Preliminary Environmental Assessment

Request for Environmental Assessment Requirements
Karangi Quarry
Karangi

quality solutions sustainable future

Preliminary Environmental Assessment

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Karangi Quarry
Karangi

Prepared for: Leighton Fulton Hogan Joint Venture
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Ref: 1480466
Date: May 2010

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Executive Summary

Applicant	Leighton Contractors - Fulton Hogan Joint Venture
Background	Karangi Quarry is an existing approved quarry used from time to time to supply hard rock for the Coffs Harbour break wall. It has been operating intermittently since 1977 under DA259/77. This proposal seeks approval for the temporary use of Karangi Quarry and extraction of up to 800,000 tonnes of material over approximately 2 years for supplying material to the Pacific Highway Upgrade Sapphire to Woolgoolga Project (the Project).
Location	Karangi Quarry is located 17 kilometres northwest of Coffs Harbour on land described as Lot 1 DP 593102, Parish of Coffs Harbour, County of Fitzroy (the Site). The Site is located adjacent to Orara East State Forest, a 4,100 hectare State Forest located north east of Coffs Harbour and Karangi Dam. The site is surrounded by predominantly forested land with access to the north provided by a gravel road connecting to Upper Orara Road.
Site Area	The site has a total approximate area of 3.1 hectares.
Site Features	The site is at the northern side of the Mount Brown escarpment between 140m to 200m AHD. Current access is provided from the service road to Karangi Dam. The area is characterised by undulating hills of forested and pastured lands. The site of the quarry is surrounded by dense vegetation.
Zoning and Approvals	The site is zoned 1A Agricultural Zone according to Coffs Harbour Local Environmental Plan 2000 (CHLEP 2000). Section 75B of the Environmental Planning & Assessment Act 1979 provides that Part 3A (Major Infrastructure & other projects) of the Act applies to projects declared by a State Environmental Planning Policy (SEPP) to be a project to which Part 3A applies. The extraction of more than 200,000 tonnes per annum is defined in clause 7 of Schedule 1 of the SEPP (Major Development) as a project to which Part 3A applies. An Environmental Protection Licence under the Protection of the Environment Operations Act 1997 is also required from the NSW Department of Environment, Climate Change and Water as the proposal involves the extraction of more than 30,000 tonnes per year of extractive materials.
Planning Controls & Policies	The following planning controls are relevant to the site: ▪ Coffs Harbour Local Environmental Plan 2000; ▪ State Environment Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007; ▪ State Environmental Planning Policy (Major Projects) 2005; and ▪ State Environmental Planning Policy (North Coast Regional Environmental Plan) 2009.
Proposal	The proposal is to seek approval for the temporary use of an existing quarry to extract approximately 800,000 tonnes of material per annum over a two year period for use in the construction of the Project.
Key Issues	The following key issues are relevant to the proposal: ▪ Noise, blasting and vibration; and ▪ Traffic.

1 Introduction

1.1 Background

Leighton Fulton Hogan Joint Venture (Joint Venture) is responsible for constructing the Pacific Highway Upgrade Sapphire to Woolgoolga Project (the Project) immediately north of Coffs Harbour. Rock is required for the Project which is being sourced from local quarries.

Karangi Quarry is situated on Crown land reserved for Rural Services. It has an existing development consent DA259/77 related to supply of material for the breakwaters at Coffs Harbour. Quarrying of material at Karangi Quarry has not occurred since the extraction of hard rock by Public Works Department in the mid 1990s for raising the wall of Karangi Dam.

The Land and Property Management Authority (LPMA) has confirmed that while the quarry was set aside as a hard rock resource for maintenance and repair of the coastal infrastructure at Coffs Harbour the material is not suitable for the production of large rock armour units > 20 tonnes. LPMA future needs for smaller material (rubble through to 3 tonne rock) is in the order of 20,000 tonnes.

This proposal seeks approval for the temporary use of Karangi Quarry and extraction of approximately 800,000 tonnes over two years for supplying material to the Project.

GeoLINK Pty Ltd (GeoLINK) has been engaged by the Joint Venture to prepare this Preliminary Environmental Assessment (PEA). This PEA has been prepared to provide preliminary information to Department of Planning (DOP) to seek the Director General's environmental assessment requirements under section 75F of the Act.

1.2 Structure of Report and Its Scope

This PEA describes the proposal and the subject site, provides an assessment of relevant planning provisions and outlines potential environmental impacts associated with the proposal.

Section 2 of this report describes the context of the site and the physical characteristics of the subject land.

Section 3 provides a description of the proposal.

Section 4 provides an assessment of the planning framework in which the proposal will be considered and highlights key legislation / policy and assesses compliance with that legislation.

Section 5 provides a preliminary review of key environmental, social and economic considerations.

Section 6 identifies the preliminary consultation that has occurred.

Section 7 contains our conclusions and recommendations.

1.3 Further Information

Should additional information be required in relation to this application, please contact **Steve Fermio** of the Joint Venture on 0417 170 645 or steve.fermio@leicon.com.au.

2

The Site and its Context

2.1 Site Location and Cadastral Description

Karangi Quarry is located 17 kilometres northwest of Coffs Harbour on land described as Lot 1 DP 593102, Parish of Coffs Harbour, County of Fitzroy (the Site). Illustration 2.1 shows the locality of the Site overlayed on an aerial photograph. As shown, the land has an approximate area of 3.1 hectares. As outlined above, Karangi quarry is situated on Crown land reserved for Rural Services.

2.2 Site Context

The Site is located immediately to the south east of Karangi Dam and adjacent to Orara East State Forest, a 4,100 hectare State Forest. The site is surrounded by predominantly forested land. Currently access to the site is from the north via the Karangi Dam entry road and then by a gravel road connecting to the quarry.

Illustration 2.2 shows the Site, identifying the subject land and its relationship to adjoining land uses. Plate 2.1 provides a view of the quarry face, while Plate 2.2 provides a view of the current quarry access and Plates 2.3 and Plates 2.4 are views of the access road and potential storage area.

Plate 2.1 View of the quarry face

Plate 2.2 View of the quarry access adjacent to Karangi Dam

Plate 2.3 Access road to the quarry

Plate 2.4 Potential storage area adjacent to access road

2.3 Site History

Karangi Quarry commenced operations in 1977 for the production of rip rap rock for the initial stage of the Karangi Dam and gained development consent for the production of rock for harbour works in 1977 from CHCC.

Quarrying of material at Karangi Quarry has not occurred since the extraction of hard rock by Public Works Department in the mid 1990s for raising the wall of Karangi Dam.

The quarry's resource consists of argillite which is variably weathered and highly jointed and fractured (Public Works Department, 1984). The Joint Venture has estimated that 800,000 tonnes of material remains available for extraction.

2.4 Site Analysis

2.4.1 Topography and Existing Land Uses

The site is at the northern side of the Mount Brown escarpment between 140m to 200m AHD. The area is characterised by undulating hills of forested and pastured lands.

Currently access is provided off Upper Orara Road via the service road to Karangi Dam.

2.4.2 Soils

Topsoils at the site consist of loam to silty loam, and are underlain by clay loam to silty clay loam and occasionally light clay. The site lies within the Suicide soil landscape (Milford, 1999).

The Suicide soil landscape is located on crests and upper slopes, and can generally be found on the ridgeline. It comprises moderately deep to deep (>100 cm), well drained, stony structured Yellow Earths, with stony Lithosols and structured Red Earths on mid slopes and foot slopes. This soil landscape is characterised by strongly acid stony soils with low wet bearing strength, strong subsoil acidity and low fertility. Some limitations include steep slopes; mass movement hazard, high run-on, high water erosion hazard, foundation hazard, and localised rockfall hazard. (Milford, 1999)

2.4.3 Vegetation

The site of the quarry is surrounded by dense vegetation. Forested areas of the site are mapped as containing secondary and tertiary koala habitat (CHLEP 2000). The quarry, access road and storage areas to the north-west are already cleared. A corridor of riparian vegetation approximately 50 metres wide is located between the access road and Karangi Dam.

Information shown is for illustrative purposes only

Drawn by: RE Reviewed by: MVE Date: May 2010
Source of base data: Google Maps

North

0 2 km

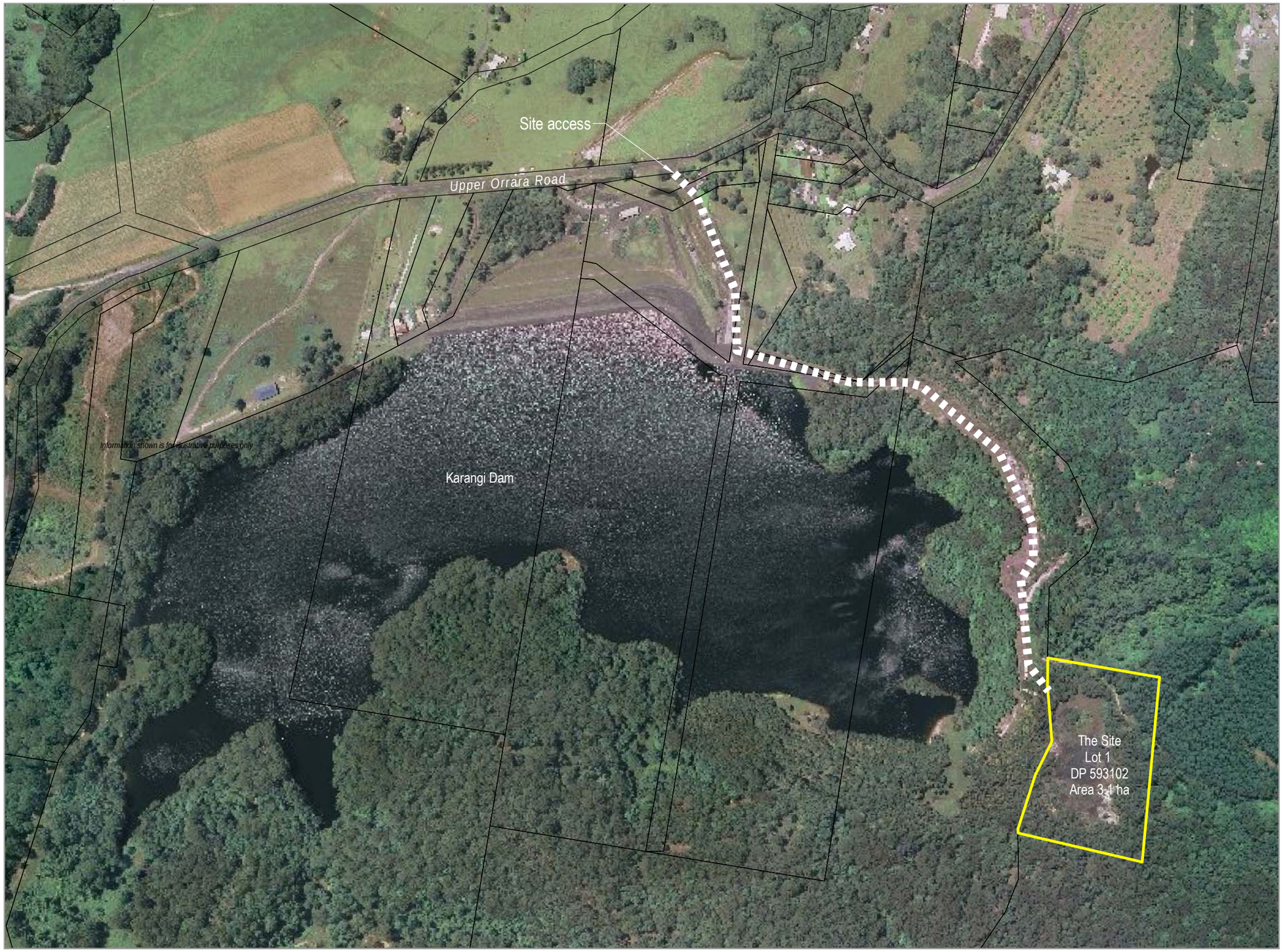
Site Locality

Preliminary Environmental Assessment - Karangi Quarry
1480191

Illustration 2.1

Drawn by: RE Reviewed by: MVE Date: May 2010
Source of base data: Coffs Harbour City Council

Information shown is for illustrative purposes only



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GeoLINK environmental management and design

Preliminary Environmental Assessment - Karangi Quarry
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The Site

Illustration 2.2

3

Project Description

3.1 Description of Proposal

3.1.1 Resource Description and Accessibility

The Joint Venture proposes to temporarily use Karangi Quarry to supply hard rock and aggregate for use in construction materials for the Project.

The quarry's resource consists of argillite which is variably weathered and highly jointed and fractured (Public Works Department, 1984). Following a recent survey it is estimated by the Joint Venture that 800,000 tonnes remain available for extraction.

It is proposed to obtain approval to extract up to 800,000 tonnes of material over a two year period only for use on the Project.

3.1.2 Extraction

It is proposed to extract the hard rock by drill and blast techniques (as has occurred in the past) which will generally involve:

1. Blasting the quarry face;
2. Ripping and removal of the material by dozer to the stockpile area;
3. Crushing and sorting of raw material ready for transport to the Project site(s); and
4. Establish stockpiles of rock material.

The quarry would require the clearing of vegetation (including recent regrowth) in order to access the material.

3.1.3 Operation and Transport

The proposal is anticipated to require up to 18 full-time staff and various contractors for blasting and transportation.

Plant and infrastructure on site would consist of two loaders, an excavator and a crusher. A crib room and ablutions facility would be required for employees.

It is estimated that blasting would occur up to twice a week, with target blast volumes of 8,000 to 10,000 tonnes per blast. Quarried material would be crushed, screened and stored on site. It would be transported to the Project site as required.

It is estimated that there will be approximately 60 to 70 return truck movements per day. There are two main routes available from Karangi Quarry to the location of the Project (refer Illustration 2.1). These are:

1. North on Orara Way and then east along Bucca Road to Moonee; or
2. East on Coramba Road and though Coffs Harbour then north along the existing Pacific Highway.

The designated transport route for trucks will be determined during the assessment.

3.1.4 Site Rehabilitation

Site rehabilitation will occur progressively as quarry areas are worked. A Closure and Rehabilitation Plan will be prepared for the site and would address specified matters including preferred end land use and landform and LPMA access.

3.1.5 Value

The proposal has an estimated capital investment value of $12.7M and will result in 18 full time equivalent construction jobs.

4 Planning Framework

4.1 Approval Overview

The site is currently zoned 1A Agricultural Zone according to Coffs Harbour Local Environmental Plan 2000 (CHLEP 2000). The temporary use of Karangi Quarry for the Project is permissible with approval from the Minister under section 75J of the Act (ie: Part 3A).

An Environment Protection Licence under the Protection of the Environment Operations Act 1997 is also required from the NSW Department of Environment, Climate Change and Water as it is proposed to extract more than 30,000 tonnes per year of material.

The site and proposal is also subject to State policies and guidelines as prescribed by the New South Wales agencies and the Department of Planning. These policies and relevant legislation are discussed in this Section in addition to relevant licence requirements.

4.2 Environment Planning and Assessment Act 1979

The EP&A Act is the primary legislation for environmental planning in NSW. It establishes the legislative framework that governs land use, development assessment and decision making. The Regulations create the required processes and allocates roles for land use and assessments. This section summarises the process for assessment and approval of the temporary use of Karangi Quarry.

4.2.1 Part 3A Environmental Planning & Assessment Act 1979

Section 75B of the Environmental Planning & Assessment Act 1979 provides that Part 3A (Major Infrastructure & other projects) of the Act applies to projects declared by a State Environmental Planning Policy (SEPP) to be a project to which Part 3A applies. The extraction of more than 200,000 tonnes per annum is defined in clause 7 of Schedule 1 of the SEPP (Major Development) as a project to which Part 3A applies.

4.2.2 Coffs Harbour Local Environmental Plan 2000

Current Zoning

The Site is currently zoned 1A Agricultural Zone pursuant to the provisions of the Coffs Harbour Local Environmental Plan 2000 (CHLEP 2000). The primary objective of this zone is to enable development which is compatible with agricultural practices and with the amenity and character of the rural environment of the area, and to enable development that can be adequately serviced.

Extractive Industries are defined as:

"an industry or undertaking (other than a mine) which depends for its operation on the winning or removal of extractive material from the land on which it is carried on".

Extractive Industries are permissible with development consent within the 1A Agricultural Zone.

The LEP contains a number of provisions that are relevant to the proposed project, relating to issues such as flooding, bushfire, development in the vicinity of waterways, acid sulfate soils, and development in the coastal zone. These will need to be addressed in detail within the Environmental Assessment (EA) prepared in accordance with the requirements of Part 3A of the Act.

Illustration 4.1 shows the current zoning of the site pursuant to CHLEP 2000.

4.2.4 State Environmental Planning Policies

State Environment Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007

The proposal is permissible, with consent, on the subject site under State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007.

Consistent with extractive industries being permissible under the CHLEP, the SEPP (Mining, Petroleum Production and Extractive Industries) directs LEP zoning of agricultural or industrial land to permit such development.

The proposal is also defined as an extractive industry under the SEPP. An extractive industry is permissible with consent under clause 7(3)(a) of the SEPP on any land which agriculture or industry is permissible. Agriculture is permissible, with consent, within the 1A Agricultural Zone under the CHLEP 2000 and therefore permissible with consent under clause 7(3)(a) of the SEPP. Clause 8 of the SEPP effectively extinguishes any specific Local Environmental Plan provisions which may or may not apply to the subject proposal.

Part 3 of the SEPP provides that additional matters be considered by the consent authority relating to:

- compatibility with other land uses;
- compatibility with mining, petroleum production or extractive industry;
- natural resource management and environmental management;
- resource recovery;
- transport; and
- rehabilitation.

A preliminary review of the proposal indicates that these additional matters are unlikely to preclude consideration of the proposal, but will guide its further assessment including optimising the efficiency of recovery material & transport requirements.

State Environment Planning Policy No. 14 – Coastal Wetlands

The aim of this policy is to ensure that coastal wetlands are preserved and protected. The closest wetland is greater than eight kilometres to the east of the proposed quarry and therefore it is considered the SEPP does not apply.

State Environment Planning Policy No. 44 – Koala Habitat Protection

In place of SEPP44, CHCC has undertaken Koala Habitat Mapping, produced as part of the CHCC Koala Plan of Management (KPoM) which forms the basis for the identification of areas of core koala habitat that require consideration when assessing such areas for a potential change in landuse that may affect Koalas and their habitat. Clause 12 of CHCC LEP 2000 requires that the consent authority shall not grant consent to any development on lands mapped as Primary, Secondary or Tertiary Koala Habitat or on lands adjoining Primary Koala Habitat unless the development is in accordance with the KPoM. Pursuant to the KPoM part of the Site is mapped as Koala Habitat and consequently an assessment of the impact on koalas will be included in the EA.

State Environmental Planning Policy (Major Development)

State Environmental Planning Policy (Major Development) 2005 was gazetted in May 2005. Pursuant to Clause 6 of this SEPP, development of a kind described in, inter alia, Schedules 1 and 2 is declared to be a project to which part 3A of the EP&A Act applies. Schedule 1 includes the following under clause 7:

Development for the purpose of extractive industry that extracts:

- more than 200,000 tonnes of extractive materials per year;
- from a total resource (the subject of the development application (or other relevant application under the Act)) of more than 5 million tones; and
- from an environmentally sensitive area of State significance.

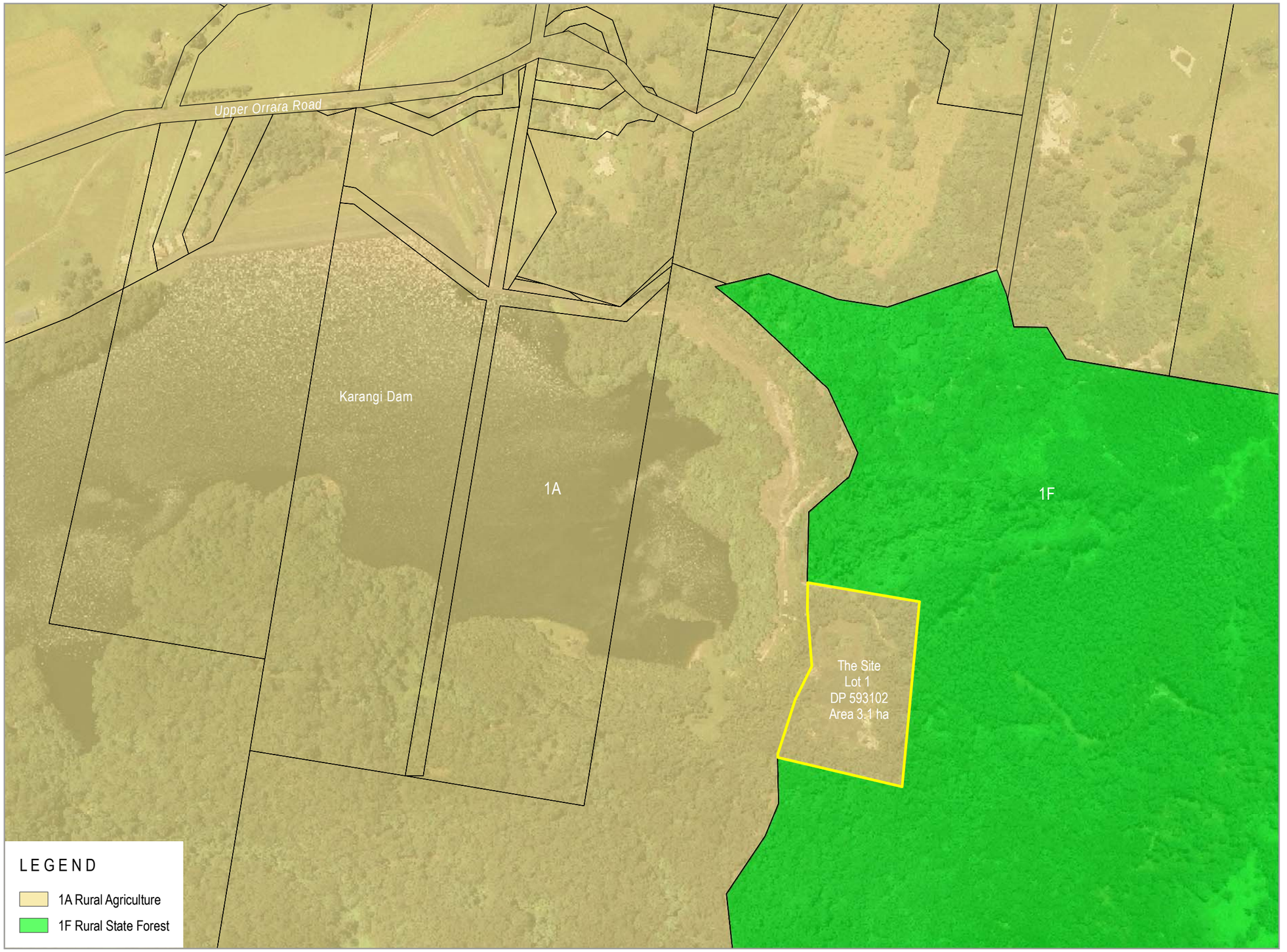
As the proposed use of the Quarry proposal exceeds 200,000 tonnes per year it requires assessment and approval under Part 3A.

4.3 Approvals History

Karangi Quarry commenced operations in 1977 for the production of rip rap rock for the initial stage of the Karangi Dam and gained development consent for the production of rock for harbour works in 1977 from CHCC (DA259/77).

Drawn by: RE Reviewed by: MVE Date: May 2010
Source of base data: Coffs Harbour City Council

Information shown is for illustrative purposes only



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North

Zoning

5 Review of Environmental Issues

The EA to be prepared for temporary use of Karangi Quarry will investigate all potential environmental, social and economic impacts. This investigation will include a comprehensive review of the existing site and a review of previous reports and studies relating to the site. It will also involve necessary additional investigations to ensure that all potential impacts of the proposed development are identified, assessed and addressed.

The likely potential environmental, social and economic impacts have been assessed and sorted into key issues and general issues and are summarised in this section.

5.1 Key Issues

5.1.1 Noise, Blasting and Vibration

The quarrying process consists of drilling and blasting rock which is collected using a loader and excavator and fed to a crushing and screening plant. Potential noise and vibration issues from these activities would consist of blasting impacts on the Karangi Dam wall and associated water supply and treatment infrastructure and airborne noise and blasting impacts on surrounding residents.

As part of the EA a detailed assessment will be made of the noise, blasting and vibration impacts and relevant compliance criteria including undertaking background ambient noise levels and predictive modelling. The EA will also outline appropriate management and mitigation measures for any noise, blasting and vibration impacts resulting from the proposed activity.

5.1.2 Traffic

Access to the quarry is currently provided off Upper Orara Road. This access also provides vehicular access for ingress and egress from Karangi Dam. Two routes are available from the Quarry to the Project site, being:

- north on Orara Way and then east along Bucca Road to Moonee; or
- east on Coramba Road and though Coffs Harbour then north along the existing Pacific Highway.

It is anticipated there will be between 60 to 70 return truck movements per day from the quarry. The route will also be determined by the construction program, location of stockpile sites and demand for material. There are two routes available from Karangi Quarry to the location of the highway upgrade, north on the Orara Way and then east on Bucca Road or alternatively, east on the Orara Way, Shepherds Lane, Donn-Patterson Drive, Bray Street and through Coffs Harbour and then north on the existing Pacific Highway. It is envisaged that haulage traffic to/from the quarry would utilise both of these routes depending on the destination for materials and need to avoid peak local traffic periods including school bus times and holiday traffic.

There are approximately 300 residences adjacent to Upper Orara Road, Coramba Road, and through Coffs Harbour to the Pacific Highway. There are also approximately 300 residences adjacent to Upper Orara Road, Orara Way and Bucca Road to the Pacific Highway.

The impact of traffic movements associated with quarrying activities will be detailed within a Traffic Impact Assessment which will include details of the proposed route to the site and measures to ensure the safety of other road users to minimise potential impacts. .

5.2 General Issues

5.2.1 Air Quality

The operation of the quarry has the potential to generate dust from blasting, extraction and transportation. However, the coarse nature of the rock stockpiles would minimise the potential for dust generation from this source when compared with other operations. Further to this, the site's distance from sensitive residential receivers (approximately 750 metres) means there would be little direct impacts from the blasting and extraction of material.

A qualitative air quality assessment would be prepared to evaluate the potential for dust emissions from blasting, extraction and transportation operations and to identify the necessary safeguards and mitigation measures established to ensure these impacts are minimised on residents.

5.2.2 Flora and Fauna

The quarry is surrounded by densely vegetated land within the catchment area of Karangi Dam and Orara East State Forest. The proposal may require removal of vegetation to facilitate the required expansion of the quarry.

As outlined in Section 4.2.3 of this report, CHCC has undertaken Koala Habitat Mapping, produced as part of the CHCC Koala Plan of Management (KPoM) of which forms the basis for the identification of areas of core koala habitat that require consideration when assessing such areas for a potential change in landuse that may affect Koalas and their habitat. Vegetation west of the quarry is mapped as secondary and tertiary koala habitat.

The quarry may require the removal of some vegetation to facilitate its expansion. The total area of vegetation to be removed will be determined once a quarry plan has been prepared but is likely to be less than 0.5 Ha in total. The impact of the development on flora and fauna will require assessment and a report prepared by an appropriately qualified consultant. It is unlikely a Species Impact Statement would be required.

5.2.3 Soils and Geotechnical

The site is located on the Coffs Harbour tectonic block, known as the Coffs Harbour Block. This block is divided into three main lithological units known as the Moombil siltstone and the Brooklana and Coramba beds.

Topsoils at the site consist of loam to silty loam, and are underlain by clay loam to silty clay loam and occasionally light clay. The site lies within the Suicide soil landscape (Milford, 1999). The Suicide soil landscape is located on crests and upper slopes, and can generally be found on the ridgeline. It comprises moderately deep to deep (>100 cm), well drained, stony structured Yellow Earths, with stony Lithosols and structured Red Earths on mid slopes and foot slopes.

This soil landscape is characterised by strongly acid stony soils with low wet bearing strength, strong subsoil acidity and low fertility. Some limitations include steep slopes; mass movement hazard, high run-on, high water erosion hazard, foundation hazard, and localised rockfall hazard. (Milford, 1999)

5.2.4 Surface and Groundwater

The quarry is situated in a mid-slope position and consequently intercepts a considerable volume of clean runoff water from the vegetated slope above. This clean water flows over the upper quarry workings and cascades over the quarry face into the floor. The majority of the water leaving the quarry does so via a small sedimentation basin which has been constructed on the northern extent of the quarry floor (ERM, Management Plan 1998).

The majority of runoff from the quarry site flows away from the catchment of Karangi Dam into an unnamed creek which flows into Wongiwomble Creek.

The impact of the development upon site hydrology, being both surface and groundwater, will need to be investigated and a report will be prepared by an appropriately qualified consultant. There are no creeks which run directly through the proposed development site; however mitigation measures may be required to prevent soil erosion and impacts upon water quality downstream of the site.

5.2.5 Visual

The quarry is located on the edge of an escarpment within dense vegetation. The nearest residences are located greater than 750 metres to the north and northwest but do not have line-of-site to the quarry. Indeed, the quarry cannot be seen from Upper Orara Road or the Orara Way. The potential for visual impact is considered to be very low.

However, the possible visual (direct and cumulative) impact of the proposal will be assessed in the context of the immediate and surrounding locality.

5.2.6 Heritage

Aboriginal Cultural Heritage

There is only a small portion of surface clearance due the existence of previous quarry workings where there is potential for Aboriginal heritage to remain. Given the site has already been operating as a quarry and the majority of the site has already been disturbed it is considered that the potential for Aboriginal artefacts is very low.

Aboriginal heritage assessment will be undertaken to investigate the potential for Aboriginal Heritage in the immediate and surrounding area of the proposed quarry. This report will be consistent with relevant guidelines and consultation requirements.

European Heritage

There is no immediate evidence of European heritage on the site or surrounding area. Given the Quarry commenced operation in the late 1970's it is considered very unlikely that there would be any items of historical significance in the area of proposed quarrying activities.

If during any further investigations items of potential heritage significance are found, a heritage assessment would be undertaken by a qualified consultant to investigate the items.

5.2.7 Bushfire

The site is identified as being of bushfire risk as defined by the Rural Fires Act. The site is surrounded by forest vegetation and located on a slope. The clearing associated with the quarry activities will reduce the bushfire threat to employees and plant within the development site. However the site has single access and is surrounded by densely vegetated slopes.

A Bushfire Hazard Assessment will be undertaken to determine appropriate bushfire protection measures for the development. This will be consistent with NSW Rural Fire Service's document *Planning for Bushfire Protection 2006*.

5.2.8 Waste Management

Topsoil and cleared vegetation will be stockpiled during commencement of the operation, and used within rehabilitation of the disturbed areas.

5.2.9 Hazards

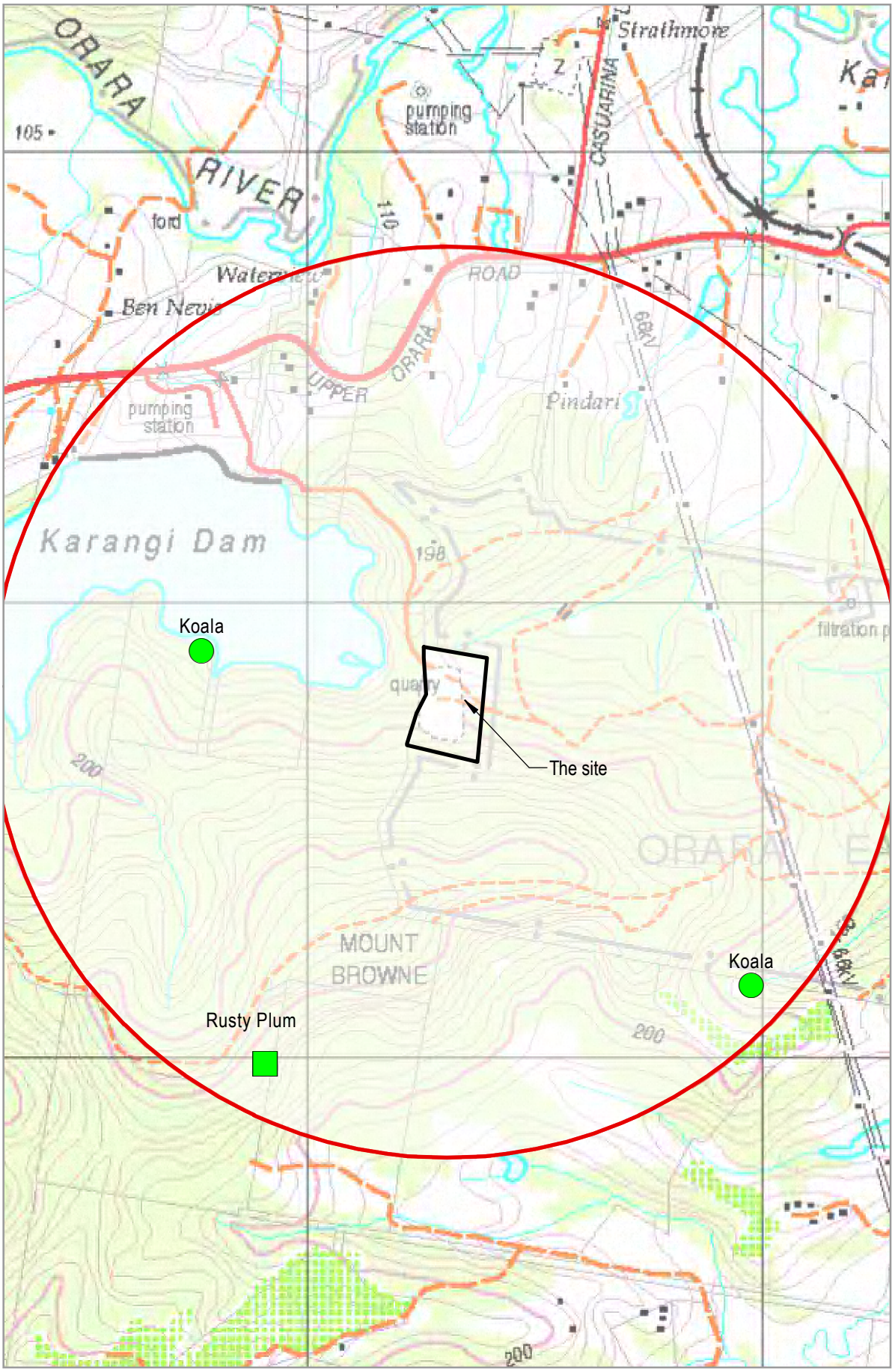
Potential environmental and operational hazards resulting from the proposed development will be dealt with through management tools, practices and procedures. An appropriate storage facility for chemicals, if required, will be identified on the site. The new development where appropriate will utilise existing facilities and practices including the environmental management and operational procedures.

5.2.10 Social and Economic

The proposed development will have a direct economic benefit, by providing additional resources to the construction industry. The proposed quarrying activity will provide continued employment for employees within the quarry industry, and contractors associated with the current operations.

Information shown is for illustrative purposes only

Drawn by: RE Reviewed by: MVE Date: May 2010
Source of base data: DECCW and NSW Topographic Map



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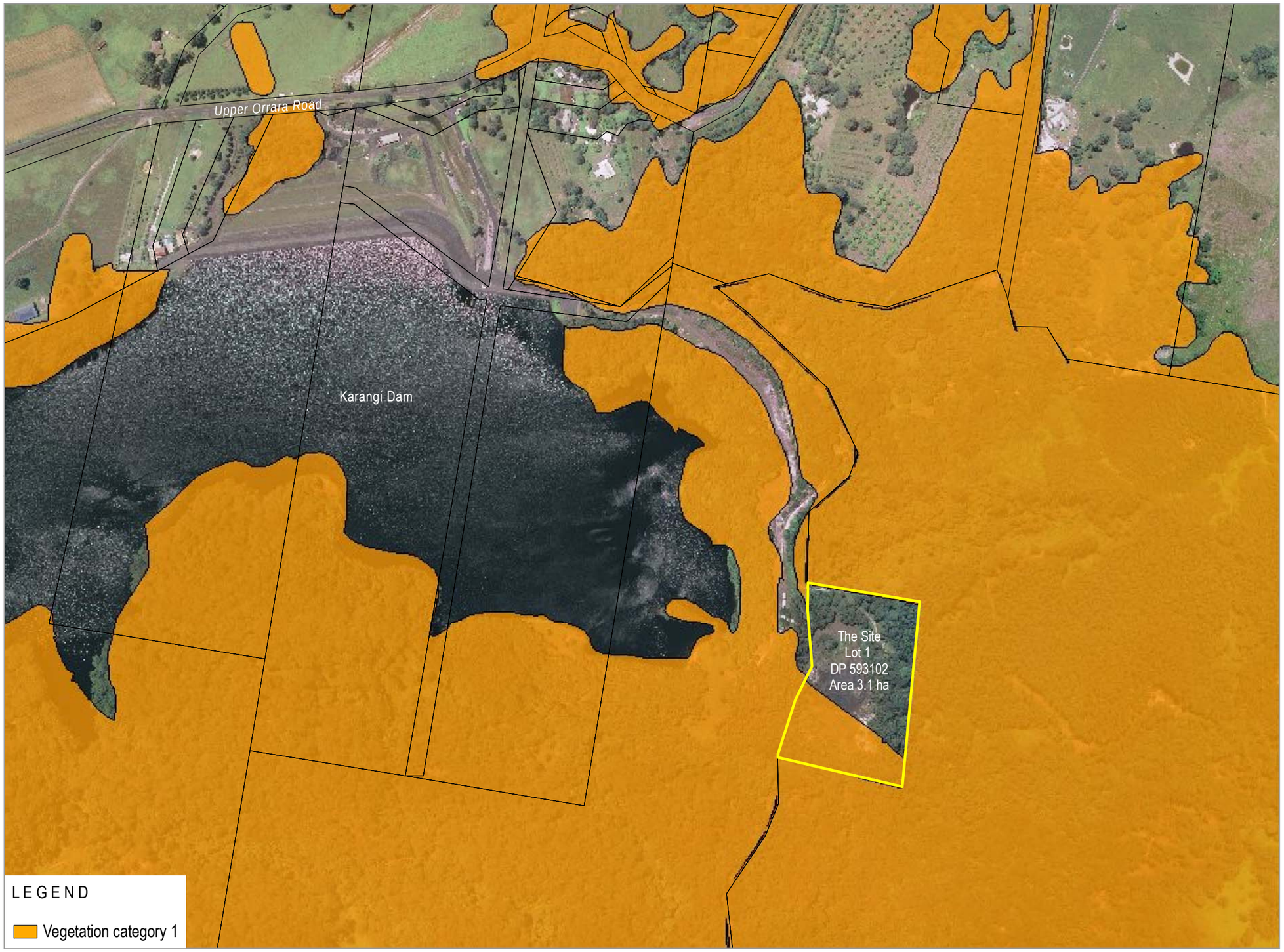
Threatened Flora and Fauna Within 1km of the Site

Drawn by: RE Reviewed by: MVE Date: May 2010
Source of base data: Coffs Harbour City Council

Information shown is for illustrative purposes only



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Bushfire Prone Land Excluding Buffers

6 Consultation

In preparation for design and construction of the Project, the Joint Venture has undertaken preliminary consultation with government agencies on the proposed use of the Quarry. These have been in the form of meetings and telephone conversations with relevant staff to ascertain the key issues with the site.

The agencies involved with the preliminary consultations were:

- CHCC;
- NSW Land and Property Management Authority (formerly the Department of Lands); and
- Department of Environment, Climate Change and Water.

It is anticipated that further consultation in addition to those listed above will occur as part of the preparation of the EA and will include:

- Northern Rivers Catchment Management Authority
- NSW Industry and Investment (formerly the Department of Primary Industries);
- Roads & Traffic Authority (Regional Office - Grafton);
- State Emergency Service;
- NSW Rural Fire Service; and
- Local Aboriginal Land Council.

Once the environmental assessment requirements are received the Joint Venture will continue liaising with all necessary agencies and the community as part of the EA.

7 Conclusion

This PEA describes the project, identifies the planning framework that will be relevant to the proposed project and identifies potential environmental, economic and social impacts from the proposed quarry. It is considered that the key matters that require specialist investigation as part of the EA relate to:

- Noise, blasting and vibration;
- Traffic;
- Surface Water Management; and
- Flora / fauna.

The proposed temporary use of the Quarry is considered to be consistent with the relevant planning Environmental Planning Instruments, Development Control Plans and relevant policies. It is also considered that potential impacts could be safely mitigated by design and operational management measures.

We look forward to receipt of Director General's environmental assessment requirements that will confirm the scope of work for the project, and allow preparation of appropriate reports and studies to accompany the EA.

References

Milford, H.B. (1999). *Soil Landscapes of the Coffs Harbour1:100 000 Sheet Report.* Department of land and Water Conservation, Sydney.

Milford, H.B. (1999). *Soil Landscapes of the Coffs Harbour1:100 000 Sheet Map.* Department of land and Water Conservation, Sydney.

NSW Rural Fire Service (2006). *Planning for Bushfire Protection*. NSW Rural Fire Service and Department of Planning, Sydney