

2. PROPOSED DEVELOPMENT

To secure additional hard rock, the Applicant is proposing to expand the quarry onto adjoining land. The proposed expansion has three components:

- the extension of the quarry pit onto adjoining land;
- upgrading and using the existing infrastructure at the quarry to accommodate the proposed extension; and
- the progressive rehabilitation of the quarry.

The proposed extension of the quarry covers an area of 10.8 hectares (see Figure 2). This area contains up to 11.2 million tonnes of hard rock. The hard rock would be extracted using the same methods and machinery that are currently used, and at the same extraction rate of up to 500,000 tonnes a year. It would then be hauled to the existing processing and handling area for processing and stockpiling before it is trucked to local and regional markets via the Pacific Highway.

Essentially, the proposal would rely on the existing infrastructure at the quarry; however, the internal haul roads and existing water management system of the quarry would be upgraded to accommodate the proposed extension of the quarry pit.

The proposal has a capital value of \$100,000 would provide continued employment for up to 20 people, and would enable the Applicant to continue supplying hard rock to the construction industry in the Hunter region for the next 22 years.

On 29 October 2004, it lodged a development application (DA 265-10-2004) and Environmental Impact Statement (EIS) with the Department for the proposed expansion.

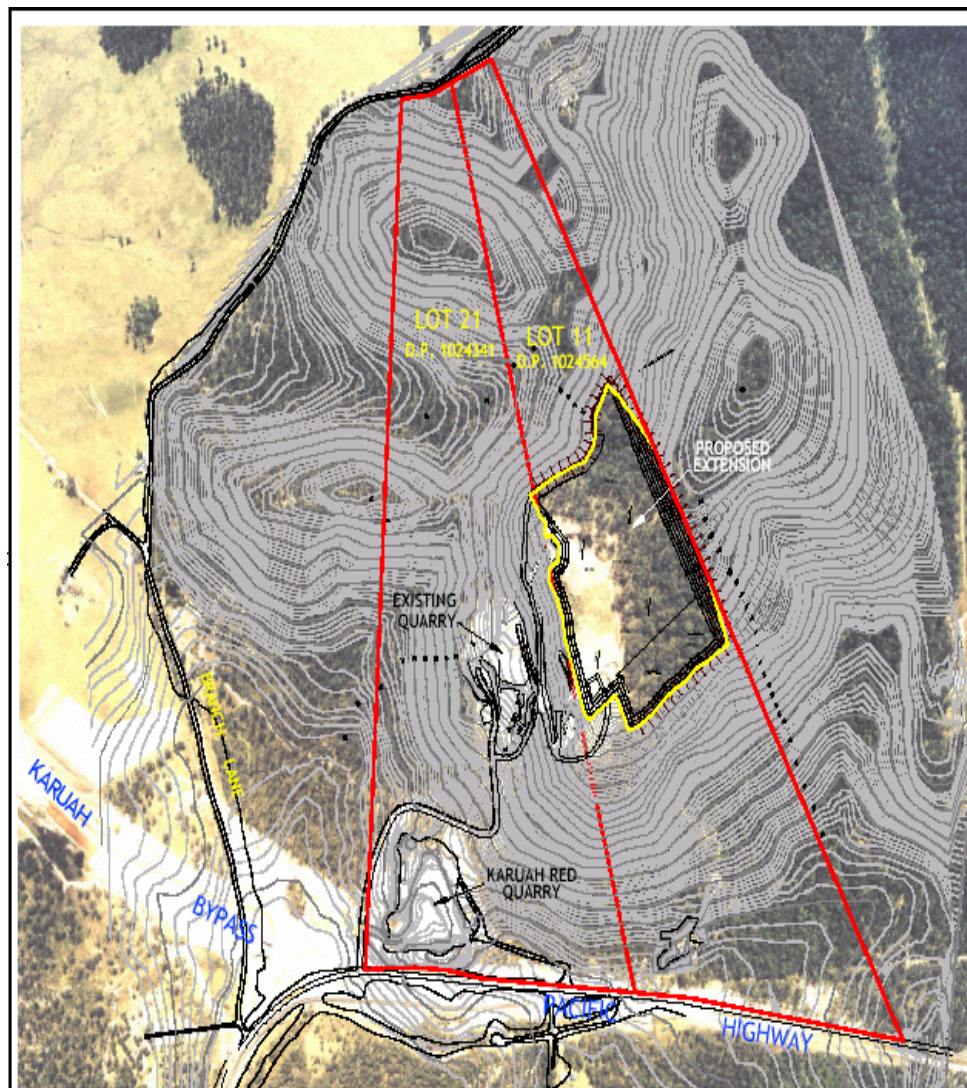


Figure 2: Location of Existing and Proposed Quarry Operations

3. STATUTORY CONTEXT

3.1 State Significant Development

The proposal is classified as State significant under section 76A(7) of the EP&A Act as it is an extractive industry that would extract more than 200,000 tonnes of material a year, and therefore meets the criterion of State significant development under the Minister's declaration of 3 August 1999. Consequently, the Minister is the consent authority for the DA.

3.2 Integrated development

The proposal is classified as integrated development under section 91 of the EP&A Act as it requires an additional approval from the Department of Environment and Conservation under the *Protection of the Environment Operations Act 1997*.

3.3 Designated Development

The proposal is classified as designated development under Section 77A of the EP&A Act as it meets the criteria of an 'extractive industry' under clause 19 of Schedule 3 to the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation).

3.4 Permissibility

The site is zoned 1(a) – Rural under the *Great Lakes Local Environmental Plan 1996*. The proposal is permissible with development consent in this zone.

3.5 Environmental Planning Instruments

The Department has assessed the proposal against the requirements of relevant planning instruments (see Appendix 1), and is generally satisfied that the proposal complies with, or is consistent with, the requirements of these planning instruments.

4. CONSULTATION

On 29 October 2004, the Applicant lodged a DA and EIS for the proposal with the Department. The Department subsequently:

- notified all residents in the vicinity of the site who could be affected by the proposal;
- notified Great Lakes Council and Port Stephens Council and all relevant State government agencies;
- advertised the exhibition of the DA and EIS on two occasions in the Hawkes Nest NOTA and the Port Stephens Examiner;
- put up notices about the proposal on the site; and
- exhibited the DA and EIS from 5 November 2004 until 8 December 2004.

This satisfies the requirements for public participation in the EP&A Regulation.

During the exhibition period, the Department received 5 submissions on the proposal: 3 from public authorities (Roads and Traffic Authority, Great Lakes Council, and Port Stephens Council), and 2 from the general public.

The **RTA** is satisfied with the current access arrangements to the Pacific Highway, and has no requirements for the proposal.

The **Great Lakes Shire Council** does not object to the proposal, but has recommended several conditions of consent for the proposal. The Department has integrated these conditions into the recommended conditions of consent (see Tag A).

The **Port Stephens Council** has asked the Department to consider the potential access, flora and fauna, and visual impacts of the proposal, and to ensure that the site is adequately rehabilitated. The Department has assessed the potential impacts of the proposal (see Section 6), and included several conditions in the recommended conditions of consent to ensure that the quarry is adequately rehabilitated (see Tag A).

Only one of the submissions from the **general public** objected to the proposal; however, both of the submissions from the general public raised concerns about the potential dust, water, and visual impacts

of the proposal. The Department has considered these concerns in its assessment report (see section 5).

5. VIEWS OF THE LOCAL MEMBER

The proposal is in the Myall Lakes electorate where Mr John Turner MP is the local member. His views on the proposal are not known.

6. KEY ISSUES

The Department has assessed the DA, EIS and submissions on the proposal in accordance with the requirements in section 79C of the EP&A Act. The Department considers the key issues to be:

6.1 Flora and Fauna

An assessment of the potential flora and fauna impacts of the proposal was undertaken by HWR Ecological (see Appendix F of the EIS).

The proposal would result in the removal of 10.8 hectares of vegetation from a 1,000 hectare area of intact remnant vegetation. To compensate for the proposed clearing, the Applicant is proposing to set aside and manage 16 hectares of undisturbed bushland to the south-east of the existing quarry for conservation (see Figure 3).



Figure 3: Proposed Conservation Offset Area

The vegetation to be cleared consists of:

- Spotted Gum/Ironbark Open Forest – 8 hectares;
- Smooth-barked Apple/Red Bloodwood Open Forest - 2 hectares; and
- Blue Gum/Brush Box Forest - 0.8 hectares.

HWR Ecological determined that none of these vegetation communities are Endangered Ecological Communities listed under the *NSW Threatened Species Conservation Act 1995* (TSC Act).

The flora and fauna assessment also identified 4 threatened fauna species (Glossy Black Cockatoo¹, Powerful Owl¹, Brush-tailed Phascogale¹ and Grey-headed Flying Fox²), within the study area, although only the Brush-tailed Phascogale was recorded within the area to be directly affected by the proposal through vegetation clearing.

One threatened flora species (*Terathea Juncea*² - Black-eyed Susan) was also identified within the study site, although not within the area to be directly impacted by vegetation clearing. The ecologists noted that the proposal may have some indirect impacts (edge effects; increased runoff; dust etc) on one population of *Terathea Juncea* which is located very close to the proposed impact area.

¹ Listed as vulnerable under the TSC Act

² Listed as vulnerable under both the TSC Act and the Commonwealth *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act)

Section 5A assessments (8-part tests) undertaken for relevant threatened species as part of the flora and fauna assessment concluded that the proposal is unlikely to have a significant impact on any of the threatened species identified provided that a range of mitigation measures are implemented.

The Department is satisfied with the Applicant's flora and fauna assessment, and believes that, the removal of 10.8 hectares of vegetation from a 1,000 hectare area of intact remnant vegetation is unlikely to result in any significant impacts on regional wildlife corridors or result in significant levels of habitat fragmentation, primarily because the proposed vegetation clearing comprises only a small proportion of the larger remnant vegetation in the area.

Notwithstanding, the Department believes that, the Applicant should be required to:

- establish and maintain the proposed conservation offset area, which contains similar vegetation communities as those proposed to be removed as a result of the proposal, and includes suitable habitat for the threatened species identified during the assessment;
- ensure suitable arrangements are made to protect the long term security of the conservation offset area; and
- prepare a comprehensive Flora and Fauna Management Plan for the site and the conservation offset area, which details a range of safeguards to minimise impacts on flora and fauna, for the life of the proposal.

6.2 Visual

An assessment of the potential visual impacts of the proposal was undertaken by Pittendrigh Shrinkfield Bruce Pty Ltd (see Appendix G of the EIS). Views from the Karuah Bypass, the Old Pacific Highway and residences in the vicinity were considered in the assessment.

The assessment found that while the proposal would be visible from the Karuah Bypass and the Old Pacific Highway, the visual impact on passing motorists would be low due to the transitory nature of these views.

The assessment also found that of the six residences, identified to be within the view catchment of the proposed quarry, five of these would be either partially or fully shielded from the proposal by topography and/or existing vegetation.

The assessment found that proposal would only be clearly visible from one residence to the west of the quarry site. However, the existing quarry is already visible from this residence, and the proposal is only expected to result in a small change to the visual impact on this residence, through the loss of some ridgeline vegetation. The proposed expansion of extraction to the north and east of the existing extraction areas will not be visible to this residence due to screening by existing foreground vegetation.

To reduce the visual impact of the proposal, the Applicant proposes to:

- retain and revegetate an area (approximately 30 metres wide) along the western side of the proposed extension area to act as a visual screen; and
- progressively rehabilitate exposed faces and disturbed land with local indigenous species.

The Department is satisfied with the Applicant's visual impact assessment, and is confident that the implementation of the proposed mitigation measures would minimise the visual impacts of the proposal on nearby residences, particularly on the residence to the west of the site. Consequently the Department is satisfied that the proposal is unlikely to have a significant visual impact on nearby residences.

Nevertheless, the Department believes the Applicant should be required to:

- implement all practicable measures to minimise the visual impacts of the development;
- retain, re-vegetate and subsequently maintain the proposed visual screen to minimise visual impacts; and
- regularly report on the progress of re-vegetation and maintenance of the visual screen.

6.3 Noise

A noise assessment was undertaken for the proposal by Richard Heggie Associates Pty Ltd in accordance with the *NSW Industrial Noise Policy* (see Appendix I of the EIS).

Background noise levels measured as part of the noise assessment indicate that residents close to the Pacific Highway³ are likely to experience a noise environment dominated by traffic noise rather than

³ Day time (Monday to Saturday – 7.00am to 6pm) background noise levels of 44dBA were monitored at a residential receiver close to the Pacific Highway.

quarry noise. This is confirmed by the fact that the quarry has not received any noise-related complaints to date.

The noise modelling undertaken found that noise generated by the proposal would be at least 5 dBA below the DEC project specific noise levels at all residences surrounding the quarry (see below).

Monitored location	Predicted Quarry Plant Noise LA _{eq(15 minute)} dBA (day time)	Project Specific Noise Level (PSNL) _{eq(15 minute)} dBA (day time)
540m south of quarry	34	49
420m south of quarry	42	49
640m south of quarry	44	49
1090m south-west of quarry	44	49
1210m south-west of quarry	43	49

Table 1 Noise Modelling Results

The noise assessment also found that traffic generated by the proposal would only contribute about 0.6% of the total daily traffic along the Pacific Highway in the area, and that such a minor contribution to traffic levels would not have any discernable noise impact on residences along the Pacific Highway.

The Department is satisfied that the Applicant's noise assessment has been conducted in accordance with the *NSW Industrial Noise Policy*, and believes it provides a robust basis upon which to assess the potential impacts of the proposed development. The Department is satisfied that the noise impacts of the proposed development are unlikely to have a significant impact on any surrounding residents.

Notwithstanding, the Department believes the Applicant should be required to:

- ensure the noise generated by the development complies with the DEC noise criteria at all times; and
- prepare and implement a noise monitoring program for the development to demonstrate compliance with the DEC noise criteria.

6.4 Blasting

A blasting assessment was undertaken for the proposal by Richard Heggie Associates Pty Ltd (see Appendix I of the EIS).

The assessment found that, provided best practice blast design is adopted by the Applicant, blasting at the proposal would meet the DEC blasting criteria at all residential locations in the vicinity of the site,

The Department is satisfied with the Applicant's blasting assessment, and believes that the blasting impacts of the proposal are unlikely to have a significant impact on any residences.

However, the Department believes the Applicant should be required to:

- ensure the overpressure and vibration generated by blasting at the development comply with the relevant DEC blasting criteria at all times;
- restrict blasting to a maximum of once per week between 9am and 3pm on weekdays;
- implement all practical measures to ensure the safety of people, and avoid and/or minimise any blasting impacts of the development on any privately owned land; and
- establish a blasting notification register for the quarry.

6.5 Air Quality

The potential air quality impacts of the proposal were assessed by Richard Heggie Associates Pty Ltd in accordance with DEC's *Approved Methods and Guidance for Modelling and Assessment of Air Pollutants in NSW* (EPA 2001) (see Appendix H of the EIS).

The air quality modelling indicates that worst case fugitive dust emissions generated by the proposed development would comply with relevant DEC criteria for dust deposition, total suspended particulates (TSP) and small particulate matter (PM₁₀) at all residential receptors surrounding the site (see below).

Annual Average Dust (DEC Criteria: 4g/m ² /month)				
Location	Year 1		Year 8	
	Background	Background + Increment	Background	Background + Increment
540m south of quarry	2	2.4	2	2.3
420m south of quarry	2	2.6	2	2.7
640m south of quarry	2	2.3	2	2.4
1090m south-west of quarry	2	2.2	2	2.2
Annual Average TSP (DEC Criteria: 90µg/m ³)				
Location	Year 1		Year 8	
	Background	Background + Increment	Background	Background + Increment
540m south of quarry	42	44	42	43
420m south of quarry	42	45	42	44
640m south of quarry	42	44	42	43
1090m south-west of quarry	42	43	42	43
Maximum Annual 24 Hour Average PM ₁₀ (DEC Criteria: 50µg/m ³)				
Location	Year 1		Year 8	
	Background	Background + Increment	Background	Background + Increment
540m south of quarry	44	44	44	44
420m south of quarry	31	44	31	44
640m south of quarry	44	44	44	44
1090m south-west of quarry	44	44	44	44

Table 1 Results of the Air Quality Impact Assessment

The Department is satisfied that the air quality assessment has been carried out in accordance with the *Approved Methods and Guidance for the Modelling of Air Pollutants in NSW*, and is confident that the proposed development would comply with all relevant DEC air quality criteria at nearby residences.

However, to ensure that air quality impacts resulting from the development are minimised, the Department believes the Applicant should be required to:

- comply with relevant DEC air quality criteria at all privately owned residences;
- implement all practical measures to minimise and/or prevent the emission of dust from the site; and
- prepare and implement a air quality monitoring program for the development to demonstrate compliance with relevant DEC air quality criteria.

6.6 Surface Water

A surface water assessment was carried out for the proposal by GSS Environmental (see Appendix D of the EIS), as part of a broader hydrological assessment.

As with the existing quarry, it is proposed that any surface runoff resulting from the proposal would be separated into clean and dirty water, with clean water to be diverted around the site into natural drainage lines and dirty water to be directed to the Karuah Red Quarry.

The surface water assessment calculated that, based on the NSW Department of Housing's *Managing Urban Stormwater: Soils and Construction* manual, the proposal would require approximately 12.3 megalitres of storage capacity to capture runoff from the site. The Applicant's proposal to continue to use the Karuah Red Quarry as a detention basin, which has a capacity of 20 megalitres, would therefore provide more than sufficient capacity to capture dirty water runoff from the site. Water from the Karuah Red Quarry would be reused on site for truck wash-down and dust suppression. Potable water would be sourced from the existing 50,000 litre on-site rainwater tank.

The Department is satisfied with the Applicant's assessment and agrees that the Karuah Red Quarry is likely to have sufficient capacity to detain runoff from the site. Nevertheless the Department believes that the Applicant should be required to prepare and implement a Site Water Management Plan for the development, which incorporates:

- an Erosion and Sediment Control Plan;
- a Surface Water Monitoring Program; and
- a site water balance.

to ensure adequate surface water control measures are implemented on site.

6.7 Ground Water

A ground water assessment was carried out for the proposal as part of the GSS Environmental hydrological assessment (see Appendix D of the EIS).

Due to the elevation (approximately 140 metres AHD) and topography of the site, the assessment considered it unlikely that any groundwater would be intercepted as a result of the proposed development. This is supported by the fact that no groundwater has been intercepted during any previous exploration or quarrying operations on the site.

The Department agrees with the assessment and is satisfied that the proposal would not result in any noticeable impacts on groundwater resources.

6.8 Heritage

An archaeological assessment, of both European and Aboriginal Heritage, was carried out for the proposal by Insite Heritage Pty Limited (See Appendix K of the EIS). The aboriginal heritage assessment included a field survey of the site by representatives of the Karuah Local Aboriginal Land Council (LALC).

The assessment found that while the study site lies on the south-eastern boundary of the original Australian Agricultural (AA) Company land grant of 1824, it is located well to the west of the main area of archaeological significance relating to the AA company's occupation of the grant area and thus is unlikely to adversely impact any European heritage values of the grant area. The assessment also found that the proposal is located approximately 4km to the north of the nearest European heritage item listed under the *Great Lakes Local Environment Plan 1996*.

The indigenous heritage assessment identified 1 modified (scarred) tree outside of the impact area and 1 potential scarred tree within the impact area. Following further detailed inspection of the potential scarred tree by representatives of the Karuah LALC, it was concluded that the scar was unlikely to be of Aboriginal origin. Thus the assessment concluded that there would be no impediments to the proposal on the grounds of Aboriginal heritage.

The Department is satisfied with the assessment and is satisfied that the proposal is unlikely to have any adverse impacts on European or Aboriginal heritage values on site.

6.9 Traffic and Transport

The Applicant proposes to continue accessing the Pacific Highway via the Branch Lane through a grade separated interchange newly constructed by the Roads and Traffic Authority (RTA).

A traffic and transport assessment of the proposal was carried out by TPK and Associates Pty Ltd to investigate the potential impacts of the Proposal's road haulage requirements on the broader road network, and on-site road-safety and traffic management (See Appendix C of the EIS).

The assessment found that the type and level of traffic generation from the quarry and its potential impacts on road safety and intersection capacity had already been considered by the RTA in its design of the interchange between Branch Lane and the Karuah Bypass, and as such further assessment of these issues were unnecessary. The assessment also noted that the traffic generated by the quarry is unlikely to adversely impact on the efficiency of the road network, due to the low hourly volumes generated.

The Department is satisfied that the proposal is unlikely to adversely impact on the safety and efficiency of the surrounding road network.

6.10 Hazard and Risk

The applicant has proposed a range of measures to manage potential chemical and /or bush fire hazards on site including the bunded storage of all fuels and chemicals and the retention rather than discharge of 'dirty' water to enable its use in fire suppression. The Department supports the mitigation measures proposed.

6.11 Other

The Applicant has also assessed the potential impact of the proposed development on geology and soils, waste management, utilities and the socio-economic environment. The Department is satisfied

with the Applicant's assessment of these issues, and the measures proposed by the Applicant to manage and mitigate any potential impacts arising from the proposed development.

7. INTEGRATED APPROVALS

Under section 91 of the EP&A Act, the proposal is classified as an integrated development because it requires an additional approval under the *Protection of the Environment Operations Act 1997*.

The Department of Environment and Conservation has granted its general terms of approval for the proposal, and the Department has integrated these general terms into the recommended conditions of consent (see Tag A).

8. RECOMMENDED CONDITIONS

The Department has prepared recommended conditions of consent for the proposal. These conditions are required to:

- prevent, minimise, and/or offset adverse environmental impacts;
- set standards and performance measures for acceptable environmental performance;
- ensure regular monitoring and reporting; and
- provide for the on-going environmental management of the development.

The Applicant accepts these recommended conditions of consent.

9. CONCLUSION

The Department has assessed the DA, EIS and submissions on the proposal in accordance with the requirements in section 79C of the EP&A Act, and is believes:

- the assessment provides a robust basis upon which to consider the potential impacts of the proposed development;
- the environmental impacts of the proposed development can be adequately managed, mitigated, or compensated for, and are unlikely to result in any significant adverse impacts on nearby residents;
- the proposal would enable the Department to regulate the existing and proposed quarrying operations under a single development consent, ensuring that appropriate environmental and rehabilitation outcomes are achieved across the site; and
- the proposal would provide economic and social benefits to the Hunter region by securing a valuable supply of hard rock for the region's construction industry for at least the next 22 years, and provide continued employment for at least 20 people during this period.

Consequently, the Department believes the proposed development is in the public interest and recommends that the Minister approve the DA, subject to conditions.

10. RECOMMENDATION

It is RECOMMENDED that the Minister:

- consider this report;
- approve the DA under section 80 of the EP&A Act; and
- sign the attached Instrument of Consent (Tag A).

David Kitto
Manager
Mining and Extractive Industries

Chris Wilson
Director
Major Development Assessment

Sam Haddad
Deputy Director-General

APPENDIX 1

Assessment of Relevant Planning Instruments

State Environmental Planning Plan No. 11 – Traffic Generating Development (SEPP 11)

SEPP 11 applies to this proposal as it an 'extractive industry', which is a class of development listed under Schedule 1 of SEPP 11, as requiring referral to the NSW Traffic Authority.

The noise assessment of the EIS (see Appendix I of EIS) found that traffic generated by the proposal would not contribute significantly to the total daily traffic along the Pacific Highway. The NSW Roads and Traffic Authority, in its submission to the Department, had no requirements for the project. Consequently the Department is satisfied that the proposal is unlikely to constitute a traffic generating development.

State Environmental Planning Plan No. 14 – Coastal Wetlands (SEPP 14)

The site is located approximately 620 metres upstream of a wetland listed under SEPP 14. The potential impact of the proposal on this wetland was assessed as part of the EIS's hydrological assessment (Appendix D of EIS) and judged to be negligible.

This conclusion was based on the fact that there would be adequate on-site storage to capture dirty water runoff, the fact that there have been no discharges from the sediment detention basins on the site to date, and the fact that prior to any discharges from the site, the water would be required to meet appropriate ANZECC water quality guidelines. Consequently the Department is satisfied that the proposal is unlikely to have a significantly impact on any SEPP14 listed wetlands.

State Environmental Planning Policy No. 33 – Hazardous and Offensive Development (SEPP 33)

The Department has assessed the environmental impacts of the proposal (see section 6 of this report) and is satisfied that the proposal will not result in the emission of offensive or hazardous levels of air, noise or water pollution, and consequently does not believe the proposal to constitute a hazardous or offensive development as defined by SEPP 33.

State Environmental Planning Policy No. 44 – Koala Habitat Protection (SEPP 44)

The Applicant has assessed the potential impact of the proposal on Koalas as part of the Ecology Assessment of its EIS (Appendix F). This assessment found no Koalas or evidence of Koalas on the site, and while "potential Koala habitat" was found on the site, this habitat was considered not to comprise "core Koala habitat" as defined under SEPP 44. Consequently the Department is satisfied that the proposal is unlikely to have a significant impact on Koala habitat, and that a Koala management plan is not required to be prepared.

State Environmental Planning Policy No. 55 – Remediation of Land (SEPP 55)

The Department does not believe the proposal would be located on land defined as contaminated under SEPP 55, given that the proposal involves the development of land comprising largely of undisturbed remnant bushland.

Hunter Regional Environmental Plan 1989 (Hunter REP)

The Department has assessed the environmental impacts of the proposal (see section 6 of this report) and is satisfied that the proposal meets and/ or is consistent with the stated objectives of the Hunter REP in relation to mineral resources & extractive materials (Part 6, Division 1), environmental protection (Part 7, Division 1-3), and conservation & recreation (Part 8, Division 1).

Great Lakes Local Environmental Plan 1996 (Great lakes LEP)

The Department has reviewed the Applicant's assessment of the proposal against the requirements of the Great Lakes LEP (Section 3.4 of EIS), and is satisfied that the proposal complies with and/or is consistent with the LEP's requirements.