

PRELIMINARY ENVIRONMENTAL ASSESSMENT

PROPOSED INTERMODAL GOODS TERMINAL HERON ROAD, KOORAGANG ISLAND

Prepared for submission to:
DEPARTMENT OF PLANNING

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1. INTRODUCTION

1.1 Overview

de Witt Consulting has been commissioned by Toll Group ("the applicant") to prepare an Environmental Assessment under Part 3A of the *Environmental Planning and Assessment Act 1979* ("EP&A Act") for the proposed development of an Intermodal Goods Terminal at Heron Road, Kooragang Island ("the site"). The site comprises Lot 1 DP 1117013. The proposed development involves a warehouse, rail spur, outdoor storage and associated infrastructure and facilities that handle imports and exports for movement by rail, road and shipping.

1.2 Background

Kooragang Island, located in Newcastle Port, is an ideal location for storage and transport of material to the local and export markets. The site provides access to intermodal transport networks and is within an area that contains industrial land uses. Development of a purpose built goods terminal in an appropriate location will allow for effective and efficient storage and transport of material that can be managed to contemporary environmental and safety standards.

1.3 Purpose and Structure of the Report

The purpose of this Preliminary Environmental Assessment ("Preliminary EA") is to provide an overview of the proposal and its potential impacts on the environment. Additionally, this Preliminary EA has been prepared to provide sufficient background information for the Director-General to provide Environmental Assessment Requirements for the preparation of an Environmental Assessment.

The structure of the Preliminary EA is as follows:

- Section 1 introduces the proposal.
- Section 2 outlines the environmental conditions of the site.
- Section 3 outlines the various aspects of the proposal.
- Section 4 outlines the planning framework of the project.
- Section 5 reviews the potential environmental impacts of the proposal that will require further discussion or investigation as part of the Environmental Assessment.
- Section 6 provides a summary of the Preliminary EA and request that the Director-General provide Environmental Assessment Requirements.

1.4 Approval Process

The proposal development meets the criteria of a Major Project under Schedule 1 of State Environmental Planning Policy (Major Projects) 2005 (SEPP 2005). The project will be determined by the Minister for Planning through a project application and associated Environmental Assessment.

In June 2008, a submission was lodged with the Department of Planning requesting the Minister determine whether the proposed development was a Major Project that would require assessment under Part 3A of the EP&A Act. On 11 August 2008, the Director-General determined that the proposed development was a project to which Part 3A of the EP&A Act applies.

1.5 Project Justification

The site planning process included a site analysis that determined opportunities and constraints for development of the Bulk Handling Facility in accordance with its 4(b) Port and Industry Zone under the Newcastle Local Environmental Plan 2003 ("LEP 2003"). The site analysis considered:

- Existing zoning and planning controls.
- Need for new purpose built facilities.
- Demand for additional opportunities for material movement in local and export markets.
- Ongoing demand for ammonium nitrate in local and export markets.
- The results of existing environmental studies and specialist reports.
- Design of the development in accordance with the constraints and opportunities of the land.
- Water quality controls.
- The service capability and location of the site.
- Existing access to transport networks.
- Visual impacts.

The resultant proposal is consistent with the planning controls and environmental constraints that apply to the site.

The project will include the storage of ammonium nitrate that will be utilised for explosives in the mining industry. Furthermore, an intermodal goods terminal at Kooragang Island will add to the ability of Newcastle Port to manage goods for local and export markets.

The need for the proposed project is reflected by the following:

- The project will allow for erection of a new purpose built goods terminal in an appropriate industrial location with access to intermodal transport networks.
- Contemporary site environmental controls will be incorporated into the development to minimise the potential for adverse impact on the environment.
- An existing vacant and remediated site that is zoned for industrial purposes will be utilised to establish a goods terminal that considers current design principles.
- The proposed project will produce economic benefits to the wider community, including employment opportunities during the construction and operational phases.

2. THE SITE

2.1 Location

The site is located on Heron Road, Kooragang Island (refer Appendix 3). Kooragang Island is located in Newcastle Port and is girt by the North Arm and South Arm of the Hunter River. The Hunter River catchment is one of the largest in NSW and reaches further inland than any other catchment, covering an area of approximately 22,000 km². Originating in the Mount Royal Range, the Hunter River is 300 km long and enters the sea at Newcastle. The tidal limit is located 4 km upstream of Maitland at Oakhampton, 45 km from the sea (Department of Water and Energy, 2008).

The site is appurtenant to existing industrial land to the south and Teal Street to the north. Greenleaf Road abuts the eastern boundary and then vacant foreshore land and the North Arm of the Hunter River. Railway lines and then Heron Road, industrial lands and the South Arm of the Hunter River are located to the west (refer Appendices 3 and 4). The site is surrounded by port and industrial uses that are consistent with the proposed development (refer Appendix 4).

2.2 Title Details and Ownership

The 12.27 hectare site is located on Heron Road, Kooragang and comprises Lot 1 DP 1117013. The land is owned by Incitec Pivot Limited.

2.3 Easements

Easement for railway variable width, access appurtenant to the land and easement for services appurtenant to the land are shown on the Certificate of Title for Lot 1 DP 1117013.

2.4 Physical Features

2.4.1 Topography and Drainage

The site comprises flat land that includes some reclamation. Evidence of gypsum dams can be found at the site. Drainage over the site is predominantly by overland flow, with some infiltration and subsurface flow. The site drains into the Hunter River.

2.4.2 Flooding

Council records indicate that the site has been identified as potentially flood prone.

2.4.3 Mine Subsidence

The site is not located within a proclaimed mine subsidence district.

2.4.4 Bushfire

The site is not classified as bushfire prone land pursuant to Council's bushfire prone land maps.

2.4.5 Acid Sulfate Soils

The site is not classified as containing acid sulfate soils pursuant to Council's acid sulfate soil maps. However, previous investigations indicate that the natural clays are usually acid sulfate soils (Coffey, 2006).

2.4.6 Contamination

Council records do not indicate that the site is potentially contaminated. A Site Audit Report prepared by HLA-Envirosciences (2006) reviewed previous investigations from JBS Environmental (2006) and Radioactive Advice & Solutions (2006). The audit found that the environmental assessment programme relating to soils and fill materials on the site has generally been carried out to appropriate standards endorsed by NSW DEC and that the site is suitable for industrial use (HLA-Envirosciences, 2006).

2.5 Previous uses of the site

The site has been used in the past for industrial purposes that primarily include the handling and storage of phosphogypsum (Coffey, 2006). HLA-Envirosciences (2006) add that the site has historically been used for the placement of phosphogypsum (calcium sulfate), a by-product of the fertiliser manufacturing process which occurs at the Incitec Pivot facility located to the south of the subject site. The phosphogypsum was generated as a filter cake and was deposited at the site in a slurry into large holding ponds (or dams), where the phosphogypsum particles were allowed to settle (HLA-Envirosciences, 2006).

2.6 Existing Development

The site has not been improved by any buildings or infrastructure. Evidence of dams previously utilised for gypsum disposal exists at the site.

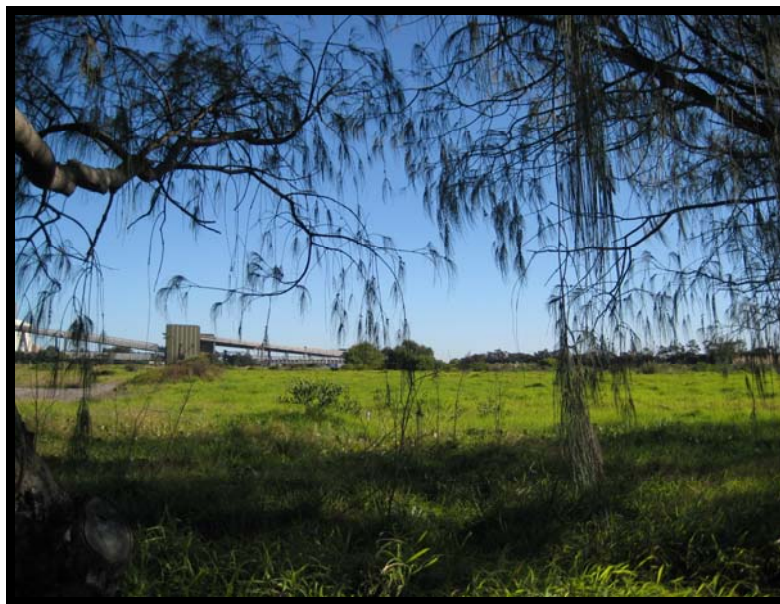


Photo 1 – View of the vacant site

2.7 Access and Parking

Vehicular access is provided to the site via Heron Road. Future vehicular access will be gained from Greenleaf Road.

2.8 Capital Investment Value

The capital investment value of the project will be around \$17-18 million.

2.9 Services

Services including water, electricity and telephone are presently available to the subject property. Some augmentation of services may be required to support the proposed redevelopment and discussions with service agencies will be undertaken in due course. The Environmental Assessment will be accompanied by a Services Statement detailing servicing requirements.

2.10 Land to the North

To the north of the site is Greenleaf Road and the Teal Street bridge. Beyond the Teal Street bridge is industrial land and the Kooragang Nature Reserve.



Photo 2 – Teal Street Bridge to the north of the site

2.11 Land to the East

To the east of site are Greenleaf Road, vacant land and the Northern Arm of the Hunter River.



Photo 3 – Vacant land to the east of the site

2.12 Land to the South

To the south of the site is the Incitec Pivot facility. The site is the location for a number of plants that manufacture ammonia, nitric acid, ammonium nitrate and granular fertilizers for use in the mining of coal and as a source of nitrogen for agriculture.



Photo 4 – Incitec Pivot facility to the south of the site

2.13 Land to the West

To the west of the site are Heron Road and the Kooragang Coal Loader.



Photo 5 – Kooragang Coal Loader to the west of the site

2.14 Distance to Nearest Residential Properties

As indicated on the attached location plan (refer Appendix 3) the nearest residential properties are approximately 1.2 kilometres from the eastern boundary of the subject site.

To the north-east of the site is located Stockton Centre that is a residence for intellectually disabled individuals. The centre houses approximately 438 permanent residents within various buildings that contain between 20 and 30 people. Other activities also occur at the site such as food preparation, laundering and day activities for people within the centre and within the wider community. The average age of residents at the centre is 50 years of age.

To the south-east is the residential area of Stockton that generally contains a single house on each allotment. Access is gained to Stockton via Fullerton Road.

3. THE PROPOSAL

3.1 Overview

The proposal involves construction and operation of an intermodal goods terminal. As the purpose of the goods terminal is to store and redistribute material to local and export markets there will not be any repackaging or processing of material on site. The site will operate as a goods terminal for a range of import and export goods including maximum storage of 6,000 tonnes of ammonium nitrate.

3.2 Alternatives Considered

3.2.1 Upgrade existing operations

Toll Group presently operates two sites in the Newcastle area, Tomago and Sandgate. The possibility of upgrading the existing operations was considered as part of scoping for the project. Utilising existing sites provides the advantage of entrenched staff, existing infrastructure and reduced need for additional land. However, issues such as feasibility, current infrastructure, access to intermodal networks and cost of retro-fitting sites were considered to be too significant in terms of efficient operation of the sites. Upgrade of the existing sites is not considered a viable option.

3.2.2 Select an alternate site

Toll Group has considered several other sites in the region in determining the appropriate location for a goods terminal. The main attributes of the subject site are:

- Located within Australia's largest port in bulk terms and the world's largest coal exporting port.
- Access to shipping, rail and road transport networks.
- Location within the regional city of Newcastle, that State's second largest urban centre (DoP, 2006).
- Close proximity to a source of ammonium nitrate (Orica facility).
- Close proximity to coal mines in the Hunter.
- Located within an industrial area with low sensitivity to the project.

Although it is possible that other sites may be found that have similar attributes to those listed above, the subject site possesses all of the above attributes and is ideal for the project. It is considered that an alternate site would not provide the same level of opportunity as the subject site, and as such an alternate site is not a viable option.

3.2.3 Do nothing

The "do nothing" option would result in lost opportunity for Newcastle Port. The site is ideally suited to the proposed goods terminal and will allow for improved operation of the port. In doing nothing Toll Group would be relying on their existing operations to manage the increased activity that is occurring due to demand for movement of goods, including mineral resources. The opportunity to utilise a site that is eminently suited to the project for an activity that would otherwise have to rely on existing sites or an alternative sites with less obvious advantages in terms of access to intermodal transport, does not present the do nothing option as a viable option.

3.3 Justification of Site Location

The Three Ports State Significant Site Proposal (NSW Department of Planning, 2008) states the following:

"The volume of trade through Newcastle Port is expected to increase further as the NSW Government continues to implement the Ports Growth Plan. The Hunter Region accounts for 14 percent of Australia's total exports which are sent to international markets through the Port of Newcastle. In addition, Newcastle is Australia's largest port in bulk terms and the world's largest coal exporting port. In 2006/07 the value of trade moved through the Port of Newcastle was \$8.3 billion. Over 1200 hectares of vacant employment land remains available for port and airport development and related employment development."

The site is ideally situated to allow for development of the intermodal goods terminal due to its proximity to the port and intermodal transport networks. The site is located adjacent to existing industrial zoned land. Furthermore, a ready supply of ammonium nitrate to be utilised for explosive will allow for efficient continuation of mining activities.

3.4 Site Layout

The project proposes the following key components as identified in the site plan in Appendix 5.

- Erection of a warehouse (8,000 square metres) and attached awning and amenities (2,000 square metres). The warehouse will be utilised for under cover storage of material to be transferred to trains and trucks. The awning will be utilised for under cover transfer of material for movement via trucks.
- Outdoor container storage space of goods for local and interstate movement and for export, stored a maximum of three containers high.
- Rail spur into the site.
- An office for approximately 40 people and attached drivers area containing ablution facilities and lunch room.
- Three bay workshop with staff office and amenities.
- Approximately 108 car parking spaces at ground level.
- Prime mover parking.
- Storage for large equipment.
- Two above ground fuel storage tanks (total capacity approximately 100,000 litres).

3.4.1 Storage

The goods terminal will be both customs and quarantine approved to allow for the packing and unpacking of containers. A wide range of materials will occur on site, either in transit or storage of up to several weeks and appropriate licences will be held by Toll Properties as required. Ammonium nitrate storage will occur in designated outdoor storage areas. In the warehouse ammonium nitrate will be stored within 1 tonne bags that will be stacked two bags high.

3.4.2 Movement of Material

Due to the location of the proposed goods terminal various transport options are available to serve local and export markets. An undercover truck loading area is proposed on the western elevation of the warehouse. Trucks of varying sizes can be loaded in the undercover area irrespective of weather. The site has been designed with a ring road with separate ingress and egress so that trucks can enter and leave in a forward motion without the necessity to reverse. A workshop is also proposed to allow for general maintenance of plant and equipment to the west of the warehouse.

The advantage of access to intermodal transport networks that is provided by the site is highlighted by the proposed railway spur that enters from the main rail line on Kooragang Island to the west of the site. Trains will



be loaded and then re-enter the main rail line for transport of material to national markets. Existing berths located within Newcastle Port will be utilised by any ships that are involved in movement of material to and from the site, a wharf will not be constructed as part of the project.

Designated parking is proposed for prime movers on site. Separate vehicular access is proposed to the staff car park on the north-east of the site. No off site parking is required (refer preliminary site plan in Appendix 5).

3.4.3 Administration Office

An administration office containing driver's lunch and ablution facilities, office space (shared and individual), boardroom and associated amenities is proposed in the north-east corner of the site near Greenleaf Road. Staff in the office that will administer the site will include senior supervisors and other administration staff. Direct access is provided from the office to the employee car park.

3.4.4 Fuel Storage

A fuelling area is proposed between the prime mover parking and equipment storage area. Two tanks containing a total of approximately 100,000 litres of fuel are proposed under an awning to allow covered storage of fuel.

3.4.5 Hazardous materials

As the site is an intermodal goods terminal a range of material will arrive on site and may be stored for several weeks. Toll Properties will hold licences to handle all of the material that arrives on the site and staff that handle dangerous goods must have a dangerous goods licence.

3.4.5.1 Ammonium Nitrate

The UN number for the majority of Ammonium Nitrate that will be stored at the site is 1942 and a copy of the MSDS is attached (refer Appendix 6). A small amount of Ammonium Nitrate Emulsion (UN Code 3375), maximum of 40 tonnes, may be located in transit on the site. The Ammonium Nitrate Emulsion will be located at the site for a maximum period of 3 days and a copy of the MSDS is attached (refer Appendix 6)

3.4.6 Security

A security fence will be provided to the site to preclude pedestrian access. Truck access to the site will be managed via a truck vehicle entry gate with associated gatehouse security. A secure gate connected to traffic control is also proposed for trucks seeking to egress the site. A swipe card entry system will be provided to the proposed employee car park.

Risk to the site will be managed by site security. Licences required to handle SSAN at the site are discussed in Section 4.4.

4. PLANNING FRAMEWORK

4.1 Introduction

The following provides an outline of the statutory and non-statutory planning framework relating to the proposed development. As indicated in Section 1.4 the development is a project to which Part 3A of the EP&A Act applies.

4.2 Environmental Protection and Biodiversity Conservation Act 1999

The *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act) identifies matters that have the potential to have a significant impact on matters of national environmental significance ("NES"). Each matter of NES, presented below, will be considered in the Environmental Assessment:

- World heritage properties.
- National heritage places.
- Wetlands of international significance.
- Listed threatened species and communities.
- Listed migratory species.
- Protection of the environment from nuclear actions.
- Commonwealth marine area.

A search of the EPBC Protected Matters database was conducted on 1 July 2008 that identified a number of issues, such as threatened ecological communities and Hunter Estuary Wetlands, to be considered in the Environmental Assessment.

Approval may also be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Fort Wallace at Stockton is listed on the Commonwealth Heritage List and is nationally significant as a major component of the integrated system of defence for the Newcastle Fortress Area. The potential for the proposal to impact on Commonwealth land will be considered in the Environmental Assessment.

4.3 Australian Heritage Council Act 2003

Heritage conservation legislation at a federal level was amended by the *Australian Heritage Council Act 2003* together with amendments to the EPBC Act. Legislative changes introduced a new scheme of heritage protection that effectively focuses on national, as opposed to state and territory, heritage concerns. The new regime provides for the continuation of the Register of the National Estate ("RNE"); however, the RNE is now used as an information resource to which the newly formed Australian Heritage Council ("AHC") is able to add places that it believes meet the prescribed criteria. Under the new regime, the National Heritage List and the Commonwealth Heritage List have been created to add to the RNE.

The site is not listed on the AHC's Register of the National Estate, the National Heritage List or the Commonwealth Heritage List. Although unlikely, potential for adverse environmental impact to the Hunter Estuary Wetlands that includes Kooragang Nature Reserve will be considered in the Environmental Assessment.

4.4 Explosives Act 2003 and Explosives Regulation 2005

Changes to the legislation governing explosives came into effect with the *Explosives Act 2003* and *Explosives Regulation 2005*. Security sensitive ammonium nitrate is defined by the *Explosives Regulation 2005* as any of the following:

- (a) *ammonium nitrate that is not a dangerous good of Class 1,*
- (b) *ammonium nitrate emulsions, suspensions or gels containing greater than 45% ammonium nitrate,*
- (c) *ammonium nitrate mixtures containing greater than 45% ammonium nitrate,*

but does not include ammonium nitrate solutions.

Under the new regulations, retailers and suppliers of SSAN fertilisers are not permitted to sell or supply SSAN for private home use in concentrations greater than 45 per cent ammonium nitrate. Toll Properties require a Licence to supply explosives or explosives precursors and can only supply SSAN to licensed users (WorkCover, n.d.).

The Toll Properties licensee must have a security clearance check and a license to use 'Security Sensitive Dangerous Substances'. As a reflection of the tightening controls on explosives and explosive precursors, Toll Properties are also required to prepare and maintain a Site Security Plan for SSAN. Furthermore, all employees that have unsupervised access to the SSAN must have undergone security clearance, hold an Unsupervised Handling Licence and be listed on the Site Security Plan (WorkCover, n.d.).

Further consideration will be given to the Site Security Plan for SSAN as part of the Environmental Assessment.

4.5 Environmental Planning and Assessment Act 1979

The EP&A Act requires that consideration be given to environmental impacts as part of the land use planning process (including heritage impacts). Environmental Planning Instruments ("EPI's") can be made pursuant to the provisions of the EP&A Act and they are discussed throughout Section 4 of this Preliminary EA.

The project will be assessed under Part 3A of the EP&A Act that requires approval from the Minister for Planning. As discussed in Section 1 this Preliminary EA provides background information to enable the Director-General to provide Environmental Assessment Requirements for the project in accordance with Section 75F(2) of the EP&A Act.

4.6 Threatened Species Conservation Act 1995

The impact of the proposal on threatened species, populations or ecological communities, or their habitats must be considered as part of the Environmental Assessment. As discussed previously the site is heavily disturbed and as such there is unlikely to be any adverse ecological impact.

However, an ecological assessment will occur as part of the Environmental Assessment to confirm the status of the site and potential for ecological impact.

4.7 Other Approvals Required

Pursuant to Clause 75U of the EP&A Act, authorisation for a Part 3A approved project is not required under the following Acts:

- the concurrence under Part 3 of the *Coastal Protection Act 1979* of the Minister administering that Part of the Act,

- 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*,
- a permit under section 87 or a consent 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 to be repealed by that Act) to clear native vegetation or State protected land,
- a permit under Part 3A of the *Rivers and Foreshores Improvement Act 1948*,
- 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 under section 91 of the *Water Management Act 2000*,
- Division 8 of Part 6 of the *Heritage Act 1977*.

In relation to the above, the following is of relevance to the proposed development:

- The site is within the Coastal Zone as defined under the *Coastal Protection Act 1979*.

Pursuant to Clause 75V of the EP&A Act, an authorisation of the following kind cannot be refused if it is necessary for carrying out an approved project and is substantially consistent with the approval:

- an aquaculture permit under section 144 of the *Fisheries Management Act 1994*,
- an approval under section 15 of the *Mine Subsidence Compensation Act 1961*,
- a mining lease under the *Mining Act 1992*,
- a production lease under the *Petroleum (Onshore) Act 1991*,
- an environment protection licence under Chapter 3 of the *Protection of the Environment Operations Act 1997* (for any of the purposes referred to in section 43 of that Act),
- a consent under section 138 of the *Roads Act 1993*,
- a licence under the *Pipelines Act 1967*.

In relation to the above, the following is of relevance to the proposed development:

- The *Protection of the Environment Operations Act 1997* ("POEO Act") relates to pollution management and waste disposal. Section 48 of the POEO Act requires a person to hold a licence that authorises an activity identified in Schedule 1 of the Act to be carried on at those premises. Schedule 1 of the POEO Act lists chemical storage with a capacity to store more than 2,000 tonnes. The proposed development has the potential to store approximately 6,000 tonnes of ammonium nitrate as well as other chemicals and will require a licence under the POEO Act.

4.8 State Environmental Planning Policies

The following provides an overview of each State Environmental Planning Policy (SEPP) that is relevant to the project.

4.8.1 State Environmental Planning Policy (Major Projects) 2005

State Environmental Planning Policy (Major Projects) 2005 ("SEPP 2005") identifies which projects are identified as "Major Projects" and require assessment under Part 3A of the EP&A Act. Schedule 1 of SEPP 2005 identifies that the following chemical facilities may be declared Part 3A Projects:

"10 Chemical, manufacturing and related industries

- (1) *Development that employs 100 or more people or with a capital investment value of more than \$20 million for the purpose of the manufacture or reprocessing of the following (excluding labelling or packaging):*
 - a) *soap, detergent or cleaning agents,*
 - b) *paints, ink, dyes, adhesives, solvents,*
 - c) *pesticides or inorganic fertiliser,*
 - d) *pharmaceuticals or veterinary products,*
 - e) *ammunition or explosives,*
 - f) *oils, fuels, gas, petrochemicals or precursors,*
 - g) *polymers, plastics, rubber or tyres,*
 - h) *batteries or carbon black.*
- (2) *Development with a capital investment value of more than \$20 million for the purpose of:*
 - i) *bulk liquid storage facilities, or*
 - j) *gas storage facilities, or*
 - k) *chemical storage facilities.*
- (3) *Development for the purpose of the manufacture, storage or use of dangerous goods in such quantities that constitute the development as a major hazard facility under the Control of Major Hazard Facilities National Standard [NOHSC: 1014 (2002)]."*

In relation to the above, we have concluded as follows:

- The project does not fall within subcategory 10(1) above.
- The project does not fall within subcategory 10(2) above.
- The project does fall within subcategory 10(3) above as the site will store a dangerous good (ammonium nitrate – Class 5.1 dangerous good) in a quantity (approximately 4,800 tonnes) that constitutes a "major hazard facility" under the Control of Major Hazard Facilities National Standard (NOHSC:1014(2002)).

Schedules 2 and 3 of SEPP 2005 also list certain sites that are defined as Part 3A projects. Parts of the subject site are in a sensitive coastal location as they are within 100m above the mean high water mark of the Hunter River and may be considered a Major Project by virtue of Clause 11(e) of Schedule 3. Schedule 2 includes buildings greater than 13 metres in height and located in the coastal zone. The preliminary height of the buildings is less than 13 metres. The site is not listed in Schedule 3 of SEPP 2005; however, there is a current proposal to declare Newcastle Port as a State Significant Site (Three Ports Significant Sites Proposal).

4.8.2 State Environmental Planning Policy (Infrastructure) 2007

Schedule 3 of State Environmental Planning Policy (Infrastructure) 2007 ("SEPP 2007") identifies traffic generating development that must be referred to the RTA. Freight intermodal facilities and freight terminals are identified in Schedule 3 of SEPP 2007. Clause 104(3) of SEPP 2007 states that the requirement for referral under the SEPP relates to development applications and as such Schedule 3 of SEPP 2007 does not relate to Major Projects. However, a Traffic Impact Assessment will be completed as part of the Environmental Assessment.

4.8.3 State Environmental Planning Policy No. 14 – Coastal Wetlands

The aim of State Environmental Planning Policy No. 14 ("SEPP 14") is to ensure that the coastal wetlands are preserved and protected in the environmental and economic interests of the State. There are a number of SEPP 14 wetlands located on the North Arm and South Arm of the Hunter River including wetland 817, 823, 844, 844a, 846, 847, 848 and 849 (refer Appendix 7). Full consideration will be given to the aims and objectives of SEPP 14 during preparation of the Environmental Assessment.

4.8.4 State Environmental Planning Policy No. 33 – Hazardous and Offensive Development

State Environmental Planning Policy No. 33 – Hazardous and Offensive Development (“SEPP 33”) provides the ability to determine whether a development is hazardous or offensive. Storage of approximately 6,000 tonnes of ammonium nitrate has the potential to be considered a hazardous or offensive industry. A Preliminary Risk Screening will be conducted to determine whether SEPP 33 applies. A Preliminary Hazard Analysis will be conducted, if required, to ascertain whether the development is considered hazardous or offensive. The document Applying SEPP 33 – Hazardous and Offensive Development Application Guidelines (Department of Urban Affairs and Planning, 1994) will be considered as part of the Environmental Assessment.

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

State Environmental Planning Policy No.55 – Remediation of Land (“SEPP 55”) provides a Statewide planning approach to the remediation of contaminated land. SEPP 55 requires consent authorities to consider contamination and remediation in zoning/rezoning proposals as well when determining development applications. SEPP 55 does not relate to Major Projects; however, geotechnical and contamination issues will be considered as part of the Environmental Assessment.

4.8.6 State Environmental Planning Policy No. 71 – Coastal Protection

State Environmental Planning Policy No. 71 – Coastal Protection (“SEPP 71”) applies to land, either all or part of, which is within the “coastal zone”. The coastal zone is defined in the *Coastal Protection Act 1979* and includes the subject site. SEPP 71 identifies matters to be taken into account when Council prepares a draft Local Environmental Plan and when determining a development application. SEPP 71 does not generally relate to Major Projects; however, the Environmental Assessment will give full consideration to the potential for the proposal to impact on coastal processes and the coastal environment. The proposed development will not impede or diminish public access to the coastal foreshore as discussed in Clause 14 of SEPP 71.

4.9 NSW Coastal Policy

The NSW Coastal Policy provides for management of population growth and economic development; whilst, maintaining environmental attributes of the NSW coast. The coastal policy is based on the principles of Ecologically Sustainable Development. Full consideration will be given to the coastal environment and coastal processes during preparation of the Environmental Assessment.

4.10 Regional Matters

4.10.1 Hunter Regional Environmental Plan

The Hunter Regional Environmental Plan 1989 (REP) seeks to promote balanced land development of the region. The objectives of the REP in relation to industrial development are:

- (a) *to ensure that sufficient zoned and serviced industrial land is provided in locations appropriate to the needs of industry, while ensuring protection of the environment, and*
- (b) *to promote the distribution of employment in secondary industry in a manner compatible with the availability of services and distribution of population.*

As discussed in Section 2 and 3 of this Preliminary EA the site is eminently suited to the proposed development and is in keeping with the objectives of the REP.

The objective of Part 7 (Division 1) of the REP is to control development so as to minimise air, noise and water pollution. The Environmental Assessment will ascertain the nature and level of environmental impacts that are briefly discussed in Section 5 of this Preliminary EA. Where potential environmental impacts are identified

appropriate ameliorative measures will be presented in the Environmental Assessment to minimise adverse environmental impacts and ensure compliance with the REP.

4.10.2 Lower Hunter Regional Strategy

The Lower Hunter Regional Strategy (LHRS) is the government's 25-year land use strategy for the Hunter region. One of the outcomes identified in the LHRS is that a greater proportion of employment will be in centres close to higher population densities and accessible through a variety of transport options. Furthermore, the LHRS aims for employment growth to capitalise on key regional infrastructure such as the port (DoP, 2006). The proposal is consistent with the LHRS in creating employment opportunities in the region that utilise transport networks and the port.

4.11 Newcastle Local Environmental Plan

The proposed development is considered a goods terminal under the Newcastle Local Environmental Plan 2003 ("LEP 2003"). A goods terminal is defined in the LEP 2003 as:

"...a building or place used for the principal purpose of the bulk handling of goods for transport by air, rail, road or waterborne vessels, and includes facilities for the loading and unloading of vehicles and vessels used to transport those goods and for the parking, servicing and repair of those vehicles or vessels..."

A goods terminal is permitted with consent in the 4(b) Port and Industry Zone. The primary objective of the 4(b) Port and Industry Zone is:

"...To accommodate port, industrial, maritime industrial, and bulk storage activities which by their nature or the scale of their operations require separation from residential areas and other sensitive land uses..."

The project is therefore not "partially prohibited" or "wholly prohibited" within the meaning of Section 75J(3) of the Act and is consistent with the objectives of the zone.

4.12 Newcastle and Kooragang Island Area Risk Assessment Study

The Newcastle and Kooragang Island area and associated transportation activities was selected for an area risk assessment study as the older industrial areas, in particular, have potential for land use safety conflicts. The study was carried out in stages, with the site of the proposed goods terminal being located within Stage 3 the Mayfield heavy industrial area, including BHP and port facilities. The road, rail, pipeline and shipping transport operations for the overall study area were also covered in Stage 3. The risk criteria for land use safety planning applied for the study were as set out in *Hazardous Industry Planning Advisory Paper No. 4 – Risk Criteria for Land Use Safety Planning*. In terms of cumulative risk assessment, it was found that there are no issues of concern with regard to cumulative risk, which are not covered through consideration of the risk contributions from each individual site. Incitec and Elgas sites dominated the cumulative risk contours (Department of Planning, 1993).

In conclusion, the risk assessment conducted by the Department of Planning found that Kooragang Island and Mayfield industrial areas (Stages 2 and 3 of the study, including the subject site) have a substantial capacity to safely accommodate industries involving significant quantities of hazardous materials. Parts of Kooragang Island offer the best isolation from residential areas and, in some cases, would offer the best transport safety. The existing risk levels from the Incitec facility and the proximity to sensitive environmental areas would tend to constrain respectively activities with far-field effects or significant potential to harm the biophysical environment. Assessment of proposals for future development through the '7 stage approval process' and in accordance with the provision of SEPP 33 should adequately address issues associated with potentially hazardous development (Department of Planning, 1993).

5. POTENTIAL ENVIRONMENTAL IMPACTS

5.1 Overview

There are a number of potential environmental impacts that may occur as a result of the proposed development. The following discussion on environmental issues will be subject to detailed investigation as part of the Environmental Assessment. Where the potential for significant adverse environmental impacts are identified appropriate measures to ameliorate those impacts will be presented in the Environmental Assessment.

5.2 Air Quality

Air quality in Newcastle is likely to be dominated by motor vehicle emissions and emissions from industry such as coal mining, transportation and port activity. Sources of air emissions in the locality of the site include neighbouring Orica and Incitec plants and the Tomago Aluminium smelter. Odour in the locality may be impacted by the Cargill (oilseed) site.

Potential impacts from the proposed project include dust emissions due to construction activities, movement of vehicles and wind borne fertiliser from broken bags. Odour may be produced through storage of fertiliser and internal combustion engines in trucks and cars. It is expected that the majority of air quality impacts from the proposed development will be limited to the construction phase; however, an Air Quality Impact Statement will be produced to determine the likely impact of the development on local and regional air quality as part of the Environmental Assessment.

5.3 Acoustic Environment

Noise and vibration effects are expected to occur during the construction phase of the development. Post-construction noise is expected to be limited to plant, primarily air conditioners, and movement of vehicles. Loading and movement of trains and trucks is expected to be the main noise generating activity, with some noise produced by activity of employees. There are a number of noise generating industries and activities in the general locality of the proposed facility. There are no sensitive users that are likely to be affected by the noise generated and as such significant noise impacts are not expected. A Noise Impact Assessment will be prepared as a component of the Environmental Assessment, with appropriate noise mitigation recommendations.

5.4 Contamination

A Site Audit Report was prepared for Lot 1 (the subject site) in the proposed subdivision of Lot 5 in DP 262783 by HLA-Envirosciences. The report found that the site was suitable for industrial use. However, the report found that phosphogypsum, a by-product from fertiliser manufacturing, which occurred on an adjacent site has been placed in dams on the site. The phosphogypsum is characterised by high concentrations of sulfate. Phosphogypsum also contains low concentrations of naturally occurring radioactive materials, but their presence has been assessed by Radiation Advice & Solutions Pty Ltd to pose no significant impact to occupiers of the site when used for commercial/industrial purposes or to the receiving waters of the Hunter River (HLA-Enviroscience, 2006).

Design of the facility will include appropriate storage and bunds for potentially contaminating materials and selective location of activities to minimise potential for contamination of the soil. The Environmental Assessment will involve investigations to confirm the level of contamination at the site and the suitability of the site for the proposed development.

5.5 Ecology

As the site is heavily disturbed and has a history of being associated with industrial uses, there is minimal potential for the site to contain endangered ecological communities or threatened and endangered species. An ecological assessment will occur to confirm that the development will not have a significant impact on ecological attributes of the site. The ecological assessment will include a review of relevant databases and field work that is appropriate to the disturbed nature of the site.

5.6 Geotechnical

A Geotechnical Audit was prepared by Coffey (2006) for the previous subdivision to create the subject allotment. The audit found that in terms of geotechnical attributes the site was suitable for use as an industrial site. Some demolition rubble and timber identified in portions of the site should be removed prior to sale (Coffey, 2006).

The Environmental Assessment will involve investigations to confirm the geotechnical conditions at the site and the suitability of the site for the proposed development.

5.7 Greenhouse Gas

There is unlikely to be a significant change to greenhouse gases from the new purpose built intermodal goods terminal. The likely reduction in travel distances and improvement in efficiency resulting from access to intermodal transport networks will potentially result in a reduction of greenhouse gas emissions through the transport network. A broad qualitative assessment of greenhouse gas emissions will occur to determine the likely changes to greenhouse gas emissions as a result of the proposed development.

5.8 Hazard Analysis

The project involves storage of a dangerous good (ammonium nitrate – Class 5.1 dangerous good) in a quantity (approximately 6,000 tonnes) that constitutes a “major hazard facility” under the Control of Major Hazard Facilities National Standard (NOHSC:1014(2002)). An assessment will occur under SEPP 33 to determine whether the project is considered a potentially hazardous or offensive industry pursuant to definitions under the SEPP. The document Applying SEPP 33 – Hazardous and Offensive Development Application Guidelines (Department of Urban Affairs and Planning, 1994) will be considered as part of the Environmental Assessment. Any additional risk assessment matters considered necessary by the Director-General will be addressed.

5.9 Indigenous and non-Indigenous Heritage

The site is heavily disturbed and has a history of being associated with industrial uses. There is unlikely to be any archaeological deposits at the site. Consultation will occur with the local Aboriginal community appropriate to the disturbed nature of the site and previous land uses. An Aboriginal Heritage Impact Assessment will be prepared as part of the Environmental Assessment.

There are no items of European heritage significance that are likely to be affected by the proposal. The Newcastle LEP 2003 identifies a number of items of local heritage significance in Kooragang that will be considered as part of the Environmental Assessment.

5.10 Transport

Additional information will be provided on movement of material in the Environmental Assessment. A traffic impact assessment will be conducted as part of the Environmental Assessment. A brief outline of the modes of movement of goods is provided below.

5.10.1 Road

Access to the site is provided by Heron Road from Cormorant Road/Teal Street. The Pacific Highway and Sydney to Newcastle Freeway to the east of the site will be utilised as road transport routes. As discussed in Section 3.4.2 new access and vehicle parking will be provided to the site. The nature and volume of materials handled by road will be discussed in detail in the Environmental Assessment.

5.10.2 Rail

The site provides access to the rail network for movement of goods to regional and national markets. A proposed rail spur will enter from the main rail line on Kooragang Island to the west of the site. Trains will be loaded and then re-enter the main rail line. Detailed design will occur on the interaction of the rail spur with the rail and road network and will be discussed in the Environmental Assessment.

5.10.3 Shipping

Existing berths located in Newcastle Port will receive goods from national and international markets for storage and re-distribution. A wharf will not be constructed as part of the project. Detail on the relationship between the site and the movement of goods through shipping will be discussed in detail in the Environmental Assessment.

5.11 Visual Impact

It is considered that as the site is heavily disturbed and located within an existing industrial area the proposed development will have minimal visual intrusion on the scenic qualities of the area. Consideration has been given to potential visual impact of the buildings and infrastructure in terms of surrounding land uses and location within Newcastle Port. A Visual Impact Assessment will be prepared and considered during detailed design. Where necessary and appropriate to the proposed land use, changes will be made to the design to improve the impact on the visual environment.

5.12 Water Quality

Kooragang Island is girt by the Northern Arm and Southern Arm of the Hunter River. Water quality impacts associated with the project may result from activities during construction and post-construction. Potential impacts to surface and ground water will be considered as part of the Environmental Assessment. Where required mitigation measures will be included in the design or operation of the facility to minimise the potential for impact to water quality in the local area.

An Erosion and Sediment Control Plan will be prepared to control off site emission of soil during construction. A Stormwater Management Plan that considers Water Sensitive Urban Design will be prepared to manage stormwater during operation of the site.

5.13 Consultation

Consultation will occur with relevant government agencies to garner their feedback on the proposed project. As there are no residential properties in close proximity to the site community consultation is not considered necessary. Consultation will occur with government agencies, as required, throughout

preparation of the Environmental Assessment. The following government agencies will be included in the consultation process:

- Department of Planning.
- Department of Environment and Climate Change.
- Department of Water and Energy.
- Newcastle Port Corporation.
- Newcastle City Council.
- Roads and Traffic Authority, NSW.

5.14 Statement of Commitments

The Environmental Assessment will include a Statement of Commitments that identifies activities that will occur during the construction and operation of the goods terminal. Where activities have the potential to have an adverse impact on the environment the Statement of Commitments will list mitigation measures that should occur to manage the impact.

5.15 Preliminary Environmental Risk Analysis

5.15.1 Environmental Issues

As identified in Sections 2-5 there are a number of key issues that need to be considered as part of preparation of the Environmental Assessment. In addition to key issues, there are a number of minor issues that must be considered. As part of the Environmental Assessment the issues will be investigated and appropriate environmental safeguards will be provided. It is considered that further investigation and development of environmental safeguards is likely to reduce the risk that the project poses to the environment.

5.15.2 Risk Ranking

Risk ranking of the environmental issues was based on the current level of technical knowledge of the site. A risk ranking matrix of the key issues is presented in Table 6.1. Key concepts of AS/NZS 4360 Risk Management have been utilised in preparing the matrix. It should be noted that additional risk analysis will occur during preparation of the EA.

Table 6.1 – Risk Ranking Matrix

Likelihood in absence of controls	Consequence in absence of controls				
	Insignificant	Minor	Moderate	Major	Catastrophic
Almost certain	H	H	E	E	E
Likely	M	H	H	E	E
Moderate	L	M	H	E	E
Unlikely	L	L	M	H	E
Rare	L	L	M	H	H

E: extreme risk – immediate action is required

H: high risk – senior management attention required

M: moderate risk – management responsibility must be specified

L: low risk – managed by routine procedures



Table 6.2 – Project Risk Ranking

Environmental Issue	Risk Ranking (no controls)
Hazard	E
Air Quality	H
Water Quality	H
Acoustic	M
Visual	M
Contamination	L
Ecology	L
Geotechnical	L
Greenhouse Gas	L
Heritage	L
Transport	L

E: extreme risk – immediate action is required

H: high risk – senior management attention required

M: moderate risk – management responsibility must be specified

L: low risk – managed by routine procedures

As indicated above, the environmental issues with the highest risk in the absence of any controls are hazards, air quality and water quality (surface and groundwater). The EA will provide additional consideration of all relevant environmental issues and appropriate environmental safeguards.

6. SUMMARY

This Preliminary Environmental Assessment details our proposed approach to the assessment of environmental issues relating to the development of an intermodal goods terminal. The land the subject of the proposed development comprises Lot 1 DP 1117013 and is located at Heron Road, Kooragang Island.

In summary, we consider the key issues that need to be addressed in the future Environmental Assessment to be:

- Air quality.
- Acoustic environment.
- Contamination.
- Ecology.
- Geotechnical assessment.
- Greenhouse gas emissions.
- Hazard Analysis.
- Indigenous and non-Indigenous heritage.
- Transport.
- Visual impact.
- Water quality.
- Consultation.

On behalf of the applicant, we seek the Director-General's Requirements for the preparation of an Environmental Assessment



7. REFERENCES

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