Section 3

Issue Identification and Prioritisation

PREAMBLE

This section describes how the environmental issues assessed in the Environmental Impact Statement were identified and prioritised.

In summary, a comprehensive list of all relevant environmental issues was assembled through consultation with the local community and local and State government agencies, completion of background environmental studies and a review of relevant legislation, planning documents and environmental guidelines.

A review of the design of the Proposal and the components of the local environment was undertaken to identify risk sources and potential environmental impacts for each environmental issue to determine the relative priority of each issue and provide an order of assessment and breadth of coverage within Section 4.

The risk rankings were initially applied following the adoption of standard control measures and then with all proposed control measures to establish the residual risk ranking. The results of both risk rankings are presented in Section 6.2.
3.1 INTRODUCTION

In order to undertake a comprehensive assessment of the environmental impacts arising from the Rocky Hill Coal Project, appropriate emphasis needs to be placed on those issues likely to be of greatest significance to the local environment, neighbouring landowners and the local and broader community. To ensure this has occurred, a program of community and government consultation and review of environmental planning documentation has been 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 Environmental Impact Statement.

3.2 ISSUE IDENTIFICATION

3.2.1 Introduction

Identification of environmental issues relevant to the Proposal involved a combination of consultation and background investigations and research. This included:

- consultation with surrounding landowners, the local community and surrounding resource companies (Sections 3.2.2.1, 3.2.2.2 and 3.2.2.3 respectively);
- consultation with Federal, State and local government agencies (Section 3.2.2.4); and
- reference to relevant NSW legislation, planning issues, policies and guidelines (Section 3.2.3).

3.2.2 Consultation

The following subsections introduce the methods used by the Applicant throughout the planning for the Proposal to inform interested stakeholders about the Proposal and its status and to identify issues for coverage in the EIS. Each of the groups, organisations or individuals consulted were nominated in the DGRs for the Proposal (see Appendix 2).

3.2.2.1 Consultation with Surrounding Landowners

The Applicant has discussed its plans for the Rocky Hill Coal Project (the Proposal) with a number of landowners since the Applicant decided to proceed with the Proposal. In a number of cases, those discussions culminated in the purchase of properties whereas for other landowners, they were informed of the general plans for the Proposal and the proximity of the various components of the Proposal to their properties and/or residences. The Applicant has maintained and “open-door” policy with the adjoining landowners encouraging contact at any time regarding its plans.
3.2.2.2 Community Consultation

Extensive community consultation has been undertaken throughout the design of the Proposal and during the preparation for the *Environmental Impact Statement* using a range of forums ranging from one on one discussions to Community Consultative Committee meetings. The issues identified throughout each of the consultation processes have been addressed by the following means and explored in detail throughout the *Environmental Impact Statement* and the supporting specialist consultant reports.

Under the terms of ELs 6523, 6524 and 6563 administered by the Division of Resources and Energy (DRE) within the Department of Trade and Investment, Regional Infrastructure and Services (DTIRIS - formerly Department of Primary Industries – Mineral Resources), a community consultative committee, known as the Gloucester Exploration Project Community Consultation Committee (CCC), was established in 2007 to:

> “provide a forum for open discussion between the company, Gloucester Resources Limited, the appointed community representatives, other interested stakeholders and relevant government agencies. The process includes exchange of information, proper identification and addressing of potential concerns and conflicts of interest. Of equal importance, it is aimed at facilitating good working relationships amongst committee members and to act as a conduit to assist Gloucester Resources Limited to improve communication, education and notification with the general community.”

Throughout the period of baseline investigations which culminated in the Applicant’s announcement to proceed with the Rocky Hill Coal Project, and the process from requesting the Director-General’s Requirements from the Department of Planning and Infrastructure (DP&I) and *Environmental Impact Statement* preparation to submission of the development application, the function of the committee has been expanded to one of a de facto Rocky Hill Coal Project CCC.

The CCC comprises representatives of the Applicant, Gloucester Shire and Great Lakes Councils, DRE and the public, including active members of the BGSPA. The CCC has held in excess of 30 meetings to date with the key issues raised including land purchases, air quality and health impacts, mining in proximity to Gloucester, agricultural property management, environmental data availability, and the development of the Company’s website.

Since early 2012, the Applicant has also:

- established a website, www.rockyhillproject.com.au, that has provided a mechanism for members of the community to pose questions and raise any issues/concerns, as well as present summaries of air quality and meteorological monitoring data, fact and information sheets, news and press releases and the minutes of meetings of the CCC;
- released two newsletters and various press releases to inform the local and broader community within the Gloucester Local Government Area about the Proposal, the Applicant’s activities and other salient information; and

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1 Source: Charter of the Gloucester Exploration Project Community Consultative Committee
engaged in a program of individual landowner and broader community consultation to inform potentially affected persons and the broader community about its proposed activities and its environmental investigations. Community consultation undertaken to date has enabled the Applicant and/or its specialist consultants to engage with a number of potentially interested stakeholders about their concerns and identify issues to be addressed in the design of the Proposal and incorporated into the Environmental Impact Statement.

From the ongoing consultation through and within the CCC, meetings that involved the wider community and discussions with individuals, community groups and Gloucester Shire Councillors and staff, the following list identifies the environmental issues relating to the Proposal that were most of concern.

1. Air quality impacts
2. Groundwater and surface water impacts
3. Ecological impacts
4. Health issues
5. Noise impacts
6. Local traffic impacts
7. Potential employment
8. Visibility and visual amenity impacts
9. Incompatibility with E3 zoning and the LEP
10. Impacts on tourism

As part of the wider Socio-Economic Impact Assessment (SEIA), Key Insights undertook a program of research which included a Community Perception Survey to gauge the issues and concerns that the community had regarding the Proposal and extensive consultation with individuals, business owners and operators, service providers, Council and community groups including Forbesdale residents, Gloucester Residents in Partnership (GRIP) and youth focus groups. Volume 4 Part 14 of the Specialist Consultant Studies Compendium records in detail the survey’s questions and responses, with the following issues identified in order of frequency within the survey results.

1. Impacts on the water supply in the local area
2. Dust impacts
3. Visual impacts of the proposed open cut mine
4. Impacts on agriculture
5. Impacts on the local character of the area
6. Noise impacts
7. Flora and fauna impacts
8. Increased traffic associated with workers and deliveries to the Site
9. Coal mining’s impact on climate change
10. More trains moving on local railway lines
The issues arising from the consultation undertaken by the Applicant and the research by Key Insights, together with the matters raised by BGSPA in their submission to DP&I identifying matters of concern regarding the Proposal, have been comprehensively addressed in the Environmental Impact Statement and the appropriate specialist consultant studies.

3.2.2.3 Other Resource Companies and Infrastructure Owners

The Applicant participated in discussions with Stratford Coal Pty Ltd (now a subsidiary of Yancoal Australia Limited), AGL Upstream Infrastructure Investments Pty Ltd and TransGrid regarding issues of mutual interest for their respective projects, and areas of interaction. Discussions have also been held with Australian Rail Track Corporation (ARTC) and Port Waratah Coal Services (PWCS) regarding the rail delivery to, and export of product coal from, the Port of Newcastle.

**Stratford Coal Pty Ltd (now a subsidiary of Yancoal Australia Limited)**

Over the past 2 years, the Applicant has consulted extensively with senior management of Stratford Coal Pty Ltd, together with their environmental consultants (Resource Strategies Pty Ltd), in relation to their planned activities in the Gloucester area and the potential cumulative issues. Non-commercially sensitive information including background and operational monitoring data has also been exchanged.

This EIS has been prepared with the input from a range of specialist consultants who have incorporated an assessment, where applicable, of the likely cumulative impacts of the Rocky Hill Coal Project and the Stratford Extension Project. It was necessary for some assessments undertaken by the specialist consultants to rely upon limited, publicly available data for the Stratford Extension Project. The outcomes of the cumulative assessments undertaken using the limited publicly available data have been reviewed since the release of the EIS for the Stratford Extension Project in November 2012. In most cases, the assessments undertaken using the earlier, publicly available data have been retained as the level of change to the likely impacts based upon the advertised EIS would be negligible.

**AGL Upstream Infrastructure Investments Pty Ltd (AGL)**

Stage 1 of the approved Gloucester Gas Project includes the development of 110 coal seam gas (CSG) wells, associated pipelines and other infrastructure within the Gloucester Basin in an area extending from south of Stratford to Waukivory Road, part of which overlays the Site. Figure 1.6 displays the boundary of AGL’s Petroleum Exploration Licence 285 and the indicative locations of the proposed CSG wells, together with the locations of the four exploration (pilot) wells and existing and proposed water monitoring bores in the vicinity of the Site.

AGL and the Applicant have been working collaboratively for almost 2 years to develop a Petroleum and Coal Co-operation Agreement and Co-operation Plan and are working to have both finalised and executed during 2013. The purpose of the proposed Agreement and Plan is to provide for safe, efficient and expedited processes under which both parties may undertake exploration and development activities on the overlapping parts of their tenements (PEL285, EL6523, EL6524 and EL6563). The Agreement and Plan will enable a Mining Lease (ML) and Petroleum Production Licence (PPL) to partially overlap.
This Agreement and Plan will outline how AGL and the Applicant will co-ordinate and undertake the Applicant’s proposed mining activities and AGL’s production activities, including the installation and operation of all required supporting infrastructure such as the Applicant’s overland conveyor and AGL’s wells, pipelines and access roads, to effectively and efficiently develop the State’s resources.

The Co-operation Agreement and Co-operation Plan will facilitate and regulate the carrying out and development of mining activities and petroleum production activities in a way that is safe, efficient, and viable and optimises both CSG and coal production and include:

- exploration access protocols;
- timing and interaction of the each company’s production activities;
- rehabilitation obligations; and
- Health Safety and Environment management and interaction.

Both the Applicant and AGL consider that both projects can operate concurrently within the terms of the approvals for the Gloucester Gas Project and within the terms of any approvals which might be given for the Rocky Hill Coal Project, with the detailed consideration of the interaction between the projects to be incorporated into a Mining Operations Plan if an ML is granted for the Rocky Hill Coal Project, and the Petroleum Operations Plan if a PPL is granted for the Gloucester Gas Project.

During the past 2 years, AGL and the Applicant have also engaged in an extensive and free exchange of data and other information which has been utilised in the development of the geological and groundwater models for the Proposal and by various other specialists engaged in the preparation of this document. Cumulative impact assessments relating to groundwater, noise and air quality have also reflected the information in AECOM (2009).

**TransGrid**

In view of the necessity to re-locate the existing TransGrid 132kV power line which currently traverses the eastern section of the Mine Area to facilitate open cut pit development and out-of-pit overburden emplacement activities, and the currently-preferred option (Option 1) for the construction of the Stroud to Lansdowne 330kV power line, the Applicant has been in regular consultation with TransGrid in both Newcastle and Sydney. During the process, the requirements and timing for each party’s activities were discussed and TransGrid has indicated it is satisfied with the proposed corridor shown on Figure 2.1 for both the re-located 132kV power line and their requirements should they proceed with Option 1 (and 1(a) or 1(b)) for the Stroud to Lansdowne Transmission Line Project.

3.2.2.4 **Consultation with Government Agencies and Other Groups**

A Planning Focus Meeting (PFM) was held on site on 14 March 2012. During that meeting, an overview of the Project, as it was then understood, was presented and all attendees from State and local government agencies inspected the Site. Following the site inspection, the various government agencies present verbally outlined the issues from their perspectives that the EIS should address. A number of these issues and others were subsequently provided to the Department of Planning and Infrastructure (DP&I) in writing to assist DP&I in formulating the Director-General’s Requirements (DGRs) for the Proposal. The DGRs and the correspondence...
from the various agencies and the BGSPA were provided to the Applicant on 24 April 2012. A full copy of the DGRs is reproduced in Appendix 2 of this document. A tabulated summary of all requirements raised in the DGRs and the correspondence to DP&I provided by government agencies, Gloucester and Great Lakes Shire Councils, and the BGSPA, and where each issue is addressed in the EIS and accompanying documents, is presented in Appendix 3.

In addition to the above, the following consultation was undertaken with specific agencies.

- On 1 June 2011, the Applicant presented a Conceptual Project Development Plan to the Division of Resources and Energy (DRE), with support for the Proposal being provided by DRE to DP&I on 25 July 2011.

- Representatives of the Applicant, R.W. Corkery & Co Pty Limited, Australasian Groundwater and Environmental Consultants and WRM Water and Environment hosted representatives of the NSW Office of Water on site in February 2011 to discuss the Applicant’s plans, existing studies, potential issues and management measures and the planned approach to the groundwater and surface water assessments. Further meetings were also held in April 2012 to seek comment on the documented approach to the groundwater modelling and model development, and in August 2012 to discuss the outcomes of the groundwater and surface water assessments.

- In March 2012, the Applicant hosted an on-site meeting and site visit with a number of the then incumbent Gloucester Shire Councillors and senior Council staff which involved a presentation similar to that provided at the Planning Focus Meeting.

- The Applicant has explained the Proposal and hosted site visits by other officers of DRE as well as regularly engaging with senior DRE personnel regarding various operational and procedural matters pertaining to the Proposal.

- The Applicant consulted the Commonwealth Department of Sustainability, Environment, Water, Population and Communities (DSEWPaC) regarding the Proposal and lodged a referral to the Department under the provisions of the EPBC Act. The DSEWPaC notified the Applicant on 11 May 2012 that the Proposal is not a controlled action.

In summary, the following government agencies and organisations have been consulted by the Applicant and/or its specialist consultants during the development of the Proposal.

- Department of Planning and Infrastructure (DP&I)*.
- Environment Protection Authority (EPA)*.
- Office of Environment and Heritage (OEH)*.
- NSW Office of Water (NOW)*.
- Gloucester Shire Council (Council)*.
- Division of Resources and Energy (DRE)*.
- Hunter New England Population Health (NSW Health)*.
• Mid-Coast Water (MCW)*.
• Hunter-Central Rivers Catchment Management Authority (HCRCMA)*.
• Roads and Maritime Services (RMS).
• Department of Primary Industries – Catchments and Lands (DPI).
• TransGrid.
• Great Lakes Council (GLC).
• Australian Rail and Track Corporation Ltd (ARTC).

Representatives of those government agencies identified with an asterisk (*) attended the Planning Focus Meeting held on 14 March 2012.

The DGRs specified that in preparing the EIS, consultation was to be undertaken with nominated agencies, regardless of previous communications between the Applicant, DP&I and individual government agencies. In accordance with this request, in late June and early July 2012, letters initiating formal consultation and requesting matters for consideration in the EIS were distributed to each individual government agency which attended the PFM, as well as the following government agencies that either did not attend the PFM or submit matters to be incorporated into the DGRs.

• Department of Primary Industries – Agriculture (DPI - Agriculture)
• Department of Primary Industries – Fisheries (DPI - Fisheries)
• Department of Primary Industries – Forests (DPI - Forests)
• Hunter Valley Coal Chain Coordinator Limited (HVCCC)
• RailCorp
• Newcastle Ports Corporation

Of the government agencies contacted, initiating formal consultation and requesting matters for consideration in the EIS, only the Department of Primary Industries – Fisheries and Newcastle Ports Corporation responded, submitting their input on 29 June 2012 and 2 August 2012 respectively. The matters raised by DPI – Fisheries have been addressed within the Aquatic Ecology Assessment presented in Volume 3 Part 8 of the Specialist Consultant Studies Compendium and the Environmental Impact Statement. The matters raised by Newcastle Ports Corporation relate to the Applicant applying for contracts regarding terminal access, track access and a rail contract. These matters are currently being addressed by the Applicant and would be further pursued during the assessment of the development application and EIS.

Table 3.1 presents a summary of the environmental issues identified in correspondence from the DP&I and other State and local government agencies.
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Government Agency Issue Identification

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* OEH includes the Heritage Council of New South Wales which separately submitted Director-General’s Requirements to the Department of Planning & Infrastructure.

Following the preparation of the EIS and before the public exhibition, the DP&I requested each of the above agencies to review a copy of the EIS and supporting documentation to establish whether the EIS contained the information required to comply with the DGRs. The responses to this request were provided to the Applicant including a commentary on the issues which needed further information or clarification. In some cases, e.g. with respect to noise, the Applicant and its noise consultant met with representatives of the EPA to clarify various issues raised in the EPA’s response to the EIS. The exhibited EIS has addressed each of the comments provided to the extent considered appropriate.

3.2.3 Relevant Legislation, Planning Issues, Policies and Guidelines

3.2.3.1 Introduction

A range of Commonwealth and NSW Legislation applies to the proposed Rocky Hill Coal Project. These pieces of legislation and statutory instruments were reviewed to identify any environmental aspects requiring consideration in the Environmental Impact Statement. In addition, the DGRs identified a number of guideline documents that would potentially be of
assistance during the preparation of the Environmental Impact Statement (see Appendix 2). A brief summary of each relevant piece of legislation and planning instrument is provided in the following subsections. The application and relevance of planning instruments related to specific environmental issues have been addressed in the relevant specialist consultants assessments.

3.2.3.2 Commonwealth Legislation

Native Title Act 1993

The Native Title Act 1993 (Cth) (NT Act) provides for the recognition and protection of native title rights and interests of Aboriginal and Torres Strait Islander peoples to land and waters according to their traditional laws and customs. It also establishes a mechanism to determine claims to native title. Native title rights and interests can only exist if they have not been extinguished by a prior valid grant of a right which is inconsistent with the continuation of native title rights and interests (such as the grant of freehold title).

A native title determination application (or native title claim) may be made pursuant to the NT Act. Upon lodgement of a native title claim, the National Native Title Tribunal (NNTT) is required to apply a registration test and either accept the native title claim for registration or reject it. The NNTT maintains a register of native title claims.

Proposed activities that may affect native title, including the grant of a mining lease, are called ‘future acts’. A future act will only be valid to the extent that it affects native title if the procedural requirements set out in the NT Act are followed. If a native title claim is accepted for registration, the native title claimant is entitled to negotiate about future acts over the land that is subject to the native title claim.

The Applicant has confirmed that there are no existing native title claims over the Site nor is there any land within the proposed mining lease area that is claimable land under the NT Act. On this basis, the mining leases can be granted to the Applicant without the need to follow any procedures under the NT Act.

Environmental Protection and Biodiversity Conservation Act 1999

The Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) covers ‘matters of national environmental significance’. Matters of national environmental significance include:

- world heritage properties;
- wetlands listed under the Ramsar Convention;
- listed threatened species and ecological communities;
- listed migratory species protected under international agreements;
- nuclear actions;
- the Commonwealth marine environment; and
- National heritage places.
'Actions' are defined in the EPBC Act to include projects and developments. Actions which would or would be likely to have significant impacts on matters of national environmental significance, or which might significantly impact on the environment or Commonwealth land, are ‘controlled actions’. The Minister for Sustainability, Environment, Water, Population and Communities determines whether a proposed action is a controlled action for the purpose of the EPBC Act. The carrying out of controlled actions are prohibited, unless approved by the Minister.

The Applicant has previously referred the Proposal to the Commonwealth Department of Sustainability, Environment, Water, Population and Communities (DSEWPaC) to establish whether the Proposal is a controlled action under the EPBC Act. DSEWPaC notified the Applicant on 11 May 2012 that the Proposal is not a controlled action.

**Clean Energy Act 2011**

The *Clean Energy Act 2011* (Cth) is the central piece of legislation in the Australian Government’s Clean Energy Legislative Package which sets up the carbon pricing mechanism.

The carbon pricing mechanism applies to Australia’s largest producers of carbon emissions. It covers carbon emissions from electricity generation, stationary energy, landfills, wastewater, industrial processes and fugitive emissions. Organisations are liable if they operate facilities that exceed the threshold for covered scope 1 emissions of 25,000 tonnes CO₂-e, or if they supply or use natural gas.

Liable entities are required to acquire and surrender one carbon unit for every tonne of carbon emissions that they produce, or pay a shortfall charge. The carbon price is fixed for the first three years, i.e. from 1 July 2012. From 1 July 2015, the price will be set by the market and the Australian Government will cap the number of carbon units issued each year.

It is estimated that the Proposal would exceed the facility threshold of 25,000 tonnes CO₂-e per annum and that GRL will become a liable entity under the *Clean Energy Act 2011* (Cth), and as such scope 1 GHG emissions from the Proposal (with the exception of vegetation stripping) would be subject to the carbon pricing mechanism (see the Air Quality Assessment in Volume 1 Part 2a of the *Specialist Consultant Studies Compendium*).

**National Greenhouse and Energy Reporting Act 2007**

The *National Greenhouse and Energy Reporting Act 2007* (Cth) (NGER Act) was introduced in 2007 with the objective of underpinning the introduction of an emissions trading scheme, informing government policy formulation and enabling Australia to meet its international reporting obligations.

The NGER Act establishes a mandatory corporate reporting system for greenhouse gas emissions, energy consumption and production. Scope 1 and Scope 2 greenhouse gas emissions are required to be reported under the NGER Act.

The Applicant’s exploration activities do not currently trigger the thresholds for reporting under the NGER Act, however it is expected that the Proposal will result in GRL triggering the thresholds for reporting under the NGER Act once it is operational.
Energy Efficiency Opportunities Act 2006

The Energy Efficiency Opportunities Act 2006 (Cth) aims to improve the identification and evaluation of energy efficiency opportunities by large energy using corporations, and to encourage the implementation of cost effective energy efficiency opportunities.

Large energy using corporations are required to undertake an assessment of energy efficiency opportunities and to report publicly on the outcomes of that assessment. Every 5 years, those corporations must submit assessment plans with deadlines for action on the assessed opportunities.

The Applicant is not currently registered for the Energy Efficiency Opportunities program but will be required to do so once the mine is operational.

Minerals Resources Rent Tax Act 2012

The Mineral Resources Rent Tax Act 2012 (Cth) established the Mineral Resources Rent Tax (MRRT) in Australia. From 1 July 2012, the MRRT applies to new and existing coal and iron ore projects in Australia. It establishes a tax on the ‘economic rent’ made by miners from the mined resource after it has been extracted, but before any processing takes place.

The MRRT is worked out separately for each mining project and is payable at a rate of 22.5% on a miner’s group mining profit of more than $75 million in a year. The miner’s profit is calculated after mining expenditure and other mining royalties paid to States and Territories have been taken into account. There are also allowances that are applied in calculating a miner’s profit in a MRRT year, such as losses made in earlier years or losses transferred from a miner’s other projects (if any).

It is not expected that the Proposal will be subject to the MRRT.

3.2.3.3 NSW Legislation

Key Legislation

The key NSW legislation relating to the approvals, leases and licences required for the Proposal (and listed in Section 2.1.3) and their implications for the Proposal are as follows.

- Environmental Planning and Assessment Act 1979
- Mining Act 1992
- Protection of the Environment Operations Act 1997
- Water Act 1912
- Water Management Act 2000
- Roads Act 1993
- Coal Mine Health and Safety Act 2002
- Radiation Control Act 1990
- Explosives Act 2003
Environmental Planning and Assessment Act 1979

The EP&A Act provides the framework for the assessment and approval of development in NSW and is administered by the DP&I.

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 the purposes of coal mining in NSW. The Proposal has been submitted for approval under Part 4, Division 4.1 of the EP&A Act as State Significant Development (SSD).

The EP&A Act sets out the process for assessment of SSD applications. Environmental Impact Statements are required for all SSD development applications, and must address all of the DGRs in adequate detail. The consent authority for the Proposal will be the Minister for Planning and Infrastructure or the Planning Assessment Commission under delegation from the Minister.

Section 89J of the EP&A Act nominates that if development consent is granted for a SSD, the following authorisations would not be required as the subjects of the authorisations are addressed in the assessment of SSD and often addressed in relevant management plans.

- 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.
- An authorisation referred to in section 12 of the Native Vegetation Act 2003 (or under any Act repealed by that Act) to clear native vegetation or State protected land.
- 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 authorisations that must be granted with conditional requirements consistent with any development consent including:

- the mining leases under the Mining Act 1992;
- an environment protection licence under Chapter 3 the Protection of the Environment Operations Act 1998; and

It is expected that all of the above three authorisations will be required for the Project.
Mining Act 1992

The Mining Act 1992 (Mining Act) aims to encourage and facilitate the discovery and development of mineral resources in NSW. The Mining Act provides the framework for exploration, development, operation and closure of mines, and provides for the management of exploration licences and mining leases to allow access to mineral resources, including coal.

The Applicant will make all mining lease applications to the Minister for Resources and Energy in accordance with the Mining Act. Section 89K(1) of the EP&A Act provides that an application for a mining lease cannot be refused if it is necessary for the carrying out of SSD that is authorised by a development consent under Division 4.1 and is substantially consistent with the development consent.

Figure 1.3 displays the areas to be incorporated within the two mining lease applications relevant to the Proposal.


The Protection of the Environment Operations Act 1997 (POEO Act) provides the framework for regulation and reduction of pollution and waste in NSW. The POEO Act is regulated by the Environment Protection Authority (EPA), which issues environment protection licences (EPLs) for wide-ranging scheduled activities, including mining for coal and coal works.

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 Proposal will require an EPL under the POEO Act to carry out ‘mining for coal’ and ‘coal works’. The EPL will apply to all of the Site including the open cut pits, CHPP, overland conveyor and Rail Load-out Facility.

Any release of water from the Site (except as allowed under the Erosion and Sediment Control Plan) would only be authorised under the EPL for the Proposal, which would specify the maximum permissible concentrations of important water quality indicators. The EPL will also specify noise and dust limits for the Proposal.

The noise limits for the transportation of product coal from the Rail Load-out Facility to the Port of Newcastle via the North Coast Railway Line are nominated in the EPL 3142 held by ARTC.

Water Act 1912

The Water Act 1912 (Water Act) is progressively being replaced by the Water Management Act 2000 (WM Act), but some provisions of the Water Act are still in force where water sharing plans are not in place. The Water Sharing Plan relevant to the Site, known as the Water Sharing Plan for the Lower North Coast Unregulated and Alluvial Water Sources, was released in August 2009 and includes provision for the management of surface water and alluvial groundwater within and surrounding the Site. The Water Act is still relevant for Permian groundwater in the Mine Area.
The Water Act regulates the extraction of water and any construction work relating to the Permian groundwater source. Construction works include dams, reservoirs, excavations, pipes and sewers.

A licence is required if a project is expected to intercept groundwater during construction, or for the construction of a bore. The Water Act imposes volumetric water allocation schemes and also identifies transfer of water allocations in some circumstances.

Licences under the Water Act will be required to account for the groundwater seepage from the Permian groundwater source.

There is currently an embargo order under section 113 of the Water Act that applies to all coastal floodplain alluvial groundwater sources and highly connected alluvial groundwater sources of coastal catchments in NSW, including the Manning River Basin in which the Proposal is located. The embargo declares that no further applications for a licence under Part 5 of the Water Act may be made, unless the activity fits within one of the exemptions specified in the order. However, due to the commencement of the Water Sharing Plan over the Site, this embargo does not apply to alluvial groundwater that is impacted by the Proposal.

There is currently no embargo that applies to fractured or porous Permian rock aquifers in the vicinity of the Proposal under section 113 of the Water Act.

**Water Management Act 2000**

An objective of the WM Act is the 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;
- water management work approval;
- controlled activity approval – works carried out within 40m of waterfront land; and
- aquifer interference activity approval.

An aquifer interference activity approval authorises the holder to conduct activities that affect an aquifer such as approval for activities that intersect groundwater. The aquifer interference activity approval provisions are currently part of the WM Act, however these provisions have not come into effect yet. Until these provisions are proclaimed to commence, an aquifer interference activity approval will not be required.

For controlled activities and aquifer interference activities (once the provisions commence), the WM Act requires that the activities avoid or minimise their impact on the water resource and land degradation, and where possible the land must be rehabilitated.

The *Water Sharing Plan for the Lower North Coast Unregulated and Alluvial Water Sources* sets the framework for managing groundwater in the Lower North Coast alluvial groundwater systems until 2019, including the Avon River Water Source in which the Site is located.
Surface waters in the Avon River, Waukivory Creek, Oaky Creek and other tributaries in the vicinity of the Site are allocated under this plan.

The WM Act requires that all extraction of surface water or groundwater must be properly accounted for under the rules of the relevant water sharing plans (see Section 4.6.8).

**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 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 89K(1) 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 will be required to undertake the proposed road and intersection works and improvements for the Proposal, together with the overland conveyor crossing beneath Fairbairns Road and for the construction/re-location of power lines across Waukivory Road. Gloucester Shire Council would be the issuing authority for the required permits.

Following receipt of development consent, the Applicant would also seek the necessary approvals from Gloucester Shire Council for activities including:

- the closure of the section of McKinleys Lane south of the entrance to the proposed offices and amenities (see Figure 2.1);

- the closure of the section of the east-west oriented Faulkland Road extension road reserve and the north-south road reserve adjacent to Lot 21 DP1048749 within the Site (see Figure 1.2).

**Coal Mine Health and Safety Act 2002**

The *Coal Mine Health and Safety Act 2002* (CMH&S Act) is to be read in conjunction with the *Work Health and Safety Act 2011*, and puts into place special provisions to control particular risks that may arise from the exploration or mining of coal to secure and promote health, safety and welfare of people that work in coal operations.

The CMH&S Act aims to ensure that effective provisions for emergencies are developed and maintained in coal operations and at related places.

Approval from the Minister for Resources and Energy under Section 100 of the CMH&S Act is required for the establishment of emplacement areas within the Mine Area.

**Radiation Control Act 1990**

The purpose of the *Radiation Control Act 1990* (Radiation Control Act) is to secure the protection of humans and the environment from exposure to harmful radiation to the maximum extent that is reasonably practicable.

A Radiation Licence under the Radiation Control Act will be required for the measurement devices used in the CHPP.
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 will be required for the storage of explosives under the Explosives Act and the bulk storage of Class 3 Combustible Liquid (diesel).

Other Legislation

The following NSW legislation (presented alphabetically) is outlined given its potential to apply to the Proposal at some stage(s) throughout the life of the Proposal.

- Aboriginal Land Rights Act 1983
- Contaminated Land Management Act 1997
- Crown Lands Act 1989
- Dam Safety Act 1978
- Dangerous Goods (Road and Rail Transport) Act 2008
- Fisheries Management Act 1994
- Heritage Act 1977
- National Parks and Wildlife Act 1974
- Native Vegetation Act 2003
- Noxious Weeds Act 1993
- Pipelines Act 1967
- Rural Fires Act 1997
- Threatened Species Conservation Act 1995

Aboriginal Land Rights Act 1983

The Aboriginal Land Rights Act 1983 applies to claimable Crown land in NSW. Searches have identified that there are no Aboriginal land claims over the Site.

Contaminated Land Management Act 1997

The Contaminated Land Management Act 1997 (CLM Act) establishes a process for investigating and remediating land that the EPA considers significantly contaminated.

A Phase 2 Environmental Site Assessment (ESA) has been undertaken at the decommissioned Boral timber processing plant site, on which the Rail Load-out Facility would be located. The Phase 2 ESA undertaken in July 2010 identified surface soils contaminated with hydrocarbons near a former above-ground diesel tank and under machinery within the timber processing plant building as well as elevated levels of boron present in an ash stockpile which, together with the underlying soil, was removed and disposed of at the Gloucester Landfill Facility. The Applicant commits to completing all remediation of the former Boral timber processing plant site in accordance with the CLM Act and to the satisfaction of the EPA.
Section 60 of the CLM Act imposes a duty on the owner of land to notify the EPA in writing if activities cause contamination to land. The Applicant will comply with this obligation if any further contamination to land is caused or identified.

**Crown Lands Act 1989**


No Crown lands or Crown roads have been identified on Site, as such the Crown Lands Act will not apply to the Proposal.

**Dam Safety Act 1978**

The *Dams Safety Act 1978* (Dam Safety Act) established the Dams Safety Committee. One of the roles of the Dams Safety Committee is to determine the type and the extent of coal mining which is allowed in the vicinity of a prescribed dam. A holder of a mining lease may be required to seek Ministerial approval to mine near a prescribed dam.

The Dams Safety Committee will monitor coal mining that takes place in the vicinity of a prescribed dam, as well as monitor subsidence, and measure water inflows and outflows. The Dams Safety Committee may require the owner of a prescribed dam to make observations, keep records and provide books, plans or other records by a notice in writing. The Dams Safety Committee may authorise a person, in writing, to carry out inspections of any dam.

There are no prescribed dams in the vicinity of the Site and due to the size of the proposed dams on Site, it is unlikely that any dams related to the Proposal will be prescribed under the Dams Safety Act.

**Dangerous Goods (Road and Rail Transport) Act 2008**

The *Dangerous Goods (Road and Rail Transport) Act 2008* applies to transport of dangerous goods, including explosives, over land, and the handling, unloading, receipt, transfer and storage of those dangerous goods.

The Proposal will comply with any relevant requirements of this Act.

**Fisheries Management Act 1994**

The *Fisheries Management Act 1994* (Fisheries Management Act) aims to conserve, develop and share fisheries resources through the management of habitats, threatened species, populations and ecological communities of fish and marine vegetation, in conjunction with promoting viable commercial fishing and aquaculture industries.

Permits under sections 201, 205 and 219 of the Fisheries Management Act may be required for dredging and reclamation work; harm to marine vegetation; or to construct a dam or otherwise create an obstruction across a watercourse.

Once the Proposal is granted development consent, section 89J(1) of the EP&A Act provides that a permit under the Fisheries Management Act is not required for the overland coal conveyor which is proposed to cross Waukivyre Creek and the Avon River.
Heritage Act 1977

The Heritage Act 1977 (Heritage Act) aims to promote and protect the State’s heritage, by preventing harm to buildings, relics or places that are on the State Heritage Register.

Under the Heritage Act, approval is required to carry out development on land on which an item listed on the State Heritage Register is located or that is subject to an interim heritage order. A conservation management plan may be entered into with respect to conserving an item listed on the State Heritage Register.

Once the Proposal is granted development consent, section 89J(1) of the EP&A Act provides that an excavation permit under the Heritage Act is not required for any impact to an item of heritage significance. A permit under the Heritage Act will therefore not be required to carry out the Proposal.

National Parks and Wildlife Act 1974

The National Parks and Wildlife Act 1974 (NP&W Act) aims to manage and conserve nature, objects, places and features that have ecological and cultural value. The NP&W Act is administered and enforced by the OEH.

Aboriginal places and objects are protected under the NP&W Act. The Director-General has a database of information and records regarding Aboriginal objects whose existence and location have been reported, known as the Aboriginal Heritage Information Management System (AHIMS).

An Aboriginal Heritage Impact Permit (AHIP) is generally required for consent to destroy, deface or damage Aboriginal object or Aboriginal place. The requirement to obtain an AHIP under the NP&W Act does not apply to SSD once development consent is received.

Native Vegetation Act 2003

The Native Vegetation Act 2003 (NV Act) prohibits broadscale clearing of native vegetation, without Ministerial consent, unless it improves or maintains environmental outcomes and aims to encourage revegetation of land and rehabilitation of land with appropriate native vegetation. Broadscale clearing is defined as the clearing of any remnant native vegetation or protected regrowth.

Once the Proposal is granted development consent, section 89J(1) of the EP&A Act provides that authorisation under the NV Act is not required to carry out native vegetation clearing.

Noxious Weeds Act 1993

The objective of the Noxious Weeds Act 1993 (Noxious Weeds Act) is to reduce the negative impacts of weeds on the environment by establishing mechanisms to prevent, eliminate or restrict the spread of new or significant weeds.

The Noxious Weeds Act aims to effectively manage widespread weeds through weed control orders, requiring occupiers to control noxious weeds on land and to prohibit the entry of noxious weeds into the NSW. This is enforced by inspectors appointed under the Noxious Weeds Act, who are granted wide powers of entry and inspection in relation to the control of noxious weeds.
Five weeds declared under the Noxious Weeds Act listed in the Gloucester Local Government Area were observed within the Site, albeit at low densities. There are also a number of other agricultural and environmental weed species that have been identified on Site.

**Pipelines Act 1967**

The *Pipelines Act 1967* (Pipelines Act) is administered by the NSW Department of Trade & Investment. Under the Pipelines Act, a pipeline licence may be sought to construct and operate a pipeline for the transmission of any substance.

A pipeline licence is not required for the purpose of the supply of water (including for irrigation), the drainage of land or the conveyance of waste water, mine water, aqueous slurries of minerals, mineral concentrates or mineral tailings. A pipeline licence will not be required for the pipeline used to transmit mains water between the Rail Load-out Facility and the Mine Area.

**Rural Fires Act 1997**

The aims of the *Rural Fires Act 1997* (Rural Fires Act) are to prevent, mitigate and suppress bush and other fires in rural fire districts, to coordinate fire fighting, to protect persons from injury and death, and to limit property damage arising from fires.

As SSD, separate approval is not required under Section 100B of the Rural Fires Act, however the DGRs require that the EIS detail potential hazards, including bush fire.

**Threatened Species Conservation Act 1995**

The *Threatened Species Conservation Act 1995* (TSC Act) aims to conserve biodiversity and promote ecologically sustainable development by preventing extinction and promoting recovery of threatened species, populations, ecological communities and their habitats. This is done through eliminating and managing threats to the survival or evolutionary development of species, populations, ecological communities, such as the impacts of development.

The Lower Hunter Valley Dry Rainforest is a threatened ecological community that has been identified on Site. There have been nine threatened fauna species identified on Site. Design features, operational controls and management measures have been proposed to avoid, minimise and offset impacts on local flora and fauna.

**Waste Avoidance and Resource Recovery Act 2001**

The *Waste Avoidance and Resource Recovery Act 2001* works in conjunction with the POEO Act, and aims to minimise the consumption of natural resources by encouraging efficient use of resources and reducing environmental harm. The Proposal will comply with any relevant requirements of this Act.

### 3.2.3.4 State Planning Policies

The following six State Environmental Planning Policies (SEPPs) are relevant to the Proposal.

- SEPP (State and Regional Development) 2011.
- SEPP 33 – Hazardous and Offensive Development.
- SEPP 44 – Koala Habitat Protection.
- SEPP 55 – Remediation of Land.

**State Environmental Planning Policy (State and Regional Development) 2011**

This 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 require Ministerial approval under the provisions of the EP&A Act 1979. This SEPP, and Part 4 – Division 4.1 of the EP&A Act 1979, is a system introduced to specifically deal with major projects.

As a coal mine, the Applicant’s Proposal is identified under Schedule 1 of the SEPP and hence is designated as ‘State significant development’ to which Part 4, Division 4.1 of the EP&A Act 1979 applies.

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

This SEPP was gazetted on 17 February 2007 in recognition of the importance to NSW of mining, petroleum production and extractive industries.

The SEPP specifies matters requiring consideration in the assessment of any mining, petroleum production and extractive industry development as defined in NSW legislation. Table 3.2 presents a summary of the matters that the Minister or his/her delegate needs to consider when assessing a new or modified Proposal (Part 3 – Clauses 12 to 17 of the SEPP) and a reference to the section(s) in this Environmental Impact Statement where each relevant element of the SEPP is addressed.

It is noted that *Gloucester Local Environmental Plan (LEP) 2010* nominates that mining is permissible with consent in the RU1 zone but is not permissible in the E3 zone. Notwithstanding the non-permissibility of mining in the E3 zone under the Gloucester LEP 2010, the proposed Rocky Hill Coal Project is permissible under this SEPP as Gloucester LEP 2010 nominates “extensive agriculture” as permissible in the subject area. This SEPP provides that mining is permissible on land over which the relevant LEP permits agriculture to be carried out.

**State Environmental Planning Policy (Infrastructure) 2007**

The State Environmental Planning Policy (Infrastructure) 2007 (Infrastructure SEPP) identifies, amongst other things, the matters to be considered in the assessment of development adjacent to particular types of infrastructure.
### Table 3.2
Application of SEPP (Mining, Petroleum Production and Extractive Industries) 2007

<table>
<thead>
<tr>
<th>Relevant SEPP Clause</th>
<th>Description</th>
<th>EIS Section</th>
</tr>
</thead>
</table>
| 12: Compatibility with other land uses | Consideration is given to:  
- the existing uses and approved uses of land in the vicinity of the development;  
- 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. Measures proposed to avoid or minimise any incompatibility are considered. | 4.1.4, Section 4, Section 4 and 6, 4.16.6 and 4.17, Section 4 and 6 |
| 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. Measures taken by the Applicant to avoid or minimise any incompatibility are considered. The public benefits of the development and any existing or approved mining, petroleum production or extractive industry must be evaluated and compared. | Section 4, 3.2.2.3 and Section 6 |
| 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:  
- impacts on significant water resources, including surface and groundwater resources, are avoided or minimised;  
- impacts on threatened species and biodiversity are avoided or minimised; and  
- greenhouse gas emissions are minimised and an assessment of the greenhouse gas emissions (including downstream emissions) of the development is provided. | 4.6 and 4.7, 4.12 and 4.13, 4.4.8.16 |
| 15: Resource recovery | The efficiency of resource recovery, including the reuse or recycling of material and minimisation of the creation of waste, is considered. | 2.10 |
| 16: Transportation | The following transport-related issues are considered.  
- The transport of some or all of the materials from the site by means other than public road.  
- Limitation of the number of truck movements that occur on roads within residential areas or roads near to schools.  
- The preparation of a code of conduct for the transportation of materials on public roads. | 2.8, 2.11, 4.9.3 |
| 17: Rehabilitation | The rehabilitation of the land affected by the development is considered including:  
- the preparation of a plan that identifies the proposed end use and landform of the land once rehabilitated;  
- the appropriate management of development generated waste;  
- remediation of any soil contaminated by the development; and  
- the steps to be taken to ensure that the state of the land does not jeopardise public safety, while being rehabilitated or at the completion of rehabilitation. | 2.15, 2.6.2.4, 2.7.3, 2.7.5 and 2.10, 4.8.4.3, 2.3.5 and 2.14 |
Electricity Infrastructure

Clause 45 of the Infrastructure SEPP identifies that where development would be carried out within or immediately adjacent to an easement for electricity purposes, the determining authority must give written notice to the electricity supply authority, inviting comments about potential safety risks and take into consideration any response received. The Applicant notes that the Proposal would require the relocation of a 132kV power transmission line that traverses the Mine Area (Figure 3.1). As a result, the determining authority has already consulted with TransGrid in relation to the Proposal who has provided its additional matters for the Environmental Impact Statement.

As noted in Section 3.2.2.3 the Applicant has held discussions with TransGrid in relation to both the re-location of the existing 132kV distribution line and the potential interaction of the Proposal with the proposed Stroud to Lansdowne 330kV Transmission Line Project, should it proceed. TransGrid has advised the Applicant that the Corridor 1 option is the preferred option (see Section 4.15 for further details).

Road Infrastructure

The Proposal includes the upgrading of sections of the surrounding road network including the replacement of the Jacks Road bridge across the Avon River which is currently closed due to structural issues. The Applicant and its traffic consultant has discussed the general extent of roadworks required with Gloucester Shire Council – see Sections 2.5.6 and 4.9.3.

Telecommunication Infrastructure

The Applicant would arrange for the necessary telecommunications for the entire operation with a reputable communications provider.

Railway Infrastructure

The Applicant has, through the submission of an ARTC Connection Agreement Requirements Report, and subsequent discussions with ARTC, established the feasibility of constructing a rail loop in the area adjacent to the North Coast Railway Line near the former Berrico platform. The report, a feasibility design document, is precursor to a formal application for the Applicant to connect the proposed balloon rail loop within the Rail Load-out Facility to the North Coast Railway Line. All construction activities associated with the rail loop and connection to the North Coast Railway Line will be undertaken with the requisite approvals and to the design nominated by ARTC.

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.

The hazardous substances and dangerous goods to be held or used on the Site are required to be identified and classified in accordance with the risk screening method contained within the document entitled Applying SEPP 33 Final (DP&I, 2011) (Appendix 4). Hazardous materials are defined within (DP&I, 2011) as substances falling within the classification of the Australian Code for Transportation of Dangerous Goods by Road and Rail (Dangerous Goods Code), (National Transport Commission, 2011).
Figure 3.1

Electricity Infrastructure

REFERENCE
- Site Boundary
- Mine Area Boundary
- Overland Conveyor Corridor Boundary
- Rail Load-out Facility Boundary
- Proposed Limit of Disturbance
- Existing 132kV Power Line
- Indicative 132kV Power Line Diversion Corridor (100m Wide) (within Mine Area Boundary)
- Indicative 132kV Power Line Diversion Corridor (beyond Mine Area Boundary)
- Indicative 11kV Power Line Corridor (50m Wide)

Note: Some boundaries / lines are offset for clarity

SCALE 1:40 000

Base Photograph Source: Geo-spectrum (Australia) Pty Ltd - Date: 26 June 2013
The Proposal would involve on-site storage of up to 220,000L of diesel fuel, a Class 3 C1 combustible liquid, and small amounts of other hydrocarbons including lubricating oils and grease, defined as Class 3 C2 combustible liquids. As the diesel fuel and lubricating oils and greases would not be stored adjacent to any other hazardous materials of the same class, SEPP 33 does not require these to be considered further.

As identified in DP&I (2011), Class 1.1 dangerous goods are assessed by the required storage of the explosives (measured in tonnes) on a logarithmic scale in comparison to the proximity of the Site boundary. At an anticipated maximum level of explosives required on site at any one time for the Proposal determined to be 200t, a minimum safe distance to store the explosives from the nearest Site boundary would be less than 750m. While the specific location of an explosives storage facility is yet to be finalised, the Applicant would locate the explosive storage facility in an appropriate location within the Site, ensuring that all minimum proximity requirements are met.

Based on the risk screening method of Applying SEPP 33 Final (DP&I, 2011), neither the storage nor transportation of the hazardous materials to be stored on the Site would result in the Proposal being considered potentially hazardous under SEPP 33.

**State Environmental Planning Policy No. 44 – Koala Habitat Protection**

The Gloucester Local Government Area is identified in Schedule 1 of this policy as an area that could provide habitat for Koalas. The policy requires an investigation to be carried out to determine if any Koala feed trees are present within the Site. Schedule 2 of this policy also provides a list of tree species that are favoured feed tree species of Koalas. “Potential Koala Habitat” is defined as areas of vegetation where the trees listed in Schedule 2 constitute at least 15% of the total number of trees in the upper or lower strata of the tree component. Studies completed by Ecotone Ecological Consultants Pty Ltd have established that the Site contains three of the listed feed tree species, namely, red gum (*Eucalyptus tereticornis*), grey gum (*E. punctata*) and tallowwood (*E. microcorys*). These species have been identified within the few areas of remnant vegetation that remain in parts of the Site and constitute at least 15% of these areas. However, these areas represent less than 5% of the total area to be disturbed throughout the life of the Proposal.

No Koalas or evidence of Koalas were found during the survey of the Site and its surrounds and there are only 10 previous records of Koalas within a 10km radius of the fauna Study Area as described in Volume 3 Part 7 of the Specialist Consultant Studies Compendium. Hence, no core Koala habitat is present. However, as a consequence of some areas of remnant vegetation containing greater than 15% of the favoured feed tree species, these parts are considered to be “potential Koala habitat”.

**State Environmental Planning Policy No. 55 – Remediation of Land**

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. In May 2010, Boral Limited, the former owner of the land comprising the Rail Load-out Facility and operator of the timber processing plant on that site, commissioned a hazard materials survey (HMS) of the area impacted by its activities. The survey, which was undertaken by Coffey Environment Australia Pty Ltd (CE) to facilitate the
identification and location of any hazardous materials, established that no high risk (classified as A1 and A2) hazardous and/or asbestos containing materials were present or suspected on site.

In June 2010, prior to the Applicant’s acquisition of the proposed Rail Load-out Facility site, a Phase 1 environmental site assessment (ESA) of that component representing the decommissioned Boral timber processing plant site was undertaken by CE and identified 13 areas of environmental concern and recommended that a Phase 2 ESA be undertaken.

The Phase 2 ESA undertaken in July 2010 (involving nine test pits, 37 soil samples and four stockpile samples) identified total petroleum hydrocarbons contaminated surface soils near a former above-ground diesel storage tank and beneath areas used to support former machinery with elevated levels of boron occurring in an ash stockpile. As a consequence of laboratory testing, CE recommended the off-site disposal of the ash stockpile and the management of the contaminated soil by way of an Environmental Management Plan (EMP). Under the supervision of CE, the ash stockpile and underlying soil was removed to the Gloucester Landfill Facility with CE also preparing an EMP for the site. Further information on the assessments undertaken by CE are presented in Section 4.8.4.3.

During September/October 2012, the former main timber processing building and some associated structures, all unwanted assets, were demolished and re-located under a development approval issued by Gloucester Shire Council (2012/2047) dated 26 July 2012, with one condition of that approval requiring the prior provision of a Work Plan, including a Hazardous Substances Management Plan to Council for approval prior to the commencement of approved works. The remaining features at the former plant site comprise the concrete slabs of the main building and, timber drying kilns, and the office building.

Based on the preliminary investigations regarding the grazing land and the investigation undertaken by CE, SEPP 55 is only relevant to areas of the former Boral timber processing plant site.

3.2.3.5 Regional Planning Issues

Strategic Regional Land Use Plan – Upper Hunter

The Strategic Regional Land Use Plan – Upper Hunter (SRLUP-UH) was developed as one component of the Strategic Land Use Policy prepared by the NSW State Government in conjunction with various government agencies and private sectors to act as a key policy response for resolving land use conflict between mining and coal seam gas activities within areas designated as strategic agricultural land (SAL). The draft SRLUP-UH was placed on public exhibition for comments in March 2012 with the final revised ‘Strategic Regional Land Use Plan – Upper Hunter’ released on 11 September 2012.

Any new State significant development (SSD) proposal that lies either on SAL or within areas identified as critical industry clusters, will now undergo a ‘gateway’ process where a ‘Gateway Certificate’ application must be made and determined before a development application can be submitted.
Due to the regional scale of mapping and the objective nature in which the strategic agricultural land is identified in the policy, any State significant mining or coal seam gas proposal within the Strategic Regional Land Use Plan regions that is not located on mapped strategic agricultural land must verify whether the land to which their application applies meets the criteria for SAL and, if so, go through the gateway process.

As the Rocky Hill Coal Project had already received the DGRs at the time when the SRLUP was released, a Gateway Certificate is not required and the transitional arrangements of the SRLUP apply. Under the transitional arrangements, such projects will still be subject to a comprehensive assessment of the potential agricultural impacts at the development application stage through:

- referral to an Independent Gateway Panel for advice;
- the requirement for an Agricultural Impact Statement;
- assessment against the Aquifer Interference Policy; and
- referral to the Commonwealth Independent Expert Scientific Committee for advice, where the project will impact on highly productive groundwater as defined in the Aquifer Interference Policy.

The location of the Site for the Proposal places it within the region covered by the SRLUP-UH as shown on Figure 3.2, with the Site also identified as occurring within the following areas.

- SRLUP-UH Coal Resource area (Map 2)
- SRLUP-UH Coal Seam Gas Resource area (Map 3)
- SRLUP-UH Tier 2 Aquatic Biodiversity area (Map 8)
- SRLUP-UH State Heritage Listed Sites (Map 10)

It is noteworthy, as shown in Figure 3.3, that the location of the Site does not fall on SAL or within a critical industry cluster.

Notwithstanding the transitional provisions, the Applicant has not only examined its Proposal in light of the mapped strategic agricultural land in the SRLUP-UH which showed that the Site does not lie on mapped SAL, but also has undertaken a verification process as would otherwise have been required.

This verification process confirmed that the Site is not located on biophysical strategic agricultural land (as an interim measure to operate as a gateway trigger) as the following criteria (SRLUP-UH 2012) to define the land occurring within the Site as biophysical strategic agricultural land were not met.

- “land that falls under soil fertility classes ‘high’ or ‘moderately high’ under the Draft Inherent General Fertility of NSW (OEH), and
- land capability classes 1, 2 or 3 under the Land and Soil Capability Mapping of NSW (OEH), and

---

2 The fertility of the land to be disturbed within the Site would not be classed as either high or moderately high.
3 The land to be disturbed within the Site occurs within land capability classes 4, 5 and 7.
• reliable water of suitable quality, characterised by having rainfall of 350mm or more per annum (9 out of 10 years); or properties within 150m of a regulated river, or unregulated rivers where there are flows for at least 95% of the time (i.e. the 95th percentile flow of each month of the year is greater than zero) or 5th order and higher rivers; or groundwater aquifers (excluding miscellaneous alluvial aquifers, also known as small storage aquifers) which have a yield rate greater than 5L/s and total dissolved solids of less than 1 500mg/L.

OR

• land that falls under soil fertility classes ‘moderate’ under the Draft Inherent General Fertility of NSW (OEH), and
• land capability classes 1 or 2 under the Land and Soil Capability Mapping of NSW (OEH), and
• reliable water of suitable quality, characterised by having rainfall of 350mm or more per annum (9 out of 10 years); or properties within 150m of a regulated river, or unregulated rivers where there are flows for at least 95% of the time (i.e. the 95th percentile flow of each month of the year is greater than zero) or 5th order and higher rivers; or groundwater aquifers (excluding miscellaneous alluvial aquifers, also known as small storage aquifers) which have a yield rate greater than 5L/s and total dissolved solids of less than 1 500mg/L.”

The above process undertaken for the Proposal soon established that the Site is not located on biophysical strategic agricultural land as none of the Site lies within the land capability classes 1, 2 or 3 as defined under the OEH mapping. Furthermore, the detailed soil testing undertaken by GCNRC (2013b) and summarised in the Agricultural Impact Statement confirms the soils have only a low-moderate fertility.

Agricultural Impact Statement
In accordance with the ‘transitional arrangements’ section of the SRLUP-UH, the Proposal requires an Agricultural Impact Statement be submitted in conjunction with the Environmental Impact Statement for the Rocky Hill Coal Project. This document has been prepared reflecting the guidelines released in September 2012 regarding their content. A copy of the Statement is located within Volume 4 Part 13 of the Specialist Consultant Studies Compendium and a summary of its content is included in Section 4.17 of this document.

Aquifer Interference Policy
On 12 September 2012, the NSW Government released the final Aquifer Interference Policy which sets out the water licensing and assessment processes for aquifer interference activities under the WM Act.

The WM Act defines an aquifer interference activity as that which involves any of the following:

• penetration of an aquifer;
• interference with water in an aquifer;
• obstruction of the flow of water in an aquifer;
• taking of water from an aquifer in the course of carrying out mining or any other activity prescribed by the regulations; and

• disposal of water taken from an aquifer in the course of carrying out mining or any other activity prescribed by the regulations.

Examples of aquifer interference activities include mining, coal seam gas extraction, injection of water, and commercial, industrial, agricultural and residential activities that intercept the water table or interfere with aquifers. The Proposal will involve aquifer interference activities, such as the development of open cut pits.

The Aquifer Interference Policy defines an agreed set of ‘minimal impact’ considerations that will be taken into account when assessing the Proposal and the potential for harm to occur to an aquifer and its dependent ecosystems, culturally significant sites, connected surface water sources and to existing water users. The Policy indicates that the aquifer impact assessment will include consideration of potential impacts on water table levels, water pressure, and water quality in different types of groundwater systems. The Proposal has been assessed against the Aquifer Interference Policy (see Section 4.6.7.7).

Hunter Regional Environmental Plan – Heritage

Since 1 July 2009, the Hunter Regional Environmental Plan – Heritage has been deemed to be a State Environmental Planning Policy. This plan focusses solely on heritage issues with the objectives:

a) to conserve the environmental heritage (including the historic, scientific, cultural, social, archaeological, architectural, natural and aesthetic heritage) of the Hunter Region;

b) to promote the appreciation and understanding of the Hunter Region’s distinctive variety of cultural heritage items and areas including significant buildings, structures, works, relics, towns, precincts and landscapes; and

c) to encourage the conservation of the Region’s historic townscape which contain one or more buildings or places of heritage significance or which have a character and appearance that is desirable to conserve.

Schedule 2 of the Plan incorporates a listing of three items in Gloucester which, under the State Heritage System, are now designated to be of “local significance” (Lamb 2013b). These items include:

• “Gloucester Cottage” – The Bucketts Way;

• Court House Group – Church Street; and

• Court House (No. 19) – Church Street.

Schedule 3 of the Plan incorporates one item of local environmental heritage in Gloucester, namely the Former Council Chambers at the corner of Church and Tyrell Streets.

Schedule 4 of the Plan incorporates two items requiring further investigation, namely:

• Former Bank of NSW (No. 23) – Church Street; and

• Sisters of St Joseph Convent – Denison Street.
None of the above items are located within or close to the Site and hence would not be adversely affected by the Proposal. These items are not considered any further.

**Hunter-Central Rivers Draft Catchment Action Plan 2013-2023**

The Catchment Management Authority Hunter-Central Rivers has released a draft Catchment Action Plan (CAP) for the next decade. The CAP is a whole of government and whole of community strategic plan that aims to capture the full range of issues, roles and responsibilities of all the key organisations involved in natural resource management and decision making.

The Applicant accepts it has a responsibility to participate with the surrounding industries and community to aim to achieve the relevant goals and targets in the CAP.

Table 3.3 lists relevant goals from the CAP and a commentary on how the Applicant would address the goals.

<table>
<thead>
<tr>
<th>Goal</th>
<th>Requirement</th>
<th>Applicant’s Approach</th>
</tr>
</thead>
</table>
| 1. Governance and Planning | There is a shared vision and goals for natural resources and ecosystem services within the region.  
  • Planning and land use decisions contribute positively to natural resource management.  
  • Knowledge and evidence informs decision making.  
  • Decision making is coordinated and collaborative. | The Applicant, in planning for and designing the Proposal, has actively considered the future use of the Site post-mining operations by returning the disturbed land to a similar or improved quality, effectively providing a positive net benefit to natural resources within the immediate area, i.e. from both an agricultural and ecological perspective. This is made possible by the Applicant engaging with local and broader government and non-government agencies to determine the most effective way to design the Proposal to protect the natural resources and ecosystems within the region. |
| 2. Knowledge and Research | Natural resources, ecosystem function and ecosystem services in our region are well understood.  
  • Natural resource management is continually improved and informed by research, monitoring and evaluation.  
  • Research, monitoring, evaluation and reporting is collaborative, coordinated. | The Applicant and its specialist consultant team have undertaken baseline environmental monitoring over a variety of environmental attributes to understand the local and surrounding environment. The proposed continuation of this environmental monitoring, in conjunction with the proposed additional operational environmental monitoring will continue to expand its knowledge of the surrounding environment, allowing a tailored approach and plan to be implemented to reduce the overall impact on the surrounding environment as a result of the Proposal. |
| 3. Empowerment and Capacity Building | Individuals, organisations, communities and industries able to effectively protect, improve, maintain and manage the natural resources of the region.  
  • All stakeholders understand the reasons for natural resource management and have the capacity to contribute to natural resource management and decision making. | The Applicant recognises that, as a substantial landholder in the catchment, it has a responsibility to fully understand the attributes of the natural resources on its properties. The Environmental Impact Statement and its supporting documents would assist the Applicant to responsibly manage the natural resources on both the land proposed to be disturbed and the land beyond the proposed area of disturbance. |
## Table 3.3 (Cont’d)

### Hunter-Central Rivers Draft Catchment Action Plan 2013-2023 – Catchment Goals

<table>
<thead>
<tr>
<th>Goal</th>
<th>Requirement</th>
<th>Applicant’s Approach</th>
</tr>
</thead>
</table>
| 4.   | Estuaries and Marine | Improve or maintain the ability of oceans, estuaries, beaches and shorelines to provide ecosystem functions and services:  
- to support biodiversity and regionally significant habitats and species;  
- to support sustainable economic and recreational opportunities; and  
- to contribute to human health and well-being. |
|     |             | While it is recognised that the Proposal is not within an estuarine or marine environment, the Applicant is committed to prevent any off-site discharge that could potentially affect downstream estuarine or marine environments associated with the Manning River estuary and ultimately the Pacific Ocean. |
| 5.   | Land and Soils | Improve or maintain the ability of land and soils to provide ecosystem functions to support:  
- biodiversity;  
- sustainable and viable agriculture; and  
- community amenity and infrastructure. |
|     |             | Throughout the compilation of the EIS, baseline conditions have been established and mitigation measures proposed within the fields of biodiversity, agriculture and community amenity and infrastructure and are discussed in detail in Sections 4.8, 4.12, 4.16 and 4.17 of the EIS respectively. Furthermore, the Agricultural Impact Statement (Volume 4 Part 13 of the Specialist Consultant Studies Compendium) discusses in detail, the predicted impacts and the proposed mitigation measures to be implemented on agricultural lands and enterprises. The rehabilitation of the area disturbed by the Proposal represents a balance proposed by involving both agricultural land and nature conservation. |
| 6.   | Fresh Water | Improve or maintain the ability of catchments to provide ecosystem functions and secure fresh water to support:  
- biodiversity;  
- human health and community well-being; and  
- economic opportunities. |
|     |             | Both groundwater and surface water systems have been studied in depth (Sections 4.6 and 4.7 of the EIS respectively) to define the potential impacts that the Proposal may have on the biodiversity, human health and economic opportunities with the studies concluding that there would be minimal impacts upon fresh water as a result of the proposed and implemented mitigation measures such as retention of saline water on site, compliant water discharges, if required, and a closed water circuit within the CHPP. The proposed segregation of clean, dirty and saline water streams, along with the implementation of the Water Management Plan would contribute to maintaining the fresh water qualities throughout the region. |
| 7.   | Biodiversity | Improve or maintain the ability of our catchments to provide ecosystem functions and services which sustain biodiversity and regionally significant habitats and species to:  
- conserve terrestrial and aquatic biodiversity and the habitats it depends on;  
- support community well-being; and  
- support economic opportunities. |
|     |             | Terrestrial and aquatic biodiversity have both been studied in depth (Section 4.12 and 4.13 of the EIS respectively) with baseline conditions determined and appropriate mitigation measures proposed. These suggested measures have been determined to adequately maintain during the life of the Proposal, and improve, post-mining operations, the biodiversity of the area through rehabilitation and the conservation of the Biodiversity Offset Area. |
| 8.   | Air         | Improve or maintain regional air quality to provide ecosystem functions to support:  
- biodiversity;  
- human health and community well-being; and  
- agriculture and other economic opportunities. |
|     |             | Background air quality information has been sourced throughout the preparation of the EIS with a full air quality assessment undertaken to determine the potential impacts on air quality as a result of the Proposal (see EIS Section 4.4). As a result of the modelling and proposed mitigation measures, impacts upon biodiversity, human health, community well-being and agricultural and economic opportunities are likely to be minimal. |
### Hunter-Central Rivers Draft Catchment Action Plan 2013-2023 – Catchment Goals

<table>
<thead>
<tr>
<th>Goal</th>
<th>Requirement</th>
<th>Applicant’s Approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.</td>
<td>Community Well-being</td>
<td>The Applicant currently participates pro-actively in the Gloucester Exploration Project Community Consultation Committee which has acted as a de facto Community Consultation Committee (CCC) for the Proposal allowing open discussions to be undertaken between the community and the Applicant. It is proposed that if development consent is granted, a separate, Proposal specific CCC be created to continue to provide an open forum for discussions with the community.</td>
</tr>
<tr>
<td>10.</td>
<td>Economic Prosperity</td>
<td>A full socio-economic impact assessment was undertaken for the EIS (Section 4.16) to provide information on the background economic setting and the proposed impacts on the regional economy as a result of the Proposal, with the results of this assessment determining that there will be a positive net economic benefit on the long term economy and community prosperity and well-being within the region.</td>
</tr>
</tbody>
</table>

#### 3.2.3.6 Local Planning Issues

**Gloucester Local Environment Plan 2010**

The Site is located within the Gloucester Local Government Area to which the *Gloucester Local Environment Plan (LEP) 2010* is relevant. It is noted at the outset that the Gloucester LEP 2010 incorporates an introductory note to the Land Use Table relating to its relevance to proposed development, i.e.

“A type of development referred to in the Land Use Table is a reference to that type of development only to the extent it is not regulated by an applicable State environmental planning policy. The following State environmental planning policies in particular may be relevant to development on land to which this Plan applies. *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007*” (the Mining SEPP).

Notwithstanding the provisions of the above SEPP (discussed in Section 3.2.3.4) which prevail over provisions of the Gloucester LEP 2010 in the event there is an inconsistency between the two environmental planning instruments, the remainder of this subsection reviews the relevant clauses of Gloucester LEP 2010 and the background to the strategic planning within and surrounding the Site, as well as how the objectives of the relevant land use zones have been incorporated into the Proposal.

**Figure 3.4** displays the section of the Gloucester LEP 2010 relevant to the Site and its surrounds.

- The Mine Area is located within an area covered by the E3 – Environmental Management Zone (77%) and RU1 – Primary Production Zone (23%).
- The Overland Conveyor Corridor is located within an area covered predominantly by the RU1 Zone with small areas of land zoned E3 – Environmental Management and SP2 – Infrastructure.
Figure 3.4
GLOUCESTER LOCAL
ENVIRONMENTAL PLAN 2010

REFERENCES
- Site Boundary
- Mine Area Boundary
- Overland Conveyor Corridor Boundary
- Rail Load-out Facility Boundary
- Power Line Corridor Boundary

LEP REFERENCE
- E2 - Environmental Conservation
- E3 - Environmental Management
- IN1 - General Industrial
- R5 - Large Lot Residential
- RE1 - Public Recreation
- RE2 - Private Recreation
- RU1 - Primary Production
- SP2 - Infrastructure

SCALE 1:40 000

Source: Gloucester Local Environmental Plan 2010

NOTE: Some boundaries / lines are offset for clarity.
The Rail Load-out Facility is located wholly within an area covered by the RU1 Zone.

Figure 3.4 displays the two further zones that lie within 2km of the Site, namely E2 – Environmental Conservation and Zone R5 – Large Lot Residential.

Under the Gloucester LEP 2010, mining is permissible with consent in the RU1 Zone but is not permissible in the E3 and SP2 Zones. The Proposal is, however, permissible with consent in the E3 and SP2 Zones by virtue of the Mining SEPP.

Planning Objectives

The planning objectives of the RU1 Zone (Primary Production), E3 Zone (Environmental Management) and SP2 (Infrastructure) are as follows.

Zone E3 – Environmental Management

The three objectives of the E3 Zone are as follows.

i) To protect, manage and restore areas with special ecological, scientific, cultural or aesthetic values.

ii) To provide for a limited range of development that does not have an adverse effect on those values.

iii) To conserve the biological diversity and native vegetation corridors, and their scenic qualities, in a rural setting.

Zone RU1 – Primary Production

The five objectives of the RU1 Zone are as follows.

iv) To encourage sustainable primary industry production by maintaining and enhancing the natural resources base.

v) To encourage diversity in primary industry enterprises and systems appropriate for the area.

vi) To minimise the fragmentation and alienation of resource lands.

vii) To minimise conflict between land uses within this zone and land uses within adjoining zones.

viii) To encourage eco tourism enterprises that minimise any adverse effect on primary industry production and the scenic amenity of the area.

Zone SP2 – Infrastructure

The two objectives of the SP2 Zone are as follows.

i) To provide for infrastructure and related uses.

ii) To prevent development that is not compatible with or that may detract from the provision of infrastructure.
Strategic Planning Background

Prior to assessing how the above objectives have been accommodated in the design of the Proposal, the following background information is provided with respect to the strategic planning reflected in the Gloucester LEP 2010, particularly with respect to the E3 Zone.

When providing guidance to Councils preparing LEPs in accordance with the Standard Instrument (Local Environmental Plans) Order 2006, the DP&I identified that an E3 Zone ‘is generally not intended for cleared lands including lands used for intensive agriculture’ (LEP Practice Note PN 09-002 30 April 2009). The land within the Site that is mapped as an E3 Zone has historically been used for agricultural purposes, principally grazing for beef cattle and dairy operations. Both of these agricultural uses continue to operate within and adjacent to the Site. Hence, the land within the Site has not been previously protected or managed for its environmental values due to its history of intensive agricultural land use, that is, the E3 Zone over this land is inconsistent with the purpose of this zone as outlined in the Standard Instrument, and as guided by the Practice Note issued by the DP&I.

Notwithstanding the above, it is understood that the E3 Zone in the Gloucester LEP 2010 in the vicinity of the Site was effectively transposed from the 7d Zone (Environmental Protection-Scenic) in the Gloucester LEP 2000. The zones were intended principally to secure and retain the agricultural setting and clear unfettered views to the west and the Gloucester Bucketts, an iconic landmark in the northern section of the Stroud-Gloucester Valley (see Figures 4.1 and 4.2). It is noted that Council substantially reduced the range of permissible developments within the E3 Zone in the 2010 LEP compared with the 2000 LEP.

It is understood that the views eastwards towards the Mograni Range were also seen as requiring some security however, existing development, such as the rural residential subdivisions and the former Fennings timber mill/Boral timber processing plant have received development consent from Gloucester Council. Gloucester Council has also approved the residential subdivisions along Jacks Road, and some rezoning that occurred in the 2010 LEP has increased potential development opportunities around Jacks Road.

Assessment of the Proposal and the LEP 2010 Objectives and Strategic Planning Intentions

Zone E3 – Environmental Management

The Site lies on the eastern side of the Stroud-Gloucester Valley, i.e. the opposite side to the Bucketts Range, with the areas of planned operations confined to predominantly cleared agricultural lands on the lower slopes. Visitors approaching Gloucester from the south would not have their view of the Gloucester Bucketts compromised in any way by activities within the Site. The proposed visual barriers comprising rehabilitated overburden would be a key component in ensuring that views towards the Mograni Range are not compromised during operation of the Proposal and that any impacts to the area’s aesthetic value during the construction and operation of the Proposal would be short term.
In recognition of the emphasis placed upon the scenic qualities of the land zoned E3 and the identification of visual impacts by numerous government agencies and the BGSPA, the Applicant engaged Richard Lamb & Associates to undertake a visibility assessment to analyse the visual effects, recommend appropriate mitigation measures and assess residual impacts of the Proposal. A total of 46 viewing places were identified and assessed for their scenic values and potential to be affected by the Proposal. A number of these places were suggested by the BGSPA.

On the whole, visibility of the mining-related activities within the Site would be limited by topography, settlement pattern, the location of roads, and by other intervening landscape and vegetation features. However, as the Site is of rural character and has largely been cleared for cattle grazing (for many years), there are areas of exposure where views of the activity areas within the Site would be possible, albeit for short periods of time. The Site would be shielded from the main urban areas of Gloucester township, although it is likely to be visible from the Kia Ora lookout (10.4km) and the Lions Lookout (6.7km). On limited sections of The Bucketts Way there are areas where the activities within the Site would be visible at some stages of the operations. However, the proposed construction of three north-south aligned visibility barriers would substantially shield the activities within the Mine Area when viewed from The Bucketts Way and the rural-residential properties to the west of the Mine Area.

It is acknowledged that during the site establishment and construction phase, activities involved with construction of the western and northern visibility barrier would not be able to be shielded at all times from these rural-residential areas, due to their proximity. However, the method of construction and progressive rehabilitation as described in Section 2.6.2.4 would ensure that activities within the active open cut pits and coal processing area would not be visible from these rural-residential areas. There would not be significant visibility of overburden or coal extraction within the open cut pits, nor will stockpiling, processing or placing of the product on the conveyor be visible. By the end of Year 4, the majority of out-of-pit overburden emplacement will be constructed to its final landform and rehabilitated along the eastern side of the Site. By Year 7, mining activity would be confined to what would become the Main Pit, and visibility of the Proposal from any location would be very limited by this stage.

The activities associated with the re-contouring of the final landform and backfilling of the Main Pit would periodically be visible, although all efforts would be made to ensure that mobile earthmoving equipment would operate behind the remaining landform, albeit reducing progressively in height.

Based upon the above description, the Applicant considers that the Project is consistent with the strategic intent of the E3 Zone for the Site and surrounding area which is to secure and retain the agricultural setting and to preserve the aesthetic value of the views towards the Bucketts Range.

Although partially located within the E3 Zone, the Site itself currently has minimal areas of ecological significance that warrant protection and management due to its historical use for extensive agriculture, specifically, cattle grazing. Following mine closure, the final landform would enhance the existing ecological value of the area, as sections of the cleared grazing land would be rehabilitated to improve its biological diversity and promote native vegetation corridors, improving the aesthetics of the rural setting, while enabling cattle grazing to continue.
The Proposal would also have a limited impact on the biological diversity of the Site. Any impacts on biological diversity from the Proposal would be offset through the Biodiversity Offset Strategy which would protect and enhance the native vegetation corridor to the east of the Site to ensure its long-term protection. All areas within the Mine Area and Overland Conveyor Corridor and some of the Rail Load-out Facility that are disturbed throughout the life of the Proposal would be progressively rehabilitated. A series of native vegetation corridors would be established on the land, enhancing the existing ecological and aesthetic value of the area.

The biological diversity and existing native vegetation and fauna corridors within the E3 Zone would be increased as a result of the proposed rehabilitation and long-term protection of the existing remnant vegetation within the proposed Biodiversity Offset Area. As noted in Objective (ii) for land zoned RUI, defined areas would be returned to viable agricultural land with the remaining land rehabilitated in a manner that would provide agricultural or ecological benefits. Specific vegetation corridors created within the final landform would aid in increasing the biological diversity within the local area.

The Proposal is not considered to be inconsistent with the E3 Zone objectives, because as described throughout this document, management and mitigation measures would be implemented where practicable, to minimise the potential impacts of the Proposal on the ecological and aesthetic values of the area.

**Zone RU1 – Primary Production**

The land within the Mine Area, whilst being progressively removed from agricultural production during the life of the Proposal, would be largely re-established for grazing purposes.

The establishment of the Biodiversity Offset Area is proposed in both the E3 and RU1 Zones in areas of existing low agricultural productivity. This outcome would provide improved ecological values with negligible change in the agricultural productivity of the area.

The removal of the substantial buildings used for the former Fennings timber mill / Boral timber processing plant and the return of a vegetated landform would also contribute to improving the rural vista which underpins the objectives of the adjacent E3 Zone.

**Zone SP2 – Infrastructure**

The Applicant has recognised the objectives of the SP2 Zone and has endeavoured to design the Proposal to accommodate these objectives by ensuring that the overland conveyor conforms to all standards and restrictions imposed by the rail operator so as to not alter the land at all or affect the day-to-day operations of the North Coast Railway.

**Justification of why mining should be allowed in the E3 Zone**

Notwithstanding whether mining is permissible within the E3 Zone over the northern section of the Site, the Minister (or delegate) can determine the development application for the Proposal, as the Proposal is not wholly prohibited by the Gloucester LEP 2010. The Gloucester LEP 2010 permits ‘extensive agriculture’ within land zoned E3 on the Site. Provision 7(1) of the Mining SEPP identifies that mining may be carried out with consent on land where agriculture is a permissible land use.
Accordingly, the Minister would not be precluded from granting approval under section 89E of the EP&A Act for the Proposal in respect of those parts of the Proposal on land where mining is prohibited under the Gloucester LEP 2010.

The rehabilitation strategy would establish pasture land with tree lots on the lowermost areas graduating to pasture land that would incorporate an open woodland character, interspersed with native vegetation belts providing fauna corridors. This would extend the vegetated character of the middle to lower slopes in the vicinity into the Site, enhancing the existing ecological and aesthetic qualities of the area in line with the E3 Zone objectives. Following the cessation of mining and rehabilitation of the Site, the character of the Site would be comparable with, and include greater areas of vegetation than was on the Site when the 7d Zone (2000 LEP) and now E3 Zone (2010 LEP) was introduced.

Rehabilitation of all areas to be disturbed throughout the life of the Proposal (except the rail loop within the RU1 Zone) forms an integral part of the Project aims. Emphasis will be placed upon progressively creating the final landform and re-establishing soil profiles and vegetation essential to achieving the preferred land use(s) during or following Site closure. The rehabilitated land planned for grazing within the Mine Area will be allowed to regenerate for a period of at least three years to ensure its biological efficacy before cattle is re-introduced onto that land.

In reality, the proposed mining activity is a temporary land use that recovers the important (coal) resources beneath the Site whilst providing for both long-term agricultural production and increased biodiversity values.

Contaminated Land Management Policy

The policy includes a schedule on which Lot 28 DP 606093 is included, i.e. the parcel of land on which the Rail Load-out Facility is proposed. At the time when the Policy was prepared, the subject lot was owned by Fenning Timber Pty Ltd. The timber mill on the subject land had in fact commenced operations in 1979. The land was subsequently sold to Boral Timber who operated the timber processing plant until 2009 when it ceased operations.

Discussion regarding SEPP 55 – Remediation of Land in Section 3.2.3.4 of this document reviews the investigations undertaken since 2009 regarding the on-site contamination together with the Applicant’s plans for the remediation of the small amount of contamination remaining on site.

3.2.3.7 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. Appendix 3 identifies each of the relevant guidelines and identifies the relevant section(s) of the Environmental Impact Statement and/or part of the Specialist Consultant Studies Compendium where they are considered and/or addressed.
3.2.4 Summary of Environmental Issues and Potential Impacts

Table 3.4 presents a summary of the environmental issues identified by the various State and local government agencies and the BGSPA each of which provided their requirements for the Proposal, along with the frequency with which each was identified. The frequency of identification provides an initial indication of those environmental aspects perceived to be at greatest risk and hence of greatest priority, with Table 3.4 being ordered accordingly (from most to least frequently identified). The following subsections provide the methodology and justification for the numbers displayed in the source and frequency identification columns within Table 3.4 which forms one part of the method used to determine the relative importance of each environmental issue discussed in detail in Section 4.

Table 3.4  
Summary of Identified Environmental Issues

<table>
<thead>
<tr>
<th>Environmental Issue</th>
<th>Source and Frequency of Identification</th>
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<tbody>
<tr>
<td></td>
<td>Government Consultation</td>
</tr>
<tr>
<td>Surface water/erosion &amp; sediment control/Flooding</td>
<td>8</td>
</tr>
<tr>
<td>Groundwater</td>
<td>7</td>
</tr>
<tr>
<td>Noise/Blasting/Vibration</td>
<td>4</td>
</tr>
<tr>
<td>Terrestrial Ecology</td>
<td>8</td>
</tr>
<tr>
<td>Air Quality/Greenhouse Gas</td>
<td>4</td>
</tr>
<tr>
<td>Traffic and Transport</td>
<td>5</td>
</tr>
<tr>
<td>Soil resources / Management</td>
<td>3</td>
</tr>
<tr>
<td>Visual amenity</td>
<td>3</td>
</tr>
<tr>
<td>Rehabilitation &amp; final landform</td>
<td>4</td>
</tr>
<tr>
<td>Aquatic Ecology</td>
<td>2</td>
</tr>
<tr>
<td>Socio-economic impacts</td>
<td>3</td>
</tr>
<tr>
<td>Cultural heritage</td>
<td>4</td>
</tr>
<tr>
<td>Land Use / Planning / permissibility</td>
<td>3</td>
</tr>
<tr>
<td>Acid Rock Drainage</td>
<td>2</td>
</tr>
</tbody>
</table>

3.2.4.1 Government Consultation

A review of the DGRs (and attached correspondence to DP&I from the relevant government agencies consulted) was undertaken to calculate the number of times a specific environmental issue was raised to be discussed and assessed within the Environmental Impact Statement. The review process simply counted how many times a particular environmental issue requiring assessment was mentioned per government agency (see Table 3.1).

3.2.4.2 Community Consultation

Key Insights (socio-economic specialist consultants) produced and distributed a ‘Community Perception Survey Report’ to the Gloucester community (see Volume 4 Part 14 Specialist Consultants Studies Compendium) asking respondents to answer an array of questions relating to the Proposal. Question 5 of the Community Perception Survey asked each respondent to rate
how concerned they were with the potential environmental impacts associated with the Proposal. The resulting answers were tallied and weighted (from ‘extremely concerned’ to ‘not at all concerned’) with the environmental issues rated from ‘10’, being the most identified concern to ‘1’, being the least identified concern. Environmental issues displaying the same rated score after tallying and weighting were given the same rating.

### 3.2.4.3 Preliminary Environmental Studies

A review of the preliminary environmental studies completed by each specialist consultant was undertaken to determine an importance ranking for each of the environmental issues. The environmental issues were ranked on a sliding scale of ‘5’ being extremely important to ‘1’ being selectively important to the Proposal. The ranking of the environmental issues was undertaken in conjunction with each specialist consultant’s feedback, taking into consideration the local and regional importance of the issues as well as the requirement for and difficulty of adopting appropriate mitigation measures.

### 3.2.4.4 Policies, Guidelines and Plans

Within the DGRs, numerous policies, guideline documents and plans were suggested for consideration within the Environmental Impact Statement (and Specialist Consultant reports) in the assessment of the Proposal. A tally of the suggested policies, guideline documents and plans was undertaken to provide an indication to the importance of each environmental issue in relation to the Proposal, with the results also displayed in Table 3.4.

### 3.3 ANALYSIS OF ENVIRONMENTAL RISK AND ISSUE PRIORITISATION

#### 3.3.1 Analysis of Environmental Risk

Risk is the chance of something happening that will have an impact upon the objectives or the task which, in this case, is the construction and operation of the Rocky Hill Coal Project with minimal adverse impacts on the surrounding environment. Risk is measured in terms of consequence (severity) and the likelihood (probability) of the event happening. In order to analyse the environmental risks associated with the Proposal, a structured broad-brush risk assessment involving R.W. Corkery & Co. Pty Limited, representatives of the Applicant’s management team and key specialist consultants advising the Applicant was undertaken.

A workshop was convened to discuss and analyse:

- each of the likely risk sources;
- their potential consequences;
- the likely receptors / surrounding environment;
- potential environmental impacts; and
- how they could be mitigated or managed to reduce the level of impact(s).
The assessment of risk was firstly established based upon the adoption of the controls and mitigation measures that are standard throughout the coal mining industry or are expected, such as the dust minimisation measures identified by Katestone Environmental Pty Ltd (2011) in the document entitled *NSW Coal Mining Benchmarking Study: International Best Practice Measures to Prevent and/or Minimise Emissions of Particulate Matter from Coal Mining*. This level of risk was referred to as the risk with standard control measures. It was recognised that where it would be necessary to reduce the potential impacts beyond that achieved with standard control measures to a level considered both achievable and worthwhile, further controls or mitigation measures would need to be adopted. This level of impact after the adoption of the additional controls was referred to as residual risk. 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 or that the risk was already as low as reasonably practical. Each risk source was allocated a risk ranking based on the potential consequences and likelihood of occurrence and in accordance with Australian Standards HB 203:2006 and AS/NZS 4360:2004.

The allocation of a qualitative consequence ranking was based on the definitions established within the environmental risk matrix developed for the risk assessment workshop. The qualitative likelihood or probability ranking of the impact(s) occurring for each risk source was then ranked. The risk ranking was then established based upon the consideration of both the consequence ranking and likelihood or probability ranking.

The results of the risk assessment with the adoption of standard control measures initially and then with all proposed control measures to establish the residual risk ranking is presented in Section 6.2.

### 3.3.2 Prioritisation of Key Environmental Issues

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.
- The risk analysis outlined in Section 3.3 and documented further in Section 6.2.
- 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 4 in the following order:

- Noise
- Vibration and Blasting
- Air Quality
- Visibility
- Groundwater
- Surface Water
• Soils and Land Capability
• Traffic and Transportation
• Indigenous Cultural Heritage
• Non-Indigenous Heritage
• Terrestrial Ecology
• Aquatic Ecology
• Socio-Economic

The acid rock drainage assessment is relevant principally to the surface water and groundwater assessment and is discussed in Section 2.3.3.3.

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.