretary.

It should be noted Great Lakes Council's Development Control Plan (DCP) (Section 10.3.1 – Car Parking Rates) does not have a prescribed requirement for the provision of parking for the operation of a quarry.

4.1 Existing Quarry Operation

The existing quarry operation provides onsite parking for staff and truck drivers as well as some lay by parking for trucks within the quarry. This parking arrangement will remain separate to that proposed for the proposed Karuah East Quarry operation.

Currently there are 12 full time employees on site for the existing operation with 12 parking spaces provided, a ratio of 1 parking space per employee.

4.2 Proposed Quarry Operation

The Karuah East Quarry will provide enough adequate on-site parking to cater for staff and vehicles external to the quarry operation (clients, etc). This parking will be located in the vicinity of the main office. It is noted up to 28 staff will be employed by the Karuah East Quarry.

The proposal will also provide truck parking and lay buys on site to the north of the weighbridge location (refer to the approved development plan, Appendix D). This parking can be used for out of hour's storage and stacking of trucks during the quarry operation.

Great Lakes Council's DCP 2014 does not provide a parking ratio for the operation of a quarry. However, the DCP provides a table which can be used to determine minimum carparking rates for a said development where a parking demand survey has not been completed.

In order to determine the carparking needs for this development the following assumptions have been made:-

- A parking demand survey is not required in this instance as there is a known and suitable pre-existing parking ratio requirement that can be used. (the existing Karuah Quarry operation)
- The parking ratios provided in Council's DCP are not relevant for this proposal.

Therefore, for the Karuah East development the following carparking is to be provided:

28 carparking spaces will be provided, based on a ratio of space per employee plus a 1 carparking space for visitors.

It is also noted the TPK & Associates Traffic and Transportation Study (June 2011) considered parking. The report noted the following in relation to car parking on site:-

- The nature of the land use, the small staff numbers and the expanse of the site determines that the potential parking demands will be accommodated on site.
- The development site will have adequate capacity to manage staff and quarry transport demands in terms of traffic.

5. TRUCK DRIVER CODE OF CONDUCT

5.1 General Requirements

Heavy vehicle drivers hauling from the Karuah East Quarry must:

- i) Have undertaken a Site Induction carried out by an approved member of the Quarry staff or suitably qualified person under the direction of the Quarry management;
- j) At the commencement of each shift or day's work drivers will attend a "Tool Box" held by the Quarry Management where drivers will be updated on Work Health and Safety issues that may have arisen from the previous shift or day's work.
- ii) Hold a valid driver's licence for the class of vehicle that you operate;
- iii) Operate the vehicle in a safe manner within and external to the Quarry site;
- iv) Comply with the direction of authorised site personnel when within the site;

5.2 Heavy Vehicle Speed

Increased speed means not only an increased risk of crashing but also increased severity if a crash occurs. A study undertaken for the Australian Transport Safety Bureau found that travelling 10 km/h faster than the average traffic speed can more than double the risk of involvement in a casualty crash. (Source: Roads and Maritime Services (RMS) formerly known as Roads and Traffic Authority (RTA)).

There are two types of speeding:

- i) Where a heavy vehicle travels faster than the posted speed limit; and
- ii) Where a driver travels within the speed limit but because of road conditions (e.g. fog or rain) this speed is inappropriate. (Source: RMS).

Drivers and truck operators are to be aware of the "Three Strikes Scheme" introduced by the Roads and Maritime Services which applies to all vehicles over 4.5 tonnes. When a heavy vehicle is detected travelling at 15 km/h or more over the posted or relevant heavy vehicle speed limit by a mobile Police unit or fixed speed camera, the Roads and Maritime Services will record a strike against that vehicle. If three strikes are recorded within a three year period, the Roads and Maritime Services will act to suspend the registration of that vehicle (up to three months).

More information is available from the Roads and Maritime Services website (www.rms.nsw.gov.au) Vehicle speeds on public roads are enforced by the NSW Police Service.



The speed limit within the quarry site is 40 km/h which is to be strictly maintained.



The speed limit for the haul road leading up to the quarry is 60 km/h.

Drivers are to observe the posted speed limits, with speed adjusted appropriately to suit the road environment and prevailing weather conditions, to comply with the Australian Road

Rules. The vehicle speed must be appropriate to ensure the safe movements of the vehicle based on the vehicle configuration.

5.3 Heavy Vehicle Driver Fatigue

Fatigue is one of the biggest causes of crashes for heavy vehicle drivers. The Heavy Vehicle Driver Fatigue Reform was therefore developed by the National Transport Commission (NTC) and approved by Ministers from all States and Territories in February 2007.

The heavy vehicle driver fatigue law commenced in NSW on 28 September 2008 and applies to trucks and truck combinations over 12 tonne GVM (however there are Ministerial Exemption Notices that can apply).

Under the law, industry has the choice of operating under three fatigue management schemes:

- i) Standard Hours of Operation
- ii) Basic Fatigue Management (BFM)
- iii) Advanced Fatigue Management (AFM)

All heavy vehicle drivers operating out of the Karuah East Quarry are to be aware of their adopted fatigue management scheme and operate within its requirements.

5.4 Heavy Vehicle Compression Braking

Compression braking by heavy vehicles is a source of irritation to the community generating many complaints especially at night when many residents are especially sensitive to noise.

In some instances compression braking is required for safety reasons however when passing through or adjacent to residential areas or isolated farmsteads a reduction in the speed of the vehicle is recommended to reduce the instances and severity of compression braking.

No compression braking beyond the quarry gate. Brakes must be applied so as not to create excessive noise that could disturb local residents.

5.5 Heavy Vehicle Noise

Noise criteria relating to the Karuah East Quarry is outlined in the Project Approval, EPL and the Noise Management Plan'.

In accordance with the PA the quarry shall ensure that the operational noise generated by the project does not exceed the criteria in the following table.

Location	Criteria (day)
Residence on Lot 11 DP1024564	43
Lot 2 DP785172	40
Lot 1 DP785172	37

Lot 14 DP1024564	38
All other residences	35

Operational noise criteria (dB(A) LAeq(15 min))

It should be noted the noise criteria in the above table will not apply if the quarry has entered into an agreement with the relevant landowner to generate higher noise levels, and the Quarry Management has advised the Department in writing of the terms of the agreement.

5.5.1 Operating Conditions (PA Schedule 3, Condition 6)

The PA requires the following be put in place so as to minimise noise impacts on the surrounding community.

- implement best management practice, to minimise the construction, operational and traffic noise of the project;
- minimise the noise impacts of the project during meteorological conditions when the noise limits in this approval do not apply;
- regularly assess noise monitoring data and relocate, modify, and/or stop operations on site to ensure compliance with the relevant conditions of this approval;
- apply and enforce a speed limit of 40 km/hour for all project-related vehicles on site;
- ensure that project-related trucks slowing to use the intersection of Branch Lane and Andesite Road do not use engine or compression braking systems,
- Waiting trucks do not block the entry to Lot 11.

The above measures are to be included in an overall approved Noise Management Plan that will detail how these measures will be addressed and / or implemented.

At commencement of the working day it may be that drivers arrive early. If this occurs drivers are to wait with engines off.

To reduce the impact of vehicle noise at commencement of the working day heavy vehicles waiting for the quarry to open are to wait with engines off.

These conditions do not apply in the event of a direction from police or other relevant authority for safety or emergency reasons regarding works which may need to be undertaken to avoid loss of life, property loss and/or to prevent environmental harm.

5.6 Quarry Hours of Operation

The extraction operation hours are limited to the following:

- Monday to Friday – 7.00am to 6.00pm
- Saturday – 7.00am to 1.00pm
- Sunday and Public Holidays – closed.

Maintenance activities can be carried out 24 hours a day, 7 days a week, providing maintenance activities are inaudible at any privately-owned residence.

These conditions do not apply in the event of a direction from police or other relevant authority for safety or emergency reasons regarding works which may need to be undertaken to avoid loss of life, property loss and/or to prevent environmental harm.

5.7 Load Covering

Loose material on the road surface has the potential to cause road crashes and vehicle damage.

All trucks arriving at or departing from the site whether loaded with material or not are required to have an effective cover for the duration of the trip. The load cover may be removed upon arrival at the delivery site.

All care is to be taken to ensure that all loose debris from the vehicle body and wheels is removed prior to leaving the site and again after unloading.

Drivers must ensure that following tipping that the tailgate is locked before leaving the site.

Quarry management is to monitor loose material on the side of the haulage route from quarry operations and take appropriate action (removal or suppression) regularly.

5.8 Vehicle Departure and Arrival

Heavy Vehicles travelling in close proximity on single lane public roads can be of concern to light vehicle drivers as well as increasing noise through the area adjacent to the quarry. To alleviate public concern and increase road safety, heavy vehicles leaving the quarry should be separated by a minimum five minute interval.

To formalise this requirement all trucks leaving the quarry are to announce they are leaving the gate using two way radio on the predetermined channel.

It is difficult to schedule arrivals to the Quarry (except at the commencement of work for the day) due to the different directions of approach from external jobs and the varying job completion times, however, when a driver becomes aware, through visual contact or two-way contact between trucks, that they will arrive at approximately the same time then they are to ensure that there is a suitable gap between vehicles.

All heavy vehicles entering or exiting the site are to do so in a forward motion.

To alleviate public concern and increase road safety heavy vehicles leaving the Quarry should be separated by a minimum five minute interval.

To formalise this requirement all trucks leaving the quarry are to announce they are leaving the gate using two way radio on the predetermined channel.

5.9 Breakdowns and Incidents

In the case of a breakdown the vehicle must be towed to the nearest breakdown point as soon as possible. All breakdowns must be reported to the Karuah East Quarry management and the vehicle protected in accordance with the Heavy Vehicle Drivers handbook.

To ensure that traffic impacts are minimised in the event of an incident, rapid response from the company is required. In order to ensure rapid response to incidents drivers must contact the Karuah East Quarry Manager as soon as the stranded vehicle and load is safely secured.

If there is a product spill while loading/unloading or en-route the driver must:

- i) Immediately warn persons in the area who may be at risk;
- ii) The Karuah East Quarry Manager must be immediately informed so that emergency services can be contacted and a clean-up initiated;
- iii) All spills must be adequately cleaned up and waste disposed of in an acceptable and environmental manner;
- iv) Put out warning triangles where it is safe to do so.

Drivers are to ensure that when passing pedestrians/cyclists a safe separation distance exists between trucks and pedestrians as well as a reduction in speed if appropriate.

5.10 Operational and Emergency Contact Numbers

Organisation	Contact Details
RMS Transport Management Centre	131700
Great Lakes Council	(02) 6591 7222
Quarry Management (Gerard Bowen - General Manager Karuah East)	0475 975 922
Quarry Management (Duane Harrison - WHS/HR Manager)	0475 975 922
NSW Police Service (Karuah)	(02) 4997 5544
NSW Police Service (Raymond Terrace)	(02) 4983 7599
Head Office (Thornton)	(02) 4964 1811

5.11 Communication

Karuah East Quarry drivers and sub-contractors are to use the following UHF channels:-

- Channel 25 when on the quarry site and travelling along Andersite Road
- Channel (to be nominated by the quarry) when travelling on all other roads
- Designated channels when working on mine sites & work sites

All Karuah East Quarry drivers and sub-contractors are to have their two-way radios turned on at all times while working their shift. All drivers and sub-contractors are to maintain open UHF channels at all times where possible.

All drivers and sub-contractors shall immediately report (ie. by phone, two way radio, verbally, etc) any potential safety issue / incident / hazard to the Quarry Manager or in their absence the site safety officer. This includes entering and exiting the site and the intersection of Andersite Road and Blue Rock Lane.

The Quarry Manager or in their absence the site safety officer shall coordinate any formal potential safety broadcasts as required by way shift "tool box" meetings, two-way radio or mobile phone.

5.12 Overtaking Other Vehicles

There is to be no overtaking of road registered vehicles by Karuah East Quarry drivers & sub-contractors once exiting the Pacific Highway to the quarry or before entering the Pacific Highway from the quarry.

If overtaking is required in these locations due to a vehicle breakdown then the drivers are to communicate with each other on the designated two way radio channels before any overtaking manoeuvre is commenced.

5.13 Other Safety Considerations Along the Haul Route

- a) **Wet weather safety** - drivers should adjust their driving speed to suit prevailing wet weather conditions encountered on the designated haul routes.
- b) **Dust** – dust represents a safety and a health hazard. Any gravel roads on the haul route will be regularly watered by a water truck to minimise these impacts. (Level 1 Watering at 2 litres / square metre / hour in accordance with Statement of Commitment 7.1)

5.14 Sub-Contractor Trucks & Trailers

Where it is a requirement of a project approval all Karuah East and sub-contractors trucks and trailers must pass a safety inspection as prescribed by the project requirements before commencing any work or operating on designated quarry haul routes.

5.15 Summary of Driver Code of Conduct Requirements

The following is a summary of the requirements truck drivers will be required to enter into as part of the overall Karuah East Quarry management.

Description	Requirement
General Requirements	<ul style="list-style-type: none">Have undertaken a Site Induction carried out by an approved member of the Quarry staff or suitably qualified person under the direction of the Quarry management;Hold a valid driver's licence for the class of vehicle that you operate;Operate the vehicle in a safe manner within and external to the Quarry site;Comply with the direction of authorised site personnel when within the site;
Heavy Vehicle Speed Limit	<ul style="list-style-type: none">The speed limit within the quarry site is 40 km/h which is to be strictly maintained.The speed limit for the haul road leading up to the quarry is 60 km/h.
Heavy Vehicle Driver Fatigue	<ul style="list-style-type: none">All heavy vehicle drivers operating out of the Karuah East Quarry are to be aware of their adopted fatigue management scheme and operate within its requirements.
Heavy Vehicle Compression Braking	<ul style="list-style-type: none">No compression braking beyond the quarry gate. Brakes must be applied so as not to create excessive noise that could disturb local residents.
Heavy Vehicle Noise	<ul style="list-style-type: none">Noise criteria relating to the Karuah East Quarry is outlined in the Project Approval, EPL and the Noise Management Plan'.Apply and enforce a speed limit of 40 km/hour for all project-

	<p>related vehicles on site;</p> <ul style="list-style-type: none"> • Ensure that project-related trucks slowing to use the intersection of Branch Lane and Andesite Road do not use engine or compression braking systems, and • At commencement of the working day it may be that drivers arrive early. If this occurs drivers are to wait with engines off.
Quarry Hours of Operation	<ul style="list-style-type: none"> • The extraction operation hours are limited to the following: <ul style="list-style-type: none"> • Monday to Friday – 7.00am to 6.00pm • Saturday – 7.00am to 1.00pm • Sunday and Public Holidays – closed. • Maintenance activities can be carried out 24 hours a day, 7 days a week, providing maintenance activities are inaudible at any privately-owned residence. • To reduce the impact of vehicle noise at commencement of the working day heavy vehicles waiting for the quarry to open are to wait with engines off. • These conditions do not apply in the event of a direction from police or other relevant authority for safety or emergency reasons regarding works which may need to be undertaken to avoid loss of life, property loss and/or to prevent environmental harm.
Load Covering	<ul style="list-style-type: none"> • All trucks arriving at or departing from the site whether loaded with material or not are required to have an effective cover for the duration of the trip. The load cover may be removed upon arrival at the delivery site. • All care is to be taken to ensure that all loose debris from the vehicle body and wheels is removed prior to leaving the site and again after unloading. • Drivers must ensure that following tipping that the tailgate is locked before leaving the site. • Quarry management is to monitor loose material on the side of the haulage route from quarry operations and take appropriate action (removal or suppression) regularly.
Vehicle Departure and Arrival	<ul style="list-style-type: none"> • All heavy vehicles entering or exiting the site are to do so in a forward motion. • To alleviate public concern and increase road safety heavy vehicles leaving the Quarry should be separated by a minimum five minute interval. • To formalise this requirement all trucks leaving the quarry are to announce they are leaving the gate using two way radio on the predetermined channel.
Breakdowns and Incidents	<ul style="list-style-type: none"> • In the case of a breakdown the vehicle must be towed to the nearest breakdown point as soon as possible. All breakdowns must be reported to the Karuah East Quarry management and the vehicle protected in accordance with the Heavy Vehicle Drivers handbook. • To ensure that traffic impacts are minimised in the event of an incident, rapid response from the company is required. In order to ensure rapid response to incidents drivers must contact the Karuah East Quarry Manager as soon as the stranded vehicle and load is safely secured. • If there is a product spill while loading/unloading or en route the driver must: <ul style="list-style-type: none"> • Immediately warn persons in the area who may be at risk; • The Karuah East Quarry Manager must be immediately informed so that emergency services can be contacted and a

	<p>clean-up initiated;</p> <ul style="list-style-type: none"> • All spills must be adequately cleaned up and waste disposed of in an acceptable and environmental manner; • Put out warning triangles where it is safe to do so.
Communication	<ul style="list-style-type: none"> • Karuah East Quarry drivers & sub-contractors are to use the following UHF channels:- <ul style="list-style-type: none"> • Channel 25 when on the quarry site and travelling along Andersite Road. • Channel (to be nominated by the quarry) when travelling on all other roads. • Designated channels when working on mine sites & work sites. • All Karuah East Quarry drivers and sub-contractors are to have their two-way radios turned on at all times while working their shift. All drivers and sub-contractors are to maintain open UHF channels at all times where possible. • All drivers and sub-contractors shall immediately report (ie. by phone, two way radio, verbally, etc) any potential safety issue / incident / hazard to the Quarry Manager or in their absence the site safety officer. This includes entering and exiting the site and the intersection of Andersite Road and Blue Rock Lane. • The Quarry Manager or in their absence the site safety officer shall coordinate any formal potential safety broadcasts as required by way shift "tool box" meetings, two-way radio or mobile phone.
Overtaking Other Vehicles	<ul style="list-style-type: none"> • There is to be no overtaking of road registered vehicles by Karuah East Quarry drivers & sub-contractors once exiting the Pacific Highway to the quarry or before entering the Pacific Highway from the quarry. • If overtaking is required in these locations due to a vehicle breakdown then the drivers are to communicate with each other on the designated two way radio channels before any overtaking manoeuvre is commenced.
Sub-Contractor Trucks & Trailers	<ul style="list-style-type: none"> • Where it is a requirement of a project approval all Karuah East and sub-contractors trucks and trailers must pass a safety inspection as prescribed by the project requirements before commencing any work or operating on designated quarry haul routes.

6. COMPLIANCE MEASURES & MONITORING

6.1 Commencement of Transport Management Plan & Driver Code of Practice

It is proposed that this Transport Management Plan and Driver Code of Practice will be initiated when the project becomes operational and reviewed after 6 months of operation by Karuah East Quarry Management and as required, a suitably qualified traffic consultant.

The document is to be signed by individual drivers and a Karuah East Quarry Pty Ltd authorised representative at the time when heavy vehicle haulage drivers attend their Site Induction or shortly thereafter.

6.2 Compliance Measures

To assist in the orderly resolution of complaints Karuah East Quarry Management will keep a register itemising all reported incidents relating to complaints in regard to heavy vehicle driver conduct external to the Quarry site.

The incident register is to include (where possible):

- i) Date;
- ii) Location/s;
- iii) The driver/heavy vehicle details;
- iv) Contact details of the person lodging the complaint;
- v) What/when actions were taken to resolve the issue; and
- vi) The reply to the person/organisation that made the complaint.

The incident register is to be audited at three monthly intervals, by Quarry management, and made available, upon request, to an authorised Council officer.

6.3 Monitoring Measures

In addition to the register, Karuah East Quarry management will undertake formal observations / review of compliance at three monthly intervals and will document and undertake any remedial actions with employees or sub-contractors that may be necessary as a result of these observations.

These formal observations / reviews maybe undertaken as part of an overall review of the quarry safety management.

6.4 Vehicle Identification

Where it is a project approval requirement all trucks are to carry MEX (plant number) identification sticker.

It will be a sub-contractor condition of engagement that you agree to have your vehicle fitted out with the above sticker.

6.5 Dealing with the Public

The operation of the quarry can be considered to be similar to that of a construction worksite. That being said the public will not always know how, what, when or why the operation of quarry may change from time to time (ie shift to shift).

It is therefore the responsibility of the Quarry Management to provide enough information to any member of the public entering the site of the site conditions, operations at that time.

This can be achieved by, but not limited to adequate safety and directional signage advising where it is acceptable and not acceptable for the public to traverse the site.

Monitoring by the Quarry Management of these conditions shall be ongoing so as to provide adequate information to any member of the public to be able enter and exit the site safely.

Monitoring shall also include dealing / reviewing any potential incident raised by a member of the public in a timely manner.

6.6 Summary of Review / Monitoring Requirements

In accordance with the PA requirements Karuah East Quarry Management are required to undertake annual reviews of the environmental performance of the quarry. The PA states an annual review is to be conducted by the end of March each year, this TMP has extra / detailed review requirements which are summarised as follows:-

Item Description	Audit Period	Audited By
Transport Management Plan (TMP)	6 months from the commencement of operation	Quarry Management & Suitably Qualified Traffic Consultant as required.
Driver Code of Conduct	6 months from the commencement of operation	Quarry Management
Driver Site Induction (Driver Code of Conduct)	As Required	Quarry Management
Quarry, New Subcontractor Truck & Trailer Safety Inspections	As Required	Quarry Management or Approval Subcontractor Inspection Station.
The Amount of Quarry Products Transported from the Site.	Calendar Month And Year	Quarry Management and published quarterly on the company website.
The Number of Laden Truck Movements from the Site	Per Hour, Day, Week, Calendar Month And Year	Quarry Management and published quarterly on the company website.
Operational / Road & Cumulative Noise	In Accordance with Approved Noise Monitoring Plan	Quarry Management or Approval Noise Monitoring Consultant
Incident Register	Every 3 months from the commencement of operation	Quarry Management
Compliance Observations	Every 3 months from the commencement of operation	Quarry Management
Loose Material on the Side of the Haulage Route	Daily	Quarry Management
Driver Fatigue	Daily (During hours of Operation)	Quarry Management
Dealing with the Public	Ongoing	

7. ROUTE ASSESSMENT & MAINTENANCE

7.1 Route Assessment

A route assessment was undertaken by GCA Engineering Solutions to investigate improvements to assist truck drivers as part of the proposed quarry expansion. The following improvements / upgrades will be made to service the expansion.

- Intersection widening of Blue Rock Lane at the intersection with Andersite Road,
- Shoulder widening of Blue Rock Lane,
- Installation of guardfence at culvert locations along Blue Rock Lane, and
- Construction of a 4 cell 1500 dia RCB Culvert at Ch150.0 on Blue Rock Lane.

7.2 Road Maintenance

In accordance with the PA requirements Karuah East Quarry Pty Ltd will be required to pay contributions for road maintenance as a result of this development.

The contributions will be \$.037 per tonne of material extracted per km, from the site on local roads in accordance with Council's Great Lakes Wide Development Contributions Plan (November 2007) – Amended.

It will be Great Lakes Council's responsibility to ensure haulage routes used by Karuah East Quarry Pty Ltd are suitably maintained in the future.

8. QUALITY CONTROL

8.1 IDENTIFY

Identify unsafe drivers before they have a collision by soliciting feedback from concerned motorists with our 'How Am I Driving' stickers & truck identification numbers.

8.2 NOTIFY

Notify our Leading Hand & the driver automatically of compliments, complaints, and safety issues reported by concerned motorists.

8.3 MODIFY

Modify unsafe driving behaviour before an incident or accident occurs with the help of training & consultation with all drivers.

8.4 QUANTIFY

Quantify the effectiveness of this Code of Conduct by monitoring community feedback and any incidents or accidents

APPENDIX A REFERENCES

The following references were used in the preparation of this Transportation Management Plan:-

- ***NSW Department of Planning & Environment Project Approval (17 June 2014)***
- ***Appendix 6 – Statement of Commitments (NSW Department of Planning & Infrastructure)***
- ***Environmental Assessment Report (ADW Johnson, 31 January 2013)***
- ***Preferred Project Report (ADW Johnson, 30 July 2013)***
- ***Austroads Guide to Traffic Management,***
- ***Austroads Guide to Road Design,***
- ***Roads and Maritime Services (RMS) Traffic Control at Work Sites Manual,***
- ***Australian Standard 1742 (AS1742), and***
- ***Great Lakes Council Development Control Plan (DCP), Section 10.3 - Carparking***

APPENDIX B
COPY OF DEPT OR PLANNING & ENVIRONMENT EXPERT APPROVAL



**Planning &
Environment**

**Planning Services
Resource Assessments**

Contact: Swati Sharma
Phone: 9228 6221
Email: swati.sharma@planning.nsw.gov.au

Mr Blake Almond
GM Business Development
Karuah East Quarry Pty Ltd
PO Box 3081
Thornton NSW 2322

Our Ref: MP 09_0175

Dear Mr Almond

**Karuah East Quarry Project (MP 09_0175)
Expert Approval**


I refer to your letter dated 23 June 2015 requesting the Secretary's approval of suitably qualified persons to prepare specific management plans stipulated under conditions 7, 12, 16, 21, 26, 27, 32, 33 and 36 of Schedule 3 of the quarry's project approval.

The Department has reviewed the CVs provided with your letter and is satisfied that the nominated persons are suitably qualified. Consequently, I can advise that the Secretary endorses the following persons:

Expert	Company	Management Plan	Condition in Schedule 3
Nathan Archer	SLR Consulting	Noise Management Plan	7
Nathan Archer	SLR Consulting	Blast Management Plan	12
Martin Doyle	SLR Consulting	Air Quality Management Plan	16
Duncan Barnes	SLR Consulting	Water Management Plan	21
Craig Nethery and Andy Davis	Streetwise Road Safety and Traffic Services	Transport Management Plan	26
Sarah Jones, Alex Picton and Nicholas Alexander	Firebird EcoSultants	<i>Tetralthea juncea</i> Translocation Program	27
Chris Jones and Aaron Mulcahy	SLR Consulting / Kleinfelder	Landscape and Rehabilitation Management Plan	32
Aaron Mulcahy and Luke Forster	Kleinfelder	Biodiversity Offset Area Management Plan	33
Jeremy Hill and Darrell Rigby	RPS	Heritage Management Plan	36

If you require any more information, please call Swati Sharma on 9228 6221.

Yours sincerely


Howard Reed
Director
Resource Assessments
As nominee of the Secretary

APPENDIX C
ROADS & MARITIME SERVICES & GREAT LAKES COUNCIL CONSULTATION

Craig Nethery

From: MCGILVRAY Kellee A <Kellee.MCGILVRAY@rms.nsw.gov.au>
Sent: Tuesday, 13 October 2015 4:21 PM
To: Blake Almond
Subject: Karuah East Quarry Project - Management Plans

Hi Blake

Roads and Maritime have reviewed the Management Plan for the Karuah East Quarry Project submitted in September 2015, and considers the plan to be satisfactory in meeting the measures as outlined in Condition 26 of the Project Approval dated 17 June 2014.

Kind regards
Kellee

Kellee McGilvray
Manager Land Use Assessment
Network NSW | Journey Management
T 02 4924 0242 M 0429 565 985
www.rms.nsw.gov.au
Every journey matters

Roads and Maritime Services
Level 1 59 Darby St Newcastle NSW 2300



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From: Wayne Burgess [<mailto:Wayne.Burgess@greatlakes.nsw.gov.au>]
Sent: Friday, 9 October 2015 2:42 PM
To: Blake Almond <Blake.Almond@hunterquarries.com.au>
Subject: Karuah East Quarry Project - Management Plans.

Hi Blake,

I refer to your email dated 16 September 2015 in relation to the above matter.

The draft management plans have been referred to relevant Council staff.

No objection is raised to the management plans in relation to conditions 12, 16 and 26.

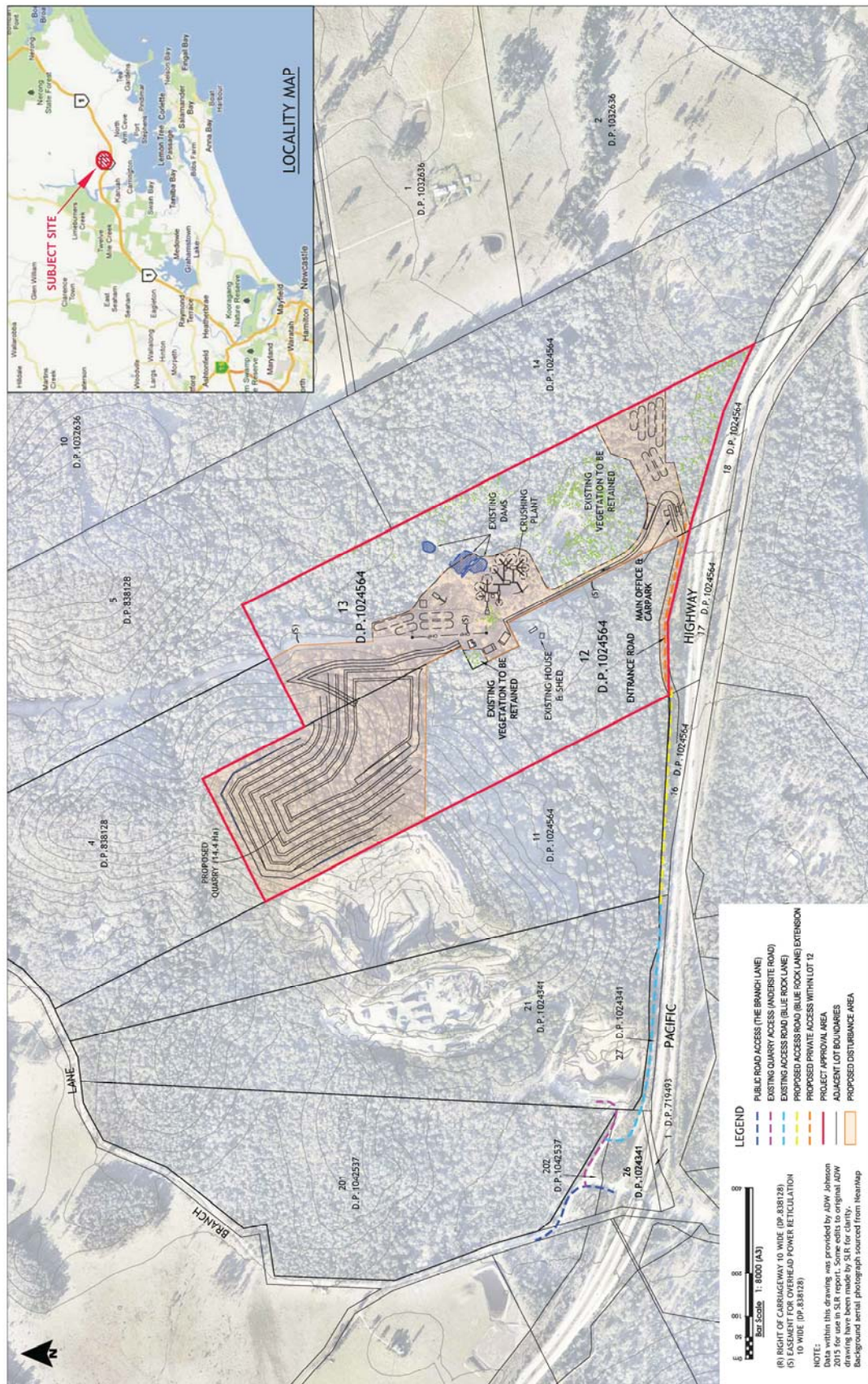
In relation to conditions 28, 29, 32, and 33, please see the attached memo from Council's Senior Ecologist (Mat Bell) dated 1 October 2015.

Regards.

Wayne Burgess.
Manager Development Assessments.
Great Lakes Council.

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APPENDIX D APPROVED DEVELOPMENT PLAN



Karuah East Quarry - Site and Locality Plan
FIGURE 1