MAJOR PROJECT ASSESSMENT: SIMTA Intermodal Terminal Facility Stage 1 Moorebank Avenue, Moorebank (SSD 6766)

Secretary's
Environmental Assessment Report
Section 89H of the
Environmental Planning and Assessment Act 1979

December 2015

ABBREVIATIONS

Applicant	Sydney Intermodal Terminal Alliance (SIMTA)
CIV	Capital Investment Value
Department	Department of Planning & Environment
EIS	Environmental Impact Assessment
EP&A Act	*Environmental Planning and Assessment Act 1979*
EP&A Regulation	*Environmental Planning and Assessment Regulation 2000*
EPI	Environmental Planning Instrument
IMEX	Import/Export
MD SEPP	State Environmental Planning Policy (Major Development) 2005
MIC	Moorebank Intermodal Company
Minister	Minister for Planning
MIT	Moorebank Intermodal Terminal
PAC	Planning Assessment Commission
PEA	Preliminary Environmental Assessment
RtS	Response to Submissions
SEARs	Secretary's Environment Assessment Requirements
Secretary	Secretary of the Department of Planning & Environment
SIMTA	Sydney Intermodal Terminal Alliance
SSFL	Southern Sydney Freight Line
TEU	Twenty Foot Equivalent Units (Containers)

Cover Photograph: simta.com.au

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EXECUTIVE SUMMARY

Sydney Intermodal Terminal Alliance (SIMTA) seeks approval for a Stage 1 State Significant Development (SSD) to develop an intermodal terminal facility with a rail link to the Southern Sydney Freight Line (SSFL) at Moorebank, in the Liverpool Local Government Area.

Stage 1 follows the Concept Plan approval by the Planning Assessment Commission (Commission) on 29 September 2014 for an intermodal facility including Import/Export (IMEX) terminal handling up to 250,000 TEUs per annum with an option of an additional 250,000 TEUs subject to not exceeding the capacity of the transport network, warehousing and rail connection to the Southern Sydney Freight Line (SSFL). The proposal has a capital investment value of $142.5 million.

The proposal would provide a port-shuttle freight service between Port Botany and the SIMTA site, whereby containers would be unloaded from ships at Port Botany, placed on a train and sent to the SIMTA site via the existing SSFL. The train would be unloaded, with freight either being temporarily stored on site or loaded directly on to heavy vehicles for distribution to markets via the nearby major road network. The trains would return to Port Botany, ready for further freight shuttling.

Separately, the Moorebank Intermodal Company (MIC), on behalf of the Commonwealth government, recently sought approval for a staged State Significant Development (SSD) (including Stage 1 early works) to develop an intermodal terminal facility with a rail link to the Southern Sydney Freight Line (SSFL) on an adjacent site. This proposal includes an IMEX terminal that would handle up to 1.05 million TEUs and an interstate terminal that would handle 500,000 TEUs. 300,000m^2 of warehousing is also proposed.

On 4 June 2014, MIC announced that it had reached an agreement with SIMTA to develop the Moorebank project on a whole of precinct basis and a combined throughput of 1.55 million containers is sought. In assessing MIC's proposal, the Department recommended conditions to ensure that the maximum throughput of a combined site is 1.55 million TEUs. However, in the absence of a single application for a combined facility, the Department has also carefully considered the cumulative impacts of both proposals in its assessment of the SIMTA application.

The SIMTA proposal is State Significant Development pursuant to the terms of the Concept Plan approval, which determined *'that approval to carry out the development the subject of the Concept Plan is to be subject to Part 4 Division 4.1 of the Act.'* The Minister for Planning is the approval authority for the proposal, however, the Commission may determine the application under delegation as Campbelltown City Council and Liverpool City Council raise objection to the proposal and there have been more than 25 submissions received by way of objection.

The Environmental Impact Statement (EIS) was publicly exhibited from 28 May 2015 to 26 June 2015 (30 days). The Department received 226 submissions from the public during the exhibition period. A total of 8 submissions were received from public authorities. In response to these submissions, the Applicant revised the alignment of the proposed rail link to avoid the need to enter into the East Hills Passenger Line corridor.

The Department has undertaken a comprehensive assessment of the proposal which focuses on four key areas.

- traffic (**Section 5.1**);
- air quality (**Section 5.2**);
- noise and vibration (**Section 5.3**); and
- contamination (**Section 5.4**).

In relation to traffic and transport, the Department acknowledges the proposal would remain within the capacity of the transport network, consistent with the terms of the Concept Plan approval and

not require any intersection upgrades. Notwithstanding, the Department has recommended the Applicant pay monetary developer contributions of $393,122.14 to Liverpool Council to offset increased pressures on Council's assets and services as a result of the proposal.

The Department notes that the proposal is predicted to meet relevant EPA criteria in relation to air quality and the predicted human health impacts are considered to be low in the context of the site. The Department has recommended stringent conditions to ensure that the intermodal terminal is designed and operated to achieve best practice emission control.

The Department considers that during operation of the facility some exceedances of relevant noise goals may occur at sensitive receivers. Impacts would primarily result from wheel squeal of wagons using the rail connection to the SSFL. A number of conditions have been recommended to address wheel squeal, including requirements for track grinding and lubrication on the rail link. Conditions requiring real time noise monitoring of train passby events on the rail link, implementation of best practice container handling equipment and the preparation and implementation of an Operational Environmental Management Plan have also been recommended to address concerns.

The Department notes that contaminated land exists on the site and considers the highest risk of exposure to contaminants would occur when ground or groundwater disturbance during excavation occurs. The Department has reviewed the Remedial Action Plan and in conjunction with recommended conditions of approval is satisfied that contamination impacts can be minimised and mitigated, including those raised by the EPA.

The proposal is also consistent with the NSW Government's objective to maximise the haulage of freight by rail. In as early as 2005, the Freight Infrastructure Advisory Board reinforced the need for an intermodal terminal at Moorebank to achieve an increase in the rail mode share of port container freight movements. The Department acknowledges that the proposal is a key component in meeting Sydney's intermodal capacity needs, particularly as SIMTA has the capability to attract a significant proportion of the freight market thus significantly reducing trucking demand.

In balancing the potential impacts of the proposal, the Department notes that, if approved, the proposal would reduce the number of heavy vehicles on the M5 Motorway, between Port Botany and Moorebank and contribute to improving network efficiency by relieving traffic congestion in the Port Botany area. The proposal would also grow freight network capacity to meet future freight requirements.

The Department has concluded that the proposal is consistent with the Concept Plan approval and on balance, the proposal's benefits outweigh its potential adverse impacts and is therefore in the public interest. Consequently, the Department considers the Stage 1 proposal should be approved subject to the recommended conditions of approval.

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1. BACKGROUND

Sydney Intermodal Terminal Alliance (SIMTA), a consortium of Qube Holdings and Aurizon, is seeking approval for the construction and operation of Stage 1 of the SIMTA Moorebank Intermodal Terminal Facility and the associated Rail link as part of the first stage of development under the approved SIMTA Concept Plan (MP 10_0193). The SIMTA Concept Plan was approved by the Planning Assessment Commission (the Commission) on 29 August 2014, and allows the following three stages of development:

1. construction of the intermodal terminal facility and associated rail link (the subject of this proposal);
2. construction of the warehouse and distribution facilities; and
3. extension of the intermodal terminal and completion of warehouse and distribution facilities.

The site is located approximately 27 kilometres south-west of the Sydney CBD, and approximately 2.5 kilometres south of Liverpool City Centre within the Liverpool Local Government Area (**Figure 1**).

Figure 1: Project Location in Context with Sydney CBD (Base Image Source: Google Maps 2014)

The SIMTA Concept Plan site is located on the eastern side of Moorebank Avenue on 19 land parcels and is relatively flat measuring 1,382 metres long by 600 metres wide. The existing site comprises approximately 238,000m^2 of low-rise buildings used for warehouses and administration offices, an internal road network, and large hardstand areas.

To the north of the site is a 200 hectare industrial precinct which supports a range of uses including freight and logistics, heavy and light manufacturing, office and business park developments. Other surrounding land uses include: Department of Defence landholdings (known as Defence National Storage and Distribution Centre (DNSDC); Holsworthy Military Reserve; residual Commonwealth land to the east and south (known as the Boot Land and Southern Boot Land); and residential areas of Moorebank, Wattle Grove and Casula (**Figure 2**).

Georges River runs along the western boundary of the School of Military Engineering (SME) to the west of the Stage 1 site, and Anzac Creek runs along the eastern boundary of the residual Commonwealth (Defence) Land. The closest residential properties are located in Moorebank to

the north-east (approximately 400 metres), Wattle Grove to the east (approximately 800 metres) and Casula to the west (approximately 850 metres).

The area to which the Stage 1 application applies is located approximately 1,300 metres south of the intersection of Moorebank Avenue and the M5 Motorway and has a site area of approximately 18 hectares. The M5 is the main road link between the Stage 1 site and the key employment and industrial areas within the West and South Western Sydney Sub-Regions. The Southern Sydney Freight Line (SSFL) is located one kilometre to the west of the proposed Stage 1 site.

Moorebank Intermodal Company (MIC), on behalf of the Commonwealth Government, is also proposing to construct and operate an intermodal facility on the SIME site. This proposal is known as the Moorebank Intermodal Terminal (MIT) (SSD 5066). The Department has assessed this proposal and has recommended approval subject to conditions. The MIT proposal includes:

- an import/export (IMEX) freight terminal with a maximum capacity of 1.05 million twenty-foot equivalent units (TEU) (containers) a year;
- an interstate freight terminal designed to handle up to 500,000 TEU per year;
- warehousing facilities;
- an upgrade of Moorebank Avenue; and
- a rail access connection between the main intermodal site and the SSFL via a bridge over the Georges River.

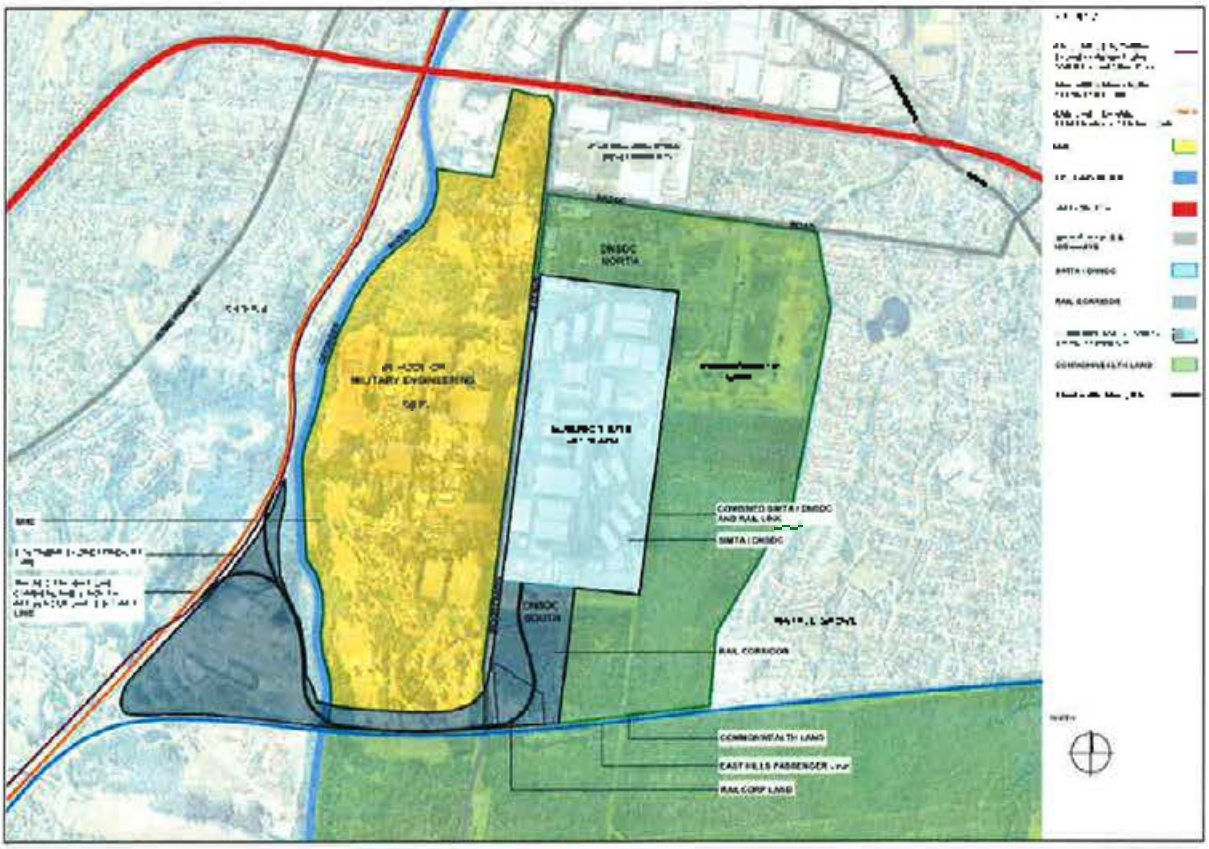

Figure 2: Local Context, showing Concept Plan site (Source: Environmental Impact Assessment 2015)

On 4 June 2014 MIC released a statement clarifying that an agreement had been reached with SIMTA and that only one intermodal facility would proceed across both sites. However, both applicants have continued to pursue approvals for their respective proposals as stand along facilities. Notwithstanding, MIC has updated its proposal by clarifying that the throughput of 1.55 million containers sought would be shared across both sites.

2. PROPOSED PROJECT

2.1. Project Description

SIMTA Stage 1 involves the construction and operation of infrastructure to support a container freight road volume of 250,000 TEU. The Capital Investment Value (CIV) of the proposed development is $142.5 million. The proposal includes truck processing, holding and loading areas; rail loading and container storage areas; an administration facility and associated car parking; the Rail link connecting to the SSFL; and associated ancillary works. The proposal would operate 24 hours, 7 days a week. The project layout is shown in **Figure 3**. The key components of the project are listed in **Table 1**.

Figure 3: Project layout (Source: Environmental Impact Statement 2015)

Table 1: Detailed description of proposal

Aspect	Description
Intermodal Terminal	The construction and operation of infrastructure to support an intermodal facility with a container freight volume of 250,000 TEU.
Truck processing	Truck processing, holding and loading areas. Entrance and exit for heavy vehicles is located off Moorebank Avenue to the northern part of the site. The exit includes two lanes to facilitate for trucks exiting northbound onto Moorebank Avenue. The entrance would be controlled through the use of truck processing gates, including gantry structures to be located over the extent of the entrance and exit lanes.
Rail loading and container storage areas	Installation of four rail sidings would extend through the central part of the site from the Rail link to enable the storage of a train with a length of approximately 650 metres. These sidings would provide an area for loading/unloading of trains. A locomotive shifter (to allow transfer between the rail sidings) and locomotive refuelling facilities would be located at the northern end of the rail sidings. Located on the western and eastern side of the rail sidings would sit a primary loading, unloading and container storage area. Containers would be stacked up to five high, equalling a total height of approximately 13 metres. Once operational, overhead gantry cranes (approximately 32 metres in height) would span across the primary container areas, rail sidings and truck loading areas.
Administration Facility	The administration area would include a single storey office building of approximately 500 square metres and 5.5 metres in height, and a parking area comprising spaces for approximately 24 light vehicles. The office would accommodate a reception, meeting rooms, offices, amenities, lunch room and an outdoor area. The administration area would be accessed via a separate entrance and exit off Moorebank Avenue to the south of the main entrance/exit.
Rail link	Located adjacent to the Sydney Trains Rail Corridor, including a connection to the intermodal terminal, traversing Moorebank Avenue, Anzac Creek and Georges River and connecting to the Southern Sydney Freight Line. The bridge over the Georges River would be in proximity to the existing bridge for the East Hills Rail Corridor, before turning north-westerly through the Glenfield Waste Facility. Works within the Glenfield Waste Facility would include the construction of structural supports, treatment and monitoring wells, a stormwater and leachate basin, and landfill barrier systems.
Ancillary Works	Including: • signalling and intersection works, such as decommissioning of the existing Moorebank Avenue traffic signals at the northern access to the SIMTA site and at the Chapman Avenue intersection, and installation of a traffic signal at the main truck entrance and exit to the Stage 1 site; • signage works; • lighting; • vegetation removal and landscaping, comprising the removal of existing landscaping on the western boundary along Moorebank Avenue at an 18 metre setback; • water management works, comprising trench drains and pits traversing the site from north to south and a bio-retention swale/on-site storage detention located along the western boundary of the Stage 1 site. A swale would also be construction within the Moorebank Avenue road reserve; and • connections to water, sewer, electricity and communications utilities.

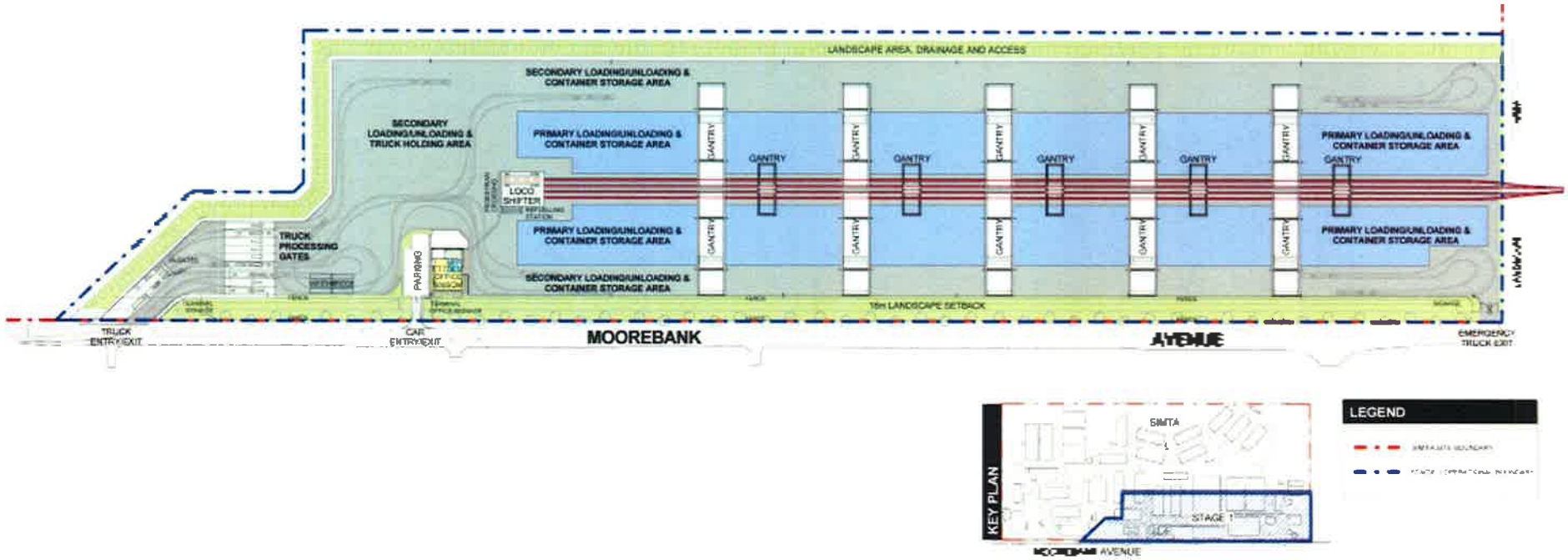

Figure 4: Terminal site layout (Source: Environmental Impact Statement 2015)

2.2. Project Need and Justification

2.2.1. Identified Need

An intermodal terminal at Moorebank was first considered by the Commonwealth Government in 2004 to promote national productivity in the long term to assist in the development of Sydney, particularly in attracting employment and investment in South-West Sydney.

In 2005, the Freight Infrastructure Advisory Board (FIAB), through its report on intermodal freight requirements for Sydney, reinforced Moorebank as a critical element for achieving the NSW Government's target of an increased rail mode share of port container freight. The FIAB report proposed a staged development of new intermodal freight capacity within metropolitan Sydney, generally as follows:

- development of the Enfield intermodal terminal by 2009/10 with a capacity to handle 300,000 TEUs per annum and servicing the Port Botany container market. This project began operations in early 2015;
- development of an intermodal terminal at Moorebank by 2013/14 with a capacity to handle up to 500,000 TEUs per annum of port freight and additional capacity to service domestic container freight market; and
- ongoing planning for a possible intermodal terminal development within the Eastern Creek precinct in outer western Sydney towards 2020.

In 2007, the Commonwealth Government allocated funding towards detailed planning of an intermodal terminal at Moorebank as part of the Nation Building Program and in 2010 the Government allocated further funding for a feasibility study.

The National Ports Strategy was developed by Infrastructure Australia and the National Transport Commission and endorsed by the Council of Australian Governments in July 2012. The Strategy considers that ports are critical to productivity and economic growth, and notes that best practice master planning would identify locations for inland intermodals and industrial/warehousing lands.

Section 5 of the Strategy considers the increasing freight demand for South West Sydney and the need for intermodals to maintain the rail modal share of container freight from Port Botany. The Department considers that the proposal would assist in increasing the rail modal share, and therefore increase the efficiency of Port Botany freight movements.

The *Freight Demand Modelling Report* undertaken by the Proponent for the SIMTA Concept Plan Environmental Assessment has identified the freight demand for the Western and South-Western Sydney regions. By 2016, direct trucking from Port Botany to the Sydney region would deliver over 70% of freight task. The report suggests that by 2025, additional intermodal terminal capacity will be required to deliver the forecast 4.6 million TEUs throughput at Port Botany, with demand for containers in the South-West exceeding the current capacity at the Minto intermodal terminal.

In addition, the Department considers that the proposal is consistent with the following Commonwealth and State policies:

Transport Planning

- *NSW Long Term Transport Masterplan* – the SIMTA proposal has the potential to increase network efficiency by relieving congestion at bottlenecks on road and rail networks; grow freight network capacity to meet future freight requirements; and manage the community and environmental impacts of freight to promote sustainability
- *Railing Port Botany's Containers* – prepared by the Freight Infrastructure Advisory Board in 2005, the report recommends that a 40% rail share target (since revised to 28%) must be met

or exceeded and that sufficient intermodal terminal capacity is provided. The report notes that Moorebank is a key component in meeting Sydney's intermodal capacity needs.

- *NSW Freight and Ports Strategy* – the proposal would contribute to a number of Strategic Action Areas including increasing freight movement and network demand, managing congestion, noise and emission impacts, and prioritising safety of freight transport.

Land Use Planning

- *NSW 2021:* includes targets to enhance rail freight movement and to double the proportion of container freight movement by rail through NSW ports to 28% by 2020. The proposal would contribute to this freight target.
- *A Plan for Growing Sydney 2014* – the proposal would contribute to long term employment growth in the South West Subregion (Liverpool LGA) and address the priorities of protecting infrastructure of metropolitan significance (intermodal terminals) and protecting land to serve Sydney's future transport needs including intermodal sites.
- *State Infrastructure Strategy 2012-2032* – identifies the Moorebank Intermodal Terminal as a key project, improving cost competitiveness of rail and road transport and provide for private investment in the rail freight market. The proposed development would also reduce heavy vehicle movements along the M5 and support the State investment in the delivery of the SSFL.

2.2.2. Moorebank Intermodal Precinct

While SIMTA sought Concept Plan approval for a throughput of 1 million TEUs, the Commission's approval limited the initial throughput of the site to 250,000 TEUs. This decision was based on the uncertainty around predicting the potential traffic impacts and determining the appropriateness of the proposed mitigation measures so far into the future.

The Concept approval includes the provision for a future application to increase throughput by a further 250,000 TEUs to be considered by the consent authority. The Department, in assessing such an application, would need to be satisfied that SIMTA has demonstrated through monitoring and modelling of the operational facility that increased TEUs would not exceed the capacity of the road network.

The key differences between the SIMTA Concept Plan and MIT Concept proposals are explained in **Table 2**. Both proposals include 300,000m^2 of warehousing:

Table 2: Key Differences between MIT and SIMTA

	IMEX TEUs	Interstate TEUs	Freight Village*
MIT	1.05 million	500,000	Yes, not publicly accessible
SIMTA	250,000 (Stage 1) 500,000 (maximum)	N/A	8,000m^2 (Publicly accessible)

** Not included in SIMTA Stage 1*

Since the Commission's determination of the SIMTA Concept Plan, SIMTA and MIC have agreed on terms to develop the Moorebank precinct as a single intermodal facility. While the Department acknowledges and supports this position, both Applicants have indicated that their respective sites would not be combined in a single Development Application at this stage. In this regard, there remain two separate applications on two separate sites (by two separate Applicants) that must be considered on their merits.

In addressing concerns raised by the Department and the Commission relating to the hypothetical (and unlikely) outcome of two intermodal terminals operating independently, MIC considered the cumulative impacts of both sites by undertaking a cumulative impact assessment on a number of different full build scenarios. Cumulative impacts were also assessed in the SIMTA Concept Plan. To understand possible likely scenarios of a combined precinct, MIC developed the scenarios presented in **Table 3** below.

Table 3: Cumulative Scenarios (Source: MIC RtS 2015)

Scenario	MIT	SIMTA
A	• 1.05 million TEUs IMEX • 500,000 TEUs interstate • 300,000m^2 warehousing	• 300,000m^2 warehousing
B	• 500,000 TEUs interstate • 300,000m^2 warehousing	• 1 million TEUs IMEX • 300,000m^2 warehousing
C2	• 550,000 TEUs IMEX • 500,000 TEUs interstate • 300,000m^2 warehousing	• 500,000 TEUs IMEX • 300,000m^2 warehousing

In the absence of a combined intermodal facility or one application for a single facility, the Department, in its assessment of the MIC proposal, has taken into consideration the cumulative impacts that may arise should both sites be developed as intermodal facilities. While the MIC EIS explains a number of scenarios adopted for cumulative impact assessments, these were refined as part of the Response to Submissions (RtS) following successful contractual negotiations with SIMTA. Therefore, the scenarios considered for cumulative impact assessments were based on more realistic possible outcomes across the two sites. The Department supported the adoption of these scenarios for assessment purposes.

Notwithstanding, it was necessary to carefully structure the MIC recommended instrument of approval in a way that ensures the Commission's intentions and objectives for ensuring the capacity of the transport network (for any scenario) is not exceeded.

3. STATUTORY CONTEXT

3.1. State Significant Development

The proposal is State Significant Development under Division 4.1 of the *Environmental Planning and Assessment Act 1979* (the Act).

On 9 November 2010 the Minister for Planning declared the SIMTA Project to be a Major Project under Part 3A of the EP&A Act because it was development for the purpose of railway freight facilities or inter-modal terminals under clause 23 of Schedule 1 of the (now repealed) *State Environmental Planning Policy (Major Development) 2005*. Although Part 3A has since been repealed, the transitional arrangements deemed the SIMTA Project to be a transitional Part 3A project to which the repealed Part 3A provision of the EP&A Act continues to apply.

A Concept Plan Approval was issued for the SIMTA Project by the Planning Assessment Commission on 29 August 2014. The Concept Plan Approval states that future approvals are subject to Part 4, Division 4.1 of the EP&A Act and the environmental assessment requirements specified in Schedule 3 of the Conditions of Approval. Therefore, the proposal is State Significant Development under Division 4.1 of the Act.

3.2. Delegated Authority

In accordance with the Minister's delegation dated 14 September 2011, the Planning Assessment Commission will determine the intermodal facility as Liverpool City Council and Campbelltown City Council have objected to the proposal and more than 25 public submissions have been received objecting to the proposal.

3.3. Permissibility

The site is located within the Liverpool Local Government Area (LGA). Under the Liverpool Local Environmental Plan (LEP) 2008, the Stage 1 site is zoned IN1 General Industrial and the Rail link is zoned SP2 Infrastructure. There are also areas of RE1 Public Recreation

zoned land. Freight transport facilities, storage premises (other than offensive storage establishments or hazardous storage establishments) and warehouse and distribution centres are permissible in the IN1 Industrial zone. However, rail infrastructure is prohibited in RE1 Public Recreation zones. In this case, clause 89E(3) of the EP&A Act ensures that State Significant Development consent may be granted despite the development being partly prohibited by an environmental planning instrument.

Further consideration of the Liverpool LEP is also provided in **Appendix B**.

3.4. Environmental Planning Instruments

The Department's consideration of relevant EPIs (including SEPPs) is provided in **Appendix B**. The Proposal is consistent with the relevant requirements of the EPIs.

3.5. Objects of the EP&A Act

Decisions made under the EP&A Act must have regard to the objects of the Act, as set out in Section 5 of the Act. The relevant objects are:

(a) to encourage:
- *(i) the proper management, development and conservation of natural and artificial resources, including agricultural land, natural areas, forests, minerals, water, cities, towns and villages for the purpose of promoting the social and economic welfare of the community and a better environment,*
- *(ii) the promotion and co-ordination of the orderly and economic use and development of land,*
- *(iii) the protection, provision and co-ordination of communication and utility services,*
- *(iv) the provision of land for public purposes,*
- *(v) the provision and co-ordination of community services and facilities, and*
- *(vi) the protection of the environment, including the protection and conservation of native animals and plants, including threatened species, populations and ecological communities, and their habitats, and*
- *(vii) ecologically sustainable development, and*
- *(viii) the provision and maintenance of affordable housing, and*

(b) to promote the sharing of the responsibility for environmental planning between the different levels of government in the State, and

(c) to provide increased opportunity for public involvement and participation in environmental planning and assessment.

The Department has given due consideration to the objects of the Act including:

- how the proposal would impact on the management, development and conservation of the area, with reference to the management of air quality, noise and vibration, and soils and water (refer to **Section 5**);
- the strategic justification of the proposal in terms of the orderly and economic use and development of land (refer to **Section 2.2**), and how the proposal would affect traffic and access throughout the region (refer to **Section 5**);
- protection of the environment by assessing the effectiveness of proposed management and mitigation measures. In particular, the Department has considered the impact of the proposal on traffic, noise, air quality and biodiversity and how the provision of the offsets for affected threatened species and communities would contribute to the protection of the environment (refer to **Section 5**);
- the principles of ecologically sustainable development (refer to **Section 3.6**); and
- public involvement and participation in the assessment of the proposal occurred (for the EIS from May-June 2015) by placing the proposal documents on exhibition at community locations in the local area (Council offices and libraries) and on the Department's website.

3.6. Ecologically Sustainable Development

The EP&A Act adopts the definition of Ecologically Sustainable Development (ESD) found in the *Protection of the Environment Administration Act 1991* (PoEA Act). Section 6(2) of the PoEA Act states that ESD requires the effective integration of economic and environmental considerations in decision-making processes and that ESD can be achieved through the implementation of:

(a) the precautionary principle,
(b) inter-generational equity,
(c) conservation of biological diversity and ecological integrity,
(d) improved valuation, pricing and incentive mechanisms.

One of the key objectives of the project is to reduce traffic congestion around Port Botany and the M5 Motorway between the Port and the Moorebank site. This would occur with the operation of a port shuttle service which would move containers from Port Botany to the site via rail.

The Applicant has considered the principles of ESD in its assessment of the proposal. In particular, the EIS has considered the precautionary principle through the proposed layout of the site and rail link which minimises impacts on ecologically sensitive areas. Further, the proposal minimises impacts to biodiversity, and where impacts cannot be avoided, a biodiversity offset will be prepared to compensate these impacts in perpetuity. All other constraints such as traffic, air quality, noise and vibration, soil and water, urban design, contamination, hazards and risks, and Aboriginal and non-Aboriginal heritage have been taken into account in the Concept design phase and will be both addressed in the assessment of this application and all Development Applications.

The proposal promotes inter-generation equity by way of supporting ongoing and increased import and export through Port Botany, while decreasing the congestion on the road network. The intermodal facility would contribute to improving traffic congestion around Port Botany, as well as the M5 Motorway between Port Botany and the Moorebank site. The Department is satisfied that the proposal would assist in maintaining and enhancing the health, diversity and productivity of the environment for future generations.

The proposal also conserves biological diversity and ecological integrity by minimising impacts on flora and fauna species that inhabit or visit the Moorebank area. This has been achieved through careful project layout and consideration of appropriate revegetation strategies. Impacts that cannot be mitigated have been addressed in the Biodiversity Offset Strategy.

The proposal promotes improved valuation, pricing and incentive mechanisms by appropriately valuing, mitigating and offsetting environmental impacts. The EIS considers the impacts associated with the proposal, and provides relevant mitigation measures to minimise 'residual' impacts that are unable to be avoided. Further, the proposal provides for a Biodiversity Offset Strategy to improve or maintain biodiversity outcomes by conservation of land outside the proposal boundary. Further details of how the costs of environmental impacts have been considered are provided in **Section 5** of this report.

3.7. Environmental Planning and Assessment Regulation 2000

Subject to any other reference to compliance within the Regulation cited in this report, the requirements for Notification (Part 6, Division 6) and Fees (Part 15, Division 1AA) have been complied with.

3.8. Secretary's Environmental Assessment Requirements

The EIS is compliant with the Secretary's Environmental Assessment Requirements and is sufficient to enable adequate consideration and assessment of the proposal for determination purposes.

3.9. Environment Protection and Biodiversity Conservation Act

On 23 January 2012, the SIMTA Intermodal project was determined to be a "controlled action" requiring assessment and approval under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The relevant controlling provisions were listed threatened species and communities (18 and 18A) and Commonwealth land (Sections 20 and 27A). The decision was based on the likely significant impact of the proposal on the *Persoonia nutans* (Nodding Geebung) and *Grevillea parviflora* (Small-flowered Grevillea) and the site being on part Commonwealth land. Approval under the EPBC Act was granted on 6 March 2014 subject to conditions.

While the Commonwealth Minister for the Environment maintains an independent assessment and approval role, the Department has consulted with the Commonwealth Department of the Environment (DoE) at certain stages of the assessment process.

4. CONSULTATION AND SUBMISSIONS

4.1. Exhibition

Under section 89F of the EP&A Act and clause 83 of the EP&A Regulation, the Department is required to make the EIS publicly available for at least 30 days. The Department exhibited the proposal from Thursday 28 May 2015 to Friday 26 June 2015 (a total of 30 days) on its website and at the following exhibition locations:

- Department of Planning and Environment: Information Centre;
- Nature Conservation Council of NSW;
- Liverpool City Council;
- Liverpool City Library;
- Campbelltown City Council; and
- Glenquarie Branch Library.

The Department also advertised the public exhibition in the Sydney Morning Herald, Daily Telegraph, the Liverpool Leader and the Campbelltown Macarthur Advertiser on 27 May 2015.

A total of 234 submissions were received during the exhibition period, comprising 6 submissions from public authorities, 2 submissions from local government authorities, and 226 submissions from the general public.

A summary of the issues raised in submissions is provided below.

4.2. Public Authorities

A total of 8 submissions were received from State agencies and local government entities. Liverpool City Council and Campbelltown City Council objected to the proposal. No State agencies objected to the proposal; however some raised key issues for consideration. The key issues raised in public authority submissions, not including Liverpool City Council, are listed in **Table 4**. The key issues raised by Liverpool City Council are discussed in **Section 4.3**.

Table 4: Key issues raised by public authorities

Authority	Key Issues Raised
Transport for NSW	• advises that the proposed rail freight line onto the East Hills Rail Line Corridor is not supported, and that the alignment of the freight rail line should be modified to avoid the East Hills Rail Line; • requests that the Applicant be conditioned for works that will allow bus services to the precinct to be provided; • requests that a comprehensive vehicle monitoring regime be developed and implemented to clearly understand the relationship between shipping containers received by the SIMTA intermodal and traffic generated on the road network; and • does not consider the mitigation measures proposed in the draft Statement of Commitments as supporting the expansion of the facility from 250,000 to 500,000 TEUs. Advises that further work is needed and RMS is currently developing a traffic model to be used to inform future development applications on the SIMTA site.
Office of Environment and Heritage (OEH)	• recommends that a final decision regarding the long term management of Aboriginal objects be made as soon as possible; • requires a number of changes to data in the biodiversity credit calculator, in order to find offsets in accordance with the *NSW Biodiversity Offsets Strategy for Major Projects*; • recommends additional information be provided on preliminary sizing, underlying soil and management arrangement for proposed sediment basins to be used during construction; • requests further information regarding the sizing and location of drainage systems for the railway corridor; and • advises that data available to OEH suggests bottom sediment of the Georges River are high risk acid sulphate soils.
Department of Primary Industries (including Fisheries NSW and NSW Office of Water)	• Fisheries recommends that the staging of in-water works during bridge construction works across the Georges River considers avoidance of migration season of Australian Bass (June to January); • Fisheries advises that the construction of any new stormwater outlets to the Georges River will need to include scour protection works; • advises that works within the Georges River should be staged so that there is only one temporary platform in the river at a time, and that visual inspection of the river for dead or distressed fish should be undertaken daily during works; and • NSW Office of Water considers that only one bridge over the Georges River should be constructed for both the SIMTA Stage 1 and Moorebank Intermodal Terminal projects. Advises of preferred bridge design in order to minimise impacts on the creek, riparian corridor and remnant vegetation.
Environment Protection Authority	• advises that all feasible and reasonable noise mitigation measures should be implemented for the rail link, and final detailed design should maximise curve radii where possible; • recommends that more mitigation measures should be committed to, noting that where noise level criteria cannot be met, measures such as noise walls or architectural treatments should be implemented; • holds concern about the proposed routing of the Central and Southern Rail Links through the Glenfield Landfill, until the Applicant can clearly demonstrate that the construction and operation of the link will not compromise the effectiveness of the landfill pollution control and monitoring systems; and • recommends a number of conditions of approval relating to air quality, the routing of the rail link through Glenfield Landfill, and noise.
NSW Health – South Western Sydney Local Health District	• recommends appropriate mitigation measures are in place to minimise any potential health risks or impacts from the terminal; • notes that health risk is considered low, however the implementation of Best Practice Measures as outlined in the EIS will reduce potential risk to the community; • holds concern regarding impacts of noise including sleep disturbance, interference with cognitive tasks for children in affected classrooms, and • recommends a condition requiring all feasible noise mitigation of the southern rail link, including lubrication and maintenance of rail and noise barriers to

Authority	Key Issues Raised
	minimise affected receivers in Casula and Glenfield.
Rural Fire Service	• advises that, at the commencement of works and in perpetuity, the entire property (including the rail corridor) shall be managed as an inner protection area as outlined within the EIS and RFS' document *Standards for asset protection zones*.

4.3. Liverpool City Council

Liverpool City Council engaged Cardno Pty Ltd to prepare a submission on the proposal. The Department notes that Council objected to the proposal and has raised ongoing concerns regarding the use of the Moorebank site for an intermodal terminal.

Council is concerned that the Stage 1 proposal would cause traffic congestion and associated impacts to the existing amenity as a result of the increase in vehicles on the road network. It also anticipates that these impacts will be greater than those predicted in the EIS due to errors in the traffic data assumptions used. Council advises that, as a result of the traffic data inaccuracies used in the EIS, noise and air quality impacts on human health during both construction and operation of the intermodal are likely to be greater than those predicted.

The submission also raised concern regarding potential negative impacts on the functioning of the SSFL as a result of the rail alignment connecting with the intermodal site. Council is concerned that the design of the rail link appears to be mainly focussed on the northern entry and designed to accommodate 650 m long trains, in contrast to the ARTC request that the link be able to accommodate trains up to 1800 m in length. Council argues that the loop should be constructed to provide a clear distance to hold an 1800 m train.

Council also raises concern that the Vegetation Management Plan provided within the EIS is inadequate, as it does not include detailed plans or diagrams and lacks detail regarding riparian vegetation types, condition, proposed areas of disturbance and proposed rehabilitation measures.

Overall, Council considers that other land uses would better suit the Moorebank site. It argues that the EIS does not demonstrate conclusively that an intermodal facility is the highest and best use of the site, noting that an alternative use of the site could result in lower environmental impacts and be better integrated with the surrounding area.

4.4. Campbelltown City Council

While Campbelltown City Council maintains an objection to the proposal, it's submission states that Council is encouraged that co-ordinated construction and operation of the SIMTA and Moorebank Intermodal terminals appears to be contemplated, and advises that a satisfactory joint development and operation arrangement should be put into place as a condition of approval for the SIMTA Stage 1 proposal

Council requests that no heavy vehicles be allowed to approach the site to and from Cambridge Avenue, and that the Applicant be required to enter into a Voluntary Planning Agreement with the State to address off site traffic impacts in consultation with Council.

Council also recommends that conditions be imposed on any approval requiring that terminal operations cannot commence until appropriate rail access has been constructed and is operational.

4.5. Public Submissions

226 submissions were received from the public. This included submissions from the following special interest groups:

- Georges River Environmental Alliance; and
- RAID Moorebank

Of the 226 public submissions, 223 (99%) objected to the project and 3 (1%) did not object but raised concerns. There were no submissions received in support of the proposal. The key issues raised in public submissions are listed in **Table 5**.

Table 5: Summary of Issues Raised in Public Submissions

Issue	Proportion of submissions (%)
Traffic impacts to the surrounding road network	75
Pollution and air quality – including environmental degradation and diesel exhaust fumes	54
Human health and safety – including physical and mental health and road safety	44
Alternative sites considered more appropriate – commonly Badgerys Creek	33
Land Use Conflict – siting of the intermodal too close to residential areas	30
Environmental impacts to Georges River – including water pollution and impacts to rivers de parklands	19
Flora and Fauna impacts	13
Consideration that intermodal freight capacity is already adequate	12
Detrimental impacts to property values	10
Impacts to non-Aboriginal heritage – including the Casula Powerhouse	10
Cumulative impacts of both the SIMTA proposal and the Moorebank Intermodal Terminal proposal	9
Lack of community consultation	5
Visual impacts from the intermodal and rail link – including impacts from light spill	5

The Department has considered the issues raised in submissions in its assessment of the project.

4.6. Applicant's Response to Submissions Report

The Applicant provided a response to the issues raised in submissions (see **Appendix A**). The response included a proposal to amend the alignment of the rail link to avoid the use of the East Hills Passenger Line (EHPL) corridor. This change was made in response to requests from Sydney Trains that the rail link be relocated outside of the EHPL to ensure that there was no impact on existing infrastructure and to not inhibit future improvements or expansion of the passenger line. The amendment would alter the alignment to the south of Anzac Creek Crossing, at the intersection with Moorebank Avenue and also on the MIC site. The rail alignment would remain within the rail corridor approved under the Concept Plan.

Two submissions were received from Liverpool City Council and the EPA on the RtS. These submissions are discussed below.

Liverpool City Council

Liverpool City Council engaged Cardno Pty Ltd to prepare a submission to the RtS. Council is concerned that many of the impacts previously identified its review of the EIS and wider submission comments are yet to be adequately addressed and mitigated to an acceptable level.

Council is concerned that the local amenity would be impacted by traffic congestion and associated additional vehicles on the road network. It also anticipates that these impacts will be greater than those predicted in the EIS due to errors in the traffic data assumptions used.

Further, Council predicts that noise and air quality impacts during construction and operation of the facility would be greater than identified in the EIS due to the traffic assumptions used.

The submission also raised concern regarding impacts of the rail link to the function of the SSFL. Council also believes that the rail link would have a detrimental impact on local biodiversity, visual amenity, heritage and existing urban development.

Council is concerned that overall risks, both within the site and beyond the site boundary associated with the transport and distribution network, have not adequately been addressed. It advises that the Applicant be required to commit to rigorous ongoing air quality and noise/vibration impact monitoring programs for both construction and operational phases of the project, to ensure the environment and community are protected from potential impacts that have not yet been addressed. Further, Council believes that the EPA would be the most appropriate regulatory authority for the proposed development and associated activities, as council is not equipped with the resources to oversee and regulate a facility of this size and operational capacity.

Overall, Liverpool City Council believes that the RtS has not adequately addressed the issues raised during exhibition of the proposal, and recommends that the SIMTA Stage 1 proposal should not proceed in its current state.

Environment Protection Authority

The EPA notes that the RtS did not provide significant information relating to noise and inconsistencies are evident between the EIS and RtS. The EPA maintains its concerns and states that its previous recommendations still apply.

The EPA also notes that where impacts on the Glenfield Waste Services Licensed Premises have not been investigated and quantified, it is not in a position to assess or support that part of the proposal, however rely on previously recommended conditions to address these concerns.

5. ASSESSMENT

The Department considers the key environmental assessment issues for the application to include traffic, air quality, noise and contamination.

The Department's consideration of these key issues is provided below. The Department has also considered other matters as part of its assessment including: biodiversity; flooding, soil and water; hazards and risks; non-indigenous heritage; Aboriginal heritage; visual amenity; greenhouse gas, developer contributions; and public interest.

5.1. Traffic

Methodology

The Applicant's assessment considered the traffic impacts associated with additional vehicle movements to and from the site. This included the collection of traffic data and modelling of likely future traffic growth (with and without the proposal) to 2016. An assessment of cumulative impacts, including the neighbouring MIC site, was also included.

A 'core area' and 'inner area' were identified in the Traffic Impact Assessment of the Concept Plan, corresponding to the potential level of impact as a result of the proposal. The core area includes Moorebank Avenue between Cambridge Avenue and Newbridge Road, and the M5 Motorway between Heathcote Road and the Hume Highway. The inner area includes the area generally bounded by Cambridge Avenue to the south, Heathcote Road to the east, Newbridge Road between Copeland Street and Nuwarra Road, the M5 Motorway to the north-west and the Hume Highway to the west (refer **Figure 5**).

The Applicant has refined the core area for the purposes of the Stage 1 assessment based on more recent traffic surveys. This refinement includes the Cambridge Avenue / Canterbury Road / Glenfield Road intersection to the south west of the site and the M5 Motorway / Heathcote Road interchange to the north east of the site.

Existing Network Performance

Surveys from both 2010 and 2014 indicate that:

- Moorebank Avenue in the vicinity of the site carries between approximately 16,800 and 17,500 vehicles per day;
- Anzac Road carries approximately 9,500 to 10,230 vehicles per day; and
- the M5 Motorway, over the Georges River, carries approximately 128,500 vehicles per day.

The Applicant undertook surveys at eight key intersections in the vicinity of the site, including:

- Moorebank Avenue / Anzac Road;
- Moorebank Avenue / M5 Motorway;
- Moorebank Avenue / Newbridge Road;
- Moorebank Avenue / Heathcote Road;
- M5 Motorway / Hume Highway;
- M5 Motorway / Heathcote Road;
- Cambridge Avenue / Glenfield Road; and
- Cambridge Avenue / Canterbury Road

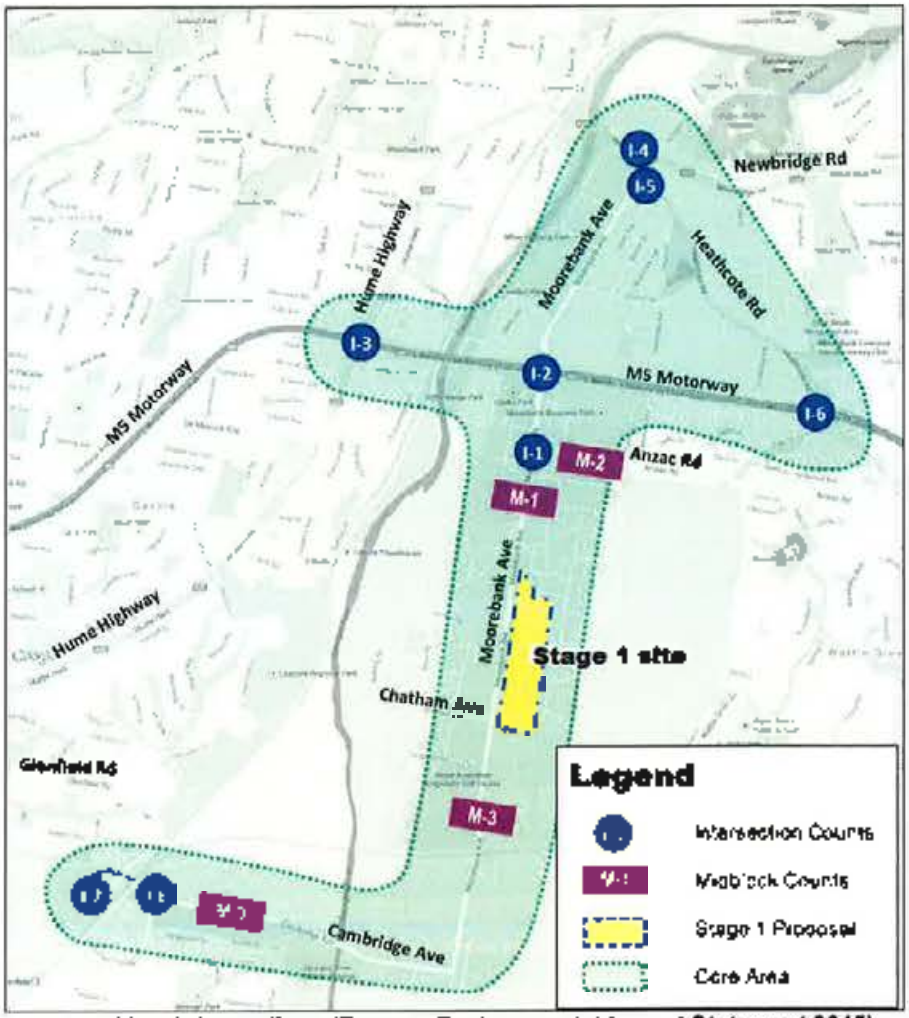

Figure 5: Core area and key intersections (Source: Environmental Impact Statement 2015)

Predicted Network Performance

Models were developed to understand the 'base' and 'future year' traffic issues. During the Concept Plan stage, background traffic growth assumptions of between 1-1.4% per annum up to 2031 were agreed with TfNSW and RMS. The average peak hour background growth of key intersections is between 1-1.9%. The Applicant has used 2016 as its forecast year given that the terminal would be operational in late 2016 / early 2017.

Intersection performance without the proposal shows only a small difference in efficiency. The Moorebank Avenue / Newbridge Road intersection would worsen from LoS C to LoS E in the AM peak. The Moorebank Avenue / Heathcote Road intersection would also worsen from LoS C to LoS D in the AM peak. In the PM peak, the M5 Motorway / Hume Highway intersection would worsen from LoS C to LoS D, and the Moorebank Avenue / Heathcote Road intersection would worsen from LoS D to LoS E.

In assessing the future case with the proposal, the Applicant assumes that the terminal would generate 670 truck movements per day, or approximately 25% of the movements assumed under the Concept Plan (at full build). A maximum additional 80 employee car movements per day are anticipated on the local road network during operation, or 2% of the movements assumed under the Concept Plan. The difference in this number is due to there being no warehousing proposed as part of this stage.

The assumed traffic distribution to the site for both trucks and employee cars are similar to the assumptions used in the Concept Plan. The majority of inbound truck movements in the AM peak occur along the M5 Motorway (eastbound), Hume Highway (southbound) and Moorebank Avenue (southbound) (refer **Figure 6**). Inbound car movements in the AM peak use the M5 Motorway (both directions), Hume Highway (both directions) and Moorebank Avenue (southbound). The proposal is predicted to increase traffic on Moorebank Avenue south of Anzac Road by approximately 4.5%.

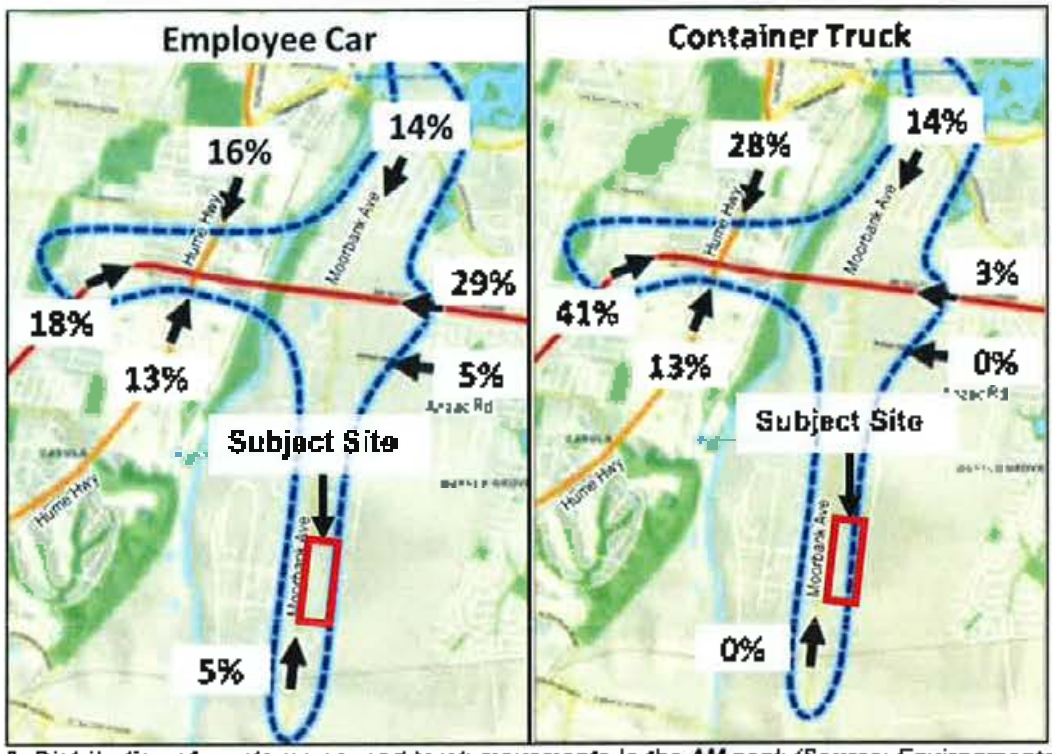

Figure 6: Distribution of employee car and truck movements in the AM peak (Source: Environmental Impact Statement 2015)

Modelling of intersection performance was undertaken for the key intersections (refer **Table 6** for AM peak and **Table 7** for PM peak).The following intersections that would experience efficiency issues even without the proposal include the M5 Motorway / Hume Highway intersection worsening from LoS C to LoS D in the AM peak and Moorebank Avenue / Anzac Road intersection worsening from LoS B to LoS C in the PM peak.

Table 6: Level of Service (LoS) and Average Delay for key intersections with proposal – AM Peak

Intersection	AM Peak 2016 7:00am – 8:00am		AM Peak 2016 8:00am – 9:00am	
	LoS	Average Delay (seconds)	LoS	Average Delay (seconds)
Moorebank Avenue / Anzac Road	C (B)	30 (25)	C (B)	30 (25)
Moorebank Avenue / M5 Motorway	B (B)	26 (24)	B (B)	28 (26)
M5 Motorway / Hume Highway	C (C)	41 (41)	D (C)	43 (42)
Moorebank Avenue / Newbridge Road	C (C)	41 (40)	E (E)	64 (63)
Moorebank Avenue / Heathcote Road	E (E)	62 (61)	E (E)	70 (69)
M5 Motorway / Heathcote Road	C (C)	39 (38)	D (D)	47 (47)
Cambridge Avenue / Glenfield Road	B (B)	20 (19)	B (B)	16 (16)
Cambridge Avenue / Canterbury Road	B (B)	17 (18)	B (B)	19 (19)

Note: Without the proposal in brackets

Table 7: Level of Service (LoS) and Average Delay for key intersections with proposal – PM Peak

Intersection	PM Peak 2016 4:00pm – 5:00pm		PM Peak 2016 5:00pm – 6:00pm	
	LoS	Average Delay (seconds)	LoS	Average Delay (seconds)
Moorebank Avenue / Anzac Road	B (B)	28 (25)	C (B)	29 (25)
Moorebank Avenue / M5 Motorway	C (B)	29 (27)	C (B)	29 (27)
M5 Motorway / Hume Highway	D (D)	46 (45)	C (C)	40 (39)
Moorebank Avenue / Newbridge Road	D (D)	46 (45)	D (D)	53 (52)
Moorebank Avenue / Heathcote Road	E (E)	70 (69)	E (E)	59 (58)
M5 Motorway / Heathcote Road	C (C)	41 (42)	D (D)	56 (56)
Cambridge Avenue / Glenfield Road	A (A)	13 (13)	A (A)	14 (13)
Cambridge Avenue / Canterbury Road	B (B)	22 (22)	B (B)	21 (22)

Note: Without the proposal in brackets

Proposed Mitigation Measures

The Applicant's assessment concludes that while the proposal would have an impact on the Moorebank Avenue / Newbridge Road and Moorebank Avenue / Heathcote Road intersections, improvements would be required regardless of the proposal due to background traffic growth beyond 2016/2017. The identified upgrades by TfNSW/RMS would improve the LoS at these intersections and it has been acknowledged in the Concept Plan that further upgrades would be required beyond 250,000 TEUs should the development proceed.

Department's Consideration

The Department recognised that traffic is the key issue for the proposal, particularly given a potential second intermodal on the adjacent MIC site and the subsequent cumulative impacts.

For the Department's assessment of the Concept Plan, Aurecon Australia Pty Ltd (Aurecon) was engaged to assist in its assessment of traffic and transport related matters for the proposal. At the time of this assessment, the Department and Aurecon acknowledged that increases in background traffic growth without the proposal would result in a number of intersections (and individual movements) operating at LoS F by 2031. Both the Department and Aurecon were however satisfied that the Applicant had adopted a reasonable approach to address traffic impacts at a Concept level, which included staging intersection upgrades depending on TEU throughput.

The Concept Plan approval included future assessment requirements requiring the Applicant to consult with TfNSW/RMS prior to the submission of any Development Application for subsequent stages. Since the Commission granted Concept Approval in September 2014, TfNSW and RMS have been developing a mesoscopic and microsimulation transport model for the combined MIC/SIMTA intermodal facility. On 10 December 2015, the Department confirmed with RMS that this work is expected to be completed by the end of December 2015 and will form the basis for Traffic Impact Assessments for each subsequent stage of development (for both the SIMTA and MIC projects). The Department is advised that this model will allow the nature and timing of proposed intersection upgrades to be more accurately calculated for subsequent Development Applications.

Notwithstanding, Stage 1 proposes to handle up to 250,000 TEUs per annum, which apart from a new signalised entrance to the terminal site from Moorebank Avenue would not trigger the need for any infrastructure/road upgrades. The Department accepts this position given that the predicted impacts on the efficiency of key intersections are not considered to be significant for this stage. The Department understands that through consultation with TfNSW/RMS in developing the EIS for Stage 1, specific upgrades to intersections were identified, however these upgrades are not proposed as part of Stage 1.

The Department also acknowledges that Stage 1 is consistent with the Commission's determination of the Concept Plan, as the instrument requires Stage 1 to be operational (so that traffic impacts can be monitored) prior to seeking approval of subsequent Development Application for Stage 2 (for an additional 250,000 TEUs). In this regard, the Department has recommended a condition of approval requiring the Applicant to monitor vehicle and container movements once the site is operational. This will provide the Applicant, TfNSW and RMS with an opportunity to monitor the network performance and provide more certainty for subsequent Traffic Impact Assessments.

The Department has also considered the cumulative impacts of the proposal with the neighbouring MIC site. The Department is satisfied that impacts would not exceed those predicted. This was based on the total throughput being shared across both sites due to rail capacity constraints. Further, given the intended timing of development of both sites, it is anticipated that Stage 1 would be under construction/operational during the Early Works phase of the MIC site. The Department considers that the cumulative impacts of Stage 1 and the MIC site would not result in an unacceptable impact on the road network.

Rail

At the time of the Concept Plan assessment, the Department, in consultation with ARTC noted that upgrades to the existing SSFL network would be required to ensure sufficient capacity is available for when operational throughput capacity of 1 million TEUs is reached. The Department also consulted with ARTC during its assessment of the MIC Staged SSD

and was advised that the intermodal terminals have been included in its assumptions for estimating available train paths in draft strategic documents. Given that the subject Stage 1 proposal proposes to handle 250,000 TEUs annually, the SSFL is considered to have sufficient capacity to accommodate the proposal.

The alignment of the rail link between the site and the Glenfield Waste Facility has been revised in the RtS due to objections raised by TfNSW with regards to the sharing of the East Hills Passenger Line (EHPL). As a result, the Department acknowledges the new alignment would not impact on the EHPL corridor.

Public Transport

The Department acknowledges TfNSW's request for the provision of a future bus stop on Moorebank Avenue adjacent to the terminal site, which would accommodate an extended Route 901 bus service. While the Department acknowledges the benefits of this request, due to the limited number of employees at the site it would be unreasonable to recommend this be a condition at this stage. However, the Department has recommended a condition requiring the design of the site to not preclude the future provision of a bus stop (including turn-around facility) for future stages.

Conclusion

The Department is satisfied that the construction and operation of Stage 1 would not result in an unreasonable impact on the efficiency of the local and regional road network. The design of the access points from Moorebank Avenue would operate at an acceptable LoS, ensure heavy vehicles are unable to use Moorebank Avenue (south) and prevent queuing of heavy vehicles onto Moorebank Avenue would be prevented.

Further, the Department considers construction related traffic impacts can be adequately managed subject to recommended conditions requiring the preparation and implementation of relevant construction management plans.

5.2. Air Quality

Air quality impacts during construction and operation of the proposal was a key issue raised by local Councils, government agencies and in public submissions. In its assessment, the Department has taken into account both the potential impacts arising from the proposal, and the cumulative impacts should SIMTA and MIC operate concurrently.

The Applicant prepared an Air Quality Impact Assessment which the EPA considers to have been conducted in accordance with *Approved Methods for Modelling and Assessment of Air Pollutants in NSW* (DEC 2005). Sensitive receptors are shown in **Figure 7**

Construction

Construction air quality impacts relate to airborne dust which would be managed under the *Protection of the Environment Operations Act 1997* (administered by the EPA) and through a Construction Environmental Management Plan.

The EPA raised concern over the potential impacts on the Glenfield Waste Facility during construction, particularly the possible release of odours and uncontrolled landfill gas emissions during construction of the rail link. In response, conditions of consent have been recommended requiring: a detailed impact assessment for the Glenfield Waste Facility; construction drawings to be reviewed by the EPA; and the preparation and implementation of a construction and operational Air Quality Management Plan.

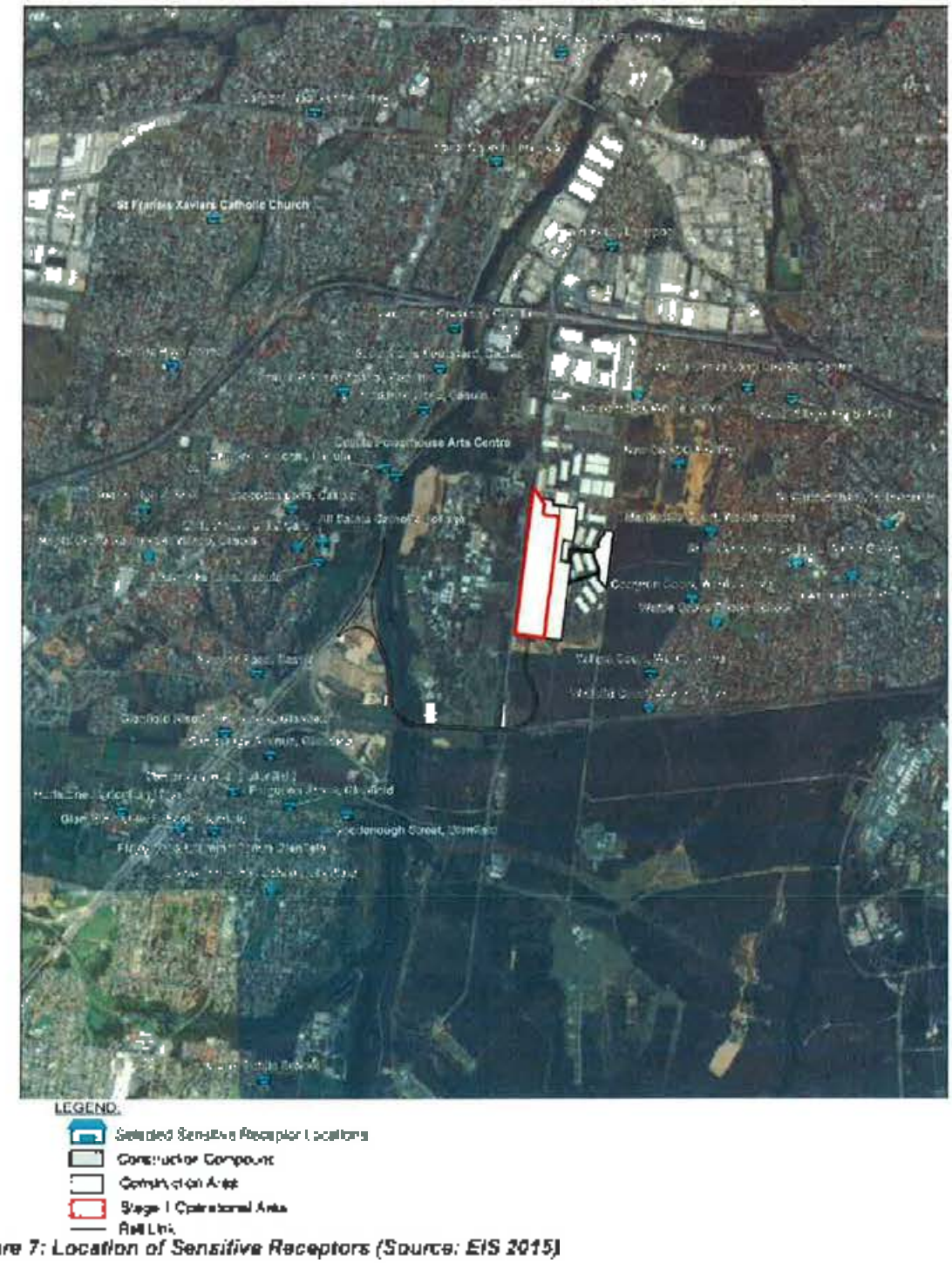

Figure 7: Location of Sensitive Receptors (Source: EIS 2015)

Operation

Operational air quality impacts would come from the use of diesel locomotives, heavy vehicles, and other equipment. The pollutants released in diesel engine exhaust include airborne particulate matter (PM) and nitrogen oxides (NO_x).

Baseline data was obtained from the OEH Liverpool station for NO_x, PM_{10} and $PM_{2.5}$, as this station was considered to provide a suitable conservative dataset for use in the assessment.

Based on this data, the EPA's annual average reporting goal for local air quality of 30µg/m^3 was met for PM_{10}, however minor exceedances were recorded against the 24 hour average goal of 50µg/m^3. These exceedances were attributed to bushfires that were in the metropolitan area in late 2013.

In considering the annual average and 24 hour average concentrations for $PM_{2.5}$, minor exceedances of the National Environment Protection Measure (NEPM) were recorded. This was also attributable to bushfires in the region. However, taking into account the annual average readings between 2005 and 2014, the advisory goal was met. It should be noted that the $PM_{2.5}$ is an advisory goal and not a reporting goal.

The EIS reports that an assessment of the local air quality impacts for residents in Wattle Grove, Moorebank, Casula and Glenfield reveals the following:

- there would be no exceedances of the reporting goal or advisory goal for the PM_{10} or $PM_{2.5}$ concentrations, consistent with the Approved Methods for Modelling (OEH 2005);
- maximum hourly NO_2 concentrations at the nearest residential receptors are predicted to be up to 102.3µg/m^3, which compares favourably to an ambient air quality standard in the area of 246µgm^3 (1 hour maximum), and
- annual average NO_2 concentrations are predicted to be up to 27.8µg/m^3, which compares favourably to an ambient air quality standard of 62µgm^3.

In summary, the Applicant predicts the overall impact on air quality to be minor considering the predictions are well below the impact assessment criteria. While the EPA considers the outcomes of the assessment to be plausible, a number of conditions have been recommended relating to the implementation of best practice container handling equipment.

Department's Consideration

The Department acknowledges the EPA's concerns regarding the construction of the rail link across the Glenfield Waste Facility and considers the recommended conditions that require best practice operations, which would also contribute to improving air quality, to be appropriate in this case. Additionally, the Department considers that the proposed mitigation measures to be employed during construction are reasonable.

During operation, a number of mitigation measures are proposed, including implementation of a vehicle booking system and anti-idle policy, use of an electric locomotive shifter, reach stackers (when procured) to meet US EPA Tier 3/Euro Stage IIIA standards and use of electric gantry cranes (within 7 years or 250,000 TEUs whoever comes first). The Department notes that proposed measures to mitigate noise impacts would also have a positive effect on air quality such as the possible use of electric motors rather than diesel powered equipment on site.

The Department understands current health advice that there is no established threshold for fine particles below which there are no health effects. It is noted that relevant reporting criteria for $PM_{2.5}$ would be met for Stage 1. The Department's recommended conditions reflect the NSW Health submission and require the implementation of best practice container handling equipment and locomotives.

The Department also concludes that the cumulative impact for both the SIMTA and MIC sites is unlikely to result in additional impact when compared to only one of the proposals proceeding

5.3. Noise

A Noise and Vibration Impact Assessment was conducted by the Applicant. The assessment considered potential impacts of all onsite noise and vibration sources on the closest residential areas and other sensitive land uses. The assessment was conducted in accordance with the *NSW Industrial Noise Policy* (EPA), *Assessing Vibration: A Technical Guideline* (DEC), *NSW Road Noise Policy* (EPA), the *Rail Infrastructure Noise Guideline* (EPA) and *Interim Construction Noise Guidelines* (DECC). The assessment identified noise and vibration impacts due to construction and operation of the project and included consideration of road traffic noise and rail noise. Cumulative impacts associated with the MIC site have been also included in this assessment.

The closest residential properties (receivers) were identified to be located within four main areas, as shown in **Figure 8**, as follows:

- NCA1 – between 600 metres and 770 metres to the east in Wattle Grove (south of Anzac Road);
- NCA2 – between 900 metres and 1.9 kilometres to the east in Wattle Grove (north of Anzac Road);
- NCA3 – between 200 metres and 960 metres to the west in Casula; and
- NCA 4 – between 750 metres and 1.7 kilometres to the south-west in Glenfield.

Three other sensitive land uses were identified, including All Saints Senior College (denoted as S1), Casula Powerhouse (denoted as S2) and the DNSDC re-location site (denoted as I1).

The noise and vibration criteria were established under the Industrial Noise Policy (INP) as part of the EIS for the Concept Plan. The INP recommends two sets of criteria, being 'intrusiveness' and 'amenity' for the assessment of operational noise. Refer **Table 1** and **Table 2** of **Appendix C**. Additionally, sleep disturbance noise goals are provided in **Table 4** of **Appendix C**.

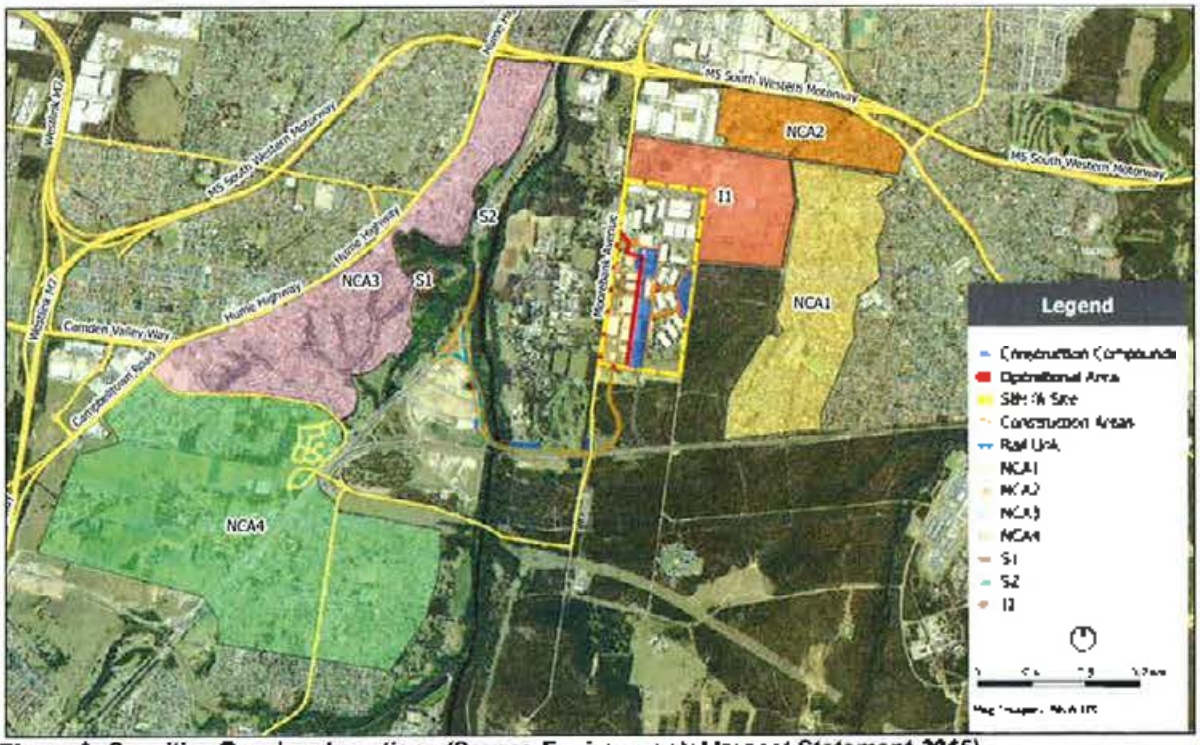

Figure 8: Sensitive Receiver Locations (Source Environmental Impact Statement 2015)

Construction Noise

The modelling undertaken considers 5 key construction phases: site preparation; earthworks, drainage and utilities installations; engineering fill; concrete construction and rail alignment construction; and miscellaneous structural construction, utilities, crane installation, commissioning and finishing.

Noise emission levels from the typical equipment that is likely to be used in each phase have been considered to determine the most noise intensive plant and machinery sound power levels (SWL). These noise levels have been refined from the Concept Plan assessment as more detailed information is now available regarding the plant and equipment to be used. Modelling was conducted to determine the predicted SWLs at each sensitive receiver location and a comparison against the relevant noise goals. The results of this comparison

indicate that construction noise levels are predicted to comply with the noise management levels at all locations.

In relation to construction vibration, no human comfort impacts were identified. A program of construction noise and vibration monitoring would be developed for the project and included in the Construction Noise and Vibration Management Plan

Operational Noise

During operation of the proposal, noise sources are expected to include the use of equipment for moving containers on-site, warehousing activities and noise generated by truck and train movements on-site and within the rail corridor. It is noted that the site would operate 24 hours per day. The predicted operational noise sources and levels are provided in **Table 8**.

Table 8 Operational Noise Sources

Source	SWL (dBA)
Reach stacker - diesel	106
Truck - idling	95
Truck – 10km/h	103
Locomotive – idling	100
Locomotive – 10km/h	106
Locomotive shifter	95

Modelling was undertaken to determine receiver noise levels (amenity and intrusive) during operation of the proposal under the INP. The results in **Table 9** and **Table 10** demonstrate that operational noise levels are predicted to comply with the established worst-case criteria at all sensitive receivers at all times.

Table 9 Predicted Amenity Operational Noise Levels

Receiver	Predicted $L_{Aeq,\ period}$ Noise Level (dBA)	Criteria (dBA)	Complies?
NCA1	33	40	Yes
NCA2	20	45	Yes
NCA3	33	40	Yes
NCA4	25	40	Yes
S1	32	45	Yes
S2	29	45	Yes
I1	26	60	Yes

Table 10 Predicted Intrusive Operational Noise Levels

Receiver	Predicted $L_{Aeq,\ 15min}$ Noise Level (dBA)*	Criteria	Complies?
NCA1	39	42	Yes
NCA2	24	41	Yes
NCA3	38	39	Yes
NCA4	31	42	Yes

* Adverse meteorological conditions

In assessing sleep disturbance impacts, the Applicant has determined that the most likely noise source from operations would be 'banging' noises associated with the handling of containers which has a predicted SWL of up to 118 dBA. The predictions indicate L_{Amax} noise levels at all receivers to be less than the sleep disturbance screening levels and as such, no further assessment has been undertaken (**Table 11**).

Table 11 Predicted Sleep Disturbance Screening Levels

Receiver	Predicted Level due to Transient Events (dBA - L_{Amax})	Sleep Disturbance Screening Level (dBA - L_{Amax})	Complies?
NCA1	48	52	Yes
NCA2	38	51	Yes
NCA3	48	49	Yes
NCA4	41	52	Yes

The Applicant also provided an assessment of road traffic noise against the NSW Road Noise Policy (RNP) (DECCW 2011), and rail noise against the Rail Infrastructure Noise Guideline (RING) (EPA 2013). The assessment found that any increase in road traffic noise along the M5 Motorway and Moorebank Avenue would be less than 2 dBA and as such, no mitigation measures would be required.

In relation to rail noise, exceedances of the recommended noise criteria were predicted with and without 'curve gain', which is applied to capture 'squealing' and 'flanging' noises associated with wagons negotiating tight curves. Exceedences were predicted up to 5dBA (without curve gain) and up to 11dBA taking curve gain into account (**Table 12** and **Table 13**).

Table 12 Predicted L_{Amax} Rail Noise Levels

Receiver	Predicted Level (dBA)				Criteria (Recommended)	Complies?
	Excluding Curve Gain		Including Curve Gain			
	Northern Connection	Southern Connection	Northern Connection	Southern Connection		
NCA1	59	59	67	67	80	Yes
NCA2	49	49	56	56	80	Yes
NCA3	66	72	68	**81**	80	**No**
NCA4	60	58	67	67	80	Yes
S1	67	64	70	72	80	Yes
S2	60	57	63	64	80	Yes
I1	56	56	62	62	80	Yes

Table 13 Predicted $L_{Aeq,\ period}$ Rail Noise Levels

Receiver	Predicted Level (dBA)				Criteria (Recommended)	Complies?
	Excluding Curve Gain		Including Curve Gain			
	Northern Connection	Southern Connection	Northern Connection	Southern Connection		
NCA1	38	38	**44**	**44**	40	**No**
NCA2	29	29	34	34	45	Yes
NCA3	**44**	**45**	**46**	**51**	40	**No**
NCA4	39	38	**44**	**44**	40	**No**
S1	43	41	45	47	45	**No**
S2	37	36	40	41	45	Yes
I1	34	34	38	38	70	Yes

The table above indicate that rail noise, more specifically wheel squeal and flanging noise (edge of wheel against rail), particularly at the southern connection to the SSFL which proposed the tightest curve, would occur during operation. The Applicant has recommended that friction modifiers (type of greasing system) be installed, with specific details documented in a Rail Noise Management Plan prior to the commencement of Stage 1 operations.

A detailed cumulative impact assessment was conducted, covering both the SIMTA and MIC sites. The Applicant also provided an updated assessment based on an agreement being reached between MIC and SIMTA to operate a single combined facility across both sites. Given that Stage 1 is seeking to handle 250,000 TEUs annually (which is 25% of what was

sought under the Concept Plan), this has concluded that both construction and operational noise levels comply with the relevant amenity criteria.

Submissions received from TfNSW, EPA, and Liverpool City Council raised the following issues relating to operational noise:

- only modern rolling stock that incorporate low noise locomotives, steering bogies and permanently coupled wagons should be allowed access to the site;
- need to address sleep disturbance impacts;
- rail curve should be designed to avoid curve radii of less than 500 metres to prevent wheel squeal;
- use of rail lubrication and top-of-rail friction modifiers to mitigate wheel squeal;
- the need to use best practice plant and equipment including automated container handling equipment and non-tonal reversing alarms;
- noise relating to the SSFL should be quantified;

Department's Consideration

The Noise and Vibration Impact Assessment demonstrates that no exceedances of noise management levels in the construction phase would occur. Notwithstanding, the Department considers that appropriate mitigation measures are also available to address any potential construction noise impacts such as the use of temporary noise barriers, use of silencers on machinery and provision of respite periods. The Department also notes that these construction works would be of a temporary nature.

In relation to the operational phase, the Department acknowledges that noise impacts may originate from: the IMEX terminal; and the rail link connection to the SSFL. It is noted that the Applicant predicts that the operation of the terminal would comply with relevant noise goals. With regard to the rail link, exceedances have been predicted by up to 11 dBA (including curve gain). Based on modelling results, these exceedances would generally occur at Wattle Grove, Glenfield and Casula.

The Department understands that wheel squeal is known to occur where curve radii is <300 metres. However it is also highly likely to occur with a curve radii of between 300 and 500 metres, particularly for older rolling stock without cross braced bogies (wheel sets). The Department has been advised that the smallest curve radius of the tie in to the existing SSFL is approximately 160 metres and as such, there is potential for wheel squeal to occur.

The Department notes the operational noise mitigation measures proposed by the Applicant, including the use of friction modifiers and track grinding (to mitigate wheel squeal), and the preparation and implementation of a Rail Noise Management Plan and Operational Environmental Management Plan (including requiring container handling equipment to be fitted with broadband reversing alarms rather than traditional 'quacker' type alarms). The Department also notes a number of other measures identified in the Best Practice Review, such as 'Gen-set' locomotives, permanently coupled wagons with braced bogies, real time noise monitoring and hybrid container handling equipment, were either not considered appropriate for Stage 1 operations or not considered appropriate for any stage by the Applicant.

The Department considers that it would be desirable to implement hybrid/electric container handling equipment for Stage 1, however the Applicant has argued that it is not warranted for this stage due to the relatively limited throughput of containers and lengthy procurement process for new equipment. While this position is acknowledged, the Department has recommended a condition requiring all new container handling equipment purchased after 2019 to meet US EPA Tier 4 or EU Stage IV emission standards. Additionally, this matter will also need to be considered in subsequent Development Applications to ensure this can be reviewed for future stages, consistent with the Applicant's Best Practice Review.

However, given the proximity of this new rail connection to residents at Casula and Glenfield, the Department has also considered the predicted impacts from the rail link in the context of feasible and reasonable best practice mitigation measures such as locomotives and wagons employing available best practice technologies, and real time noise montioring. The Department considers that with the implementation of appropriate measures, impacts can be mitigated.

A concern raised by Councils, agencies and residents related to the noise impacts associated with increased traffic on the SSFL. The Department considers that any increase in rail traffic would come under the existing approval (including noise limits) for the SSFL. ARTC have indicated that the proposed intermodal terminals have been included in its assumptions for estimating available train paths on the SSFL and noise concerns as a result of these additional movements have not been raised as a key concern.

The Department also concludes that the cumulative impact for both the SIMTA and MIC sites is unlikely to result in additional impact when compared to only one of the proposals proceeding.

The Department is satisfied that with the implementation of recommended mitigation measures and conditions, the construction and operation of Stage 1 would not detrimentally impact upon the amenity of residents in Wattle Grove, Casula and Glenfield.

5.4. Contamination

Contamination concerns have been raised as an issue during the demolition, construction and operational stages of the proposal.

The Proponent prepared a Preliminary Environmental Site Assessment (Preliminary ESA) of the SIMTA site and rail corridor land and a Phase 1 Environmental Site Assessment (ESA) of the rail corridor land in addition of a review of previous site investigations to support the Concept Plan for the site and the rail corridor. While, the Preliminary ESA concluded that contamination concerns would not preclude the proposed development, further Phase 2 intrusive investigations of the areas identified as Areas of Environmental Concern (AEC) was undertaken.

Operational Area

The Stage 1 Operational area currently comprises roads, enclosed warehouses, an open storage area, a refuelling station, administration buildings and car parking. Fuel storage and dispensing facilities are also located on the site and comprise five underground storage tanks (USTs). A canopied fuel dispensing service with several fuel bowsers is also located on the site, along with remote fill points for the USTs, additional bowsers, buildings used for storage of Dangerous Goods and a building previously used for meat storage.

Contaminations of potential concerns that have been identified on site include: metals, asbestos, organo-chloro pesticides, herbicides, total petroleum hydrocarbons (TPH), Benzene, toluene, ethylbenzene, and xylenes (**BTEX**), polycyclic aromatic hydrocarbons (PAHs), volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs) and Phenols.

Rail Corridor

Five areas within the rail corridor have been identified as containing contaminated material are described below and shown in **Figure 9**.

- Area 1 – Defence National Storage and Distribution Centre - south
  This area is currently grassed and sparsely treed. It is reported through historic information notes that landfilling may have occurred in this area and illegally dumped building waste materials have been observed. In addition, it has also been identified as

an area where potential unexploded ordnance (UXO), associated with the former grenade range may exist.

- Area 2 – Southern Boot Land
  This land is largely bushland, with a narrow cleared area for a fire trail and overhead powerline corridor. Evidence has been identified of minor waste materials, including rusting drums within the area.

- Area 3 – Railcorp land
  This land is located to the south of the Southern Boot Land and adjoins the East Hills Rail Corridor. A shipping container and demountable office exist on the site. Evidence of dumping of construction waste and illegal dumping of household waste exists. It is reported that at least one fragment of suspected asbestos containing material (ACM) was observed in the area during the preliminary inspection.

- Area 4 – Golf Course (Southern part of the MIC site)
  The southern part of the golf course comprises an open, grassed area with scattered trees. The area was identified as an AEC in the 2013 investigations due to its previous use for defence purposes including development of a mock Viet Cong village.

  The further Phase 2 ESA noted that artefact finds with the land were explosive ordnance waste (EOW). All detected items have since been confirmed as inert and based on specialist advice both the MIC site and the golf course land has a very low potential to contain remnant UXO or EOW containing high explosive or other energetic material.

- Area 5 – Glenfield Waste Facility
  It is proposed that the rail link through the Glenfield Waste Facility will follow the constructed levee that follows the eastern boundary of the site, and passing the east of the leachate dam. The rail link would then proceed over high ground which has been formed from natural in situ material and excavated and tipped spoil material. The rail link would then divide and pass an active quarry section to the west and to the north pass adjacent to a stormwater basin.

Contaminants of potential concern in these areas that have been identified include: UXO, Explosive ordnance waste (EOW), Explosive residues, Metals, TPH, BTEX, PAHs, Phenolics, Organo-chloro pesticides (OCP), Polychlorinated buphenyls (PCB), Asbestos, VOCs, herbicides and Landfill Gases.

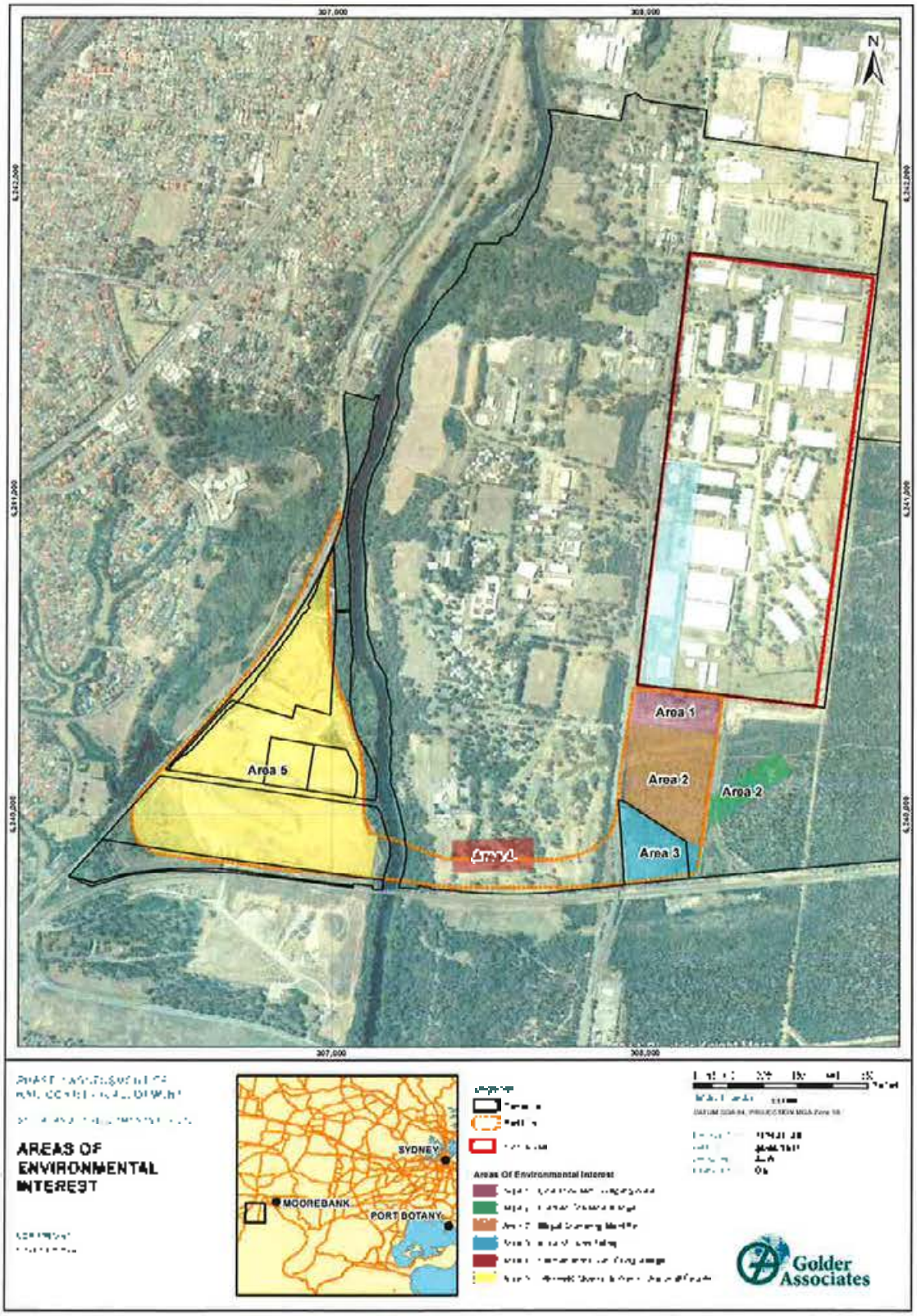

Figure 9: Location of contaminated material (Source Environmental Impact Statement 2015)

Phase 2 Results

Phase 2 intrusive investigations were undertaken to characterise the nature and extent of contamination at the site and to determine the suitability of the proposed rail link. This involved a total of 41 test pits, five soils bores and four groundwater bores across the operational land and proposed rail corridor. The results detected the following contaminants

- Bonded Asbestos Containing Material
  ACM was identified on the ground surface of Building B11 (which is located in operational area of the site), which was assumed to be related to degrading or historical building materials. ACM detected in fill at a test pit on the golf course site was possibly related to historic burials or fillings activities

- Hydrocarbon impacts soils and Light Non-Aqueous Phase Liquid (LNAPL)
  LNAPLs were detected in groundwater surrounding the USTs and is most likely a result of historical leaks during refuelling activities. These impacts on groundwater indicate that it is likely that the soil surrounding the fuel storage and distribution infrastructure has also been impacted by hydrocarbons

- Heavy metal impacted soils
  Several samples in the Operational site and the golf course contained concentrations of exceeding the adopted heavy metal ecological criteria for commercial/ industrial land.

- Railcorp Land
  It is reported that access to the Railcorp land was not available and as such there may be potential for unidentified contamination risks. Typical rail-related contaminants of potential concern (COPC) in fill materials include heavy metals, asbestos, TPH, PAHs, phenols and OCPs.

The results, although detecting contaminants, were found to be at levels generally below the adopted assessment criteria. As such, the investigations determined that the site is suitable for ongoing commercial/ industrial use, subject to the implementation of a Remedial Action Plan (RAP). The findings also concluded that there was no noted gross or widespread contamination that would unreasonably restrict development and use of the site.

Since the Phase 2 investigations, the alignment of the rail link has been amended. Intrusive investigations have not been undertaken within this amended area, which is Commonwealth owned land. The Applicant has stated that the area is likely to be in a similar condition to the Southern Boot Land. The Applicant has proposed and the Department has included into the recommended conditions of approval that appropriate soil and groundwater investigations are undertaken in this area prior to commencement of any development works.

With regard to the alignment of the rail link through the Glenfield Waste Facility, the EPA has raised concern that it has not been clearly demonstrated that the construction and operation of this rail link will not compromise the effectiveness of the landfill pollution control, monitoring systems, gas and leachate controls.

Specific concerns raised by the EPA include:

- Asbestos - it is likely that Glenfield Waste Facility has buried asbestos within the landfill cells. The locations of asbestos are not recorded and potential excavation could encounter and liberate this contaminant.
- Leachate – if a landfill cap is compromised and leachate volumes rise this can impact on surrounding groundwater and gas production.
- Gas – the impacts of movement, accumulation or release of landfill gases have not been adequately addressed.
- Exhumed Waste – waste exhumation is prohibited under the existing landfill licence.
- Contaminated Stockpiles – stockpiling of contaminated water piles would not be supported.
- Monitoring Points – the integrity of and access to monitoring points on the landfill site needs to be maintained.

As such, the EPA has recommended a series of conditions to ensure that construction and operation of the rail link would not impact on the existing landfill site. The Department has included these conditions in the recommended conditions of approval.

Department's Consideration
The Department notes that the highest risk of exposure to contaminants would occur when ground or groundwater disturbance during excavation occurs. In particular, it is noted that the EPA raise concern over the routing of the rail link over the Glenfield Waste Facility, and sought assurances that the construction and operation of this rail link will not compromise the effectiveness of the landfill pollution control, monitoring systems, gas and leachate controls.

It is noted that the disturbance to contaminated material associated with excavation for construction would provide opportunities for the release and movements of contaminates, posing a potential risk to human and ecological health. Construction activities may also cause contamination risks if not managed appropriately.

As ACM has been identified as existing on site, the Applicant has proposed that the soils impacted, specifically at the golf course, be excavated and disposed of prior to the commencement of construction and development works in this area. This would be undertaken by appropriately qualified experts and should any of the materials excavated exceed the relevant criteria, they would be required to be disposed of as "Special (asbestos) Waste".

Operational risks would come from the use of oils, fuels, lubricants and other chemical substances required for the operation of vehicles, plant and machinery during operation of the intermodal.

Measures to manage the excavation, construction and operation of the site to minimise contamination risks and identify remedial actions are included in the Remedial Action Plan (RAP) that has been prepared for the proposal. The RAP includes specific methods proposed to address known site contamination, and details proposed remediation approaches and technologies that would be used to manage contamination on the site.

The Department has reviewed the RAP and in conjunction with recommended conditions of approval and is satisfied that contamination impacts can be minimised and mitigated

5.5. Other Matters

Biodiversity
Stage 1 would require clearing of approximately 1.23 hectares of native vegetation, predominantly to enable rail line construction. The area affected comprises four threatened ecological communities being:

- Castlereagh Scribbly Gum Woodland in the Sydney Basin Bioregion;
- Castlereagh Swamp Woodland;
- River-flat Eucalypt Forest; and
- Freshwater Wetlands.

Two threatened flora species will be affected. These are:

- *Persoonia nutans* – removal of 11 individuals; and
- *Grevillea parviflora* – approximately 20 stems will be removed.

In addition to the 1.23 hectares of native vegetation removal which also provides fauna habitat, an additional 43 hectares of landscaped, cleared and disturbed habitat will be subject to development of the terminal and any habitat features this provides would be lost. No threatened fauna species would be directly affected.

The proposed Biodiversity Offset Strategy identifies an offset which includes credits for four Endangered Ecological Communities (EECs); two threatened flora species (*Persoonia nutans* and *Grevillea parviflora subsp. parviflora*) and two threatened fauna species (Eastern Pygmy Possum and Southern Myotis). The offset comprises five land parcels in two locations being the Southern Boot Land and the Georges River offsets. These are adjacent to the rail river crossing and the terminal site (**Figure 10**).

Department's Consideration

The Department acknowledges that the changes to the proposed rail alignment to the SIMTA site have reduced impacts to native vegetation generally and threatened ecological communities specifically to the greatest extent practicable. Further, the Department is satisfied that measures to avoid or reduce impacts have been appropriately considered.

Precinct-wide Offsets

The offset (both the Georges River and the Southern Boot land sites) proposed by SIMTA is a subset of the offset put forward by MIC to support its concept application. It is not clear how the two proposals have taken each other into account in developing the offset packages. There would also appear to be discrepancies between the assessments which may be based on the inputs to the credit calculator (such as additional actions to increase the value of the credits). however it is difficult to identify the credits available across the entire precinct and how these would or could be allocated between the projects.

As currently proposed, it appears that there are insufficient credits across the precinct for all affected communities and species for both projects and both have assumed use of the available credits for their projects. The Department queried SIMTA's authorisation to offer the offset for its impacts given that the land is owned by the Commonwealth and no agreement to proceed with a single intermodal facility has been finalised. SIMTA advised that the in-principle agreement between SIMTA and MIC made on 5 December 2014 addresses this matter, however it does not specifically consider allocation of surplus lands for the purposes of offsetting and therefore the offset will not be secured until the agreement between the two parties are finalised.

While the Department acknowledges that the offset for Stage 1 as a stand-alone project would likely address the impacts of that project (see discussion below), given the agreement between the MIC and SIMTA to progress a single intermodal facility, further clarification of the commitment of the available credits is necessary, in lieu of a consolidated strategy to address impacts across the precinct.

As the impacts to threatened species and ecological communities is largely confined to those associated with the rail line east of Moorebank Avenue to the development site boundary, the Department recommends a condition requiring that this area not commence construction until a Biodiversity Offset Package is approved, unless the applicant provides evidence that the proposed offset locations have been secured. In this instance, the Applicant has 12 months to prepare and implement the offset package. If, following agreement between SIMTA and MIC to progress a single intermodal facility, it is decided to submit a consolidated Biodiversity Offset Package for the entire precinct, this must be submitted within 12 months of the Package for the stand alone Stage 1 project.

SIMTA Offset Strategy

The applicant's preferred strategy is to secure the additional land to be protected through the establishment of an offset site under a Biobanking Agreement which may include the retirement of biodiversity credits under the Government's Biobanking scheme. The value of the credits has been increased through the proposal to undertake additional weed removal, tree planting and fallen log replacement.

It is accepted that the proposed offset strategy described in the Response to Submissions provides sufficient credits to offset the impacts of all communities and species to be affected with the exception of minor shortfalls for:

- Castlereagh Scribbly Gum Woodland (4 credits) ; and
- *Persoonia nutans (58 credits).*

The Department is aware that the Applicant has sought additional credits on the "Credits Wanted" register and that the six month period has expired and no credits have become available. The Department supports the approach to consult further with the Office of Environment and Heritage on this matter.

The Applicant has identified the credit point shortfall for Castlereagh Scribbly Gum Woodland may be sourced from adjacent areas within the Boot Land. This would be subject to availability, consultation and agreement with Moorebank Intermodal Company (note the Commonwealth Government is the landowner). On the basis that the MIC proposal has identified a shortfall in credits for this community and the offset for the SIMTA proposal is a subset of that put forward for the MIC proposal, it is assumed that there are not surplus credits available for all impacts of both proposals without identification of other offsets for future impacts. This would be a matter for the parties to the agreement to resolve how credits or offsets would be allocated for a combined facility and would need to be included in any precinct-wide offset package as referred to above.

Conservation Management of the Proposed Offset Sites

The proposed offset for the SIMTA development comprises five separate parcels of land identified as two offset sites being the Southern Boot land (between the SIMTA development site and the East Hill Rail Corridor) and the Georges River offset to the north of the proposal rail corridor and between the river and the proposed Moorebank Intermodal Terminal development site (**Figure 10**).

The Georges River offset comprises one land parcel of approximately 5.8 hectares and a small land sliver, estimated to be approximately 1 metre width at its broadest, located between the existing EHPL corridor and the proposed rail corridor to service the SIMTA development. The Department considers that as a stand-alone land parcel this small sliver has extremely limited ecological value. Its location between two operational rail corridors would at best serve to provide a stepping stone for any fauna movement between the offset to the north and vegetated land south of the EHPL. It is considered that while there may be some limited value as a crossing point and that it could be included as part of the offset for this purpose, it should be not used for the purpose of calculating biodiversity credits. Given its size, this is not expected to significantly alter the applicant's calculations.

The proposed Southern Boot Land offset comprises three distinct but adjacent parcels of land supporting three of the four affected Endangered Ecological Communities separated by the rail alignment and a "future infrastructure" easement running from the rail alignment in a north-easterly direction. This is in addition to the existing rail access easement from the EHPL which further fragments these land parcels. The Department is concerned that fragmentation caused by these corridors and the resultant shape of the offset is not conducive to maximising efficient and sustainable biodiversity outcomes.

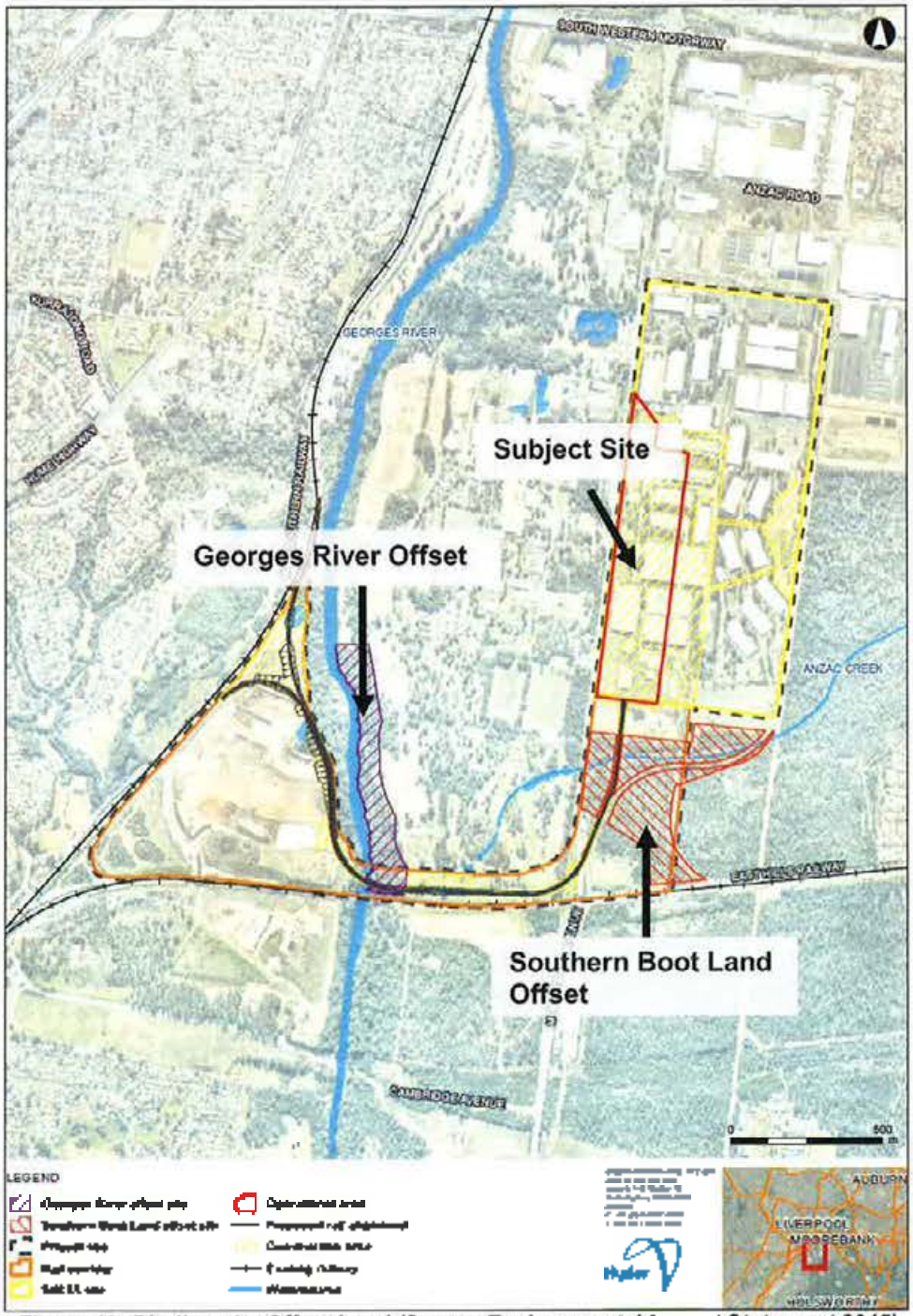

Figure 10: Biodiversity Offset Land (Source Environmental Impact Statement 2015)

The barrier caused by the rail line is largely unavoidable and the application has committed to limiting the clearing width to 20 metres. It is considered that this will pose challenges for ongoing weed management, light spill and other indirect edge effects caused by breaks in vegetation. The future infrastructure easement is of greater concern due to the uncertainties surrounding it and the future decrease in value of the biodiversity offset if and when it is cleared.

While the future infrastructure corridor does not appear to have been included in calculation of credits for the offset, it is not clear that the calculations have considered whether the future decrease in value of the offset due to indirect impacts of additional fragmentation, light spill and edge effects amongst others. Notwithstanding, these are matters that can be addressed in refining the biodiversity offset in consultation with OEH and in finalising the Biodiversity Offset Package.

Overall, the Department is satisfied that the impacts of the proposed development can be offset as nominated by the applicant but that there are a number of further steps that need to be resolved to ensure the security and long term viability of the offset. The Department supports a precinct-wide approach to preparing the offset package but recognises that this is contingent on the relevant parties finalising the agreement to proceed to a single intermodal facility.

Non-Indigenous Heritage

A Non-Indigenous Heritage Assessment (NIHA), dated April 2015, was undertaken as part of the Stage 1 EIS. The assessment found that Non-Indigenous heritage listings for the site or adjacent lands include:

- The Defence National Storage and Distributions Centre (DNSDC) site, is included on the *Commonwealth Heritage List*. The Stage 1 site contains three WWII timber post and beam store buildings (Buildings no. 6, 10, and 11) and two WWII crane service composite timber and steel store buildings (Buildings no. 7 and 9). Each building was constructed with a concrete slab onto which the timber and steel supports were set. The remainder of the structures within the Stage 1 site are modern, constructed in the 1990s;
- the School of Military Engineering (SME) site, to the west of the SIMTA site, is listed on the State Heritage Register and the *Liverpool LEP*. This land is subject to the MIC proposal and includes the Royal Australian Engineers (RAE) Memorial Chapel, RAE Monument, Major General Sir Clive Steel Memorial Gates, and The CUST Hut. The proposed Rail link for SIMTA Stage 1 works passes through a small part of the site and alongside the southern boundary of the SME complex; and
- Glenfield Farm, located on the western side of the Georges River, is listed on the State Heritage Register, State Heritage Inventory and the *Liverpool LEP*. The site is one of the few surviving rural farm complexes in NSW dating from the original land grant of 1810. The farm contains a 14 room homestead, a dairy, coach house and privy. The curtilage of the item is located approximately 50 m from the south-western extent of the proposed Rail link.

The demolition of the existing five WWII store buildings would be undertaken as part of the Stage 1 proposal. The assessment indicates that these buildings form the only known group of WWII Defence buildings in NSW, and that the demolition would result in significant impacts to the collective significance of the DSNDC site. In addition, the original road, rail and open drain alignments running through the Stage 1 site would also be impacts by the proposal. Construction and landscape modification through the installation of water tanks, sewerage, trade waste and power infrastructure is likely to have an impact on the heritage significance of the underground water mains and sewerage line, which likely date back to the 1940s

The NIHA found that there is low potential for archaeological deposits dating to the pre-WWI, WWI and interwar periods to be uncovered on the Stage 1 site.

Construction of the Proposal could temporarily impact the visual, noise and air amenity of the Glenfield Farm site, due to the location and operation of plant and equipment and vehicle movements. Construction of the rail link would impact a limited portion of the SME site, however would not have any impact on the heritage significance of the site.

During operation, the Proposal would have a visual impact on the remaining heritage elements of the SIMTA site. The view and setting of the Glenfield Farm site may also be impacted. To mitigate heritage impacts, the Proponent proposes to:

- undertake a full photographic record of the entire SIMTA site;
- prepare a heritage interpretation strategy, including interpretive items such as plaques;
- prepare a Heritage Management Plan as part of a wider CEMP; and

- monitor archaeological deposits during construction for representative sample sites of former structures which have been assessed as having potential local heritage significance.

During operation of the Proposal, the remaining buildings on the SIMTA site would be segregated from the Stage 1 site and not be impacted.

Department's Consideration

The Department notes that the NIHA considered the conservation and/or adaptive reuse of at least one of the five WWII structures on the Stage 1 site. However, the report determined that the structures are not suitable for reuse as they would need to have major conversions to meet safety and engineering requirements. The Department concurs with this assessment.

The Department considers that the other measures proposed would adequately mitigate impacts to the heritage items on site, and has recommended a condition of approval requiring the Proponent to prepare a Heritage Management Plan in adherence to NSW Heritage Council guidelines as part of the CEMP. The Department considers that implementation of a heritage interpretation strategy and the preparation of a full photographic record, would help manage these impacts by establishing methods of interpreting the former use of the site to future users in an effective manner.

Whilst the construction and operation of the Stage 1 intermodal would impact the heritage significance of Glenfield Farm, the Department notes that the site has previously been impacted by the construction of the Southern Sydney Freight Line, quarrying and landfill operations. As a result, the proposed Rail link would not significantly further impact upon the heritage item. The Department considers that the indirect impacts from the proposal on heritage impacts outside of the site boundary would be negligible.

Aboriginal Heritage

An Aboriginal Heritage Impact Assessment was completed as part of the Stage 1 EIS and found that:

- 28 Aboriginal objects were recovered from test pits associated with the Georges River, in an area known as MA14. These objects suggested a low level of past activity on the maximum upper slope and ridge of the area, with undisturbed areas containing deep stratified deposits with at least two periods of past activity. The site is considered to have high research potential, meeting the thresholds of local significance, and
- two sites of archaeological concern were identified within the riparian corridor along the western bank of the Georges River. One of the sites was identified through the Aboriginal consultation process as an area of cultural value. The second site is considered to retain high research potential, since excavations failed to reach the base of deposits. Both of these sites are outside of the Stage 1 proposal site boundary.

The proposed Rail link would directly impact MA14, with the alignment traversing through the southern portion of the site (impacting approximately 20%, or 2,000 m^2, of the total site area of MA14). Construction of the rail link is not expected to impact upon the archaeological sites on the western bank of the Georges River.

The report identified no impacts to Aboriginal heritage from operation of the Proposal.

To mitigate construction impacts on Aboriginal heritage items, the Proponent proposes to:

- continue to consult with Aboriginal stakeholders in order to identify long-term curation and management of Aboriginal objects recovered through the archaeological program;
- implement management measures through the CEMP for the Proposal;
- should works impact on MA14, mitigation measures to be implemented include open area salvage excavation up to 100 m^2; and

- inform all contractors and relevant personnel of relevant heritage considerations, legislative requirements and recommendations in the AHIA.

Department's Consideration

The Department considers that the proposed mitigation strategies to manage impacts to Aboriginal heritage items are appropriate, and has recommended a condition of approval requiring that these be incorporated into the CEMP for the Stage 1 proposal. Whilst the riparian corridor along the Georges River has been assessed as being of high cultural value, the Department notes that the project's main construction footprint is outside the corridor boundary. The Proponent would use temporary fencing along the Proposal boundary in this area. In the unlikely event that construction works impact these riparian sites, the Proponent has committed to undertaking appropriate heritage investigations in order to project the corridor from inadvertent impact.

Hydrology

As part of the Concept Plan EIS, the Proponent prepared a Stormwater and Flooding Environmental Assessment, a Flood Study and a Stormwater Management assessment. These reports identified the southern portion of the site and Glenfield Waste Facility land as flood affected by Liverpool Council. It also identified that the SIMTA site comprises three catchments and three discharge outlets. As the discharge outlets ultimately end up in either the Georges River or Anzac Creek, the downstream environmental impacts associated with stormwater and flooding in regard to water quantity and water quality for fish passage and habitat were also addressed.

With regard to stormwater, water quality and flood management, it was identified at the Concept level that impacts may occur during both construction and operational phases of the project. As such, mitigation measures were required to be stipulated in a Construction Environmental Management Plan (CEMP) to be prepared at the first stages of development, and would include a Soil and Water Management Plan, an Erosion and Sediment Control Plan and a spill and emergency response procedures plan for the site.

In regard to this Stage 1 application, a Stormwater and Flooding Impact Assessment was prepared. This addressed the recommendations of the outcomes from the assessment of the Concept Plan approval, which included commitment to the following actions:

- Water quality issues to be managed through a CEMP;
- Incorporation of stormwater quantity and quality management measures through;
  - Preparation of a Soil and Water Management Plan and an Erosion and Sediment Control Plan;
  - Implementation of management strategies prior to commencement of the staged construction phase; and
  - Monitoring and review of measures during construction and operation.
- Designing all flood and stormwater management and mitigation of pollution measures and waterway crossings to protect fish passage and habitat; and
- The preparation and update of a flood emergency response plan as necessary to each stage of development on the site.

Surface and Stormwater

As previously identified, there are three existing formal stormwater discharge outlets from the SIMTA site. Two points discharge eastward into Anzac Creek and cross under the Greenhills Rd formation via pipes and headwalls. The third discharge point drains surface water from both the site and the eastern side of Moorebank Ave and is collected in a formal concrete lined channel which runs within the site parallel to Moorebank Ave and drains to the Georges River.

The EIS states that the Stage 1 site sits within the catchment that drains to the Georges River. The initial modelling undertaken assumed that the catchment is currently 60% impervious and that the soils have a slow rate of infiltration, therefore generating a moderate runoff potential. These existing condition assumptions were then adjusted to represent post-development (operational) site conditions

Assumptions for the operational conditions included a 100% impervious surface, reduced flow travel times, changes to sub-catchments and the proposed waterway and detention storages to mitigate flow increase.

The Stormwater and Flooding Report compared the existing and operational peak flows and identified strategies to mitigate increased flows through on site detention (OSD) storage measures. The report further identifies design parameters to mitigate stormwater impacts comprising the design of the OSD structures, incorporation of swales and culverts and inclusion of stormwater treatment devices such as rainwater tanks, gross-pollutant traps, buffer strips, bio-retention and bio-swales. The reporting concludes that surface and stormwater impacts, including water quality, can be minimised and managed by the implementation of permanent and temporary stormwater management structures being installed during the early stages of construction. The recommended conditions of approval require these works.

Flooding

Floodplain mapping provided by Liverpool City Council indicated that the Georges River flood prone areas extend to the west of the overbank of the Georges River through to the existing Glenfield Waste Facility which the proposed Rail link would traverse.

A floodplain risk management study and plan was commissioned by Liverpool Council for Anzac Creek in 2008. The associated modelling identified impacts on the SIMTA site and rail corridor following a 100 year ARI and larger events along Anzac Creek. However, the modelling also confirmed that the existing culverts beneath the M5 Motorway could adequately convey flood waters to the downstream reaches of the catchment without significant retention and/or backwater accumulation.

Further, the Applicant would design the sections of the rail link along the western bank of the Georges River to allow extreme event flood flows to spread westward across the floodplain.

Ground Water

It is reported that regional groundwater flows within the shale and alluvial deposits in north and westerly directions towards the Georges River. Further, both a shallow and deep aquifer has been reported within the vicinity of the site.

Groundwater flows within the Glenfield Waste Facility site are identified as having been influenced by the extraction and filling activities undertaken on the site. The flows however have been identified to be generally in an easterly direction towards the Georges River.

Other than the Light Non-Aqueous Phase Liquids (LNAPL) contamination, the groundwater samples taken on the site and within the rail corridor were below the recognition for all analysis. Heavy metals concentrations in these samples are an exception as they were above the ecological investigation areas. This was considered however to be representative of background concentration in groundwater across urban areas of Sydney.

It is not expected that groundwater impacts would occur during the construction phases as generally the site and rail link will require raising of the site, therefore minimal excavation. It has been identified however that groundwater may be encountered during piling activities associated with construction of the Georges River bridge. The EIS states that the temporary nature of these works and the limited extent of potential disturbance to groundwater during

this period means that prolonged impacts on groundwater are not predicted as a result of the proposal

Glenfield Waste Facility

Within the Glenfield Waste Facility stormwater is captured and managed within the site's stormwater management system. Previous quarrying within the site means that stormwater within the site generally stays within the facility and does not flow to the Georges River. Larger catchment areas to the west of the Glenfield Waste Facility are cut-off and directed northward to the Georges River.

The Glenfield Waste Facility is located within the Georges River floodplain 'flood planning' and 'flood prone' areas as defined by Liverpool City Council. Ground surveys undertaken for the Stormwater and Flooding Report confirm that the 100 year ARI mainstream flood flows would not rise over the banks of the Georges River to flow into the Glenfield Waste Facility or as far west as the proposed Rail link alignment. As previously identified, the Applicant proposes to design the sections of the rail link along the western bank of the Georges River to allow extreme event flood flows to spread westward across the floodplain.

Rail Corridor and Bridge

The Rail corridor is located within the mid-Georges River catchment. The Rail link would cross both Anzac Creek and the Georges River, therefore having potential impacts on water quality and the flood regime particularly of the Georges River.

A flood assessment was undertaken with regard to potential flooding of the proposed new railway bridge crossing of the Georges River. The modelling ultimately indicated that the key to minimising hydraulic impacts of the proposed rail bridge on the Georges River is the design of streamlined bridge piers. The report continues that with streamlined piers there would be limited difference in flood impacts of a 5 or 6 span bridge. It will be required at the detailed design stage that the future bridge incorporates optimum pier alignments to reduce flood impacts.

NSW Fisheries also provided comments with regard to potential impacts from the bridge construction. Specifically their comments focused on measures to protect fish stock and habitat. Issues raised by NSW Fisheries include considering the staging of works to avoid the migration of Australian Bass, inclusion of scour protection works and maintaining fish passage by staging the works to limit in water platforms to one at a time and to place culverts within these temporary platforms to maintain fish passage.

NSW Fisheries also requested to be consulted during the detailed design of the platforms and that visual inspections be undertaken for dead or distressed fish. These precautionary measures are included in the recommended conditions of approval.

Department's Consideration

The Department considers that suitable measures have been designed to ensure any impacts arising from an increase in surface water volume and velocity can be mitigated. The EIS outlines the OSD measures, which the Department considers adequate to ensure that water quality and quantity does not impact on adjoining properties or the downstream aquatic environments.

In terms of operational impacts, although the proposal would result in changes to the catchment boundaries and increase the impervious areas on site, suitable OSD measures have been designed to minimise and mitigate any adverse impacts.

Impacts associated with the rail corridor and its alignment through Glenfield Waste Facility have also been addressed, and subject to further detailed design the Department considers that any water quality or flood risks can be managed.

Hazards and Risks

A Preliminary Risk Screening was prepared to determine the hazard and risk implications associated with the Proposal.

Asbestos is present in three buildings and priority ratings assigned to each asbestos hazard included.

- Condition Priority A1: Immediate Elevated Risk Level: friable material presents an immediate health risk. Immediate control measures would be required and the area containing asbestos should be isolated from personnel. Abatement recommended at the earliest possible time; and
- Condition A4: Negligible Risk Under Present Conditions: non-friable or stable material, unlikely to present a risk unless damaged, tooled, cut, sanded, abraded or machined.

Demolition of the structures has the potential to release asbestos fibres into the atmosphere, potentially causing harm to human health.

During operation of the Proposal, dangerous goods may be transported by road or rail. These potential dangerous goods would be classified in accordance with the Australian Code for the Transport of Dangerous Goods by Road and Rail (the Australian Dangerous Goods (ADG) Code). These products must be handled correctly, as they may be explosive, flammable, combustible, spontaneously combustible, oxidising, water-reactive, toxic or corrosive.

Containers would only be stored for a maximum of three days on the Stage 1 site, in the container storage area prior to being transported from the site. The risk of exposure to dangerous good would be minimised as unpacking (destuffing) of containers would not be undertaken. However, data taken from Port Botany from 2011 to 2012 suggests that 96 per cent of containers did not contain dangerous goods. The Proponent has decided that the Stage 1 Proposal would not receive or store dangerous goods in quantities greater than the screening thresholds determined by *SEPP No. 33: Hazardous and Offensive Development*. Therefore, as identified in *Applying SEPP 33*, a Preliminary Hazard Analysis (PHA) would not be required.

- dangerous goods that are permissible on the SSFL;
- dangerous goods that cannot be transported on containers;
- storage on site; and
- decisions to restrict goods by the operator.

The Proposal also seeks to locate an above ground mobile refuelling tank adjacent to the locomotive shifter. The tank would store diesel fuel (class C1 combustible liquid), with a maximum capacity of approximately 60,000 litres. This would be stored away from other flammable materials of class 3PGI, II or III. The refuelling of locomotives would occur on the locomotive shifter, which would catch any spills during the refuelling process.

Emergency response and incident management protocols would also be developed to cover workplace health and safety, on-site spills or leaks, off-site discharges, hazardous materials/dangerous goods, flooding, bushfire, derailment, container fall and any road incidents on Moorebank Avenue.

Department's Consideration

The Department's considers that the identified asbestos would be managed through the implementation of the mitigation measures proposed in the EIS. The Proponent has committed to developing an Asbestos Management Plan prior to construction works. Further, the demolition of the structures would be carried out by an appropriately licensed asbestos removalist, and undertaken in accordance with *Code of Practice How to Safely Remove Asbestos* (WorkCover NSW, 2011b). The Department has recommended a condition of

approval requiring the preparation of the Asbestos Management Plan as part of the Construction Environmental Management Plan for the Proposal.

The Department notes that the Proponent has established a set of parameters to restrict the carriage and storage of goods that would require the preparation of a PHA. As a result of this restriction, the Department considers that operational risks could adequately be managed through the implementation of the mitigation measures proposed in the EIS. The Proponent has committed to developing and implementing an operational Hazard and Risk Management Plan prior to operations. The Operational Environmental Management Plan (OEMP) for Stage 1 would also include procedures to monitor the quantity of dangerous goods to ensure that they remain below the threshold requiring a PHA.

The Department also notes that the Proponent has committed to handle all dangerous goods entering and leaving the site in accordance with Maritime Organisation (IMO) and regulations pertaining to the International Convention for the Safety of Life at Sea (SOLAS). Further, all transport of goods would be in accordance with the *Dangerous Goods (Road and Rail Transport) Act 2008* and the *Dangerous Goods (Road and Transport) Regulation 2012*.

To further strengthen the Proponent's commitment in the EIS, the Department has recommended a condition of approval requiring the preparation of a Hazard and Risk Management Plan as part of the OEMP for the Proposal.

Bushfire

The site adjoins Vegetation Category 1 bushfire prone land to the east, south and west. However, due to the class of the buildings proposed on the site being Class 5-8 and Class 10 (identified in the *Building Code of Australia*), the proposal is only required to comply with the aims and objectives of *Planning for Bushfire Protection 2006* (rather than satisfying the provisions).

The site layout has considered bushfire risk with a particular focus on habitable buildings. All site office locations have been located within construction compounds that are well outside bushfire prone land. The Rail East Compound is the only exception as the vegetation immediately to the west is bushfire prone land "Category 1". This vegetation however is not contiguous with a large area of bushfire prone vegetation.

The Rail link does not fall within land that is required to comply with any bushfire specific performance requirements.

Department's Consideration

The Department has assessed the submitted bushfire risk assessment and taken into consideration the comments received from the Rural Fire Service (RFS). In this respect, subject to the RFS's recommendation to maintain the operational areas as inner protection areas, which is included in the recommended conditions, it is considered that bushfire impacts can be minimised.

Visual Amenity

The EIS includes an assessment of the visual amenity implications, including light spill associated with the Proposal. This assessment took into consideration the existing vegetation and the proposed landscaping and urban design measures that would be included in the construction and operation of the Proposal.

Overall, visual impacts were assessed against the following criteria:

- Visual Adaptation – describes any significant changes to the landscape and visual amenity.
- Visual Sensitivity – refers to the likely duration of views and number of observers from a given viewpoint.

- Visual Impact – the result of the visual adaptation and the visual sensitivity and is summarised on a qualitative basis

The viewpoints assessed are shown in **Figure 11** and are all located within 2km of the site. The analysis found that no significant views further from the site exists.

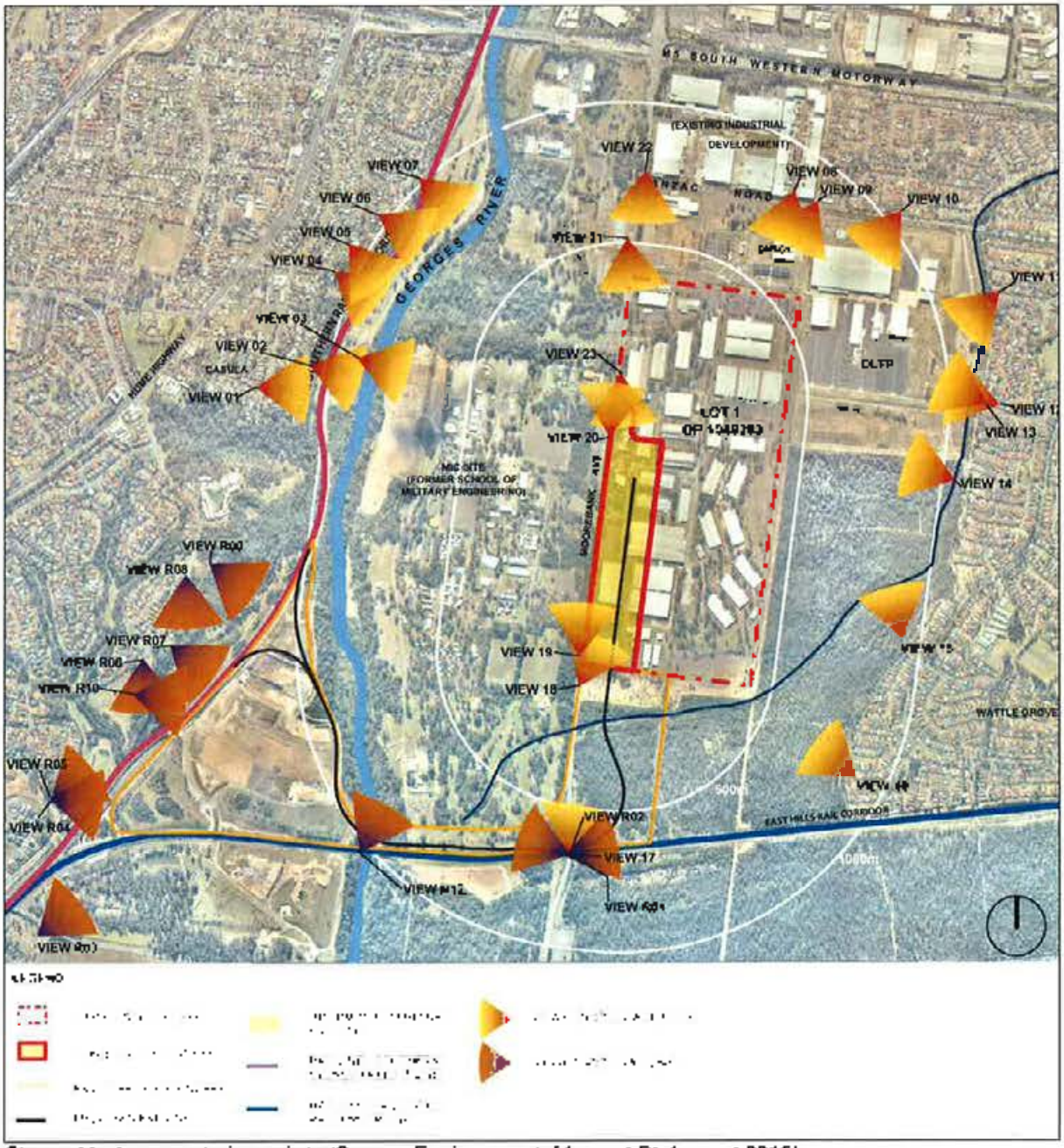

Figure 11: Assessed viewpoints (Source Environmental Impact Statement 2015)

Visual impacts were identified during the construction phases of the Proposal, however these impacts would be temporary in nature. The most likely impacts are identified to result from equipment such as cranes and piling rigs and predominantly visible from public areas such as Moorebank Ave and the passenger rail lines. Limited visibility from the residential areas of Casula and Wattle Grove may also occur.

Also during the construction phase, the establishment of hoardings and construction fencing has the potential to create localised visual impacts along Moorebank Ave.

Department's Consideration
The Department considers that the impacts from construction activities are acceptable, especially given the temporary nature and also the relative limited visibility, especially from residential areas.

With respect to the permanent visual changes during operation of the site, it is expected that minimal visual impact will occur given the general industrial type developments adjacent to the proposal to the north and west, and the significant vegetation to the east and south which acts as a buffer between the site and residential areas.

The rail link and corridor will be located in mostly a heavily vegetated area, adjacent to existing rail lines or through the Glenfield Waste Facility site and as such is not anticipated to cause any significant impacts to views.

Light spill has been considered in accordance with *AS44282-1997 'Control of Obtrusive Effect of Outdoor Lighting'*, and in these standards the proposal is considered a 'commercial area'. The EIS states the light source type, the luminaire make and model, luminaire aiming, pole positions and heights proposed for the Proposal would ensure minimal direct light spill from the static site lighting. Further, the EIS confirms that light spill from the Proposal would not extend to any nearby residential areas.

Greenhouse Gas
A Greenhouse Gas and Climate Change Impact Assessment was prepared by Hyder Consulting as part of the Stage 1 EIS.

Over an 18 month period, construction activities would generate approximately 4,262 tCO_2-e of greenhouse gas (GHG) emissions. Further, embedded GHG from key construction materials would generate 44,688 tCO_2-e during construction, however this figure represents a full life cycle emission generation across the entire operation of the proposal.

A number of alternative materials may be used to reduce the embodied emissions associated with the concrete pavement constructed during Stage 1 works. These may include asphalt, pavers or post-tension concrete. Furthermore, emissions figures are based on a 'worst case' scenario that assumes that the concrete used has a higher embedded energy content than alternative concrete mixes.

During construction, the Proponent proposes to implement the following measures to mitigate impacts to GHG emissions
- sourcing local construction materials and recycling demolition waste where possible;
- selecting construction equipment with the highest fuel efficiency;
- undertake regular maintenance of equipment; and
- ensuring that, to the highest degree possible, delivery trucks are filled to the maximum amount allowable.

The assessment considered two operational scenarios for the Proposal: Scenario One where trains and trucks would be loaded/unloaded using forklifts and reach stackers, generating 7,723 tCO_2-e/year; and Scenario Two, where gantry cranes would be operational, generating 9,221 tCO_2-e/year ('worst case' scenario). During operation, mitigation measure would be implemented to reduce impacts on GHG. These would include the:
- incorporation of energy efficiency designs and equipment;
- regular maintenance of equipment to maintain good operations;
- investigation of abatement opportunities once the facility moves from the use of forklifts to the operation of gantry cranes, and
- review and consideration of mitigation measures where appropriate.

The 'worst case' construction and operational GHG emissions from the Proposal would represent approximately 0.0017 per cent of Australia's total annual GHG emissions. The report concludes that this figure is not considered to be significant, in terms of both the construction and operational phases of the development.

Department's Consideration

The Department considers that impacts from the GHG emissions generated by the construction and operation of the Proposal would be negligible. It is also noted the Proposal would facilitate a modal shift, from truck to train, in the transportation of freight to the Moorebank freight catchment. The EIS concludes that this would see a net reduction of 3,907 tCO_2-e/year in GHG emissions.

Developer Contributions

In accordance with Section 94B of the Act, the Department can levy developer contributions. Liverpool Council does not currently have a developer contributions plan in place for the Moorebank precinct, however has requested that monetary developer contributions be sought based on similar industrial developments in the Liverpool Local Government Area (LGA). Liverpool Council has also indicated that Council has recently unanimously passed a motion to seek Ministerial approval to develop and implement a Section 94A scheme for 'Established Areas' of the Liverpool LGA to capture developments such as the proposed intermodal terminal. The proposed developer contributions are shown in **Table 14**.

Table 14 Proposed Section 94A Developer Contributions

Capital Investment Value	Levy
$0 - <$100,000	0%
$100,000 - <$200,000	0.5%
>$200,000	2%

Applying the above table to the proposal, the Applicant would be required to pay monetary contributions of $2.85 million. Should the Minister allow only a maximum 1% of the CIV to be levied, the Applicant would be required to pay monetary contributions of $1.425 million. Council argues that these contributions would assist in supporting the future provision of maintenance of local infrastructure in the Liverpool LGA.

The Applicant has calculated an alternative contribution using the formula from the Liverpool Contributions Plan 2009 (Hoxton Park Stage 2 Industrial Release Areas District Facilities):

$$\text{Cost of capital works and land identified for the catchment area} \div \text{Number of equivalent lots in the catchment area} \times \text{Vehicle trips per day / 6.7}$$

$$= \frac{\$64,302,727}{18,310} \times (80+670) / 6.7)$$

$$\$3,511.89 \times \$111.94$$

= **$393,122,14**

The calculations above have been based on the CIV of the IMEX terminal (excluding rail connection) and both heavy vehicle and light vehicle trips per day. Other figures were based on those figures found in the Contributions Plan.

The Department acknowledges Council's position and agrees that the Applicant should be required to pay monetary contributions to offset increased pressures on Council's assets and services as a result of the proposal. However, the amount sought by Council does not take into consideration the scale of the development, predicted traffic generation and proposed number of employees for this stage.

It is understood that while the total employment numbers generated from the operation of the terminal are forecast to be approximately 150, this is based on all jobs created by the proposal (ie heavy vehicle drivers) rather than the total number of permanent full time employees on-site. The Department has been advised that the number of on-site container handlers and office workers would be between 20-25 full time equivalent staff for Stage 1, with greater numbers proposed for subsequent warehousing Development Applications.

Council have argued that the contributions sought would cater for short-term upgrades to the local transport network, such as the implementation of measures to preclude heavy vehicles from using Nuwarra Road and Governor Macquarie Drive. However, the Commission's approval of the Concept Plan permitted a Development Application for Stage 1 to be pursued as it was demonstrated that traffic generation resulting from the operation of the terminal would not exceed the capacity of the transport network.

While the Department acknowledges Council's intentions to prepare a S94A Contributions Plan to capture developments in established areas such as this, in the absence of a Developer Contributions Plan for the site, the Department concurs with the calculations made by the Applicant and considers the monetary contributions offered to be fair and reasonable. Further, given the relatively limited number of employees working on-site, impacts on Council services and infrastructure are not considered to be significant for Stage 1.

The Department therefore recommends that a condition be included requiring the Applicant pay developer contributions totalling $393,122.00 to Liverpool Council to offset increased pressures on Council's assets and services as a result of the proposal

5.6. Section 79C Evaluation

Table 15 identifies the matters for consideration under section 79C that apply to SSD, in accordance with section 89H of the EP&A Act. The table represents a summary for which additional information and consideration is provided for in **Section 5** and relevant appendices or other sections of this report and the EIS, referenced in the table.

The EIS has been prepared by the applicant to consider these matters and those required to be considered in the SEARs and in accordance with the requirements of section 78(8A) of the EP&A Act and Schedule 2 of the EP& A Regulation.

Table 15: Section 79C(1) Matters for Consideration

Section 79C(1) Evaluation	Consideration
(a)(i) any environmental planning instrument	Refer Appendix B
(a)(ii) any proposed instrument	Not applicable.
(a)(iii) any development control plan	Not applicable*
(a)(iiia) any planning agreement	There is currently no Voluntary Planning Agreement (VPA) in place, however a VPA may be entered into for subsequent development applications, depending on outcomes of consultation with TfNSW/RMS in relation to infrastructure/road upgrades

(a)(iv) the regulations	The development application meets the relevant requirements of the Regulation, including the procedures relating to development applications (Part 6 of the Regulations), public participation procedures for SSD s and schedule 2 of the Regulation relating to environmental impact statements Refer to **Sections 3 and 4**
(a)(v) any coastal zone management plan	Not applicable
(b) the likely impacts of that development	Appropriately mitigated or conditioned (refer to **Section 5**)
(c) the suitability of the site for the development	Suitable (refer to **Section 2** and **Section 5**)
(d) any submissions	Refer to **Section 4**
(e) the public interest	The Department considers the proposal will have significant economic benefits to the State of NSW, with a $142.5 million direct capital investment into the south-western Sydney region and generation of up to 250 jobs during construction and 150 jobs during operation. Further, the proposal is considered to be consistent with the NSW Government's objective to maximise the haulage of freight by rail. A range of strategic documents have over the last decade continued to support the development of an intermodal terminal at Moorebank including the need to achieve an increase in the rail mode share of port container freight movements On balance, the Department acknowledges that the proposal would contribute to the local economy and satisfy the long identified need while minimising environmental impact through the implementation of appropriate mitigation measures. As such, the Department considers the proposal to be in the public interest.
Biodiversity values exempt if: (a) On biodiversity certified land (b) Biobanking Statement exists	Not applicable

* Under clause 11 of the SRD SEPP, development control plans do not apply to state significant development.

6. RECOMMENDATION

The Department considers the proposal will have significant economic benefits to the State of NSW, with a $142.5 million direct capital investment into the south-western Sydney region and generation of up to 250 jobs during construction and 150 jobs during operation. Further, the proposal is considered to be consistent with the NSW Government's objective to maximise the haulage of freight by rail. A range of strategic documents have over the last decade continued to support the development of an intermodal terminal at Moorebank including the need to achieve an increase in the rail mode share of port container freight movements.

The key environmental impacts associated with this proposal comprise traffic and transport, air quality and operational noise. These issues have been addressed in the Applicant's EIS and RtS. The Department has assessed this information and also carefully considered all submissions received from public authorities and the community on the proposal. Based on its assessment, the Department is satisfied that the impacts of the proposal, both in isolation and cumulatively with the MIC facility, can be managed and/or mitigated to an acceptable level.

The Department considers the Stage 1 proposal is consistent with the terms of the Concept Plan and should be approved subject to the recommended conditions. These recommended draft conditions would ensure that the mitigation measures included in the RtS are implemented as well as strengthening the management and mitigation of identified impacts that the Department, other government agencies, Councils and the general public have raised.

On balance, the Department acknowledges that the proposal would contribute to the local economy and satisfy the long identified need while minimising environmental impact through the implementation of appropriate mitigation measures. As such, the Department considers the proposal to be in the public interest.

It is RECOMMENDED that the Commission:

- **consider** the findings and recommendations of this report;
- **approve** the SIMTA Stage 1 SSD subject to the conditions of approval; and
- **sign** the attached instrument of approval (**Appendix D**).

Karen Jones 18.12.15
Director
Transport Assessments

David Gainsford 18/12/15
Executive Director
Priority Projects Assessments

APPENDIX A RELEVANT SUPPORTING INFORMATION

The following supporting documents and supporting information to this assessment report can be found on the Department of Planning and Infrastructure's website as follows.

1. Environmental Impact Statement

   http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=6766

2. Submissions (EIS)

   http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=6766

3. Applicant's Response to Submissions

   http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=6766

APPENDIX B CONSIDERATION OF ENVIRONMENTAL PLANNING INSTRUMENTS

The primary controls guiding the assessment of the proposal are:

a) *State Environmental Planning Policy (State and Regional Development) 2011*
b) *State Environmental Planning Policy No. 19 – Bushland in Urban Areas*
c) *State Environmental Planning Policy No.33 – Hazardous and Offensive Development*
d) *State Environmental Planning Policy No.55 – Remediation of Land*
e) *State Environmental Planning Policy No. 64 – Advertising and Signage*
f) *State Environmental Planning Policy (Infrastructure) 2007*
g) *Liverpool Local Environmental Plan 2008*

State Environmental Planning Policy (State and Regional Development) 2011 (SRD SEPP)

The aims of the *State Environmental Planning Policy (State and Regional Development) 2011* (SRD SEPP) are to identify State significant development and State significant infrastructure and provide the necessary functions to joint regional planning panels to determine development applications.

The proposal is State significant development given it is development for the purpose of an intermodal facility with a capital investment value (CIV) in excess of $30 million under clause 19 (Rail and related transport facilities) of Schedule 1 of State Environmental Planning Policy (State and Regional Development) 2011. Therefore the Minister for Planning is the consent authority.

State Environmental Planning Policy No. 19 – Bushland In Urban Areas

State Environmental Planning Policy No. 19 – Bushland in Urban Areas (SEPP 19) aims to protect bushland within urban areas because of its value to the community, aesthetic value and its value as a recreational, educational and scientific resource.

An assessment of biodiversity impacts was provided as part of the EIS. The Department accepts that vegetation clearing is inevitable for the proposal to proceed and that the clearing of some threatened ecological communities will occur. A biodiversity offset package is required to be prepared prior to any works on the ecologically significant areas. This requirement has been addressed in the assessment report recommended conditions. The Department considers that with appropriate mitigation measures, the aims and objectives of SEPP 19 have been met.

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

State Environmental Planning Policy No. 33 – Hazardous and Offensive Development (SEPP 33) provides clear definitions of hazardous and offensive industries and aims to facilitate development defined as such and to ensure that in determining developments of this nature, appropriate measures are employed to reduce the impact of the development and require advertisement of applications proposed to carry out such development.

The Department acknowledges that the intermodal facility may handle containers that contain hazardous and offensive materials. However, the application does not seek approval for development involving potentially hazardous and offensive development. The recommended conditions of consent require that any dangerous goods, as defined by the Australian Dangerous Goods Code, shall be stored and handled strictly in accordance with; all relevant Australian Standards; bund volume requirements and the *Environment Protection Manual for Authorised Officers: Bunding and Spill Management, technical bulletin* (Environment Protection Authority, 1997).

The Department is satisfied that the proposed development is not a hazardous or offensive development under SEPP 33, and that if required all necessary assessments under the SEPP 33 will be undertaken for future development applications.

State Environmental Planning Policy No. 55 – Remediation of Land

State Environmental Planning Policy No 55 – Remediation of Land (SEPP 55) is the primary environmental planning instrument guiding the remediation of contaminated land in NSW. SEPP 55 aims to:

- provide a state-wide planning approach to the remediation of contaminated land;
- identify when consent is required or not required for a remediation work;
- specify certain considerations that are relevant to applications for consent to carry out remediation works; and
- require that remediation work meet certain standards and notification requirement.

Clause 7 of SEPP 55 identifies that a consent authority must not consent to the carrying out of any development on land unless:

- it has considered whether the land is contaminated;
- if the land is contaminated, it is satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) for the purpose for which the development is proposed to be carried out; and
- if the land requires remediation to be made suitable for the purpose for which the development is proposed to be carried out, it is satisfied that the land will be remediated before the land is used for that purpose.

The Department considers that the contaminated lands can be appropriately remediated in accordance with the measures identified in the EIS. As such, the Department is satisfied that the site would be suitable for its future intended use as an intermodal facility subject to the implementation of the RAP measures and management controls.

State Environmental Planning Policy No. 64 – Advertising and Signage

The aim of *State Environmental Planning Policy No 64 – Advertising and Signage is to* ensure that any signage and advertising: is compatible with the desired amenity and visual character of an area; provides effective communication in suitable locations; and is of high quality design and finish. The proposed signage has been assessed by the Department and is considered to be appropriate for the sign and consistent with the requirements of SEPP 64.

State Environmental Planning Policy (Infrastructure) 2007

The aim of *State Environmental Planning Policy (Infrastructure) 2007* (Infrastructure SEPP) is to improve regulatory certainty, facilitate the effective state wide delivery of infrastructure by providing greater flexibility in the location of infrastructure and service facilities, allowing the development of surplus government land, identifying relevant environmental assessment categories for development, identifying relevant matters to be considered and providing for consultation with relevant public authorities.

Clause 81 Development Permitted with Consent includes rail freight terminals, rail freight sidings or rail intermodal facilities. The proposal is for a rail intermodal terminal and would require a connection into the SSFL which is an ARTC owned/operated line. The proposal is consistent with this clause as it is considered to be development required with consent.

Clause 104 Traffic-generating development applies to the proposed development as the proposal involves more than 8,000m^2 in floor space. In this regard, and in accordance with clause 104(3) of the Infrastructure SEPP, TfNSW (including RMS) were given written notice of the SSD application and due consideration was given to its comments.

Liverpool Local Environmental Plan 2008

Consideration of the relevant controls contained within Liverpool LEP is provided below.

Table 16: Liverpool LEP Compliance Table

Liverpool LEP 2008	Objectives	Department Comment/ Assessment
Clause 4.3 Height of Buildings	- Height must not exceed set maximums. however currently only applies to the northern portion of the subject site	The proposed administration building and the stacking of containers will comply with set maximums. The proposed gantry cranes exceed these heights but are compliant with the conditions set out in the Concept Plan approval.
Clause 4.4 Floor space ratio	- FSR must not exceed set maximums however does not apply to the subject site.	The proposal is compliant with the conditions set out in the Concept Plan approval.
Clause 5.9 Preservation of trees or vegetation Clause 5.9AA Trees or vegetation not prescribed by DCP	- to preserve the amenity of the area including biodiversity values through the preservation of trees and other vegetation	The proposal will require vegetation clearing including the removal of some threatened ecological communities. A biodiversity offset package is required to be prepared prior to any works on the ecologically significant areas
Clause 5.10 Heritage Conservation	- to conserve the environmental heritage of Liverpool, the heritage significance of item/areas, and archeological sites and Aboriginal objects and places.	The EIS included European Heritage and Aboriginal Heritage Impact Assessments. These were prepared in consultation with OEH and the Heritage Division Relevant protection measures or archiving is required for any proposed impacts
Clause 7.7 Acid Sulfate Soils	- to ensure that development does not disturb or expose acid sulfate soils and cause environmental damage.	The EIS identified that there is an extremely low probability of the presence of acid sulfate soil materials at or in the vicinity of the site. Further, it is reported that no indications of acid sulfate soils or potential acid sulfate soils were encountered during soil sampling. As such, the Department is satisfied that impacts from acid sulfate soils are unlikely to occur.
Clause 7.8 Flood Planning	- to minimize flood risk to life and property, to allow for development that is compatible with the land's flood hazard, and to avoid adverse impacts on flood behavior and the environment	The Department considers that suitable measures have been designed to ensure any impacts arising from an increase in surface water volume and velocity can be mitigated. The EIS outlines measures, which the Department considers adequate to ensure that water quality and potential flooding does not impact on adjoining properties or the downstream aquatic environments.
Clause 7.27 Development of certain land at Moorebank	- to ensure development is supportive of the future provision of appropriate regional transport measures to reduce the demand for travel by private car and commercial vehicle.	The proposal includes measures to increase the use of alternate transport modes such as walking and cycling. Further the proposal includes provision for a future bus stop and turning bay

APPENDIX C NOISE TABLES

Operational Noise

Table 1: Operational Noise Criteria - Intrusiveness

Receiver	dBA – L_{Aeq} 15 min		
	Daytime (7am-6pm)	Evening (6pm-10pm)	Night (10pm-7am)
NCA1	47	42	42
NCA2	41	41	41
NCA3	46	42	39
NCA4	49	49	42

Table 2: Operational Noise Criteria - Amenity

Receiver	dBA – L_{Aeq} 15 min		
	Daytime (7am-6pm)	Evening (6pm-10pm)	Night (10pm-7am)
NCA1	55	45	40
NCA2	60	50	45
NCA3	55	45	40
NCA4	55	45	40
S1, S2	Noisiest 1-hour period when in use - 45		
DNSDC	When in use - 70		

Table 3: Sleep Disturbance Screening Levels

Receiver	Sleep Disturbance Screening Level ($L_{A,1min}$ / L_{Amax})
NCA1	52
NCA2	51
NCA3	49
NCA4	52

Table 4: Rail Noise Criteria

Receiver	Time Period	RING Criteria ($L_{Aeq, period}$)		
		Acceptable	Recommended Maximum	L_{Amax}
NCA1 NCA3 NCA4	Day (7am-6pm)	55	60	80
	Evening (6pm-10pm)	45	50	80
	Night (10pm-7am)	40	45	80
NCA2	Day (7am-6pm)	60	65	80
	Evening (6pm-10pm)	50	55	80
	Night (10pm-7am)	45	50	80
S1, S2	Noisiest 1-hour period when in use	45	50	-
I1	When in use	70	75	-

APPENDIX D INSTRUMENT OF APPROVAL