

Moorebank Intermodal Terminal Preliminary Project Environmental Overview in support of the Application

December 2011

Commonwealth Department of Finance and
Deregulation

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Author: C Richard, E Taylor

Signed:

Reviewer: P Greenhalgh

Signed:

Approved by: P Greenhalgh

Signed:

Date: 7 December 2011

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Glossary

AHIMS	Aboriginal Heritage Information Management System
ANZECC	Australian and New Zealand Environment and Conservation Council
CBD	Central Business District
CBNTCAC	Cubbitch Barta Native Title Claimants Aboriginal Corporation
DACHA	Darug Aboriginal Cultural Heritage Assessments
DALI	Darug Aboriginal Landcare Incorporated
DCAC	Darug Custodian Aboriginal Corporation
DCP	Development Control Plan
DEC	NSW Department of Environment and Conservation
DECCW	NSW Department of Environment, Climate Change and Water
DLO	Darug Land Observations
DNSDC	Defence National Storage and Distribution Centre
DoPI	NSW Department of Planning and Infrastructure
DPI	NSW Department of Primary Industries
EIS	Environmental Impact Statement
EP&A Act	NSW <i>Environmental Planning and Assessment Act 1979</i>
EPA	NSW Environmental Protection Authority
EPBC Act	Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i>
ESA	Environmental Site Assessment
ESD	Economically Sustainable Development
HIPAPS	Hazardous Industry Planning Advisory Papers
IMEX	Import/Export
IMT	Intermodal Terminal
KGA	Kreab Gavin Anderson
LEP	Local Environmental Plan
LGA	Local Government Area
mAHD	metres Australian Height Datum
mBGL	metres Below Ground Level
MPO	Moorebank Project Office
NEPM	National Environment Protection Measure
NHMRC	National Health and Medical Research Council
NPI	National Pollution Inventory
NSW	New South Wales
OEH	NSW Office of Environment and Heritage (formerly the Department of Environment, Climate Change and Water)
PB	Parsons Brinckerhoff
PPEO	Preliminary Project Environmental Overview
PHA	Preliminary Hazard Analysis
PM10	Particulate Matter 10 micrometres or less
PM2.5	Particulate Matter 2.5 micrometres or less
POEO Act	NSW <i>Protection of the Environment Operations Act 1997</i>
REP	Regional Environmental Plan
RTA	Roads and Traffic Authority
SEPP	State Environmental Planning Policy
SEWPaC	Commonwealth Department of Sustainability, Environment, Water, Population and Communities
SME	School of Military Engineering
SSFL	Southern Sydney Freight Line
TIA	Traffic Impact Assessment

The Project	Construction and operation of the Moorebank IMT and associated commercial infrastructure. Also includes the development of a rail link and road access points to the site.
TLALC	Tharawal Local Aboriginal Land Council
TSC Act	NSW <i>Threatened Species and Conservation Act 1995</i>
TSP	Total Suspended Particulate Matter
VOCs	Volatile Organic Compounds
WSROC	Western Sydney Regional Organisational of Councils

Executive summary

Introduction

Moorebank, located in South-West Sydney, is being considered as a future site for an intermodal terminal (IMT) planned to handle container traffic from Port Botany and interstate rail freight. The Moorebank IMT (or the 'Project') would provide part of an integrated transport solution for the movement of freight to, from and within the Sydney basin.

The primary function of the Moorebank IMT is to be a transfer point in the logistics chain for shipping containers and to handle both international import/export cargo (IMEX) and domestic interstate and interstate (regional) cargo.

An IMT at Moorebank was first proposed by the Australian Government in 2004 and in the 2010-11 budget, funding was provided to complete a Feasibility Study for the Project. This study, which commenced in September 2010, is ongoing and includes economic and financial analysis, technical feasibility and a master plan design for the facility.

The Commonwealth Department of Finance and Deregulation is seeking staged development approval under the *Environmental Planning and Assessment Act 1979* (EP&A Act) to construct and operate the Moorebank IMT.

This document supports the request for Director-General's Requirements (DGRs) and takes into account relevant environmental policies and guidelines and statutory planning provisions applicable to the Project site, including the supporting infrastructure necessary to facilitate the Project.

This supporting document describes the Project, undertakes a preliminary assessment of its likely impacts and outlines the proposed scope of the environmental assessment for the Project.

Planning and assessment process

The Project requires assessment and approval under the Commonwealth EPBC Act as a Commonwealth action and because of its impact on Commonwealth listed species.

Pursuant to the provisions of s83(B) of the NSW EP&A Act, a staged development application is also proposed. A staged development application sets out the concept proposals for the development of a site for which detailed proposals for separate parts of the site are to be the subject of subsequent development applications.

A coordinated Commonwealth-State assessment process is sought, with discussions between the Commonwealth Department of Finance and Deregulation, Department of Sustainability, Environment, Water, Population and Communities (SEWPaC) and NSW Department of Planning and Infrastructure (DoPI) underway to establish this process.

The application for development consent under the NSW EP&A Act is made voluntarily, and without any admission by the Commonwealth that it is legally required to obtain consent (see section 3.2.1 below).

Need for the Project

The Australian Government proposes to build an intermodal terminal at Moorebank as part of their \$3.4 billion investment in the interstate rail network. It is envisaged that this project would boost rail freight's role in moving goods through the Sydney region having the potential to improve Australia's national productivity and better manage the rate of growth of traffic on our roads.

The Sydney Region is seen as most suitable for this development in that “in 2008–09, the Sydney Region had an estimated Gross Regional Product (GRP) of \$257.9 billion, representing 64.1 per cent of the estimated Gross State Product (GSP) for New South Wales and contributing approximately 20.6 per cent of Australia’s economy (Regional Plan for Sydney 2010).

The proposed Moorebank Intermodal Terminal project is part of an overall commitment by the Australian Government to investing in rail in order to make our transport systems more efficient and better integrated. A coordinated approach to improve freight infrastructure and performance is a key focus for both the Australian and State governments.

The need to improve freight efficiencies through investment in supporting infrastructure has been identified in several State and Commonwealth policies and publications including:

- Commonwealth Nation Building Program
- National Land Freight Network Strategy
- National Ports Strategy
- NSW State Plan
- Sydney Metropolitan Strategy
- NSW Metropolitan Transport Plan
- South-West Subregion: Draft Subregional Strategy.

The Moorebank IMT would be a key element of an integrated transport solution for the movement of freight to, from and within the Sydney basin.

Sydney’s need for additional IMT infrastructure is being driven by continued growth in freight markets, current network constraints and the need to reduce associated environmental and social impacts.

The Project site

The Project site is Commonwealth-owned land currently occupied by the Department of Defence. It is located within the suburb of Moorebank within the City of Liverpool Local Government Area (LGA) approximately 30 kilometres south-west of the Sydney Central Business District (CBD). The Project site is generally defined as the land bounded by the Georges River to the west, Moorebank Avenue to the east, the M5 Motorway and ABB Medium Voltage Production facility to the north and the East Hills Railway line to the south.

The Project requires additional supporting infrastructure external to the Project site including the development of a rail crossing of the Georges River connecting to the Southern Sydney Freight Line (SSFL). This infrastructure would require some development on land currently owned by Liverpool City Council.

Sale or long term lease of all or part of the Commonwealth land by the Australian Government could possibly occur prior to the commencement of development.

Moorebank IMT concept plan

The Commonwealth Department of Finance and Deregulation is seeking staged development approval for the construction and operation of the Moorebank IMT concept plan. The key features of the IMT concept plan are:

- A port shuttle terminal area and an interstate terminal area, which would both include:
 - ▶ working tracks for the movement of rail freight, and the loading and unloading of containers within the site
 - ▶ storage tracks for the storage of freight carriages within the site
 - ▶ container laydown/storage areas.
- Internal site roads, stormwater management infrastructure, power and utilities.
- An associated commercial development area, including warehousing provisions.
- Support (administrative and rail/container maintenance/repair) functions for the terminal.
- An environmental conservation zone on the eastern bank of the Georges River.
- Rail link and bridge span crossing the Georges River at the north-western area of the site.
- Vehicle access, for heavy and light vehicles, into the Project site from Moorebank Avenue.

Proposed scope of the environmental assessment

Based on the preliminary environmental assessment in this report, the following key issues are identified and would receive detailed consideration as part of the environmental assessment for the Project:

- surrounding traffic and transport network
- biodiversity
- air quality
- noise and vibration
- stormwater and flooding
- heritage
- contamination
- visual environment
- social and economic environment.

These issues would form the focus of the environmental impact statement, and detailed mitigation measures would be identified for these issues.

Other environmental issues associated with the Project would be able to be managed through the application of best practice environmental management and proposed management measures and safeguards. Further investigation of some of the 'other' issues may be required, and would be undertaken during the environmental assessment process. These other issues identified are:

- hazard and risk analysis
- groundwater
- bush fire
- waste management
- utilities and services
- environmentally sustainable development.

1. Introduction

1.1 Purpose of this report

This PPEO is in support of a voluntary Project Application for Director-General's Requirements under the *Environmental Planning and Assessment Act 1979* (EP&A Act) for the construction and operation of an intermodal terminal (IMT) at Moorebank, associated warehousing infrastructure, a rail spur connecting the facility to the planned Southern Sydney Freight Line (SSFL) and road entry and exit points to/from the site from Moorebank Avenue (the '**Moorebank IMT**' or the '**Project**').

The purpose of this PPEO is to:

- provide an overview of the Project
- support the request for a staged development application and for Director-General's Requirements (DGRs)
- brief the relevant government agencies about the Project
- identify key issues to be addressed in the Environmental Impact Statement (EIS) to be prepared.

This PPEO takes into account relevant environmental policies and guidelines and statutory planning provisions applicable to the Project site, including the supporting infrastructure necessary to facilitate the Project.

The statutory context relating to planning approval process for the Project is discussed in detail in Chapter 3.

1.2 Background to the Project

An IMT at Moorebank was first proposed by the Australian Government in 2004. In 2010 the Australian Government directed that a business case be prepared to determine the feasibility of developing an IMT on the Moorebank site. In the 2010-11 Federal Budget, funding was allocated to complete the Feasibility Study for the Moorebank IMT and to undertake the planning and conceptual design work for the potential relocation of the School of Military Engineering (SME) and other Defence units to Holsworthy.

The Commonwealth Department of Finance and Deregulation has been given responsibility for development of the Moorebank Intermodal Feasibility Study and it has established an integrated project team – the Moorebank Project Office (MPO) – to manage the Project. The MPO includes representatives from the Department of Finance and Deregulation, the Department of Defence and the Commonwealth Department of Infrastructure and Transport.

The Moorebank Intermodal Feasibility Study commenced in September 2010 and is ongoing. The Feasibility Study includes economic and financial analysis, technical feasibility and development of a concept master plan for the facility. Environmental impact assessment of the proposed development also forms part of the Feasibility Study.

It is expected that the Australian Government will consider the outcomes of the Feasibility Study in 2012.

1.3 Overview of the Project

1.3.1 Project location

The site for the proposed Moorebank IMT (the 'Project site') is located within the suburb of Moorebank within the City of Liverpool Local Government Area (LGA). The Project site is located approximately 30 kilometres (km) south-west of the Sydney Central Business District (CBD) and approximately 4 km south of the Liverpool CBD in proximity to key transport corridors including the Main South Line rail corridor (route of the planned SSFL), the M5 and M7 motorways and the Hume Highway (see Figure 1.1).

The Project site is defined generally as the land bounded on the west by the Georges River, on the east by Moorebank Avenue, on the south by the East Hills railway line and on the north by the M5 Motorway and the ABB Medium Voltage Production facility (see Figure 1.2).

The locality surrounding the Project site consists of the residential suburbs of Casula, Wattle Grove and Glenfield, as well as industrial, commercial and Department of Defence land largely comprising the Holsworthy Military Area to the south and the Defence National Storage and Distribution Centre (DNSDC) to the east.

1.3.2 Project description

The Project involves the development of approximately 220 hectares (ha) of Commonwealth owned land for the construction and operation of the Moorebank IMT and associated commercial infrastructure. The Project would also include the construction and operation of a rail link to connect the site to the planned SSFL (currently under construction) and one or more road entry points to the site from Moorebank Avenue.

The Project would be located primarily on Commonwealth-owned land currently occupied by the SME and a number of other Defence units.

The Project, if approved, will require the development of land currently owned by Liverpool City Council for the rail link connection from the Project site to the SSFL. Preliminary discussions with Liverpool City Council on this matter have commenced.

The Moorebank IMT master plan prepared at the Feasibility Study stage will be subject to refinement following determination of a proponent for the development of the IMT site. Due to the uncertainty over the final project design that will be sought by a future proponent, a staged development application under Part 4 (s83B) of the EP&A Act to construct and operate the Project is being sought.

More detail on the Project description is included in Chapter 5.

1.3.3 Project objectives

The feasibility study has considered the following six long-term objectives (endorsed by the Moorebank IMT Steering Committee) for the Project to improve the efficiency and effectiveness of freight distribution in Sydney:

1. Boost national productivity over the long-term through improved freight network capacity and rail utilisation.
2. Create a flexible and commercially viable facility and enable open access for rail operators and other terminal users.

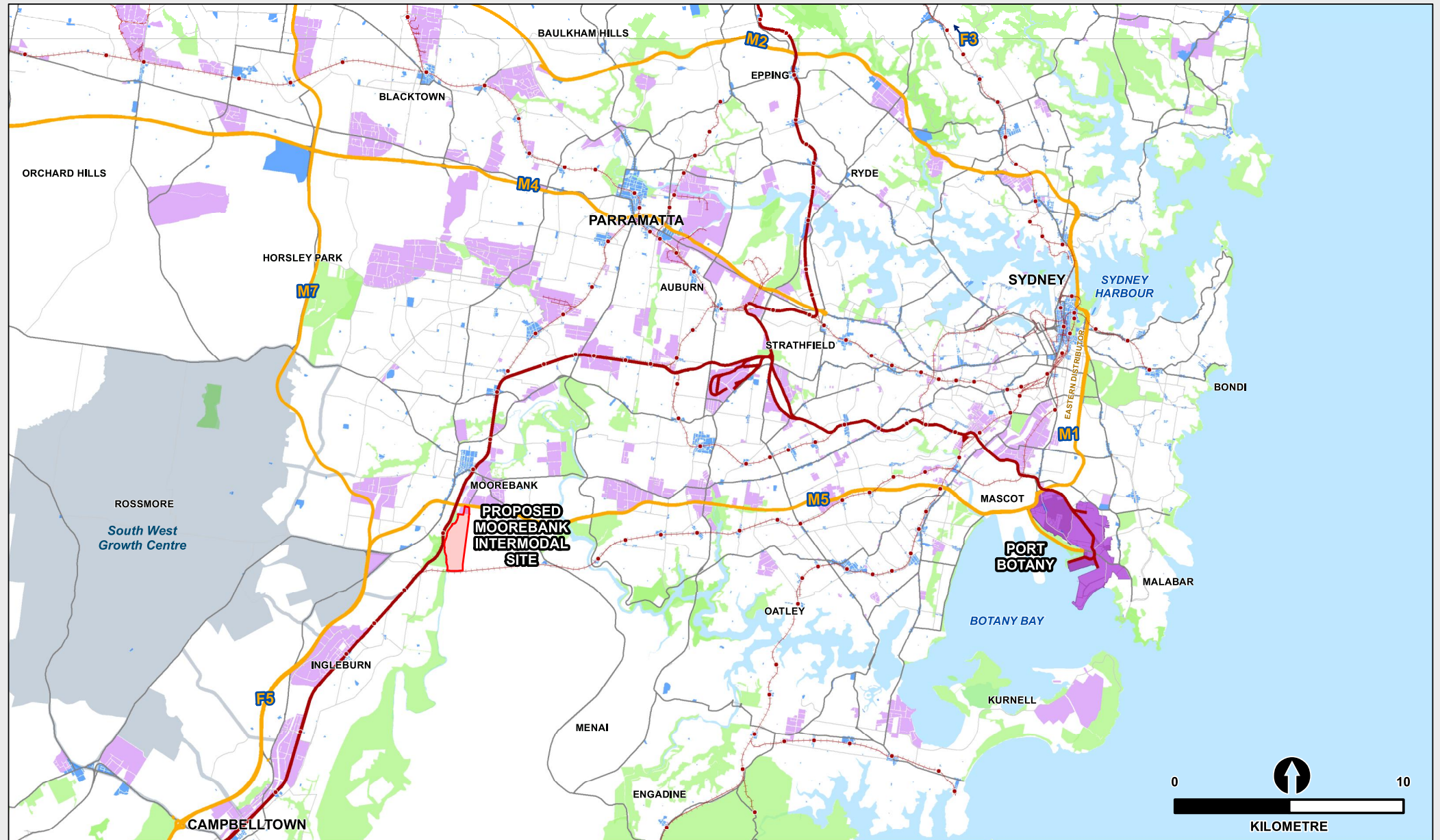
3. Minimise impact on Defence's operational capability during the relocation of Defence facilities from the Moorebank site.
4. Attract employment and investment to South West Sydney.
5. Achieve sound environmental and social outcomes that are considerate of community views.
6. Optimise value for money for the Commonwealth having regard to the other stated Project objectives.

1.3.4 Project proponent

The Commonwealth Department of Finance and Deregulation is the proponent for the Project for the purposes of obtaining Stage 1 approval. As the Australian Government has not yet decided whether the development would proceed, or how the proposed development would occur, all options including Government, Federal and/or State, and private sector delivery avenues will be considered. As such, the proponent for the purposes of construction and operation of the Project would be determined following Stage 1 approval.

1.3.5 Project value

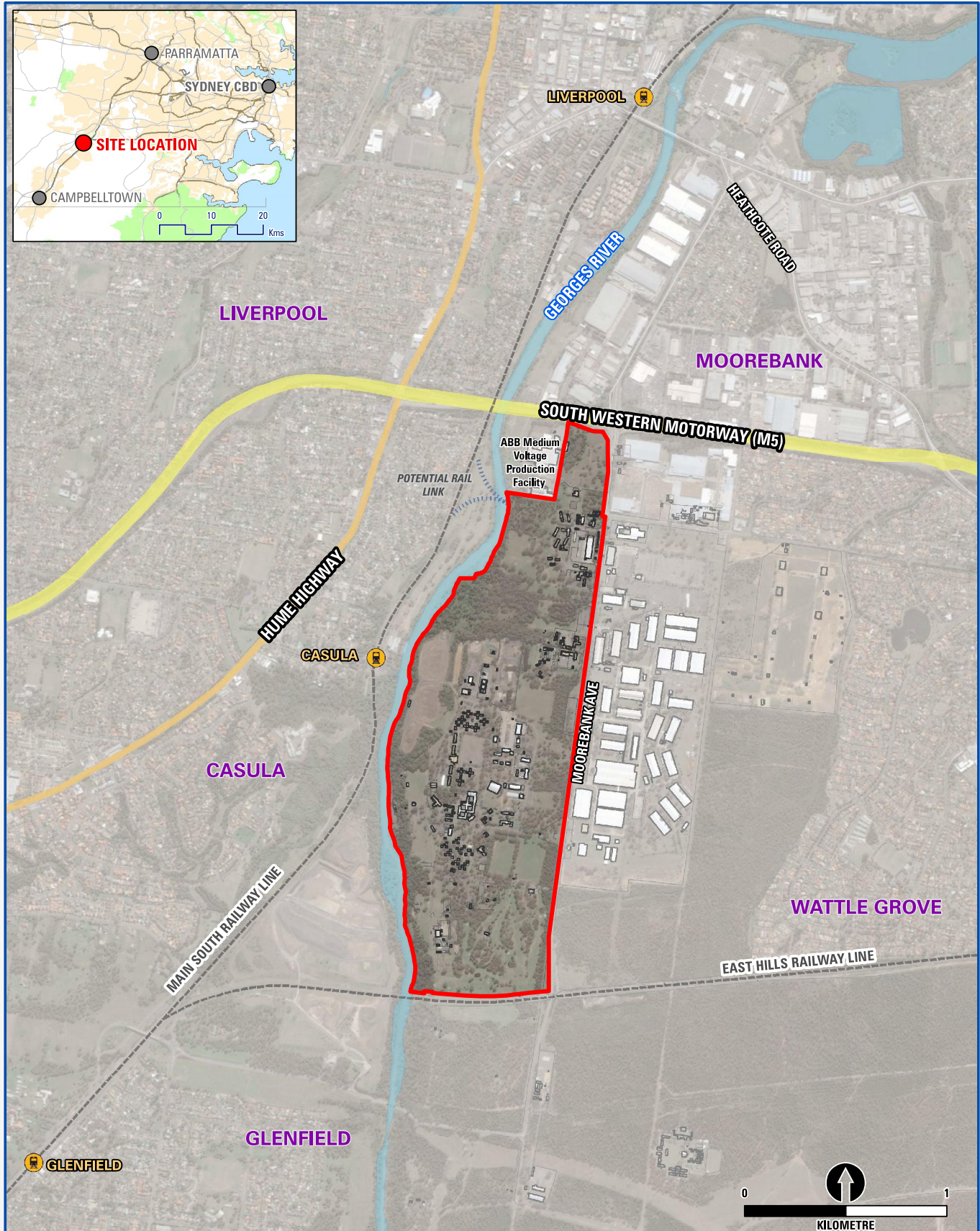
The Project has a total capital investment value well in excess of \$570 million, the potential relocation costs for the School of Military Engineering and other Australian Defence Force Units. Detailed cost estimates for the construction of the proposed IMT are being developed and are likely to be substantially in excess of \$30 million.



- | | | |
|--|--|--|
| Moorebank study area | Business land | Motorway (Main access road) |
| Port Botany | Open space | Rail line & station |
| Industrial land | Main road | Rail Freight Route |

Figure 1.1: Project location

PROPOSED MOOREBANK INTERMODAL TERMINAL



□ Moorebank Intermodal Terminal boundary ● Rail line & station

Figure 1.2: Project locality

2. Project need and alternatives

2.1 Strategic context

The Australian Government proposes to build an intermodal terminal at Moorebank as part of their \$3.4 billion investment in the interstate rail network. It is envisaged that this project would boost rail freight's role in moving goods through the Sydney region having the potential to improve Australia's national productivity and better manage the rate of growth of traffic on our roads. The Sydney Region is seen as most suitable for this development in that "in 2008–09, the Sydney Region had an estimated Gross Regional Product (GRP) of \$257.9 billion, representing 64.1 per cent of the estimated Gross State Product (GSP) for New South Wales and contributing approximately 20.6 per cent of Australia's economy (Regional Plan for Sydney 2010).

The proposed Moorebank Intermodal Terminal project is part of an overall commitment by the Australian Government to investing in rail in order to make our transport systems more efficient and better integrated. Improving freight infrastructure and performance has been a key focus for both the Australian and NSW governments. The following sections provide an overview of the strategic context of the Project in relation to relevant Commonwealth and NSW State strategic planning policies and publications.

2.1.1 Commonwealth policies and publications

Commonwealth Nation Building Program

The Commonwealth is investing \$36.9 billion on road and rail infrastructure through the Nation Building Program over the six year period from 2008-09 to 2013-14 (Department of Infrastructure and Transport 2011, <http://www.nationbuildingprogram.gov.au/>). This investment will be delivered through a range of road and rail programs and projects across the National Land Transport Network. The network is based on national and inter-regional land transport corridors that are of critical importance to national and regional growth.

An IMT at Moorebank is identified as a NSW project receiving funding under the Nation Building Program.

National land freight network strategy outline

In February 2011, Infrastructure Australia released the *National Land Freight Strategy Discussion Paper* (Infrastructure Australia 2011). The paper identifies the need to integrate freight and land use planning in developing a national land freight network. New intermodal terminal capacity at Moorebank has been identified by the discussion paper as a key project that needs to be progressed as a priority.

National Ports Strategy

The *National Ports Strategy* (Infrastructure Australia 2010), introduced in December 2010, was developed by Infrastructure Australia and the National Transport Commission. The objectives of the *National Ports Strategy* are to improve the efficiency of port related freight movements through a coordinated approach to the future development and planning of Australia's major ports and freight infrastructure.

An IMT located at Moorebank has been identified in the National Infrastructure Priorities (Infrastructure Australia 2009) as a priority infrastructure project with real potential under the action of the National Ports Strategy.

2.1.2 NSW State policies and publications

NSW State Plan

In March 2010 the *NSW State Plan* (NSW Department of Planning (DoP) 2010) was released. With the *Sydney Metropolitan Strategy* (discussed below), this provides the overall framework for managing Sydney's growth and development. The *NSW State Plan* 2010 includes priorities, targets and actions for transport within NSW. This specifically includes actions relating to the movement of freight, including increasing freight moved by rail with a particular focus on increasing the percentage of freight moved by rail out of Port Botany to 40 per cent by 2016.

The Moorebank IMT is a key piece of infrastructure that would facilitate the increased freight movements from Port Botany.

Sydney Metropolitan Strategy

The *Metropolitan Strategy, City of Cities — A Plan for Sydney's Future* (DoP 2005) provides a regional planning and development framework to manage Sydney's growth and development up to 2031. The main aims of the strategy are to:

- provide stronger cities and centres around residential developments
- increase and concentrate jobs in western Sydney and along the global economic corridor
- ensure that access to a diversity of housing, jobs, services and open space is more equally distributed
- safeguard resource lands
- improve environmental outcomes
- improve transport connections.

The *Sydney Metropolitan Strategy* provides objectives for the greater Sydney metropolitan region to meet these aims. The Project would contribute to achieving a number of these aims.

The *Sydney Metropolitan Strategy* includes an objective to maximise the efficiency of freight transport and the proportion transported by rail. Contained under this objective is an action to "Plan an intermodal terminal network in Sydney". The plan would examine the need to locate new major terminals to service Western and South Western Sydney in conjunction with existing smaller intermodal terminals. Although the Moorebank IMT is not specifically mentioned in the current version of the transport strategy, submissions received in relation to a recent review of the Metropolitan Strategy highlight Moorebank as a critical location.

South West Subregion: Draft Subregional Strategy

The *South West Subregion Draft Subregional Strategy (Subregional Strategy)* was prepared by the NSW Government in 2007 (DoP 2007). The Subregional Strategy translates objectives of the NSW Government's Metropolitan Strategy and State Plan to the local level. The plan, currently being prepared by the NSW Department of Planning and Infrastructure (DoPI) (formerly the DoP), is still in draft form and not yet formally adopted. However, when finalised, the Subregional Strategy will guide land-use planning until 2031 in the Camden, Campbelltown, Liverpool and Wollondilly local government areas.

With respect to the Project the Draft Strategy highlights that:

The State Government regards the proposal for a transport terminal at Moorebank as a key component in meeting Sydney's intermodal capacity needs. (p 30, DoP 2007).

In the context of managing commercial transport growth the Draft Strategy identifies that:

As part of the NSW Government's vision to build on strong economic growth and employment in western and south western Sydney, the subregional strategy needs to ensure that sufficient land remains available to support a network of intermodal freight terminals in the subregion including locations such as Minto, Ingleburn and Moorebank. (p 90, DoP2007).

The Draft Strategy also acknowledges the importance of the intermodal facility having access to the proposed Southern Sydney Freight Line, as well as good road access from the M5.

NSW Metropolitan Transport Plan

The *Metropolitan Transport Plan — Connecting the City of Cities* (NSW Transport and Infrastructure 2010) was released by the NSW Government in February 2010. The main focus of the plan is to effectively link Sydney's land use planning with its transport network. The *Metropolitan Transport Plan* forms a key component of the revision of the *Sydney Metropolitan Strategy* to further strengthen the planning framework, and have a sustainable plan for meeting the housing and employment growth challenges.

The plan includes a number of key freight projects proposed under the NSW Freight Strategy in order to improve the movement of freight within and through Sydney. Included in the NSW Government's commitment in partnership with the Australian Government is the investigation of an IMT at Moorebank.

2.1.3 Summary of strategic context

The strategic need for the Project has been identified in the various Commonwealth and NSW State planning policies and publications discussed above.

The Moorebank IMT would form a key component of an integrated transport solution for the movement of freight to, from and within the Sydney basin. Sydney's need for additional IMT infrastructure is being driven by:

- Continued growth in freight in markets including import and export containerised freight, interstate and bulk freight.

- Capacity constraints of existing intermodal terminals in Sydney including space limitations, accessibility to rail paths shared with passenger rail, and limited proximity to urban growth areas.
- Heavy congestion already experienced at Port Botany and on the M5 Motorway.
- Environmental and social impacts arising from higher costs on a per tonne basis of road freight relative to rail and sea, as well as greater air pollution and greenhouse gas emissions, fuel consumption and waste generation, noise and vibration, time delays and other congestion costs and fatalities from road accidents.

2.2 Alternatives to the Project

An IMT at Moorebank was first proposed by the Australian Government in 2004. In 2010 the Australian Government directed that a business case be prepared to determine the feasibility of developing an IMT on the Moorebank site.

Moorebank has been identified by both Australian and NSW State governments as the logical location for additional intermodal capacity due to its connectivity and proximity with the proposed SSFL (approved but not yet built), the M5 and M7 Motorways, Sydney's industrial centres in the west and south and the size and suitable topography of the site.

The 'do nothing' scenario has been considered and will be addressed in the business case presented for consideration by the Australian Government.

3. Planning and statutory requirements

3.1 Commonwealth legislation

3.1.1 *Environment Protection Biodiversity Conservation Act 1999*

Under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), referral to the Commonwealth Minister for the Sustainability, Environment, Water, Population and Communities (SEWPaC) is required for any proposed 'actions' (including projects, developments and activities), which have the potential to have a significant impact on a matter protected by the EPBC Act.

Matters protected by the EPBC Act

Matters which are protected by the EPBC Act include:

- Matters of national environmental significance, which comprise:
 - ▶ world heritage properties
 - ▶ national heritage places
 - ▶ wetlands of international importance
 - ▶ Commonwealth-listed threatened species and ecological communities
 - ▶ Commonwealth-listed migratory species
 - ▶ Commonwealth marine areas
 - ▶ the Great Barrier Reef Marine Park
 - ▶ nuclear actions.
- Other matters, including:
 - ▶ the environment, where the action will be undertaken on Commonwealth land or will significantly affect Commonwealth land
 - ▶ significant impact on the environment, where the Commonwealth is proposing to take the action.

The Project would be undertaken primarily on Commonwealth land, with some potential developments outside Commonwealth land (as discussed in Section 1.3.2).

Referral to Commonwealth Minister for SEWPaC

The Project was referred to the Commonwealth Minister for SEWPaC as a 'controlled action' on the basis of impacts on Commonwealth land. The Referral describing the potential impact of the project on matters protected by the EPBC Act was lodged with SEWPaC (EPBC Ref 2011/6086) and registered on the 23 August 2011.

The project was declared by SEWPaC in a letter dated 20 September 2011 to be a controlled action requiring assessment and approval under the EPBC Act. The proposed action (comprising the construction and operation of the IMT) is considered to have a significant impact on the following matters protected by the EPBC Act:

- listed threatened species and communities (sections 18 and 18A of the EPBC Act)
- Commonwealth Action (Section 28 of the EPBC Act).

The letter from SEWPaC of 20 September 2011 also confirmed that the project required assessment through preparation of an Environmental Impact Statement (EIS).

Draft Commonwealth EIS Guidelines

Subsequent to the declaration of the project as a controlled action, draft EIS guidelines were issued by SEWPaC on 3 November 2011. The draft guidelines were put out for public comment, with the period for comments closing on 15 December 2011.

3.2 NSW State legislation

3.2.1 Assessment and approval under NSW legislation

The Project requires assessment and approval under the Commonwealth EPBC Act as a Commonwealth action and because of its impact on Commonwealth listed species (refer Section 3.1). Portions of the Project, including the construction and operation of rail infrastructure between the main site and the proposed SSFL would be undertaken on land outside the Commonwealth land boundary.

Given the scope of the Project and the potential impacts to, and for, neighboring land owners and infrastructure, the Commonwealth is seeking development consent under the EP&A Act for these reasons, and additionally as:

- the likely commercial structure for the Project is not yet known. In particular, whether the Commonwealth will remain the ultimate landowner, the nature of the operation of the completed Project and the nature of the involvement of the private sector in the design, construction and operation of the Project are not yet resolved. The Commonwealth seeks to retain flexibility in this regard, and considers close cooperation with the State in relation to the Project as an important feature of this flexibility, and
- the Commonwealth has, despite its constitutional status in relation to the application of State laws, always sought to cooperate closely with State and local planning authorities to facilitate planning outcomes which meet community and stakeholder expectations. To this extent, it is common practice for the Commonwealth voluntarily to submit applications under State planning requirements.

The application for development consent under the NSW EP&A Act is made voluntarily, and without any admission by the Commonwealth that it is legally required to obtain development consent in order to construct and operate the Moorebank IMT. Accordingly:

- the Commonwealth reserves its position as to whether it is legally required to make the application

- the Commonwealth reserves its right to take the position in the future that it is not legally required to make the application, and on this basis to choose to amend, or to terminate the development consent process, or to not comply with any decision that is made
- if development consent as a State significant development is not obtained, the Commonwealth reserves its position as to whether it would be required to comply with any of the laws referred to in s 89J of the EP&A Act (see section 3.2.8 below), and
- by making the application the Commonwealth does not undertake or represent that it will seek State development consent or approval before undertaking any subsequent stage of the Project, any other similar development or land use activity, or any other activity having environmental impacts.

In short, the Commonwealth wants to facilitate the Project's compliance within the NSW environmental legislative process to preserve a consolidated Government approach to environmental issues.

Under the provisions of the EP&A Act, the Project is considered State Significant Development (refer to Section 3.2.2) and as such, Director-General's Requirements are sought in accordance with Division 4.1 of Part 4 of the EP&A Act.

3.2.2 *Environmental Planning and Assessment Act 1979*

Division 4.1 of Part 4 of the *Environmental Planning and Assessment Act 1979*

Division 4.1 of Part 4 of the NSW EP&A Act establishes an assessment and approval regime for projects deemed to be State Significant Development (SSD). Figure 3.1 outlines the environmental approval process under Part 4.

Division 4.1 applies to development that is considered to be SSD by either a State Environmental Planning Policy (SEPP) or a Ministerial Order published in the Government Gazette (under Section 89C of the EP&A Act).

Under Section 89D of the EP&A Act, the Minister is the consent authority for SSD. Section 23 of the EP&A Act enables the Minister to delegate the consent authority function to the Planning Assessment Commission, the Director-General or to any other public authority.

State Significant Development Flowchart

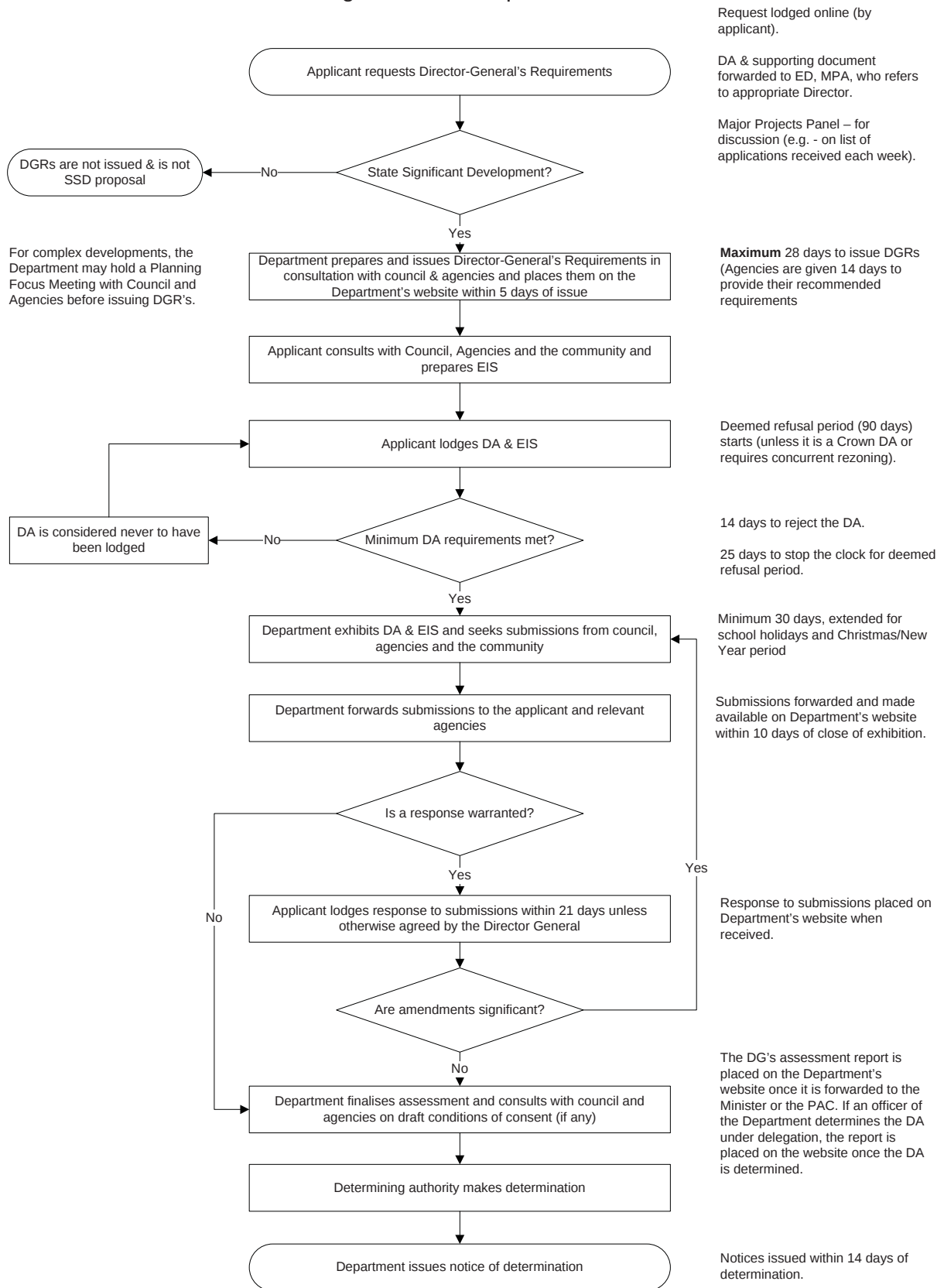


Figure 3.1: Environmental assessment for State Significant Development

3.2.3 NSW approval process

A brief description of the assessment and approval steps for Division 4.1 (SSD) projects is set out below:

- submission of an application with the accompanying combined Preliminary Project Environmental Overview report (this document) to the Director-General, seeking environmental assessment requirements for the Proposal
- preparation of an EIS (Section 78A(8A)), to address the matters outlined in the Director-General's environmental assessment requirements for the Proposal
- Lodging of SSD development application (including EIS)
- exhibition of the application and the EIS (Section 89F) for a statutory 30 days minimum
- determination by the Minister for Planning and Infrastructure, including imposition of any conditions.

3.2.4 Staged development application

Pursuant to the provisions of S 83(B) of the EP&A Act, a staged development application is proposed. This application is for a Stage 1 development application for the entire IMT.

A staged development application sets out the concept proposals for the development of a site for which detailed proposals for separate parts of the site are to be the subject of subsequent development applications.

The Minister is the consent authority for the concept proposal development application; however in respect of future development applications Section 89 (D) (2) notes that:

If a staged development application is made under Division 2A in respect of State Significant Development:

- a) *the Minister may determine that a subsequent stage of the development is to be determined by the relevant council, and*
- b) *that stage of the development ceases to be State significant development and that council becomes the consent authority for that stage of the development instead of the Minister.*

3.2.5 Joint Commonwealth – NSW assessment process

A joint Commonwealth-State assessment process is currently under discussion between the Commonwealth Department of Finance and Deregulation, SEWPaC and DoPI that would satisfy the requirements of both the Commonwealth and State environmental agencies.

3.2.6 State and regional planning instruments

The following environmental planning instruments have been considered as relevant to the Project:

- State Environmental Planning Policy (State and Regional Development) 2011.
- State Environmental Planning Policy (Infrastructure) 2007 (Infrastructure SEPP).
- State Environmental Planning Policy No. 55 — Remediation of Land (SEPP 55).
- State Environmental Planning Policy No. 19 — Bushland in Urban Areas (SEPP 19).
- State Environmental Planning Policy No. 33 – Hazardous and offensive development (SEPP 33).
- Greater Metropolitan Regional Environmental Plan No. 2 – Georges River Catchment.

A brief overview of each of the relevant environmental planning instruments shown above is presented below.

State Environmental Planning Policy (State and Regional Development) 2011

The State Environmental Planning Policy — (State and Regional Development) 2011 (State and Regional Development SEPP) establishes a guide to planning decisions for projects where the scale, significance or potential impacts are considered to be of regional or State significance, rather than of local significance.

The system establishes two separate assessment frameworks for SSD and State Significant Infrastructure (SSI). Projects that fall within these categories will be subject to approval of the NSW Minister for Planning and Infrastructure (or delegated to the Planning Assessment Commission (PAC) or senior departmental staff).

Clause 8 of the State and Regional Development SEPP provides as follows:

1. *Development is declared to be State significant development for the purposes of the Act if:*
 - a) *the development on the land concerned is, by the operation of an environmental planning instrument, not permissible without development consent under Part 4 of the Act, and*
 - b) *the development is specified in Schedule 1 or 2.*
2. *If a single proposed development the subject of one development application comprises development that is only partly State significant development declared under subclause (1), the remainder of the development is also declared to be State significant development (except so much of the remainder of the development as the Director-General determines is not sufficiently related to the State significant development).*

The development of the project, according to the zoning is not permissible without development consent thus satisfying the first limb of clause 8 (refer to discussion at 3.2.7 below).

Schedule 1 includes the following:

19. Rail and related transport facilities:

- 1. Development that has a capital investment value of more than \$30 million for any of the following purposes:*
 - a) heavy railway lines associated with mining, extractive industries or other industry,*
 - b) railway freight terminals, sidings and inter-modal facilities.*
- 2. Development within a rail corridor or associated with railway infrastructure that has a capital investment value of more than \$30 million for any of the following purposes:*
 - a) commercial premises or residential accommodation,*
 - b) container packing, storage or examination facilities,*
 - c) public transport interchanges.*

The project is consistent with the definition contained in Clause 19 (1) (b), while the ancillary warehousing proposed is consistent with the definition of commercial premises under Clause 19 (2) (a) and (b).

Accordingly the second limb of clause 8 is also satisfied with respect to the project.

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

The Infrastructure SEPP aims to facilitate the effective delivery of infrastructure across the State by providing a consistent planning regime for infrastructure and the provision of services across NSW. The Infrastructure SEPP commenced on 1 January 2008.

State Environmental Planning Policy No. 55 – Remediation of Land

SEPP 55 aims to provide a state-wide planning approach to the remediation of contaminated land. SEPP 55 requires that all remediation work complies with specified standards, and that local councils are notified prior to remediation work being carried out and once they are finished.

Clause 7(1)(a) of SEPP 55 states that a consent authority is required to consider whether or not land is contaminated when determining applications. The conditions of the SEPP would be considered as part of the EIS.

State Environmental Planning Policy No. 19 — Bushland in Urban Areas (SEPP 19)

SEPP 19 applies to all bushland within the Sydney metropolitan area, including in the Liverpool LGA that is zoned or reserved as public open space.

The aim of SEPP 19 is to preserve remnant vegetation within urban areas, and to give bushland areas priority over developments. The determining authority must consider what impact the clearing of bushland might have on soil erosion, siltation of streams and the spread of exotic weeds and plants.

The provisions of the SEPP would be considered in the EIS.

State Environmental Planning Policy no. 33 – Hazardous and offensive development

SEPP 33 requires the consent authority to consider whether an industrial proposal is a potentially hazardous or a potentially offensive industry. In doing so, the consent authority must give careful consideration to the specific characteristics and circumstances of the development, its location and the way in which the proposed activity is to be carried out. Any application to carry out potentially hazardous development must be supported by a preliminary hazard analysis (PHA).

The requirements of the SEPP would need to be addressed in the preparation of the EIS.

Greater Metropolitan Regional Environmental Plan No. 2 – Georges River Catchment

As of 1 July 2009, Regional Environmental Plans (REPs) are no longer part of the hierarchy of environmental planning instruments in NSW. All existing REPs are now deemed SEPPs (refer to Planning Circular PS 09–014).

This deemed SEPP “*aims to improve the water quality and river flows of the Georges River and its tributaries*” and also addresses the protection of aquatic ecosystems and the improvement of water quality and river flows in the catchment. As a result of the proximity of the Project site to the Georges River this deemed SEPP is likely to apply to the Project and would be taken into account in the EIS.

3.2.7 Local planning controls

Liverpool Local Environmental Plan 2000 (Liverpool LEP 2008)

The Project site is located entirely within the Liverpool LGA and is subject to the provisions of the Liverpool Local Environmental Plan (LEP). The Liverpool LEP applies different zones to different parts of the Project site. The zonings applicable to the Project site under the Liverpool LEP are SP2 (infrastructure) (defence), RE1 (public recreation), IN1 (general industrial) and W1 (natural waterways) as identified on Figure 3-2. The EIS would have regard to relevant planning control provisions identified within the Liverpool LEP.

Liverpool Development Control Plan 2008

The Liverpool Development Control Plan (DCP) 2008 main objectives relate to the protection of amenity, the improvement of the natural environment, the preservation of heritage, encouraging the diversity of housing stock and facilitating environmentally sustainable development.

Under the provisions of SSD under Part 4 of the EP & A Act, the provision of local development control plans are not applicable to a development. However all relevant aspects of the Liverpool DCP that relate to the Project would be considered in project development and in the EIS.

PROPOSED MOOREBANK INTERMODAL TERMINAL

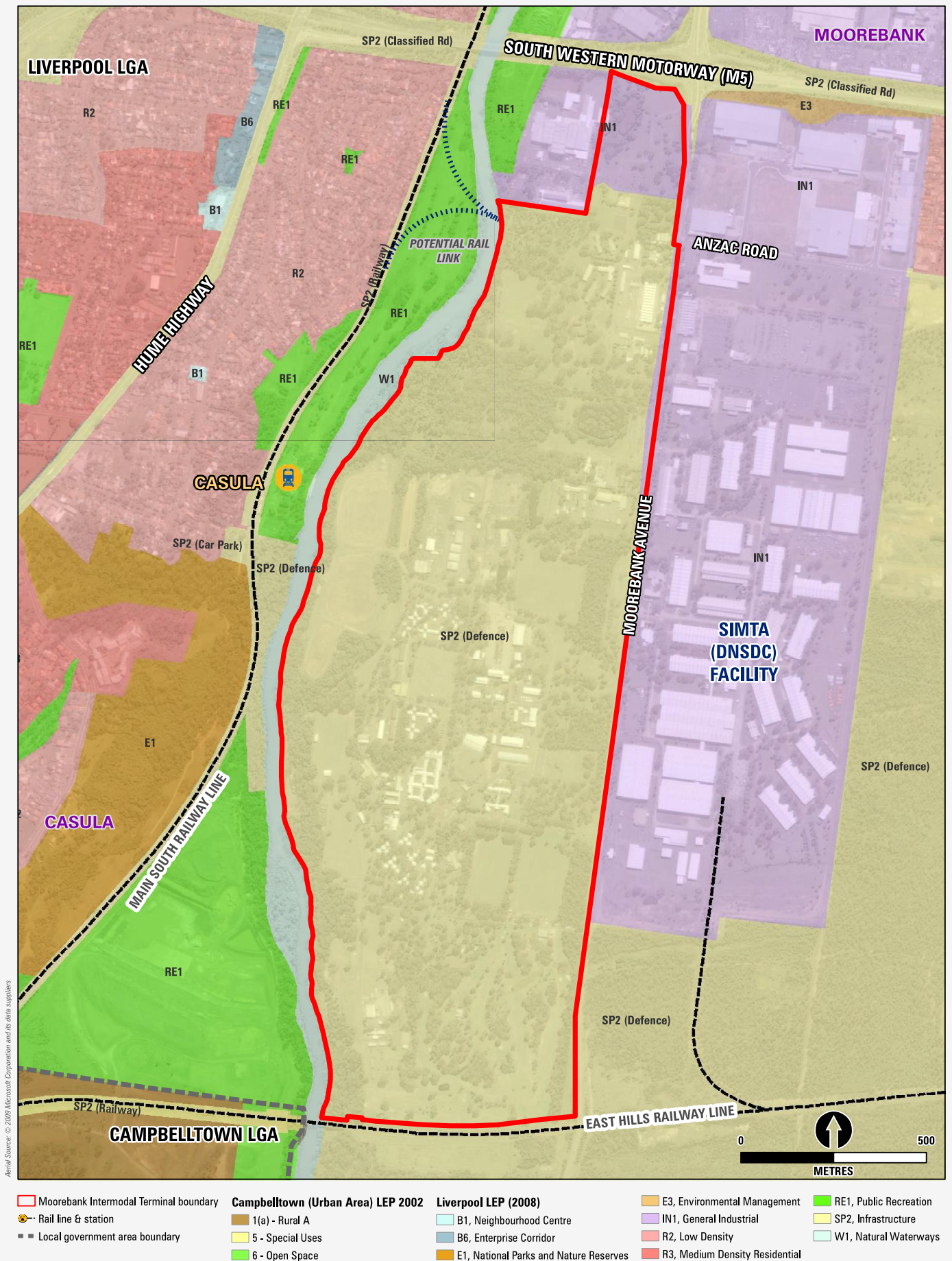


Figure 3.2 : Liverpool LEP 2008 zoning map

3.2.8 Other approvals under other NSW legislation

A number of other licences and approvals may be relevant to the provisions of SSD. Under Part 4 Section 89J of the EP&A Act, the approval provisions of the following relevant Acts do not apply:

- *Heritage Act 1977* - approval under Part 4 or an excavation permit under Section 139.
- *National Parks and Wildlife Act 1974* - permit under Section 87.
- *Native Vegetation Act 2003* - authorisation under Section 12.
- *Water Management Act 2000* - approvals under Section 89, 90 or 91.
- *Fisheries Management Act 1979* – a permit under Section 201, 205 or 219.
- *Rural Fires Act 1997* – a bush fire safety authority under section 100B.

The following approvals cannot be refused if the relevant works are necessary for the carrying out of a project approved under Part 4, Division 4.1. These approvals are also required to be substantially consistent with the approval under this Part:

- *Mine Subsidence Compensation Act 1961* - approval under Section 15.
- *Protection of the Environmental Operations Act 1997* - environment protection licence under Chapter 3.
- *Roads Act 1993* - consent under Section 138.

On the basis that the Commonwealth is voluntarily submitting to the NSW approval process, a summary of the potential licensing and approval requirements relevant to the Project is provided in Table 3.1. The need for licensing and approval may change as a result of amendments to the Project during the detailed design stage. The following assessment is, therefore, provided for consideration as part of the preliminary environmental assessment.

Table 3.1 Summary of potential licensing and approval requirements

Legislation and responsible agency	Relevant provisions	Requirements to gain approval
<i>Protection of the Environment Operations Act 1997</i> (POEO Act) Office of Environment and Heritage (OEH)	The Act enforces licences and approvals formerly required under separate Acts relating to air, water and noise pollution, and waste management with a single integrated licence.	Under Section 48 of the POEO Act, premise-based scheduled activities (as defined in Schedule 1 of the Act) require an Environment Protection Licence (EPL). The need or otherwise for an EPL would be confirmed during the EIS phase. The general provisions of the POEO Act in relation to pollution of the environment will apply throughout the Project. Consideration to the general requirements of the Act would be required during the construction phase of the Project, in relation to the control of noise, dust, erosion and sedimentation, and stormwater discharge.
<i>Threatened Species Conservation Act 1995</i> (TSC Act)	The Act aims to protect threatened flora and fauna and their habitats. Assessment of impact on threatened species, populations and communities is required in accordance with Section 94 of the Act.	Assessment is required as set out by the Act as part of the EIS phase. After assessment is carried out it can be determined whether any separate approvals under this Act are required.
<i>Native Vegetation Act 2003</i> OEH	The Act protects state-protected land and native vegetation that is identified by the Minister for Planning.	Under s89J of the EP&A Act an authorisation under s 12 of the <i>Native Vegetation Act 2003</i> to clear native vegetation is not required.
<i>Water Management Act 2000</i> OEH	Under the Act, a licence would be required if water was to be extracted from a creek or if any waterways were to be realigned during construction.	Under s89J of the EP&A Act approvals under ss 89, 90 or 91 of the <i>Water Management Act 2000</i> are not required.
<i>National Parks and Wildlife Act 1974</i> OEH	The Act aims to prevent the unnecessary or unwarranted destruction of relics and the active protection and conservation of relics of high cultural significance. This Act covers relics of both 'Indigenous and non-Indigenous' habitation in NSW.	Under s 89J of the EP&A Act an aboriginal heritage impact permit under s 90 of the <i>National Parks and Wildlife Act 1974</i> is not required.
<i>Heritage Act 1977</i> OEH	The Act protects heritage items, sites and relics in NSW older than 50 years regardless of cultural heritage significance.	Under s 89J of the EP&A Act, Division 8 of Part 6 of the <i>Heritage Act 1977</i> does not apply to prevent or interfere with the carrying out of approved SSD.

Legislation and responsible agency	Relevant provisions	Requirements to gain approval
<i>Dangerous Goods(Road and Rail Transport) Act 2008</i>	This Act regulates the transport of dangerous goods in NSW.	A licence is required when transporting any receptacle with a capacity of more than 500 L, or which contains more than 500 kg of dangerous goods.
<i>Occupational Health and Safety Act 2000</i> Workcover	Provisions in relation to storage and use of dangerous goods.	There are notification requirements in relation to storage of dangerous goods if the manifest level for that particular type of dangerous good has been exceeded.
<i>Roads Act 1993</i> NSW Roads and Traffic Authority (RTA)	Consent is required from the RTA for work in, on, under or over a public road.	Works on public roads would require RTA consent under the Act.

4. Consultation

4.1 Community and stakeholder consultation

4.1.1 Activities undertaken to date

To date communications and engagement activities with the community and stakeholders have included:

- Establishment of Project web pages on the Commonwealth Department of Finance and Deregulation website, including an email address and a 1300 number for inquiries.
- Contact with the community including newsletter drops throughout the local area, outreach to all residents who have contacted the website to discuss their issues and offer a meeting with the MPO, as well as ongoing contacts to respond to inquiries.
- Meetings to brief and receive feedback from interested residents, local government (Bankstown, Campbelltown and Liverpool Councils) and third parties (such as Western Sydney Regional Organisation of Councils (WSROC) and NSW Business Chamber).
- Meetings with NSW Department of Planning and Infrastructure (DoPI) and other NSW Government agencies.
- Meetings with Commonwealth (SEWPaC) officers to discuss the EPBC Act approvals process and its integration with the NSW approvals process.
- Recording of all stakeholder interactions and feedback received; dissemination of relevant material to MPO and its advisors.
- Two community information sessions have been held to enable the community to view project information and provide feedback. The information sessions were undertaken at the following locations:
 - ▶ Wattle Grove Community Centre, Village Way, Wattle Grove – This information session was held on 28 October from 3:30 pm — 8 pm and was attended by 112 local community members and stakeholders.
 - ▶ Hunts Comfort Inn, Hume Highway, Casula – This information session was held on 29 October from 10 am — 2 pm and was attended by 38 local community members and stakeholders.

4.1.2 Future activities

As part of the preparation of the EIS, consultation and engagement activities would be ongoing. Activities would include, but not be limited to:

- Continuation of the Project website and community information line.
- Newsletters to residents in the local area.
- Advertising in local newspapers.

- Ongoing further consultation with NSW Councils and Government Agencies including a planning focus meeting.
- Further community and stakeholder information sessions.

4.2 Indigenous stakeholder consultation

Preliminary Aboriginal heritage investigations have commenced to identify Aboriginal cultural heritage sites and potential areas of archaeological sensitivity present within the Project site. These investigations are being undertaken by Navin Officer Heritage Consultants. As part of these investigations, Aboriginal stakeholders were invited to register an interest in the Project through public notice and direct invitation protocols. To date there are six registered Aboriginal stakeholders. These are (in order of registration):

- Tharawal Local Aboriginal Land Council (TLALC)
- Cubbitch Barta Native Title Claimants Aboriginal Corporation (CBNTCAC)
- Darug Land Observations (DLO)
- Darug Custodian Aboriginal Corporation (DCAC)
- Darug Aboriginal Cultural Heritage Assessments (DACHA)
- Darug Aboriginal Landcare Incorporated (DALI).

Registered Indigenous stakeholders and those persons/groups whose names were included on a list of Aboriginal stakeholders known to the OEH (formerly the Department of Environment, Climate Change and Water (DECCW)) that may have an interest in the Project were informed about the methodology for the Aboriginal archaeological surface field survey. This correspondence included an invitation to read the methodology and then provide comments and suggestions back to Navin Officer Heritage Consultants.

Correspondence with comments on the methodology was received from all of the registered stakeholders except the TLALC.

The field survey was conducted on 6 and 8 December 2010 and attended by personnel from Navin Officer Heritage Consultants and invited representatives of the TLALC and CBNTCAC.

Consultation will continue with the Indigenous stakeholders as the Aboriginal heritage impact assessment is prepared as part of the EIS (see Section 6.8.2).

5. Project description

5.1 Project overview

The Project would incorporate the following key components:

- A port shuttle terminal area and an interstate terminal area, which would both include:
 - Working tracks for the movement of rail freight, and the loading and unloading of containers within the site.
 - Storage tracks for the storage of freight carriages within the site.
 - Container laydown/storage areas.
- Internal site roads, stormwater management infrastructure, power and utilities.
- A commercial development area, including warehousing provisions.
- Support (administrative and rail/container maintenance/repair) functions for the terminal.
- An environmental conservation zone on the eastern bank of the Georges River.
- Rail link and bridge span crossing the Georges River at the north-western area of the site (see Section 5.1.1 for further information).
- Vehicle access, including for heavy and light vehicles, into the site off Moorebank Avenue.
- Potential upgrades to Moorebank Avenue including the Anzac Road intersection.

An indicative master plan layout identifying the configuration of the Project site and proposed facilities is included as Figure 5.1.

5.1.1 Rail access to the Project site

A rail link and bridge crossing the Georges River is necessary to connect the Project to the SSFL. The location for the rail connection is subject to further investigation but it could potentially be located on the former Casula golf course land on the western bank of the Georges River which is owned by Liverpool City Council. The possible location of the rail link area is identified on Figure 5.1.

The rail link access at the northern end of the site would be designed to provide both north-bound and south-bound connections to the SSFL with arrival and departure tracks aligned along the western edge of the site. All train movements associated with arrival, departure and maintenance would occur within the site, with no requirements for holding of trains within the SSFL rail corridor.

The SSFL project is currently under construction and it is assumed that it will be operational prior to operation of the Project.

5.1.2 Road access to the Project site

Road access to the Moorebank IMT would be via access point(s) on Moorebank Avenue. Trucks travelling to and from the site would access the M5 freeway via Moorebank Avenue. Moorebank Avenue is not a public road south of Anzac Road and connections to Moorebank Avenue would be within Commonwealth owned land.

Some future work may be required to upgrade the M5, however any such activity would be subject to separate planning and environmental approvals.

5.2 Operation of the Project

The primary function of the Moorebank IMT is to be a transfer point in the logistics chain for shipping containers and to handle both international import/export cargo (IMEX) and domestic interstate and intrastate (regional) cargo. A key role for the terminal will be to promote the movement of container freight by rail between Port Botany and western Sydney as well as on the interstate rail network.

Beyond these primary functions, the Project may provide a number of services including local distribution and warehousing, cargo and container services, storage, customs clearing facilities and security.

5.3 Project timeframe

Subject to appropriate approvals, initial development of the Project site could commence in 2013.

The Project would be developed over two general phases, Phase 1A – proposed Port Shuttle Terminal Area, Phase 1B – proposed Warehousing and Distribution Area, and Phase 2 – proposed Interstate Terminal Area (refer Figure 5.1 for indicative phase elements). The development of the Project site would be undertaken progressively over time in line with freight demand requirements.

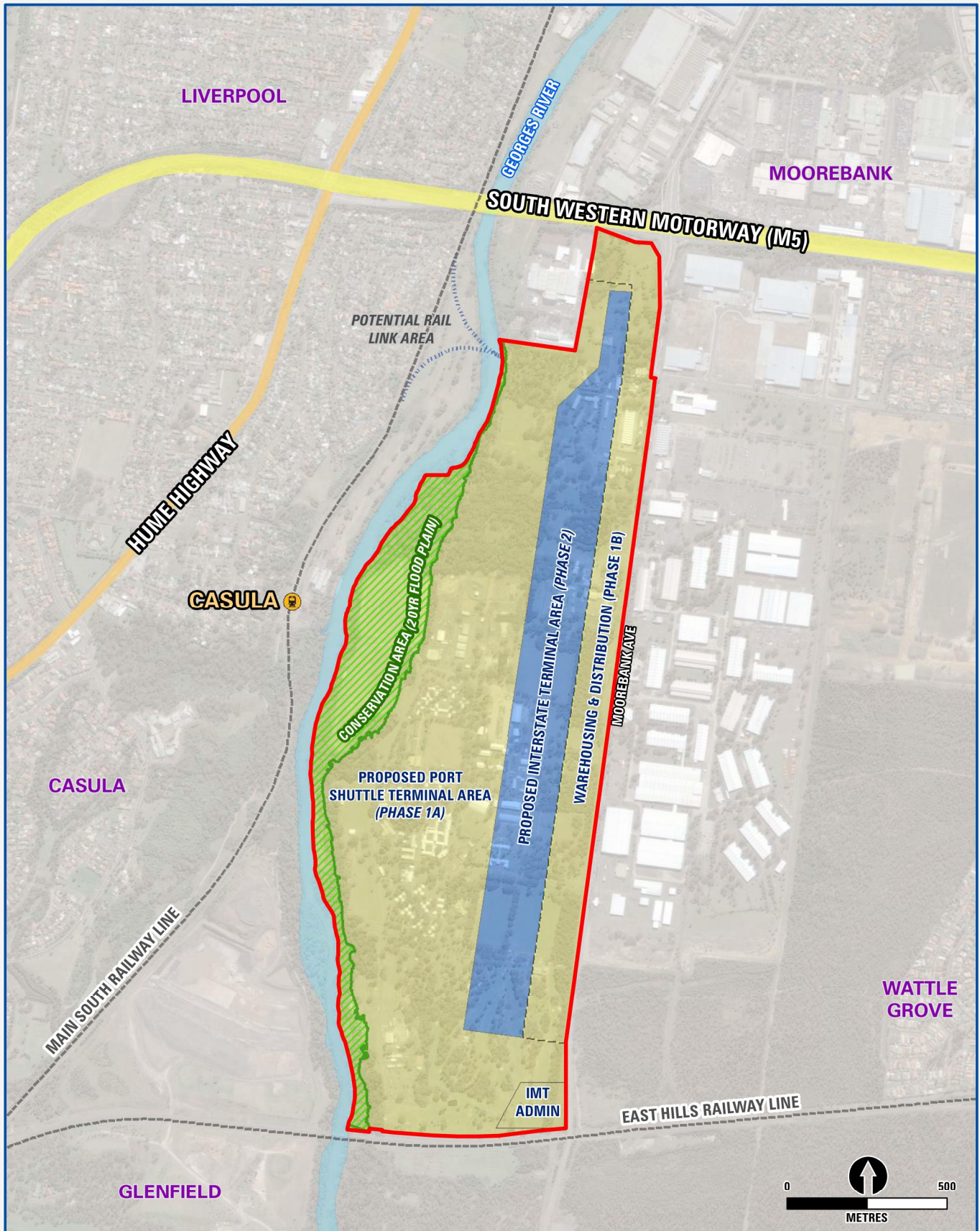
5.4 Project components subject to future approvals

The current application and accompanying EIS is for a stage 1 development application (DA) or 'concept proposal' for the entire IMT development (refer Section 3.4.2).

The EIS would set out the scope for future planning approvals for the Moorebank IMT. Following approval of the concept proposal, the Proponent would determine with the DoPI the form of future development applications under the EP&A Act.

Future development applications (including further detailed environmental assessment to support development applications), may be in the form of either a single development application for the entire Moorebank IMT development, or multiple staged development applications to reflect the development of parts of the Moorebank IMT over time. Any further environmental assessment required to obtain subsequent development approvals would be undertaken by the future proponent(s).

PROPOSED MOOREBANK INTERMODAL TERMINAL INDICATIVE LAYOUT



Moorebank Intermodal Terminal boundary Rail line & station Phase 1 Phase 2

NOTE:
Indicative only - subject to concept development

Figure 5.1 : Indicative project site layout

6. Key environmental issues

Preliminary environmental investigations of the Project site have been undertaken to inform an options assessment and concept development process, support the Project Feasibility Study and inform this PPEO. Following initial desktop studies, some field surveys were undertaken to more effectively determine the existing site conditions.

6.1 Surrounding traffic and transport network

6.1.1 Existing environment

The Project site is located in close proximity to key transport corridors of south-western Sydney including Main South Line rail corridor (route of the planned SSFL), the M5 and M7 motorways and the Hume Highway (refer to Figure 1.1).

The Project site is located on Moorebank Avenue and vehicle access to the site would be off this road. Moorebank Avenue is not a public road and connections to Moorebank Avenue would be within Commonwealth owned land.

6.1.2 Proposed future studies

A Traffic Impact Assessment (TIA) will be undertaken as part of the EIS process to demonstrate how the Project will facilitate freight transport objectives, meet freight infrastructure requirements and address impacts to local and regional transport networks.

The TIA will assess the impacts of the Project during both the construction and operational phases.



- Moorebank Intermodal Terminal boundary
- Elevation

Figure 6.1: Project site topography

The construction analysis will address the volumes and nature of the construction traffic during the construction phase and propose mitigation measures to minimise the impacts to the surrounding road network and other road uses. A key consideration of the construction assessment will be to identify appropriate haulage routes.

The TIA will also consider the traffic impacts of the Project once it becomes operational (including any associated warehousing), by determining the number of truck movements, their origin-destination and type of vehicles likely to be used. In order to assess both the local and regional impacts, three levels of traffic modelling will be employed including, strategic modelling (using EMME software), Paramics microsimulation modelling and intersection modelling (using SIDRA software). This analysis will be used to determine appropriate upgrades to the surrounding road network in order to accommodate such a development.

The TIA will also consider access for employees, as well as their likely impact. This will include an analysis of appropriate car parking level, access to public transport, pedestrian and cycle facilities.

The traffic analysis will be undertaken in accordance with NSW Roads and Traffic Authority (RTA) documentation, *Guide to Traffic Generating Developments* (RTA 2002) and *Paramics Microsimulation Modelling – RTA Manual*. Consultation with Transport for NSW will be ongoing throughout the EIS process.

6.2 Biodiversity

6.2.1 Existing environment

An ecological assessment was undertaken by Parsons Brinckerhoff in November 2010. The full ecological assessment report is available on the Moorebank Project website: <http://www.finance.gov.au/property/property/moorebank-intermodal-freight-terminal/index.html> and a summary is included below.

Assessment methodology

The purpose of an ecological assessment was to describe the existing ecological values on the site including species, species habitats and vegetation communities. The integrity and intactness of the ecological values was identified along with any listing under Commonwealth or State threatened species legislation.

The assessment involved a desktop review of ecological values to identify the presence of known threat-listed species and their habitats and threat-listed ecological communities based on existing information. Records of threat-listed species known or predicted to occur within the locality of the Project site were obtained from a range of databases and previous assessments.

Subsequently, a detailed field investigation was undertaken to verify the results of the desktop assessment. Field surveys were undertaken over five days between 8 and 12 November 2010. This survey sought primarily to identify the terrestrial plant and animal species occupying the Project site and to assess the extent and integrity of vegetation communities and habitats, especially in terms of providing habitat for threat-listed species. The floristic diversity and terrestrial vertebrate survey effort and method was designed and conducted in accordance with the *Survey Guidelines for Nationally Threatened Species* (SEWPaC 2010) and the *NSW Threatened Biodiversity Survey and Assessment: Guidelines for Developments and Activities (Working Draft)* (DEC 2004) representing best practice methods.

Key findings

The vegetation on the Project site presents a complex ecology with four native vegetation communities recorded on site including the following communities as described by Tozer (2003): Castlereagh Swamp Woodland, Castlereagh Scribbly Gum Woodland, Riparian Forest and Alluvial Woodland (the latter two communities both listed as River-Flat Eucalypt forest under the TSC Act) (refer Figure 6.1). While all four communities present on site form part of threat-listed ecological communities listed under the TSC Act, none of these communities correspond with a threat-listed community as listed under the EPBC Act.

Two threat-listed species of plant, *Persoonia nutans* (listed as Endangered under the EPBC Act and TSC Act) and *Grevillea parviflora* subsp. *parviflora* (listed as Vulnerable under the EPBC Act and TSC Act), were recorded in the Project site. Eight additional threat-listed plant species have a moderate likelihood of occurrence within the Project site based on preferred habitats and known distribution however, targeted searches did not detect these species.

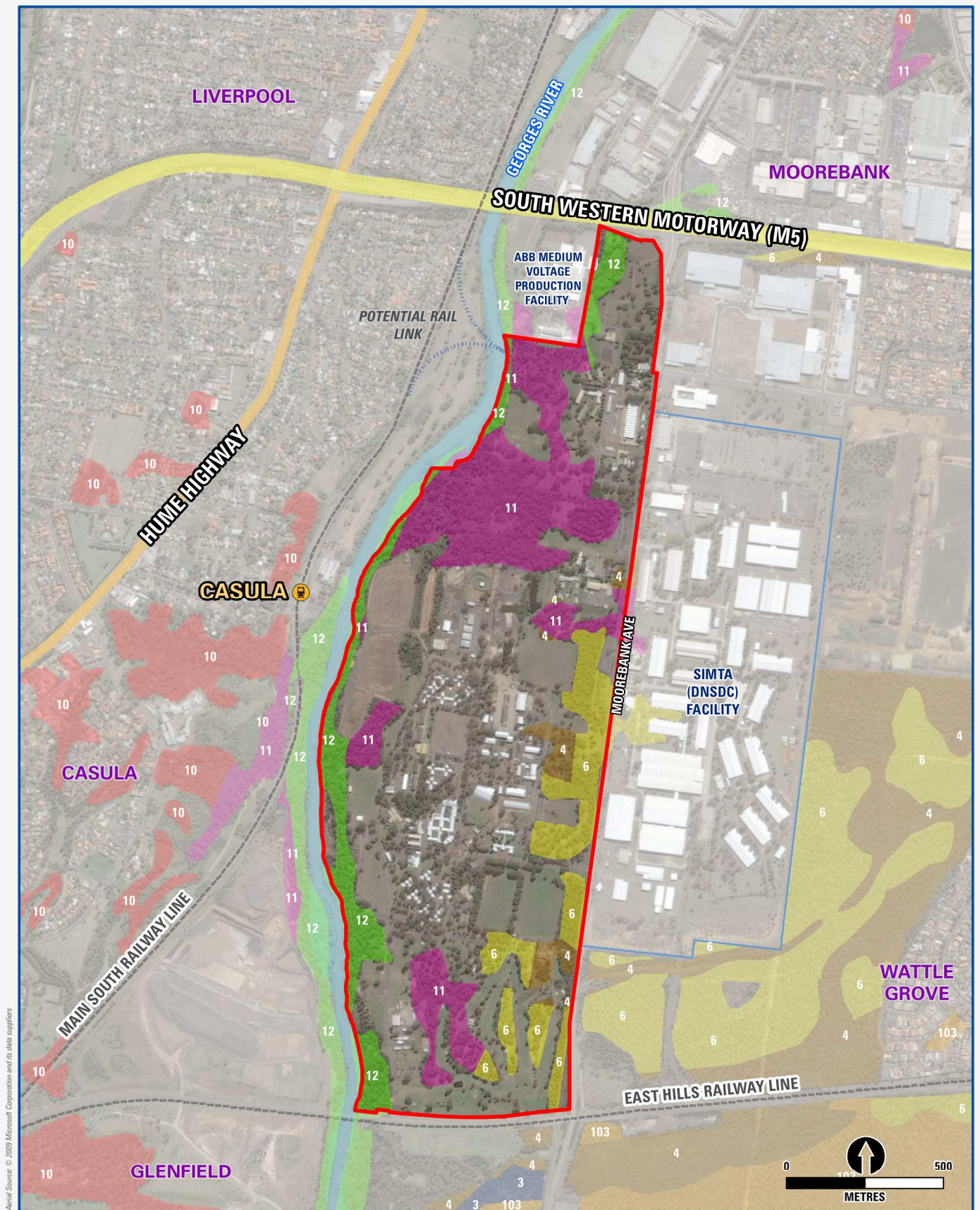
The recent fauna survey detected the Grey-headed Flying-fox (listed as Vulnerable under the EPBC Act and TSC Act) flying over the site. An earlier fauna study (Lesryk 2003) recorded the presence of two threat-listed microbat species in the Project site: Large-footed Myotis and Eastern Bent-wing Bat. The presence of additional threat-listed species of bats is considered possible.

The Project site is also likely to provide habitat for a range of additional threat-listed species of animals not detected during surveys and play a role in the local and regional corridor network given its location adjacent to the Georges River and extensive areas of vegetation to the south. Many of these species are only likely to utilise the more intact riparian habitats along the Georges River and would only occasionally, if ever, utilise the more fragmented patches of vegetation in the central and eastern areas of the site. Most of these species have large home ranges that may extend well beyond the Project site and/or are migratory or nomadic and likely to use the Project site on a sporadic or seasonal basis.

The Georges River is a major waterway and the aquatic environment of the river and major tributaries are of high ecological value. Development within the waterway can potentially affect fish habitat and hence best practice as presented by the requirements of the NSW *Fisheries Management Act 1994* with regard to fish passage need to be considered.

Riparian land (within 50 m of the river and second order or larger tributaries) is also of high ecological value due to the function of vegetation in this area as a wildlife corridor and a buffer for the protection of soil stability, water quality and aquatic habitats.

Native vegetation communities in moderate to high ecological integrity have similarly moderate to high value as potential habitat for threat-listed species of animal and plant. Several patches of this high integrity vegetation are inhabited by two plant species listed under the EPBC Act and TSC Act.



- | | | | |
|---|--|--|---|
| Moorebank Intermodal Terminal boundary | Vegetation communities | 6 - Castlereagh Scribbly Gum Woodland | 12 - Riparian Forest |
| ● --- Rail line & station | 4 - Castlereagh Swamp Woodland | 10 - Shale Plains Woodland | 103 - Shale/Gravel Transition Forest |
| | 3 - Cooks River Castlereagh Ironbark Forest | 11 - Alluvial Woodland | |

Figure 6.2: Threat-listed communities

Native vegetation on the site with substantially reduced canopy cover is in poor to moderate ecological integrity. This vegetation has reduced value as potential habitat for threat-listed species of animals and plants and reduced long-term viability due to its modified vegetation structure and composition and hence is of only moderate ecological value.

Cleared and developed areas of the site (e.g. buildings, roads) and areas dominated by introduced plant species (e.g. lawns, weed-dominated areas) are generally of low ecological value however they may contain small areas of habitat (e.g. isolated mature hollow-bearing trees) for threat-listed biodiversity that are not reflected in the vegetation mapping for the site due to their small spatial scale.

6.2.2 Proposed future studies

An ecological impact assessment of threatened species, populations and communities based on detailed field investigations will be prepared for the Project. This will build on the existing ecological values assessment already completed. Flora and fauna survey effort and design would be prepared representing best practice methods, aimed at covering the site and surrounds and focusing on threatened species, populations and communities as listed under both Commonwealth and State legislation.

The assessment would be prepared in accordance with SEWPaC nationally threatened species survey guidelines and the *Threatened Biodiversity Survey and Assessment: Guidelines for Developments and Activities* (DEC 2004). The significance of the impacts relating to biodiversity will be assessed following the SEWPaC *Significant Impact Guidelines 1.1 and 1.2* (SEWPaC 2006 and SEWPaC 2009) and the *Threatened Species Assessment Guidelines* (DPI 2008).

Mitigation measures will be developed for the Project with an aim of avoiding and/or minimising impacts on biodiversity. Biodiversity offset guidelines of both SEWPaC and OEH will be followed to determine offset requirements.

6.3 Air quality

6.3.1 Existing environment

Initial air quality investigations were completed by Parsons Brinckerhoff in December 2010 to establish the existing environment of the surrounding area. Air quality data and meteorological conditions have been referenced from a number of sources including the OEH (measured air quality monitoring data (Quarterly Air Monitoring Reports 2006, 2007, 2008 and 2009 (OEH 2011)) and the Bureau of Meteorology (BOM) website. The following data sets have been referenced:

- OEH Liverpool air monitoring station (Rose St), [33° 55' 58" (south), 150° 54' 21" (east)].
- BOM Holsworthy Control Range (067117) [Latitude: 33.98°S, Longitude: 150.93°E]: meteorological conditions (1998 – to date).

The investigations identified that the following conditions exist:

- Local industrial activities from the existing landfill and the industrial estate to the east (Moorebank) and north-east (Liverpool) and emissions from the existing road and rail network are likely to give rise to emissions of particulate matter (total suspended particles (TSP), PM₁₀ and PM_{2.5}), oxides of nitrogen, sulphur dioxide, carbon monoxide, volatile organic compounds, heavy metals and odour.
- Some regional industries may also influence the air quality of the Project site depending on their proximity, with common industries in the Liverpool LGA including moulded plastics manufacturing, electric cable manufacture, metal coating processes, farming practices and manufacture of polyurethane foam.
- The air quality at the Project site in Moorebank is likely to be reflective of the air environment at the Liverpool monitoring station, given its proximity and similar land uses, which has recorded occasional 24 hour PM₁₀ and 1 and 4 hour ozone (O₃) exceedances (during the summer months only).

The existing air quality for the Project site is considered to be characteristic of an urban/industrial environment.

6.3.2 Proposed future studies

An air quality impact assessment will be undertaken for the Project. This would identify sensitive receivers to air pollution and predict potential air quality impacts during construction and operation activities.

The air quality assessment will describe the ambient air quality and meteorological characteristics of the surrounding environment and identify potential emission sources that would contribute to the local and regional air quality. The assessment would estimate the emissions to air during the construction and operation phases of the Project and predict air quality impacts to sensitive receivers in the surrounding area using dispersion modelling.

The air quality assessment will consider the *Approved Methods of the Modelling and Assessment of Air Pollutants in NSW* (DEC 2005) as well as air quality goals and standards recommended by the National Health and Medical Research Council and prescribed in the *National Environment Protection (Ambient Air Quality) Measure (NEPM)* (EPHC 2003).

The impact assessment would include an outline of relevant mitigation measures that may be required for the Project to manage and minimise potential impacts.

6.4 Human Health Risk Assessment

6.4.1 Existing Environment

No assessment of the baseline Human Health Risk conditions has been undertaken to date. The existing air quality characteristics of the area have been presented in Section 6.3, and will be a key consideration in determining human health risks associated with the project. The assessment of human health risk is proposed in response to community feedback to date, that suggests this is a significant community concern.

6.4.2 Proposed Future Studies

A human health risk assessment will be undertaken to assess potential health risks posed by emissions to air of combustion products derived from the operation of the project.

The assessment will address acute and chronic risks to workers within the facility and surrounding communities. The HRA will not address environmental risks or risks associated with other discharges (such as waste or contamination) from the site.

The assessment of risks to human health will be conducted in accordance with established industry guidance developed and endorsed by Australian health and environmental authorities.

6.5 Noise and vibration

6.5.1 Existing environment

Preliminary investigations were undertaken to provide an overview of the existing noise and vibration environment in the area surrounding the Moorebank IMT. The investigations were completed in December 2010 by Parsons Brinckerhoff. The results of the preliminary assessment indicate that the noise characteristics of the area surrounding the Project are low and generally consistent with an urban, mixed use environment of residential uses, light industrial and open space. Noise levels are predominately influenced by:

- Local road traffic noise and local fauna (birds, insects).
- Rail pass by events on the Main South Railway Line in Casula.
- The South Western Motorway (M5) in Casula and Wattle Grove.

6.5.2 Proposed future studies

A quantitative noise impact assessment and qualitative vibration impact assessment will be prepared for onsite and offsite activities and sources related to the Project.

As part of the noise and vibration impact assessments potentially sensitive receivers in nearby residential areas would be identified.

Assessment of the potential noise impacts during the construction phase will be performed according to the methodologies outlined in the *NSW Interim Construction Noise Guideline* (DECC 2009). Assessment for the operational phase would be performed according to the *NSW Industrial Noise Policy* (EPA 2000a), *NSW Road Noise Policy* (DECCW 2011b) and the *Interim Guideline for the Assessment of Noise from Rail Infrastructure Projects* (DECC 2007).

Operational noise will be assessed with consideration given to:

- industrial noise from Project on-site operations
- transport noise – resulting from the Moorebank Avenue road transport corridor and on-site haulage roads
- rail noise – resulting from the site ingress and egress over Georges River and the on-site rail lines and sidings.

The noise impact assessment would include an outline of relevant mitigation measures that would be required for the Project to comply with noise goals.

The potential for off-site ground borne vibration during construction and operation would be assessed in accordance with relevant vibration goals established from the *Assessing Vibration: A Technical Guideline* (DECC 2006).

6.6 Stormwater and flooding

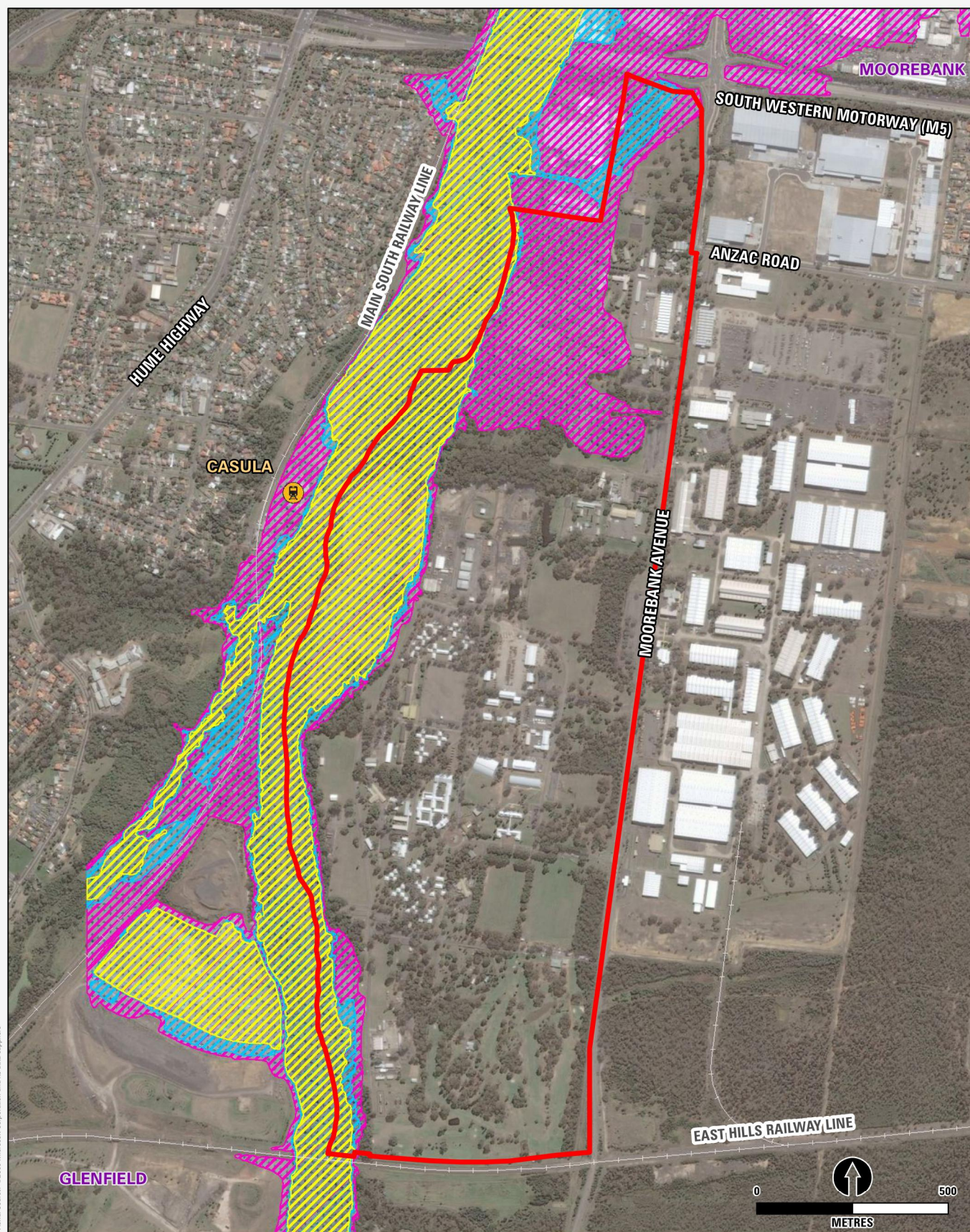
6.6.1 Existing environment

The Project site is bounded by the Georges River on the western boundary. The majority of surface water on the Project site currently discharges to the Georges River through a network of open surface drains and underground pipes. The remainder of the site drains to Anzac Creek, a tributary of the Georges River (EarthTech 2006). Water quality in the area is influenced primarily by runoff from local urban and industrial areas.

The Moorebank area has historically been subject to flooding from the Georges River and as a result a number of flood studies have been prepared to determine the nature and extent of the flood problem (LCC 2011).

Locally, groundwater levels in the alluvium have been shown to be shallow (0.9 and 5.1 mBGL) (HLA 2003 and GHD 2004). The general flow of groundwater for the Project site is generally in a west to north-west direction towards the Georges River (GHD 2004).

PROPOSED MOOREBANK INTERMODAL TERMINAL



- ▬ Moorebank Intermodal Terminal boundary
- ▬ Rail line
- Flood probability***
 - 20 year ARI
 - 100 year ARI
 - PMF

* Flood model based on 0.5m contours supplied by Liverpool City Council (January, 2011)

Figure 6.3: Surface water study area and flood levels

6.6.2 Proposed future studies

Assessments of stormwater and flooding impacts would be undertaken for the Project to address both construction and operation phases. A stormwater management plan will be prepared that will address:

- Surface water runoff impacts of the proposals and associated control measures.
- Erosion and sediment control measures.
- Water quality management.
- Accident spill management measures.
- Water cycle management.

The stormwater management plan will inform the design of a surface water drainage system to meet requirements with regards to runoff quantity and quality. A flood risk assessment will also be prepared, this assessment will address:

- Flood management and mitigation measures associated with development within the Georges River floodplain, including impacts on flood storage capacity.
- Localised flood impacts associated with the construction of the rail link bridge over the Georges River.
- Localised scour risk associated with the proposed rail link bridge and management measures.

The assessment will consider the following guidelines: *Managing Urban Stormwater Soils and Construction*, Volume 1 (Landcom 2004), Volume 2A (DECC 2008a) and Volume 2D (DECC 2008b), *National Water Quality Management Strategy Australian and New Zealand Guidelines for Fresh and Marine Water Quality* (ANZECC and ARMCANZ 2000), *Fish Passage Requirements for Waterway Crossings* (DPI (Fisheries) 2003a), and *Policy and Guidelines for Fish Friendly Waterway Crossings* (DPI (Fisheries) 2003b), *Floodplain Development Manual* (DIPNR 2005).

6.7 European heritage values

6.7.1 Existing environment

A European heritage assessment was conducted by Navin Officer Heritage Consultants with inputs from Eric Martin and Associates in late 2010 and early 2011. The purpose of the assessment was to identify the existing European heritage values on the Project site. The assessment report is available on the Project website:

<http://www.finance.gov.au/property/property/moorebank-intermodal-freight-terminal/index.html>.

In summary, there are no Commonwealth Heritage Listed places on the Project site and no places on the Project site listed on the State Heritage Register.

The SME is included in the State Heritage Inventory Database (Database no. 1970180) as a complex/group, due to its listing on the Heritage Schedule of the Liverpool City Council LEP 2008.

Numerous items and structures on the site have been identified through the literature review and field surveys as having varying degrees of European heritage significance.

6.7.2 Proposed future studies

A European heritage impact assessment will be undertaken to identify items and areas considered to have European heritage significance. The impact assessment will incorporate the built environment consisting of all above-ground structures and the potential for sub-surface archaeological deposits.

The significance of European heritage values of the Project site will be determined as part of the impact assessment report. Areas surrounding the Project site will also be identified and considered in regard to potential direct and indirect impacts of the Project.

The impacts on items of significance will be assessed and appropriate mitigation strategies will be developed to minimise impacts where appropriate.

6.8 Aboriginal heritage values

6.8.1 Existing environment

An Aboriginal heritage assessment was conducted by Navin Officer Heritage Consultants in late 2010 and early 2011. The purpose of the assessment was to identify the existing Aboriginal heritage values on the Project site. The assessment report is available on the Project website: <http://www.finance.gov.au/property/property/moorebank-intermodal-freight-terminal/index.html>.

In summary, no previously recorded AHIMS Aboriginal sites are located within the Project site. Fourteen AHIMS sites are recorded within a radius of 1.5 kilometres around the Project site (three scarred tree items and the remainder being stone artefact scatters) (AHIMS 2010). Furthermore, previous reports (Dames and Moore 1996 and Dallas and Steele 2004) have not identified any Aboriginal sites within the Project site.

Field surveys conducted by Navin Officer Heritage Consultants in attendance with invited members of the TLALC and CBNTCAC identified eight Aboriginal sites and one Potential Archaeological Deposit within the Project site. The significance of these items requires confirmation.

A large proportion of the site is either low in sensitivity to archaeological Aboriginal deposits or has no sensitivity.

6.8.2 Proposed future studies

An Aboriginal heritage impact assessment will be undertaken.

Archaeological field surveys within the Project site boundary have commenced and would be completed with the purpose of identifying and documenting surface archaeological sites, potential archaeological deposits and places of Aboriginal cultural value that are considered to have Aboriginal heritage significance. Direct and indirect impacts of the Project would be considered during the impact assessment. Areas surrounding the Project site will also be identified and considered in regard to potential direct and indirect impacts of the Project.

Assessment would be undertaken in consultation with Indigenous stakeholders in accordance with guidelines to be agreed with relevant government stakeholders.

6.9 Contamination

6.9.1 Existing environment

Parsons Brinckerhoff completed a Phase 1 Environmental Site Assessment (ESA) in November 2010. Based on the desktop review of available environmental information pertaining to the site, potential contamination issues at the site are considered likely to be associated with buried wastes and waste stockpiles, leaks from the storage and use of hazardous chemicals such as fuels and waste oils, building materials containing asbestos, residual contamination from former site uses such as explosive ordnance waste and buried munitions (ECA 2000 and EarthTech 2006).

In addition, three offsite operations have been identified that are considered to have the potential to present a contamination risk should the migration of mobile contaminants from such facilities (if any) migrate towards the site through preferential groundwater and surface pathways. These consist of an electronics component manufacturing factory (ABB Power Transmissions Pty Ltd) located adjacent to the northern boundary of the Moorebank Barracks (which is subject to eight notice records listed in the OEH contaminated land record database (DECCW 2011a)), land to the east of the Project site comprising DNSDC (where a number of operational refuelling areas and underground fuel storage infrastructure are known to exist), and an active landfill and waste transfer station (Glenfield Waste Services) to the southwest of the Steele Barracks on the western bank of the Georges River.

6.9.2 Proposed future studies

A Phase 2 ESA is being undertaken to assess and characterise the nature and extent of contamination at the Project site. An independent EPA accredited site auditor, AECOM, has been engaged by the MPO to review the Phase 1 and Phase 2 reports and confirm their suitability for their purpose.

The assessment will describe ecological and human health risks associated with identified areas of potential environmental concern and associated contaminants of concern. Furthermore, the assessment will address any necessary remediation and additional works required by the Project to render the site suitable for its intended use.

The assessment will be undertaken in accordance with the *Guidelines for Consultants Reporting on Contaminated Sites* (EPA 2000a) and *Acid Sulfate Soils Assessment Guidelines* (ASSMC 1998a) and *Acid Sulfate Soils Planning Guidelines* (ASSMAC 1998b).

6.10 Visual environment

6.10.1 Proposed future studies

A visual impact assessment will be undertaken at a broad concept level to describe the visual characteristics of the Project and the internal and external impacts of the Project. The assessment will identify and analyse the impact of the Project as seen from key visual receptors in the surrounding area. As part of the assessment, key built form elements will be addressed as well as key urban design and landscape design principles applied to the Project to mitigate any potential visual impact.

The methodology to be adopted for the visual impact assessment will be modelled on the approach outlined in *Guidelines for Landscape and Visual Impact Assessment* (Landscape Institute and the Institute of Environmental Management and Assessment 2002).

6.11 Social and economic environment

6.11.1 Proposed future studies

Assessment of the potential social and economic impacts will be undertaken to identify potential impacts the Project may have on the local and regional industries, employment, infrastructure and demographic. The assessment would be informed by the views of the community, including information from community and stakeholder consultation activities.

7. Other environmental issues

7.1 Hazard and risk analysis

A preliminary hazard analysis will be prepared in accordance with all relevant Hazardous Industry Planning Advisory Papers (HIPAPS) and the *Applying SEPP 33 Hazardous and Offensive Development Application Guidelines* (Department of Urban Affairs and Planning 1995). The risks and hazards outlined in the assessment would be in accordance with the provisions of State Environmental Planning Policy 33 – Hazardous and Offensive Development.

7.2 Groundwater

A desktop groundwater impact assessment will be undertaken to characterise the groundwater flow conditions, quality and levels.

The scope of works will include a data review of the topography and hydrology of the Project site, geology and soils, hydrogeology (main aquifers, groundwater flow levels and groundwater flow direction), groundwater legislation and a review of existing groundwater reports for the Project area.

The assessment will consider the likely construction and operational impacts of the Project and provide management and mitigation principles for potential groundwater impacts.

7.3 Bush fire

An assessment of potential bushfire hazards will be prepared in accordance with the principles outlined in the *Planning for Bush Fire Protection* (NSW RFS 2006).

7.4 Waste management

The EIS would include a review of potential waste streams from the construction and operation phases of the Project and identify measures for minimising and managing these waste products.

7.5 Utilities and services

Consultation with relevant authorities will be necessary to assess service demands, capacity and possible augmentation of existing and proposed utilities as a result of the Project. Local infrastructure and required utilities and services for the Project will be identified including water demands, sewerage capacity, trade waste, power, gas and telecommunications.

7.6 Environmentally sustainable development

The EIS will present a consolidated description of the key sustainability benefits which will be delivered by the Project.

The Project's impacts against the principles of environmentally sustainable development (ESD) in accordance with the EP&A Act will also be presented.

8. Conclusion

This PPEO describes the Project to the extent that it has been developed to date and sets out the statutory and strategic context for the Project.

This report outlines an indicative scope for the EIS to be undertaken in accordance with the assessment and approval process to be determined by the NSW DoPI under the EP&A Act. It is anticipated that the preliminary environmental assessment undertaken as part of this application will assist the Director-General with the formulation of environmental assessment requirements for the Project.

The expected environmental issues have been separated into 'key' issues and 'other' issues for the Project. The 'key' issues are considered to require further investigation, which would be undertaken during the EIS process. The 'other' issues are expected to be of less consequence than the key issues and would be able to be managed through the application of best practice environmental management, and proposed management measures and safeguards. Further investigation of some of the 'other' issues may be required, and is proposed to be undertaken during the EIS process.

This document is submitted to address the need for DGRs pursuant to Division 4.1, Part 4 of the EP & A Act. In addition, it has been prepared with the intention of establishing alignment between the Commonwealth EPBC Act process administered by SEWPaC and the NSW EP & A Act process, to ensure consistency, avoid duplication, of assessments and investigations, and provide a single point of focus for community and stakeholder consultation and information activities.

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