

Section 3

Issue Identification and Prioritisation

Preamble

This section describes how the environmental issues assessed in the EIS were identified and prioritised.

A comprehensive list of all relevant environmental issues was first assembled through consultation with the local community, government agencies and other stakeholders, a review of environmental monitoring and preliminary environmental assessments and a review of relevant legislation, planning documents and environmental guidelines.

Following identification of these environmental issues, a review of the design of the Proposal and local environment was undertaken to identify risk sources and potential environmental impacts for each environmental issue. An analysis of the risk posed by each potential impact was then completed assuming the adoption of existing or standard control measures with a risk rating assigned based on likelihood and consequence of occurrence.

By considering the frequency with which each environmental issue was raised or identified, the associated environmental impacts and the allocated risk ratings, the relative priority of each issue was determined. This order of priority was then used to provide an order of assessment and depth of coverage within Section 5.

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3.1 INTRODUCTION

In order to undertake a comprehensive assessment of the Proposal, appropriate emphasis needs to be placed on those issues likely to be of greatest significance to the local environment, neighbouring landowners and the wider community. In order to ensure this has occurred, a program of community and government consultation and a review of environmental documentation was undertaken to identify relevant environmental issues and potential impacts. This was followed by an analysis of the risk posed by each potential impact in order to prioritise the assessment of the identified environmental issues within the EIS.

3.2 CONSULTATION

3.2.1 Consultation with Surrounding Landowners

A detailed description of consultation with local community members is presented in **Appendix 5**.

September 2013

Formal consultation with surrounding landowners commenced on 15 September 2013 when representatives of RWC visited all properties where a common boundary was held between that property and the boundary of the Site. During the initial visit, a summary of key information relating to the Proposal was offered and an invitation made to each landowner or resident to comment on the Proposal. Where residents were not available, a letter was left in the mailbox. A further visit to landowners who responded to the letter was undertaken on 23 September 2013.

During the visit on 15 September 2013, the RWC representative attempted to visit the Shrine of Our Lady of Mercy – “Penrose Park” on three occasions. At the two attempts, it was estimated that there were approximately 3 000 people visiting the monastery for an event, at which point a decision was made to return later. During the final visit, there remained a significant number of people at the monastery and a letter was left at the office. The Proposal was discussed with Father Marek during the visit on 23 September 2013.

A detailed summary of the issues raised during the 2013 consultation is provided in **Appendix 5**. In summary, increased traffic levels and access arrangements were raised by all respondents with most residents also raising the issue of groundwater availability and quality. Additional concerns regarding potential noise and dust impacts were also common in the feedback at that time. Other issues raised by the community at this time included devaluation of property, flora and fauna impacts, water use and Aboriginal heritage.

February/March 2018

A summary of the consultation program undertaken in February/March 2018 is also included in **Appendix 5**. Following the initial period of consultation in 2013, the consultation program was postponed as the Applicant progressed towards finalising the Proposal design and to determine the most appropriate access arrangements to and from the Site. The consultation program was recommenced in February 2018 once the access arrangements were resolved. On 16 February 2018, a campaign of letter delivery was undertaken to approximately 50 addresses. A letter was placed in letterboxes (similar to the program in September 2013) which included a brief

overview of the Proposal, a summary of key statistics to provide the community with an informative overview and a figure displaying the locations of key components of the Proposal. The letters were delivered to properties along Hanging Rock Road, Canyonleigh Road and to the northeast of the Site along Hume Highway and Black Horse Lane. Letters were hand delivered and where the opportunity was available, the Proposal was briefly discussed with residents in these instances.

Following the letterbox campaign, a series of meetings were arranged for 22 February and 23 February 2018. A community survey was prepared at this time and was hand delivered to people during meetings or left in letterboxes where residents had not responded to the first letterbox delivery. Only three responses were received in the form of a response to the survey. A copy of this survey returned by Mr Chris Dalton of Black Horse Farm is provided in **Appendix 5**.

As an appropriate time to meet with representatives of the Shrine of Our Lady of Mercy – “Penrose Park” was not available on 22 February or 23 February 2018, a meeting with the Pauline Fathers was arranged for 2 March 2018 at the Monastery office area. Meetings were also held with the owner of the Sutton Forest Winery and the landowner of Lot 3 DP 253435 (Residence 2) who had not been available during earlier visits to the area.

The concerns raised by the local community in February 2018 were generally similar to those raised during the September 2013 consultation.

Traffic levels, traffic noise and access arrangements were mentioned by all participants. This is consistent with expectations given the location of properties in the vicinity to the Hume Highway and road noise experienced presently. Several of the participants raised concerns about traffic arrangements at the Sallys Corner Interchange noting that the interchange had not been constructed as had been indicated to the community and that there were regular incidents due to poor driver behaviour at this location. Road noise on the Hume Highway is a feature of the area and residents do not want to see this worsen. Several respondents expressed their preference for access arrangements via a dedicated, grade-separated interchange. They felt that Quarry access via the Sallys Corner Interchange would have exacerbated existing issues. Participants also expressed concern at the use of truck compression brakes and the noise of trucks accelerating out of the Sallys Corner Interchange and were interested to see details of any Driver’s Code of Conduct for the operation.

Groundwater access and quality was also mentioned by all participants and confirms the reliance of local residents on groundwater access, whether this is for domestic use, commercial water production to supply beverage companies or for stock watering and irrigation. Many participants commented on the quality of the groundwater, with some indicating that very little treatment or filtering was required. Associated with this, was concern for the condition of Long Swamp Creek and vegetation and fauna in this area. Most understood the importance of groundwater to this watercourse. Commercial water production is centred along Hanging Rock Road with residents along this location concerned for groundwater quality, though it was acknowledged that water access was managed through licensing by the NSW Government. One resident spoke of a hanging swamp at the northern section of their property that had dried up 10 to 15 years earlier and was concerned that the Proposal would exacerbate these impacts.

Other general amenity issues such as dust, operational noise and sleep disturbance due to proposed 24-hour operations were expressed by several residents. Many expressed their concern that these issues would affect their property value in the longer term. While all

participants were aware that noise from the Hume Highway was constant, at times, such as on Sundays, when traffic was not as busy, they enjoyed the peace and quiet. One resident who was renting in the area indicated that he would not be interested in a permanent move to the area if the Quarry went ahead. Through the discussions with some participants, it was apparent that the nearby proposal for the Hume Coal Project was at the front of resident's minds, with many asking how the impacts of the proposed Quarry would compare to what they had been told about the coal mine proposal. They also expressed mistrust of the coal company and information provided to them regarding this proposal and it was apparent this reflected on the Quarry proposal.

Most participants were aware of the need for construction sand resources, especially in the nearby Sydney market. They understood it was a matter of progress. However, as one participant commented *"It is progress, but it's not our progress"*.

Consultation with the Pauline Fathers

A meeting was held with a representative of RWC and representatives of the Pauline Fathers at the office area of the Monastery of the Shrine of Our Lady of Mercy – "Penrose Park" on Friday 2 March 2018. A summary of the issues raised during this meeting are provided in **Appendix 5**. In addition, a summary of the use of this property is provided in Section 4.5.2. The principal concerns raised by the Pauline Fathers was the potential conflict between visitors to the Shrine Church, one of the 50 international chapels or the Grotto with the operations of the Quarry. From an environmental perspective noise, dust and access to groundwater were key issues. It was noted that impacts may be experienced for the up to 7 000 visitors at the largest feast days as well as to those individuals who visit the property outside of these areas to experience the peace and quiet of "Penrose Park". There are currently five permanent residents at the property, however, construction has commenced on a 70-person Retreat Centre and plans are proposed for a series of hermitage/meditation areas that would be isolated residences within the property dedicated to meditation and prayer.

3.2.2 Consultation with Aboriginal Stakeholders

Relevant stakeholders from the Aboriginal community were identified using a process consistent with the "Aboriginal Cultural Heritage Community Consultation Requirements for Proponents" (DECCW 2010a). Following the completion of Steps 4.1.2 and 4.1.3 of these *Consultation Requirements*, six Aboriginal stakeholders registered as groups that may hold cultural knowledge relevant to determining the Aboriginal cultural values of the Site. The six registered Aboriginal stakeholders were:

- Bellambi Indigenous Corporation;
- Cubbitch Barta Native Title Claimants Aboriginal Corporation;
- Illawarra Local Aboriginal Land Council;
- Gundungurra Aboriginal Heritage Association Inc.;
- Gundungurra Tribal Council Aboriginal Corporation; and
- Peter Falk Consulting.

The registered Aboriginal parties were provided with information about the Proposal and the proposed cultural heritage assessment process in the form of a proposed methodology. The purpose of the proposed methodology was to explain the Proposal and consultation process in detail, define the roles of the registered Aboriginal parties and the Applicant, identify any protocols for obtaining and using sensitive cultural information and to give the registered Aboriginal parties an opportunity to comment on the proposed assessment method and provide any relevant information on the cultural significance of the Site.

All registered Aboriginal parties were invited to express an interest in participating in the field surveys. Representatives of four registered Aboriginal parties eventually participated in the field surveys, the results of which are described in Section 5.7.4. During the field surveys, the registered Aboriginal parties were asked to contribute their knowledge on the Site and the cultural heritage sites that were found. It is noted that the registered Aboriginal parties support the recommendations included within the Cultural Heritage Assessment (see Specialist Consultant Studies Compendium Part 7).

3.2.3 Consultation with Government Agencies

Table 3.1 presents a summary of the environmental issues identified in correspondence from the DP&I (now DPE) and other State and local government agencies.

Appendix 2 summarises these assessment requirements and where each has been addressed in the EIS.

Table 3.1
Government Agency Issue Identification

Agency / Org.	Issue															
	Groundwater	Biodiversity	Surface Water/Erosion & Sediment Control	Terrestrial Ecology	Noise / Vibration	Air Quality / Greenhouse Gas	Traffic and Transport	Rehabilitation and Final Landform	Cultural Heritage	Socio-economic Impacts	Land Use / Planning / Permissibility	Soil Resources / Management	Consultation	Visual Amenity	Aquatic Ecology	Hazards
NSW P&I ^{*1}	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
EPA (OEH) ^{*2}	✓	✓	✓	✓	✓	✓		✓	✓		✓				✓	✓
NOW ^{*3}	✓	✓	✓												✓	
RMS							✓									
DTIRIS Resources & Energy		✓				✓	✓				✓				✓	
Agriculture NSW													✓			
DPI - Fisheries	✓	✓	✓	✓											✓	
Wingecarribee Shire Council			✓	✓	✓	✓	✓	✓							✓	
^{*1} The Department of Planning and Infrastructure is now referred to as the Department of Planning and Environment. ^{*2} OEH includes the Heritage Council of New South Wales which separately submitted Director-General's Requirements to the Department of Planning & Infrastructure. ^{*3} The NSW Office of Water is now referred to as Department of Industry – Crown Lands and Water (CL&W).																

In recognition of the elapsed time period between receipt of the DGRs and submission of the EIS, a number of relevant government agencies were consulted to identify if any changes to policies and / or guidelines necessitated further investigation prior to the completion of the EIS. The following government agencies were consulted.

- Division of Resources and Geoscience (DRG) – the Division of Resources and Energy (DRE) initially responded to the Applicant’s request for consultation on 24 October 2016. DRG provided further response on 13 February 2018.
- Roads and Maritime Services (RMS) – RMS responded to the Applicant’s request for consultation on 27 October 2016. The Applicant and conceptual designer met with the RMS on 8 December 2017 to provide an overview of the proposed design for the Quarry Interchange. RMS reviewed the conceptual design and provided comments on 8 February 2018.
- Office of Environment and Heritage (OEH)– OEH responded to the Applicant’s requests for consultation on 27 October 2016 and 20 February 2018.
- Department of Primary Industry – Water (DPI Water) – DPI Water initially responded to the Applicant’s request for consultation on 28 October 2016. DPI Water were further consulted on 1 February 2018 and, as of the time of printing, no response has been received.
- Local Land Services – LLS responded to the Applicant’s request for consultation on 29 October 2016. LLS were further consulted on 1 February 2018 and, as of the time of printing, no response has been received.
- Department of Environment and Energy (DoEE) – DoEE responded to the Applicant’s request for consultation on 3 November 2016. DoEE were further consulted on 1 February 2018 and, as of the time of printing, no response has been received.
- Environment Protection Authority (EPA) – the EPA responded to the Applicant’s requests for consultation on 8 November 2016 and 14 February 2018.

Consultation was also undertaken with the Forestry Corporation of NSW following the preparation of the conceptual design of the Quarry Interchange given the potential interaction to the roads to and from Penrose State Forest. Feedback was received on 25 January 2018 and 1 February 2018.

The OEH confirmed the approach taken for the Biodiversity Offset Assessment (i.e. assessment under the BBAM and credit calculator (OEH, 2014) rather than the FBA (OEH, 2014b)) or the *Biodiversity Conservation Act 2016* was appropriate given that the DGRs for the Proposal were issued and a significant portion of the work had commenced on the biodiversity offset assessment prior to the commencement of the FBA’s transitional period or the commencement of the *Biodiversity Conservation Act 2016* and the Biodiversity Offset Scheme and Biodiversity Assessment Method.

Feedback from the OEH also noted that as the transitional period for completion and submission of BioBanking Agreement applications ceased on 25 February 2018, any offset areas would need to be secured under a Biodiversity Stewardship Agreement that would require

that the proposed offset area be assessed under the Biodiversity Assessment Method. It was noted that assessment of the proposed on-site offset area was completed. OEH acknowledged that these calculations may be used to present the quantum of biodiversity offset credits generated in this location and that this would provide an indication of the suitability of the location and the Applicant's ability to satisfy the offsetting obligations of the Proposal. However, when the Applicant was making arrangements to secure the on-site offset area, the assessment of credits generated in this location would need to be provided under the Biodiversity Assessment Method and the application would need to be for a Biodiversity Stewardship Agreement. Further advice was provided by the OEH regarding the investigation of options available to the Applicant to meet the ecosystem credit requirements to offset impacts to existing biodiversity values. A comprehensive review of options to satisfy offsetting requirements, in addition to the proposed on-site biodiversity offset area, is presented in Section 2.14.5.

Finally, the OEH provided feedback concerning the ecological assessment of significance of impacts under the Proposal. It was advised that the assessment of significance should consider Section 7.3 of the *Biodiversity Conservation Act 2016* and Section 7.2 of the *Biodiversity Conservation Act 2016* with regards to concluding a 'significant impact' on threatened species.

3.3 LEGISLATIVE CONTEXT

3.3.1 Introduction

A number of Commonwealth, NSW, regional and local planning instruments or policies apply to the Proposal. A brief summary of each relevant planning instrument or legislation is provided in Sections 3.2.3.2 to 3.2.3.6 with the environmental aspects requiring consideration in the EIS identified.

In addition, the DGRs identified a number of guideline documents to be referenced (if relevant) and/or reviewed during the preparation of the EIS (see **Appendix 1**). The approach taken to referencing and reviewing environmental guideline documents is provided in Section 3.2.3.7.

3.3.2 Commonwealth Planning Context

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) provides a framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places. These are collectively referred to as Matters of National Environmental Significance (NES). Under the EPBC Act, if a proposal has the potential to have a significant impact on a Matter of NES, it is required to be referred to the Department of the Environment and Energy (DoEE) for assessment as to whether it represents a 'controlled action' and therefore requires approval from the Minister for the Environment. Both KMA (2018) and Niche (2018) concluded that the Proposal's level of impact(s) on the species listed under the EPBC Act would be such that it is not necessary to refer the Proposal to the DoEE.

3.3.3 NSW Legislative Context

The key NSW legislation relating to the approvals, leases and licences required for the Proposal and their implications are as follows.

- *Environmental Planning and Assessment Act 1979*
- *Protection of the Environment Operations Act 1997*
- *Biodiversity Conservation Act 2016*
- *Water Management Act 2000*
- *Roads Act 1993*
- *Explosives Act 2003*

Environmental Planning and Assessment Act 1979

The *Environmental Planning and Assessment Act 1979* (EP&A Act) provides the framework for the assessment and approval of development in NSW and is administered by the DPE.

The EP&A Act aims to protect and conserve the environment through ecologically sustainable development. This is achieved through managing development to conserve resources, including agricultural land, natural areas, forests, minerals, water, and towns with the purpose of promoting social and economic welfare of the community and an enhanced environment.

Development consent is required under the EP&A Act for extractive industries in NSW. The Proposal has been submitted for approval under Part 4, Division 4.7 of the EP&A Act as a State significant development (SSD).

The EP&A Act sets out the process for assessment of SSD applications. An EIS is required for all SSD development applications and must address all of the Director-General's Requirements (or Secretary's Environmental Assessment Requirements) in adequate detail. The consent authority for the Proposal will be the Minister for Planning or his/her nominee or the Independent Planning Commission under delegation from the Minister.

Section 4.41 of the EP&A Act identifies that if development consent is granted for SSD, the following relevant authorisations are not required.

- A permit under section 201, 205 or 219 of the *Fisheries Management Act 1994*;
- An approval under Part 4, or an excavation permit under Section 139, of the *Heritage Act 1977*;
- An Aboriginal heritage impact permit under section 90 of the *National Parks and Wildlife Act 1974*;
- A bush fire safety authority under section 100B of the *Rural Fires Act 1997*;
- A water use approval under section 89, a water management work approval under section 90 or an activity approval (other than an aquifer interference approval) under section 91 of the *Water Management Act 2000*.

In addition, there are a number of relevant authorisations that must be granted upon approval of the Proposal (with or without conditions as determined by the relevant authority) including:

- an environment protection licence under Chapter 3 the *Protection of the Environment Operations Act 1997* (POEO Act); and
- a consent under section 138 of the *Roads Act 1993* (Roads Act).

Each of the above authorisations as well as an aquifer interference approval would be required for the Proposal.

Protection of the Environment Operations Act 1997

The *Protection of the Environment Operations Act 1997* (POEO Act) provides the environmental protection framework for regulation and reduction of pollution and waste in NSW as well as for monitoring of environmental quality. The POEO Act is administered by the Environment Protection Authority (EPA), which issues environment protection licences (EPLs) for wide-ranging scheduled activities, including extractive industries.

The POEO Act also requires immediate reporting of pollution incidents which cause or threaten to cause material harm to the environment. All holders of EPLs are required to prepare, implement and regularly test pollution incident response management plans. The Applicant would require an EPL under the POEO Act to carry out ‘land-based extractive activities’. The EPL would apply to the entire Site.

Biodiversity Conservation Act 2016

The purpose of the *Biodiversity Conservation Act 2016* (BC Act) is to maintain a healthy, productive and resilient environment for the greatest well-being of the community, now and into the future, consistent with the principles of ecologically sustainable development.

The commencement of the BC Act in August 2017 triggered the repeal of the *Threatened Species Conservation Act 1995*, *Native Vegetation Act 2003* and sections of the *National Parks and Wildlife Act 1974*, effectively consolidating this legislation in one act. The DGRs for the Proposal specifically references the *Threatened Species Conservation Act 1995* and therefore reference to this legislation has been retained in this document. However, it should be noted that all threatened flora, fauna and ecological communities are now listed under the schedules of the BC Act.

As the Proposal is State significant development, it is required to consider biodiversity impacts in accordance with the Biodiversity Offset Scheme of the BC Act, that requires that impacts are first avoided and then mitigated before being offset in accordance with scheme. Following the grant of development consent, the preliminary Biodiversity Offset Strategy (see Section 2.14) would be finalised and the necessary offsetting credit secured in accordance with the Biodiversity Offset Strategy.

In addition, KMA (2018) has included an assessment of the significance of biodiversity-related impacts of the Proposal in accordance with Section 7.2.3 of this document and Sections 7.2 and 7.3 of the BC Act through what is referred to as a ‘five-part test’. This assessment concluded that the removal of approximately 63.2ha of potential habitat for threatened fauna would represent a significant impact that requires offsetting.

Water Management Act 2000

The *Water Management Act 2000* (WM Act) which is administered by the Department of Industry – Crown Lands and Water has an objective of sustainable and integrated management of the State's water for the benefit of both present and future generations. The WM Act provides clear arrangements for controlling land-based activities that affect the quality and quantity of the State's water resources. It provides for four types of approval, namely:

- water use approval – which authorises the use of water at a specified location for a particular purpose, for up to 10 years;
- flood work approval – which authorises the construction and use of specified flood works at a specified location, for up to 10 years;
- water supply work approval – which authorises the construction and use of specified water supply; and
- controlled activity approval – which authorises works carried out within 40m of waterfront land and aquifer interference activities.

An aquifer interference activity approval authorises the holder to carry out specified activities that affect an aquifer such as activities that intersect groundwater or take water from an aquifer in the course of carrying out extraction.

Roads Act 1993

The *Roads Act 1993* (Roads Act) applies to public roads in NSW and, depending upon the type of road, is administered by the Roads & Maritime Service or by a local council.

Consent is required under section 138 of the Roads Act for works or structures that disturb the surface of a public road or connect a road to a classified road. However, Section 4.41 of the EP&A Act applies to SSD projects and requires that consent must not be refused, if the works are necessary for carrying out an approved project.

A series of permits under the Roads Act would be required to undertake the proposed road and intersection works and improvements for the Proposal. Council would be the issuing authority for the required permits.

A description of the proposed road works is provided in Section 2.8.3.

Explosives Act 2003

The *Explosives Act 2003* (Explosives Act) requires a person to hold a licence to handle, transport, store or use explosives and explosive precursors. A Dangerous Goods Licence would be required for the storage of explosives under the Explosives Act and the bulk storage of Class 3 Combustible Liquid (diesel).

While blasting would not constitute a regular activity under the Proposal, the Applicant does intend to blast some areas of sandstone where the fragmentation from the blasting would save considerable effort through conventional ripping.

3.3.4 NSW State Planning Context

State Environmental Planning Policy (State and Regional Development) 2011

This State Environmental Planning Policy (SEPP) was gazetted on 28 September 2011 and applies to all projects satisfying nominated criteria made following that date. One of the purposes of this SEPP is to define those developments of State significance and therefore requiring Ministerial approval under the provisions of the EP&A Act. This SEPP, and Part 4, Division 4.7 of the EP&A Act, is a system introduced to specifically deal with State significant projects.

As an extractive industry, the Proposal is identified as State Significant Development under Schedule 1 (7(a)) of this SEPP by virtue of annual extraction exceeding 500 000tpa and resource quantity exceeding 5 million tonnes. As such Part 4, Division 4.7 of the EP&A Act applies and the development requires approval from the Minister for Planning or his/her delegate or the Independent Planning Commission.

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

This SEPP (“the Mining SEPP”) was gazetted in recognition of the importance to New South Wales of mining, petroleum production and extractive industries and to provide proper management and orderly and economic use and development of land containing mineral, petroleum and extractive material resources and to establish appropriate planning controls to encourage ecologically sustainable development through environmental assessment, and sustainable management.

The SEPP specifies matters requiring consideration in the assessment of any mining, petroleum production and extractive industry development, as defined in NSW legislation. A summary of the matters that the consent authority needs to consider when assessing a new or modified proposal and where these have been addressed in this document is provided in **Table 3.2**.

Table 3.2
Application of SEPP (Mining, Petroleum Production and Extractive Industries) 2007

Page 1 of 2

Relevant SEPP Clause	Description	EIS Section
12: Compatibility with other land uses	Consideration is given to:	4.5
	• the existing uses and approved uses of land in the vicinity of the development;	Various Subsections of Section 5
	• the potential impact on the preferred land uses (as considered by the consent authority) in the vicinity of the development; and	
	• any ways in which the development may be incompatible with any of those existing, approved or preferred land uses.	
	The respective public benefits of the development and the existing, approved or preferred land uses are evaluated and compared.	5.14.5
	Measures proposed to avoid or minimise any incompatibility are considered.	Sections 5 and 6
12AB: Non-discretionary development standards for mining	Consideration is given to development standards that, if complied with, prevents the consent authority from requiring more onerous standards for those matters	5.2, 5.4 and 5.9

Table 3.2 (Cont'd)
Application of SEPP (Mining, Petroleum Production and Extractive Industries) 2007

Page 2 of 2

Relevant SEPP Clause	Description	EIS Section
13: Compatibility with mining, petroleum production or extractive industry	Consideration is given to whether the development is likely to have a significant impact on current or future mining, petroleum production or extractive industry and ways in which the development may be incompatible.	4.5.2
	The public benefits of the development and any existing or approved mining, petroleum production or extractive industry must be evaluated and compared.	5.14.5
	Measures taken by the Applicant to avoid or minimise any incompatibility are considered.	N/A
14: Natural resource and environmental management	Consideration is given to ensuring that the development is undertaken in an environmentally responsible manner, including conditions to ensure:	
	<ul style="list-style-type: none"> impacts on significant water resources, including surface and groundwater resources, are avoided or minimised; 	5.2 and 5.3
	<ul style="list-style-type: none"> impacts on threatened species and biodiversity are avoided or minimised to the greatest extent practicable. 	5.5 and 5.6
	<ul style="list-style-type: none"> greenhouse gas emissions are minimised to the greatest extent practicable. 	5.9.7.5
15: Resource recovery	The efficiency of resource recovery, including the reuse or recycling of material and minimisation of the creation of waste, is considered.	2.5 and 2.11
16: Transportation	The following transport-related issues are considered.	
	<ul style="list-style-type: none"> The transport of some or all of the materials from the Site by means other than public road. 	2.8
	<ul style="list-style-type: none"> Limitation of the number of truck movements that occur on roads within residential areas or roads near to schools. 	2.8.2, 5.1.5
	<ul style="list-style-type: none"> The preparation of a code of conduct for the transportation of materials on public roads. 	5.1.6
17: Rehabilitation	The rehabilitation of the land affected by the development is considered including:	
	<ul style="list-style-type: none"> the preparation of a plan that identifies the proposed end use and landform of the land once rehabilitated; 	2.13.3
	<ul style="list-style-type: none"> the appropriate management of development generated waste; 	2.11
	<ul style="list-style-type: none"> remediation of any soil contaminated by the development; and 	2.13.4
	<ul style="list-style-type: none"> the steps to be taken to ensure that the state of the land does not jeopardize public safety, while being rehabilitated or at the completion of rehabilitation. 	2.13.4

State Environmental Planning Policy (Rural Lands) 2008

The aims of the ‘Rural Lands SEPP’ are to facilitate development on rural land that is orderly and economic, promotes the social economic and environmental welfare of the State and avoids land use conflicts with existing agriculture. It also allows government authorities to identify State significance agriculture land and ensure the ongoing viability of agriculture in the State.

Specifically, and as described in Clause 12, the objectives of the Rural Lands SEPP are to provide for the protection of agricultural land:

- *that is of State or regional agricultural significance, and*
- *that may be subject to demand for uses that are not compatible with agriculture, and*
- *if the protection will result in a public benefit.*

The Proposal is considered with respect to these aims.

- The land that would be affected by the Proposal has not been identified as State or regional significant agricultural land by *Schedule 2* of the Rural Lands SEPP.
- The Proposal would not impact on any additional land currently managed for agriculture. As demonstrated at numerous other quarry sites where agricultural activities are undertaken concurrently within extractive industry, the Proposal would not be incompatible with continued agricultural land use surrounding the Site.
- The protection of the land that is the subject of the Proposal would not provide any public benefit. In fact, the employment and local economic stimulus that would be generated by the Proposal is considered to be of wider public benefit.

As a result, the Rural Lands SEPP is not considered further in this document.

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

Hazardous and offensive industries, and potentially hazardous and offensive industries, relate to industries that, without the implementation of appropriate impact minimisation measures, would, or potentially would, pose a significant risk in relation to the locality, to human health, life or property, or to the biophysical environment. **Appendix 3** presents a risk screening of the Proposal completed in accordance with the document entitled *Hazardous and Offensive Development Application Guidelines: Applying SEPP 33* (DoP, 2011). In summary, as the only hazardous substances materials to be stored on the Site would be restricted to well managed diesel fuel and other hydrocarbon products, the Proposal is not classified as potentially hazardous industry. This SEPP does not apply to explosives used on Site as the Applicant does not intend to store explosives on the Site. All explosives required for blasting would be transported to the Site on the day of each blast.

State Environmental Planning Policy No 44—Koala Habitat Protection

SEPP 44 aims to encourage the proper conservation and management of areas of natural vegetation that provide habitat for Koalas to ensure a permanent free-living population over their present range and reverse the current trend of Koala population decline.

The Wingecarribee Shire Local Government Area (LGA) is identified in Schedule 1 of this policy as an area that could provide habitat for Koalas. The policy requires an investigation be carried out to determine if core or potential Koala habitat is present within the proposed areas of disturbance within the Site. “Core Koala habitat” comprises land with a resident population of Koalas whereas “potential Koala habitat” comprises land that contains native vegetation with known Koala feed trees constituting at least 15% of the total number of trees present.

SEPP 44 has been addressed by the ecological consultant for the Proposal (Kevin Mills & Associates (KMA, 2018) – see *Specialist Consultant Studies Compendium* – Part 5A). KMA (2018) determined that although Koala feed trees, listed in Schedule 2 of the SEPP, are present on the Site, they constitute less than 15% of the trees within the Quarry Operations Area and therefore this area does not contain core or potential Koala habitat under SEPP 44. As such, no further consideration of the Policy is necessary. Comments from the local community regarding the presence of the Koala are considered in the review of potential ecological impacts in Section 5.5.6.

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

SEPP 55 aims to promote the remediation of contaminated land for the purpose of reducing the risk of harm to human health or any other aspect of the environment. In particular, this policy requires consideration of whether a development requires a consent for remediation works or not and, where warranted, requires that remediation works meet certain standards and notification requirements.

As the areas proposed for disturbance within the Site have previously been used only for quarrying, grazing cattle, and passive nature conservation, the Applicant is satisfied that no contaminated land occurs on the Site. SEPP 55 is therefore not considered further in this document.

State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011

The aims of this SEPP are to integrate the provision of healthy water catchments with development in catchment areas by ensuring that consent authorities must not grant consent to a proposed development unless it is satisfied that the proposed development would have a neutral or beneficial effect on water quality and not hinder the achievement of water quality objectives for the Sydney drinking water catchment.

Water captured within the Site ultimately drains to Long Swamp Creek which is located within the Upper Wollondilly River sub-catchment which forms part of the Hawkesbury-Nepean Catchment of NSW and Sydney's water supply. As a result, the requirements of the SEPP (Sydney Drinking Water Catchment) 2011 apply. The SEPP is administered by Water NSW, formerly the Sydney Catchment Authority (SCA).

In order to address water quality, a series of Current Recommended Practices (CRPs) and performance standards have been endorsed by Water NSW. The CRPs and standards provide best practice solutions to manage the impact on water quality of a range of land uses including construction activities, extraction industries, road building and on-site wastewater. If all the relevant CRPs are adopted and successfully implemented, then it can be assumed there would be a neutral or beneficial effect (NorBE) on water quality.

The surface water assessment for the Proposal referenced and, where appropriate, implemented the following CRPs.

- Volumes 1, 2a, 2c and 2e of OEH's series Managing Urban Stormwater for all earthmoving activities (construction, extraction, stockpiling, rehabilitation) (Landcom, 2004) (DECC, 2008a, 2008b and 2008c).

- Austroads (2000). Road Runoff and Drainage: Environmental Impacts and Management for the long term stormwater management at the Quarry Access Road.
- SCA (2012a) for Onsite Wastewater Management.

State Environmental Planning Policy (Infrastructure) 2007

The Proposal qualifies as a traffic generating development with relevant size or capacity under Schedule 3 of the SEPP (Infrastructure) 2007. In accordance with Clause 104, before determining the development application, the consent authority must refer the Proposal to the RMS.

In accordance with Clause 104 (3b), in determining the development application, the consent authority must take into consideration:

- ii) *the accessibility of the site concerned, including:*
 - a) *the efficiency of movement of people and freight to and from the site and the extent of multi-purpose trips, and*
 - b) *the potential to minimise the need for travel by car and to maximise movement of freight in containers or bulk freight by rail, and*
- iii) *any potential traffic safety, road congestion or parking implications of the development.*

3.3.5 Regional Planning Issues

South East and Tablelands Regional Plan 2036

The *South East and Tablelands Regional Plan 2036* plan has been reviewed to draw out the key strategic areas that should be addressed in the environmental assessments for the Proposal. The Proposal would be located within the Southern Highlands and Tablelands regional landscape described in the plan as being characterised by its natural beauty and heritage. The Southern Highlands and Tablelands area contains high value natural environments and is within the Sydney Drinking Water Catchment. These natural elements are balanced with tourism and mining and areas with high winds suitable for renewable energy investment.

The strategic goals of the *South East and Tablelands Regional Plan 2036* are as follows.

- A connected and prosperous economy
- A diverse environment interconnected by biodiversity corridors
- Healthy and connected communities
- Environmentally sustainable housing choices

The Proposal would assist the region to achieve its goals in relation to economic opportunities given that it is a State significant development for the purposes of sand extraction, the majority of which would be sold into the Sydney market, therefore bringing investment to the region. The plan recognises the importance of the region's mineral resources including sand resources and identifies actions to limit land use conflicts and ensure that the social, economic and

environmental implications of extractive activities are managed throughout the life of the Quarry. The Proposal would also assist to build a strong, healthy and well-connected community through the provision of employment and the economic boost to local suppliers of consumables. These matters are considered in greater detail in Section 5.14.

The *South East and Tablelands Regional Plan 2036* describes the importance of areas of high environmental value in the region, including wetlands and riparian areas, as well as the need to reserve biodiversity corridors. Section 2.14 describes the extent of native vegetation clearing required for the development of the Proposal and the proposed Biodiversity Offset Strategy to offset residual impacts to native vegetation and threatened species identified in the proposed area of disturbance. The preliminary Biodiversity Offset Strategy describes the options to secure an approximately 102ha offset area adjacent to the Site and offset of additional land to satisfy offsetting requirements in accordance with the *Biodiversity Conservation Act 2016*. Once the biodiversity offset areas have been secured, vegetation and fauna habitat adjacent to Long Swamp Creek would be preserved in perpetuity, as well as securing the connectivity of this landscape with nearby native vegetation. An assessment of potential impacts to native flora and fauna including consideration of wildlife corridors and Groundwater Dependent Ecosystems is presented in Section 5.5.

Direction 18 of the plan describes the need to protect and secure the region's water resources through water sharing plans and management strategies. Potential impacts to groundwater and surface water resources are assessed in Section 5.2 and Section 5.3, respectively. Based on the fact that water for the Proposal would be secured under existing licenced allocations or in accordance with the Maximum Harvestable Right of the property and the proposed erosion and sediment controls and water management protocols that would be implemented, it is not considered likely that the Proposal would result in significant changes to the availability or quality of drinking water in the region.

While the Proposal requires the removal of approximately 63.2ha of native regrowth and remnant vegetation, the proposed biodiversity offset and management measures to limit noise, air quality and transportation impacts would result in similar or improved biodiversity values in the medium to long term. The Proposal is also not likely to impact drinking water resources in the region. Therefore, it is concluded that the Proposal would not limit the achievement of the goals described in the *South East and Tablelands Regional Plan 2036*.

Illawarra Regional Environmental Plan No. 1

Planning in the Illawarra region, in which the Site is located, is controlled principally by Illawarra Regional Environmental Plan No. 1 (IREP No. 1), which has been in force since 1 July 2009. The main aim of IREP No. 1, as it relates to the Proposal is

“to maximise the opportunities for the people of the region and the State to meet their individual and community economic and social needs with particular reference to the way in which these needs are related to the allocation, availability, accessibility and management of the region's land resources by:

- (a) identifying regional planning issues and provisions applicable or potentially applicable,*
- (i) to actual development which may be carried out on land within the region, and*

- (ii) *to the overall planning of the region consistent with the policies for draft local environmental plan preparation.”*

The Proposal has been designed to minimise potential environmental and amenity impacts while maximising economic and social benefits (see Section 5.14).

IREP No. 1 incorporates clauses relating to wildlife corridors which are relevant to the Proposal, namely Part 2, Clauses 15(1) and 15(2) as follows.

1. *The consent authority shall not grant consent to the carrying out of development having the effect of bridging, obstructing or otherwise affecting waterways on land shown on the map as a wildlife corridor unless it is satisfied that reasonable opportunities for wildlife movement would be maintained.*
2. *The consent authority must not grant development consent to an application to carry out development on land shown on the map as a wildlife corridor that, in the opinion of the consent authority, would involve significant tree felling or vegetation clearance unless it is satisfied that:*
 - *the development would be so managed as to not have any long-term detrimental impact on opportunities for wildlife movement, or*
 - *the development is designed to enhance the retention and augmentation of vegetation native to the area.*

Potential impacts to wildlife corridors and the connectivity of the Site are assessed in Section 5.5 and were considered in the preparation of the preliminary Biodiversity Offset Strategy.

3.3.6 Wingecarribee Local Environment Plan 2010

3.3.6.1 Introduction

The Proposal would involve activities undertaken within the Site and its access. This subsection addresses the land zoning relevant to both activities.

3.3.6.2 The Site

The Site is located on land zoned Environmental Management (E3) under the Wingecarribee Local Environmental Plan 2010 (LEP) (see **Figure 3.1**). The objectives of the zone are listed as follows.

- *To protect, manage and restore areas with special ecological, scientific, cultural or aesthetic values.*
- *To provide for a limited range of development that does not have an adverse effect on those values.*

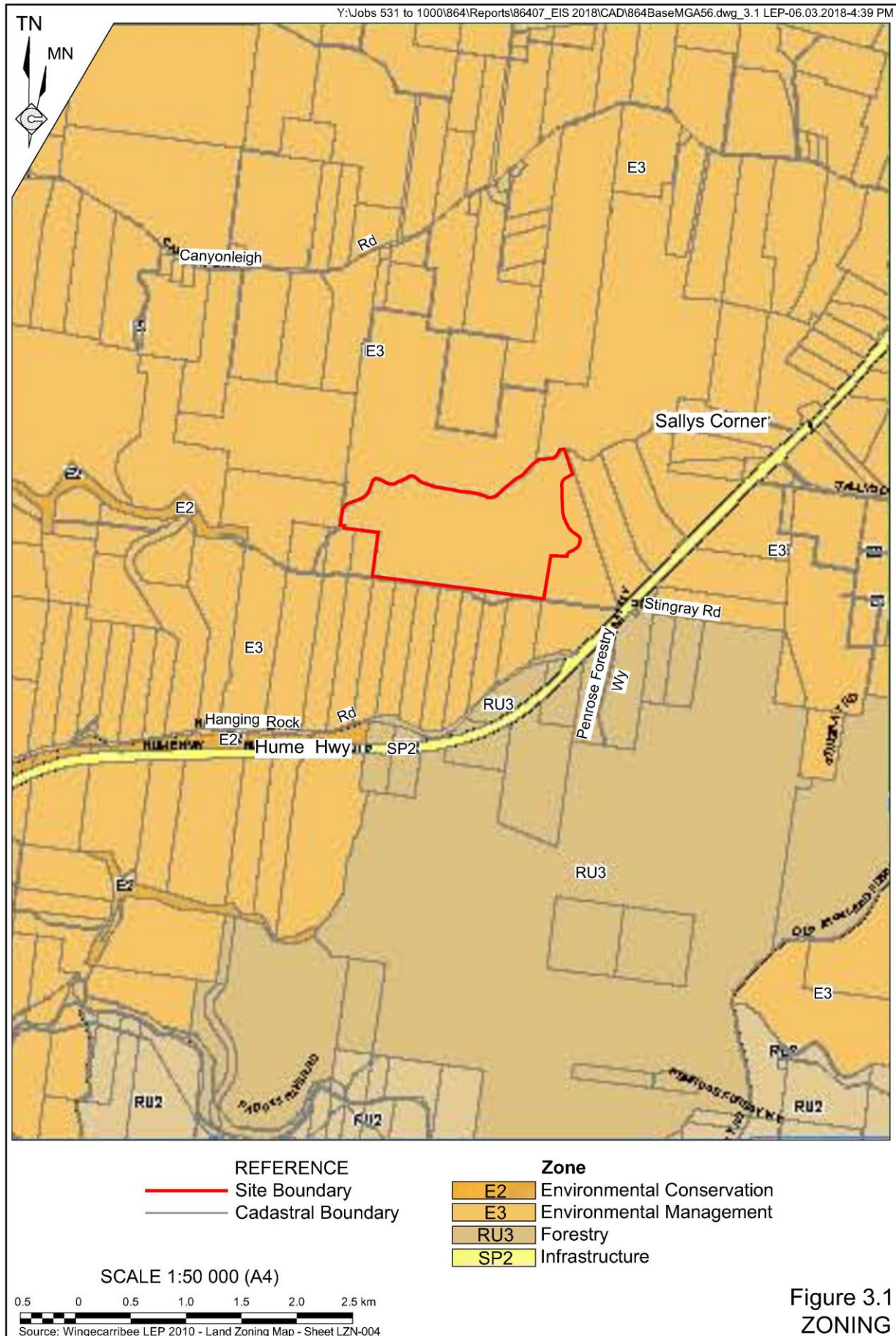


Figure 3.1
ZONING

- *To encourage the retention of the remaining evidence of significant historic and social values expressed in existing landscape and land use patterns.*
- *To minimise the proliferation of buildings and other structures in these sensitive landscape areas.*
- *To provide for a restricted range of development and land use activities that provide for rural settlement, sustainable agriculture, other types of economic and employment development, recreation and community amenity in identified drinking water catchment areas.*
- *To protect significant agricultural resources (soil, water and vegetation) in recognition of their value to Wingecarribee's longer term economic sustainability.*

Under the LEP 2010, extractive industries within the E3 – Environmental Management zone are prohibited, however, it is noted that the proposed extractive industry is a permissible use in accordance with the provisions of Clause 7(3)(a) of *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007* which states that:

“(3) Development for any of the following purposes may be carried out with development consent:

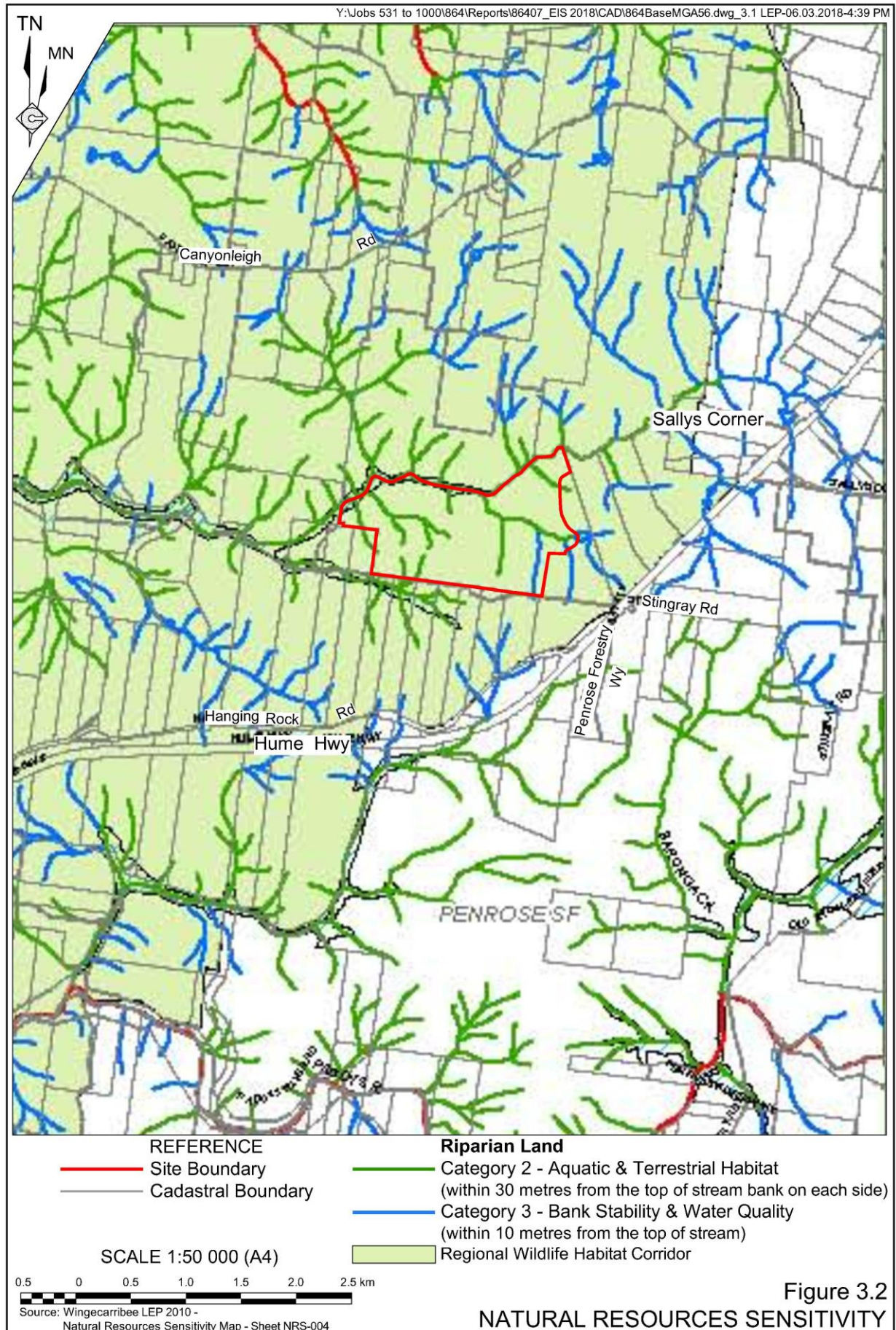
(a) extractive industry on land on which development for the purposes of agriculture or industry may be carried out (with or without development consent)”

Given that agricultural activities are permitted without consent in the E3 Zone, the Proposal is considered to be able to be carried out with development consent issued under Part 4 (Division 4.7) of the EP&A Act.

It is noted that the Site is located on land specified under the Natural Resources Sensitivity Map of the Wingecarribee LEP 2010 as within land identified as regional wildlife habitat corridor (see **Figure 3.2**). This figure also displays Category 2 and Category 3 Riparian Land traversing the Site. Each of the watercourses traversing the Site are addressed in Section 5.3. Under clause 7.4 of the Wingecarribee LEP 2010, before determining a development application the consent authority must consider any potential adverse impact of the proposed development on the following:

- a) the native ecological community;
- b) the habitat of any threatened species, population or ecological community;
- c) any regionally significant species of fauna, flora or habitat; or
- d) habitat elements providing connectivity.

Each of these items has been considered in the assessment of assessment of terrestrial ecology (section 5.5) and aquatic ecology (Section 5.6) as well as in the preparation and assessment of the preliminary Biodiversity Offset Strategy (Section 2.14). Where possible the development has been designed to avoid, minimise or mitigate potential adverse environmental impacts. Where this is not possible, residual impacts to native vegetation would be suitably offset in accordance with the requirements of the OEH.



In addition, the Site would impact land identified on the Natural Resources Sensitivity Map of the Wingecarribee LEP 2010 as riparian land under Category 2 (aquatic and terrestrial habitat) and Category 3 (bank stability and water quality).

Under clause 7.5 of the Wingecarribee LEP 2010, before determining a development application the consent authority must consider any potential adverse impact of the proposed development on the following:

- a) the natural flow regime;
- b) the water quality of receiving waters;
- c) the waterway's natural flow paths;
- d) the stability of the waterway's bed, shore and banks; and
- e) the flow, capacity and quality of groundwater systems.

Each of these items has been considered in the assessment of groundwater (Section 5.2) and surface water (Section 5.3) and concluded that there would be only minor impacts to Long Swamp Creek if the proposed operational design and control measures are implemented.

3.3.6.3 Access to the Site

The Applicant proposes to construct a new interchange on the Hume Highway approximately 1.7km south of the Sallys Corner Interchange to provide direct access to the Quarry Access Road. The southbound off-ramp section of the interchange would also provide access to the Kingsbury VC Rest Area and the Penrose State Forest via Penrose Forest Way. The land on which the southbound off-ramp and ancillary roads would be constructed is zoned RU3 – Forestry under WLEP 2010 on which the construction of roads is a permissible use without Council's consent.

The northbound on-ramp would be located within the Hume Highway corridor zoned SP2 – Infrastructure under WLEP 2010 which allows the construction of roads with the consent of Council.

The east-west section of the Quarry Access Road between the Hume Highway and the Site would be located on land zoned E3 – Environmental Management. The construction and use of the Quarry Access Road would be permissible given its sole purpose is related to the extractive industry within the Site discussed in 3.3.6.2.

Wingecarribee Rural Lands Development Control Plan

The *Wingecarribee Rural Lands Development Control Plan* applies to all rural land within the Wingecarribee LGA (that is; land zoned RU1 Primary Production, RU2 Rural Landscape E2 Environmental Conservation, E3 Environmental Management and SP3 Tourist). The plan provides development controls for specific types of development in rural land.

The Quarry is located on land zoned E3 – Environmental Management. Under the *Wingecarribee Rural Lands Development Control Plan* extractive industries are not permissible in the E3 Zone. However, as described previously, in accordance with the provisions of Clause 7(3)(a) of *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007*, given that agricultural activities are permitted in the E3 Zone, the Proposal is considered to be able to be carried out with development consent issued under Part 4 (Division 4.7) of the EPA Act.

The *Wingecarribee Rural Lands Development Control Plan* describes the objectives that should be achieved for an extractive industry development on rural lands. These include the following.

- a) *To ensure best practice methodologies and current recommended practices are employed by land owners / managers.*
- b) *To ensure that no adverse impacts or effects occur as a result of any rural or extractive industries.*
- c) *To ensure no pollutants are generated and / or released into the water catchments as a result of any rural or extractive industries.*
- d) *To ensure that no rural or extractive industries pose any risk or safety threat to any residents of the Shire.*
- e) *To ensure that any rural or extractive industries have mitigated any negative impacts prior to operation.*
- f) *To ensure that all rural or extractive industries are subjected to regular testing and checking to ensure compliance with all relevant legislation and recommended practices*

The proposed modification would not limit the achievement of these objectives. Section 5 describes the potential environmental impacts of the Proposal and design and operational controls that would be implemented to mitigate land use conflicts resulting from these impacts. The operation would be managed in accordance with these mitigation measures and a range of comprehensive management plans and strategies that would be required under the conditions of any consent. The management plans would also include a series of ongoing monitoring, reporting and compliance management measures that would be made publicly available.

3.3.7 Environmental Guidelines

The DGRs require that in assessing the identified key assessment requirements, reference be made to one or more guideline documents. In addition, a number of the government agencies consulted in relation to the Proposal required reference to other environment guideline documents. Where relevant the guideline documents have been referenced throughout Section 5 of the EIS and in the appropriate specialist consultant assessment reports provided in the *Specialist Consultant Studies Compendium*. **Appendix 2** provides a summary of where in the EIS the DGRs and other assessment requirements have been addressed and includes reference to the relevant guideline documents.

3.4 PRELIMINARY ENVIRONMENTAL RISK ASSESSMENT

Risk is the chance of something happening that would have an impact upon the objectives or the task, which in this case is the construction and operation of the Sutton Forest Sand Quarry without unacceptable environmental impact. Risk is measured in terms of consequence (severity) and likelihood (probability) of an event happening.

A preliminary environmental risk assessment, prepared in accordance with Australian and International Standards HB 203:2012, HB 89:2012 and IEC/ISO 310101 2009 was undertaken to identify environmental parameters that may be affected by the Proposal. Risk sources, potentially affected residences or environments, potential consequences and specific potential impacts were then identified. A review of the proposed operations, the local environment and other factors was undertaken to identify the likely consequence and likelihood of each potential environmental impact.

The level of risk was established assuming the implementation of standard control and mitigation measures within the sand quarrying industry and is referred to as the risk with standard control measures. In some cases, it was accepted that the standard controls and mitigation measures would be adequate to achieve an acceptable level of impact without the need for any additional controls or mitigation measures.

The results of the preliminary environmental risk assessment, with standard control measures applied, is provided as **Appendix 4**. The identified risks and risk levels have been used in prioritising issues for presentation of the EIS and also used in addition to the DGRs and government agency assessment requirements to identify priorities for assessment.

3.5 ENVIRONMENTAL ISSUE PRIORITISATION

The prioritisation of the key environmental issues, and hence their general order of presentation in this document, has been established through reference to the following.

- The results of the issue identification process recorded in Section 3.2 and Section 3.3.
- The risk analysis outlined in **Appendix 4**.
- The benefit of sequentially presenting issues with inter-related subjects.
- The experience of the document's author in assembling *Environmental Impact Statements*.

The key environmental issues are presented in Section 5 in the following order.

- | | |
|---------------------------------|-------------------------------|
| 1. Traffic and Transport | 8. Historic Heritage |
| 2. Groundwater | 9. Air Quality |
| 3. Surface Water | 10. Soils and Land Capability |
| 4. Noise and Vibration | 11. Visibility |
| 5. Terrestrial Ecology | 12. Agricultural Resources |
| 6. Aquatic Ecology | 13. Bush Fire Hazard |
| 7. Aboriginal Cultural Heritage | 14. Socio-economic |

It is noted that the positioning of the Socio-economic Assessment within the above order is not a direct consequence of the prioritisation assessment. Rather, from the assessment of the risk sources, potential consequences and nature of the existing environment, it was apparent that the majority of other environmental issues identified included actual or perceived social or socio-economic risks and, as such, it was appropriate that socio-economic issues be addressed following the discussion of the contributing issues.