NSW GOVERNMENT | Planning & Environment

MAJOR PROJECT ASSESSMENT: SIMTA Intermodal Terminal Facility Moorebank Avenue, Moorebank (MP10_0193)

Secretary's
Environmental Assessment Report
Section 75I of the
Environmental Planning and Assessment Act 1979

June 2014

ABBREVIATIONS

CIV	Capital Investment Value
EA	Environmental Assessment
EP&A Act	*Environmental Planning and Assessment Act 1979*
EP&A Regulation	*Environmental Planning and Assessment Regulation 2000*
EPI	Environmental Planning Instrument
SRD SEPP	*State Environmental Planning Policy (State and Regional Development) 2011*
Minister	Minister for Planning
PAC	Planning Assessment Commission
Part 3A	Part 3A of the *Environmental Planning and Assessment Act 1979*
PEA	Preliminary Environmental Assessment
PFM	Planning Focus Meeting
PPR	Preferred Project Report
Proponent	SIMTA
RtS	Response to Submissions
SEARs	Secretary's Environmental Assessment Requirements
Secretary	Secretary of the Department of Planning & Environment
TEU	Twenty-foot Equivalent Units (containers)

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EXECUTIVE SUMMARY

Sydney Intermodal Terminal Alliance (SIMTA), a consortium of Qube Holdings and Aurizon, seeks approval for a Concept Plan to develop an intermodal terminal facility with a rail link to the Southern Sydney Freight Line (SSFL) at Moorebank, in the Liverpool and Campbelltown Local Government Areas. Being a Concept Plan, subsequent Development Applications would need to be sought by the Proponent prior to the commencement of construction and operation of the facility.

Once constructed, the proposal would have a throughput capacity of up to one million Twenty-foot Equivalent Units (TEUs) per annum and includes development of rail sidings (up to 1,200 metres in length), 90,000m^2 of container hardstand, 300,000m^2 of warehousing with ancillary offices and an 8,000m^2 freight village with support services such as convenience retail, meeting rooms and conference facilities. The proposal has a capital investment value of $490 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 light and heavy vehicles for distribution to markets via the nearby major road network. The trains would return to Port Botany empty, ready for further freight shuttling.

The Department has also received an application for a competing intermodal facility from the Moorebank Intermodal Company (MIC) on behalf of the Commonwealth Government, on the adjoining site. While this application is not the subject of this report, the Department has carefully considered the cumulative impacts of both proposals in its assessment of the SIMTA application.

The proposal is subject to the transitional provisions of Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act), and is a Major Project under Part 3A of the EP&A Act because it is *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* (Major Development SEPP). The Minister for Planning is the approval authority for the proposal, however, the Planning Assessment Commission (PAC) 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 proposal is a controlled action under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The Department notes the proposal has already been granted separate approval under EPBC Act by the Commonwealth Minister for the Environment for matters of national significance.

The Proponent's Environmental Assessment (EA) was publicly exhibited for an extended two month period between March and May 2012. The Department received a total of 74 submissions on the proposal including 13 submissions from public authorities and 61 submissions from the general public and special interest groups. Re-exhibition of the Environmental Assessment occurred between September and October 2013 and a total of 44 submissions were received by the Department, including 11 submissions from public authorities and 33 submissions from the general public and special interest groups.

In response to these submissions, the Proponent made a number of modifications to the proposal including the reduction in the width of the rail corridor connecting the site to the East Hills Passenger Line, relocation of the rail link within the East Hills railway corridor, reduction in the maximum height of the light poles and updated its Statement of Commitments, particularly around infrastructure upgrades.

The Department notes that the proposal, if approved, would remove up to 2,700 heavy vehicles off the M5 Motorway per day between Port Botany and Moorebank and would contribute to relieving traffic congestion in the Port Botany area. The Department further notes the proposal is the largest freight project considered by the state for a number of years and considers the proposal would have significant economic benefits to the State of NSW. The proposal has a CIV of $490 million and is expected to generate up to 850 construction and up to 2,840 operational jobs. The proposal would also improve network efficiency by relieving congestion at bottlenecks on road and rail networks and grow freight network capacity to meet future freight requirements.

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 (up to 35%) thus significantly reducing trucking demand.

The Department has undertaken a comprehensive assessment of the proposal which focuses on 4 key areas

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

A range of other issues including aboriginal heritage, visual amenity biodiversity, contamination, hazards and risks, flooding, soil and water and greenhouse gas are also considered in **Section 5.5** of this assessment report.

In relation to traffic and transport, the Department engaged an independent expert to assist in its assessment. While the proposal would have some impact on the efficiency of the surrounding road network, the Department considers these impacts can be mitigated through progressive upgrades to key infrastructure such as roads and intersections, and the implementation of suitable mitigation measures such as driver codes of conduct and audit processes to ensure there are no heavy vehicles entering local streets. Additionally, the Department considers that sufficient information has been provided in the Concept Plan application to demonstrate that the proposal would not prejudice the future quadruplication of the East Hills Passenger Line. Further detail will also be required to accompany subsequent Development Applications prior to the commencement of construction.

The Department notes that the proposal is predicted to meet relevant Environment Protection Authority (EPA) criteria in relation to air quality and the predicted increase in background $PM_{2.5}$ is considered to be negligible in the context of the site. The Department has recommended stringent future assessment requirements that would need to be considered as part of any future Development Application to ensure that the intermodal terminal is designed and operated to achieve best practice emission control.

In relation to noise and vibration, the Department considers that during construction and operation of the facility, relevant noise goals would be met at sensitive receivers and that appropriate mitigation measures are available to address potential residual construction and operational noise impacts. These impacts would be further considered during the Development Application stage and would include additional noise impact assessments and the preparation of a Construction Noise and Vibration Management Plan to be implemented prior to the commencement of construction.

The Department has considered the heritage impacts associated with the proposal and notes that the proposal is likely to impact on the heritage value of the site. The proposal would require demolition of a number of heritage listed buildings, however on balance the Department considers that these are justified.

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

TABLE OF CONTENTS

1. BACKGROUND

Sydney Intermodal Terminal Alliance (SIMTA), a consortium of Qube Holdings and Aurizon, seeks approval for a Concept Plan to redevelop 83 hectares of industrial zoned land for use as an intermodal terminal facility at Moorebank. The Concept Plan includes a rail link to the Southern Sydney Freight Line (SSFL). The capital investment value (CIV) of the proposed development is $490 million. The site is located approximately 27 kilometres south-west of the Sydney CBD, and approximately 2.5 kilometres south of Liverpool City Centre (**Figure 1**)

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

The 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 Department of Defence currently leases the land for use as the Defence National Storage and Distribution Centre. The existing site comprises approximately 238,000m² of low-rise buildings used for warehouses and administration offices, an internal road network and large hardstand areas.

The site is located adjacent to a 200 hectare industrial precinct to the north at Moorebank 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, Holsworthy Military Reserve; residual Commonwealth land; and residential areas of Moorebank, Wattle Grove and Casula (**Figure 2**).

The M5 Motorway is to the north of the site. Georges River runs along the western boundary of the School of Military Engineering (SME) 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).

Moorebank Intermodal Company, on behalf of the Commonwealth Government, also proposes an intermodal facility on the SME site. This proposal is known as the Moorebank Intermodal Terminal (MIT). At the time of writing this report, this proposal is still in the early planning/impacts assessment stage but could include:

- port shuttle and interstate terminals;
- working freight rail tracks, freight storage tracks and container laydown/storage areas;
- a rail link and bridge span across the Georges River
- possible warehousing provision and support facilities; and
- vehicle access from Moorebank Avenue

While the MIT is a separate application to the development currently being considered, it is important to give due consideration to potential cumulative impacts of both proposals, however the Department acknowledges it is unlikely that both facilities would proceed given that throughput would be constrained by market forces and the capacity of the Southern Sydney Freight Line (SSFL). Cumulative impacts are discussed in **Section 2.2** and in **Section 5** of this report.

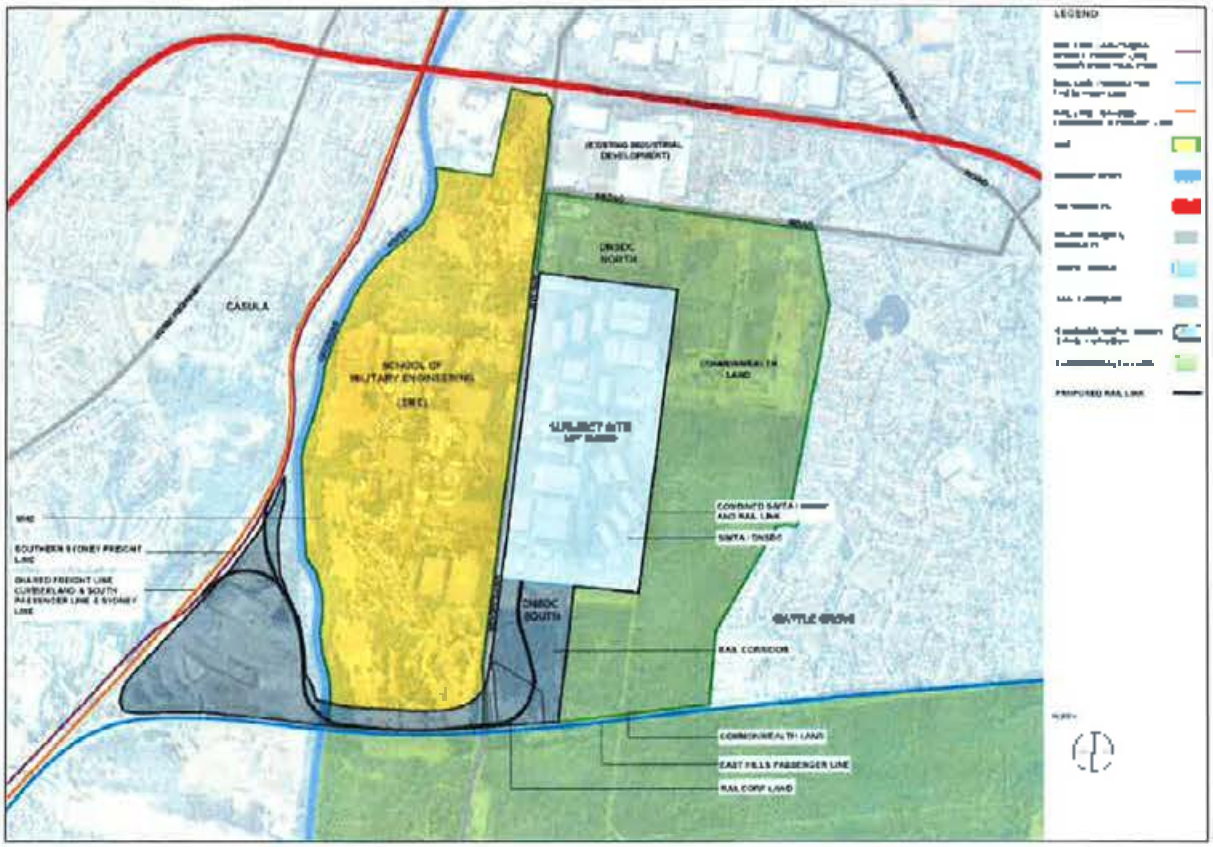

Figure 2: Local Context (Source: EA 2013)

2. PROPOSED PROJECT

2.1. Project Description

The Concept Plan comprises an intermodal terminal facility, rail corridor, intermodal terminal, warehouse and distribution facilities, and a freight village. Freight would arrive from Port Botany via the existing SSFL, be transported to on-site warehouse and distribution facilities, or loaded onto trucks for transport to nearby logistics centres. The following three stages of development are proposed:

1. construction of the intermodal terminal facility and rail link;
2. construction of warehouse and distribution facilities; and
3. extension of the intermodal terminal and completion of warehouse and distribution facilities.

The proposed site layout is shown in **Figure 3**. Key components of the proposed development are listed in **Table 1** below.

The proposed rail corridor to the south and south-west of the SIMTA site would accommodate a rail link to the SSFL. The freight line would run south from the site to connect with the East Hills Railway Corridor, cross the Georges River and run in a north westerly direction generally along the boundary of the Glenfield Waste Disposal Centre.

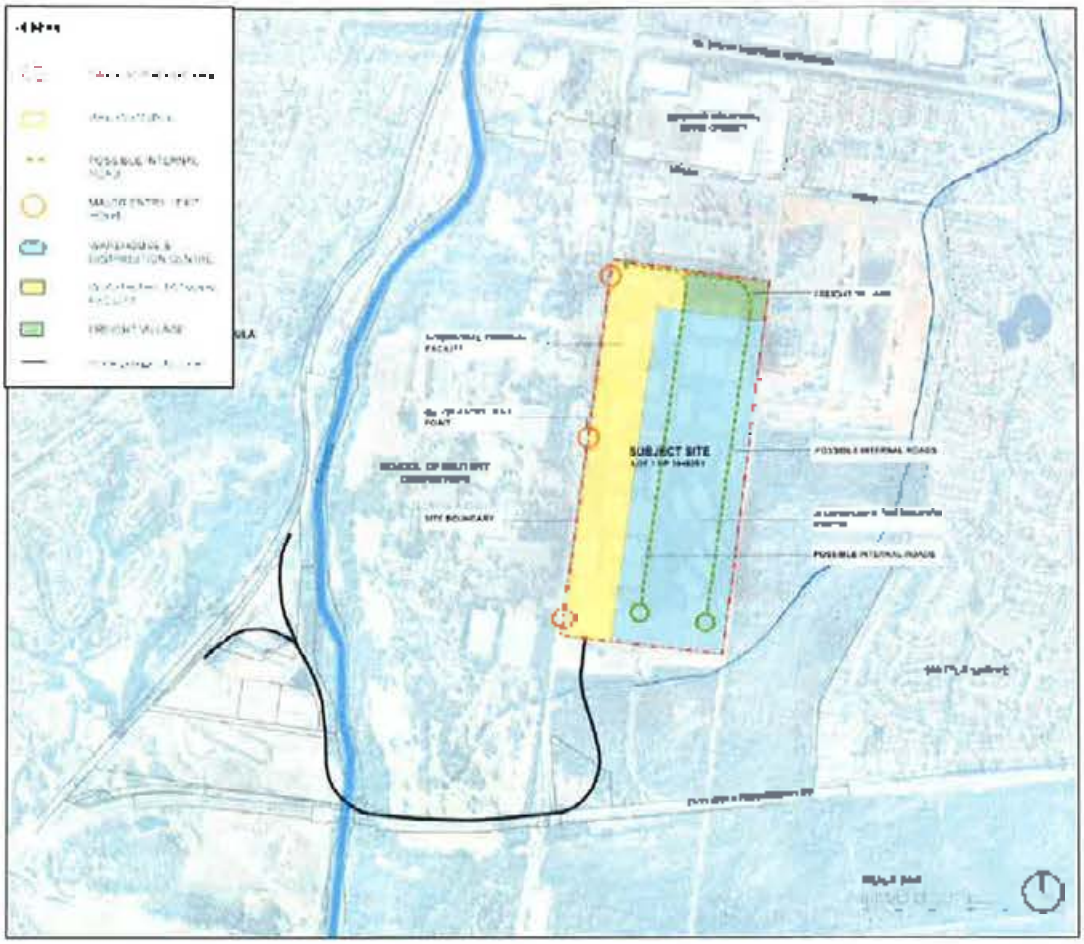

Figure 3: Project Layout (Source: EA 2013)

Table 1: Key Components

Aspect	Description
Intermodal terminal	• Development of an intermodal facility.
Rail corridor	• 20 metres in width (variable) to connect the subject site with the SSFL via the East Hills Passenger Line and the Glenfield Waste Disposal Centre.
Intermodal terminal	• Including ○ on-site freight rail sidings up to 1,200 metres long to accommodate local freight trains to Port Botany; ○ four permanent and one temporary rail sidings; ○ approximately 90,000m² of container handstand for container sorting and storage, located on both sides of railway tracks, and ○ approximately 2,100m² of terminal administration offices and ancillary operational facilities
Warehouse and distribution facilities	• Approximately 300,000m² of warehousing with ancillary offices.
Freight village	• Approximately 8,000m² of support services including: ▪ site management and security offices; ▪ commercial office space/business services; ▪ meeting rooms/conference facilities; ▪ convenience retail; ▪ driver facilities such as accommodation and service station; and ▪ associated car parking
Built form controls	• Controlling the siting, layout and design of the proposal

2.2. Project Need and Justification

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 is expected to be operating in late 2014;
- 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.

The *Freight Demand Modelling Report* undertaken by the Proponent 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 the freight task. However, if the SIMTA site were in operation, there would be capability to attract a significant proportion of the freight market (up to 35%), thus significantly reducing trucking demand to as little as 40% for the catchment the SIMTA site would service.

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 of 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.
- *Raising 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 the freight target with an annual throughput of up to 1 million TEUs.
- *Draft Metropolitan Strategy for Sydney to 2031* – the SIMTA proposal would assist with realising a number of the strategy's key objectives, including increased productivity and prosperity through the delivery of jobs; improved accessibility and connectivity, and the support for an expanded wholesale/logistics industry within the South West Subregion.
- *State Infrastructure Strategy 2012-2032* – the proposal would improve cost competitiveness of rail and road transport and provide for private investment in the rail freight market. The proposed development will also reduce heavy vehicle movements along the M5 and support the State investment in the delivery of the SSFL.

It is acknowledged that the Moorebank Intermodal Company has submitted a similar proposal to the Department on behalf of the Commonwealth Government to be located on the adjacent site across Moorebank Avenue. This site is known as the Moorebank Intermodal Terminal (MIT) site and is to be assessed as State Significant Development. An environmental assessment is likely to be exhibited in the second half of 2014.

The four key differences between the SIMTA and MIT proposals are:

- The SIMTA proposal includes a southern bridge crossing of the Georges River (adjacent to the existing East Hills Passenger Line crossing) and the MIT proposal includes a northern crossing of the Georges River (south of the M5 Motorway);
- The SIMTA site proposes a 1 million TEU throughput and the MIT site proposes a 1.2 million TEUs throughput;
- The SIMTA proposal does not include interstate movements of freight whereas the MIT proposal includes 500,000 TEUs; and
- The SIMTA proposal includes 300,000sqm of warehousing plus an 8,000sqm freight village whereas the MIT proposal includes 97,400sqm of warehousing only.

The Department, in its assessment of the proposal, has taken into consideration the cumulative impacts that would arise should both sites be developed as intermodal facilities. This assessment has been undertaken in consultation with key government agencies. TfNSW provided advice to inform the Department's consideration of the cumulative impacts and indicated that the precinct would be able to accommodate up to 1.2 million TEUs per annum plus 500,000 TEUs for interstate distribution per annum.

This position is based on a review of available business case material, discussions with the Proponents of both sites and a comparison against internal Bureau of Freight Statistics information derived from new trade forecasts, a metropolitan cargo movement model (under development) and rail operations modelling. Additionally, rail line capacity and rail operations efficiency would set an upper limit for container throughput at the precinct.

The Department acknowledges that it is unlikely that both sites would be developed as proposed, as the throughput of the precinct would be constrained by a number of factors including market forces, single catchment and capacity of the SSFL. In this regard, both sites would be competing for a limited number of TEUs. In the case where the SIMTA site is the only operating facility in the precinct, the annual TEU throughput of the site is less than the desirable maximum as advised by TfNSW.

3. STATUTORY CONTEXT

3.1. Major Project

At the time of obtaining the then Director General's Environmental Assessment Requirements (DGRs) Schedule 1 of *State Environmental Planning Policy (Major Development) 2005* (Major Development SEPP), listed the types and classes of development that could be considered Part 3A projects. The proposal is therefore a major project under Part 3A of the *Environmental Planning and Assessment Act 1979* (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) Major Development SEPP.

On 22 February 2013 the then Director-General designated the proposal 'as a project on land which has multiple land owners' in accordance with clause 8F(1)(e) of the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation). Clause 8F requires the Proponent to give notice of the application by publishing a newspaper advertisement of the project before the start of public consultation for the project.

3.2. Concept Plan

The Proponent has applied for approval of a Concept Plan under section 75M of the *Environmental Planning and Assessment Act 1979* (EP&A Act). On 9 November 2010 the then Minister for Planning authorised the submission of a Concept Plan. The Concept Plan application seeks approval for the proposed development as described earlier in this report. Further approvals would be required for the specific construction activities associated with the Concept Plan.

3.3. Continuing Operation of Part 3A

Part 3A of the EP&A Act, as in force immediately before its repeal on 1 October 2011 and as modified by Schedule 6A to the EP&A Act, continues to apply to transitional Part 3A Concept Plans. The Secretary's environmental assessment requirements (SEARs) have been issued in respect of this proposal and the environmental assessment report was lodged prior to 1 October 2011. The Concept Plan is therefore a transitional Part 3A Concept Plan.

This report has been prepared in accordance with the requirements of Part 3A and associated regulations, and the Minister for Planning (or her delegate) may approve or disapprove of the carrying out of the project under section 75O of the EP&A Act. However, the proposal falls within the Minister's delegation to the Planning Assessment Commission dated 14 September 2011, because there were more than 25 public submissions in the nature of objections and both Campbelltown and Liverpool Councils have objected to the proposal. Consequently, the PAC may determine the application.

3.4. Permissibility

The site is located within the Liverpool LGA. Under the Liverpool Local Environmental Plan (LEP) 2008 the site is zoned IN1 General Industrial, SP2 Defence, SP2 Railway and RE1 Public Recreation. 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. Additionally, rail infrastructure is also permissible in the SP2 Railway zone. However, rail infrastructure is prohibited in SP2 Defence and RE1 Public Recreation zones. In this case, Section 75O of the EP&A Act ensures that the Concept Plan is fully permissible with consent.

3.5. Environmental Planning Instruments

Under Sections 75I(2)(d) and 75I(2)(e) of the EP&A Act, the Secretary's report for a project is required to include a copy of, or reference to, the provisions of any State Environmental Planning Policy (SEPP) that substantially governs the carrying out of the project and the provisions of any environmental planning instruments (EPI) that would (except for the application of Part 3A) substantially govern the carrying out of the project and that have been taken into consideration in the assessment of the project.

There are no EPIs that substantially govern the carrying out of the project, however, the proposed rail link traverses part of the Glenfield Waste Services facility, consequently State Environmental

Planning Policy No 55 – Remediation of Land (SEPP 55) is applicable. Additionally, State Environmental Planning Policy No 33 – Offensive Development (SEPP 33) may apply to development that has the potential to store dangerous goods on site or would require a licence from the EPA.

The Proponent has undertaken an assessment of the potential for contamination within both the subject site and the rail corridor and this is considered in **Section 5** of this report. A consideration of hazards and risks is also provided in **Section 5** of this report. The Department is satisfied that the proposal is consistent with SEPP 55.

3.6. 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 considered the objects of 5(a), including the appropriate management and conservation of natural and artificial resources, including natural water resources, flora and fauna, and towns and centres for the purpose of promoting the social welfare of the community. The Department has also considered the proposal in relation to the orderly development of land, the protection of communication and utility services, the co-ordination of community services and facilities and the protection of the environment. The Proponent has outlined management strategies to maintain community services and facilities and commits to undertaking both construction and operation of the facility in a manner that would minimise impacts upon the environment and the adjacent community.

Object 5(b) is relevant as the project is strategically located to access key local and regional transport infrastructure with Port Botany to efficiently service the South West and Western Sydney catchment areas. Object 5(c) is relevant to the project as the issues raised by the community during the exhibition period of the EIS form a part of the assessment of the project and the Department's consideration.

3.7. 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*. Section 6(2) of that 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.

The Department has given due consideration to the principles of ESD in its assessment and the proposal is consistent with the principles of ESD. The Concept Plan is consistent with the precautionary principle as investigations were undertaken to enable the avoidance of important ecological features. 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 further refined during the detailed Development Application phase. An environmental risk analysis was completed for the Concept Plan, and all worse case potential environmental impacts have been assessed and mitigation measures have been developed to manage those worst case impacts.

The Concept Plan promotes intergenerational equity and the project has included a number of specialist reports to assess environmental and economic costs and benefits to the current community and future generations. The intermodal facility would remove approximately 2700 light and heavy vehicles per day off the M5 Motorway between Port Botany and the Moorebank site, and would contribute to improving traffic congestion around Port Botany itself. Additionally, the proposed road and intersection upgrades would improve road safety in the vicinity of the site for future generations. The Department considers that the environmental and economic benefits are expected to outweigh any negative impacts that cannot be mitigated.

The proposal 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 the consideration of appropriate revegetation strategies. Impacts that cannot be mitigated, have been addressed in the preliminary Biodiversity Offset Strategy.

The proposal promotes improved valuation, pricing and incentive mechanisms by considering the pricing of environmental resources (i.e. water, energy, waste products) throughout the assessment process, demonstrated in the economic assessment, the Preliminary Biodiversity Offset Strategy and the Social Impact Commentary. Costs associated with the planning and design and implementation of relevant mitigation measures have been incorporated into the overall project costs.

3.8. Statement of Compliance

In accordance with section 75I of the EP&A Act, the Department is satisfied that the then DGR's have been complied with.

3.9. Environment Protection and Biodiversity Conservation Act

On 23 January 2012, the proposed development 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 & 18A) and Commonwealth land (Sections 20 and 27A). The decision was based on the likely significant impact of the proposal on *Persoonia nutans* (Nodding Geebung) and *Grevillea parviflora* (Small-flowered Grevillea) and the site being on part Commonwealth land.

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. Additionally, DoE consulted with the Department during its assessment of the controlled action and on the draft conditions of approval.

The Commonwealth Minister for the Environment approved the controlled action on 6 March 2014 subject to conditions. A copy of this approval is included in **Appendix F**.

4. CONSULTATION AND SUBMISSIONS

4.1. Exhibition and Preferred Project Report (PPR) 2012

The Department initially exhibited the Environmental Assessment (EA) from 28 March to 28 May 2012 (62 days) on its website and at its Information Centre; the Nature Conservation Council of NSW, Liverpool City Council; and Campbelltown Library. The public exhibition was advertised in the Sydney Morning Herald, Daily Telegraph Liverpool Leader and Campbelltown Advertiser on 28 March 2012 and relevant State and local government authorities and surrounding landowners were notified in writing.

A total of 74 submissions were made during this exhibition period including 13 submissions from public authorities and 61 submissions from the general public and special interest groups.

The Proponent submitted a Preferred Project Report (PPR) in September 2012 which included responses to the issues raised in submissions. The Department did not consider that the issues raised in the submissions were adequately addressed. The principle issues of concern requiring further attention included the project description and its delivery; cumulative impacts; road and rail network and related traffic impacts, noise and air quality impacts; hazards and risks, ecological; and flooding impacts.

4.2. Re-Exhibition 2013

The then Director General's designation of the Concept Plan as land with multiple owners on 22 February 2013 necessitated re-exhibition of an updated EA. The updated EA also provided a response to issues raised during the first exhibition. The EA was re-exhibited from 4 September until 21 October 2013 (48 days) at the same locations as the initial exhibition. The Department also advertised the public exhibition (in the same publications as previously) on 4 September 2013 and notified relevant State and local government authorities and surrounding landowners in writing.

A total of 44 submissions were made during this exhibition period including 11 submissions from public authorities and 33 submissions from the general public and special interest groups (including 1 petition with 1,299 signatures). A summary of the issues raised in submissions is provided below.

4.3. Public Authority Submissions 2013

Department of Defence and the then **Department of Finance and Deregulation (Commonwealth)**, each raised the following:

- impacts to Commonwealth owned land to the south of the SIMTA site including loss of biodiversity offset value, potential adverse impacts to Anzac Creek water quality, potential impacts to flood levels, and uncertainty of the site of the proposed rail link,
- impacts to the SME (prior to its relocation) while construction of the SIMTA project occurs including traffic and access arrangements, noise impacts to residential functions of the site, air quality impact assessment, light spill impacts to residential dwellings and proposed building heights,
- impacts on future Commonwealth use of the SME site including increased flood levels upstream of the proposal,
- impacts to the Defence Logistics Transformation Program construction and DNSDC operations at West Wattle Grove including uncertainty surrounding the timing of the SIMTA development, traffic and access during the relocation program, vibration and air quality issues during construction of the proposal,
- impacts on other Commonwealth land including Moorebank Ave impacts and upgrades, road safety concerns regarding SIMTA trucks parking on Moorebank Ave, utilities and services proposed for 'Greenhills Road',
- cumulative impacts of the proposal in relation to the Commonwealth MIT Project and
- implementation of the SIMTA proposal including uncertainty as to how Commonwealth land would be acquired, assessment of the combined staged construction and operation, noise and vibration assessment of overlapping construction activities.

Australian Rail Track Corporation (ARTC) supports the project and recommended conditions of approval requiring the Proponent to obtain consent of ARTC with respect to connection to the Southern Sydney Freight Line (SSFL) and requiring the Proponent to work

with ARTC to identify timing, scope and staging of any required capacity enhancement to the ARTC network

Heritage Council provided comments on further Non-Indigenous heritage issues which require endorsement from the Heritage Council prior to works being approved.

Department of Primary Industries raised the following

- NSW Office of Water – provided advice regarding riparian corridors and watercourse crossings for Georges River and Anzac Creek, as well as consideration of groundwater management; and
- NSW Fisheries – provided comments regarding design criteria that would need to be considered in relation to waterway crossings and width of riparian buffer zones.

The then **Office of Environment and Heritage** raised the following

- further details required in relation to aspects of Aboriginal Cultural Heritage
- impacts to significant biodiversity values including two plant species (one endangered and one threatened) and five endangered ecological communities listed under the *Threatened Species Conservation Act 1995*;
- further details of the biodiversity offset are required; and
- consideration of the rail works in relation to the adjacent Leacock Regional Park.

Environmental Protection Authority (EPA) raised the following:

- is unable to support routing of the proposed rail link to the SSFL via the Glenfield Waste Facility as the Proponent has not adequately demonstrated that the construction and operation of the rail link will not compromise the landfill; and
- provided comment/recommended conditions on construction air quality, contamination, and noise impacts, and operational air quality and noise impacts.

Transport for NSW has coordinated comments from RMS, Sydney Trains and RailCorp, and raised the following

- the statement of commitments currently lacks the necessary detail to provide an overview of how the development would mitigate any regional impacts.
- insufficient information provided in relation to the proposed sharing of the EHPL;
- proposal would impact on the future Moorebank Station site.
- the Proponent should commit to the upgrade of impacted roads including Moorebank Ave and the intersections of Moorebank Ave and the M5, Newbridge Road and Heathcote Road and the upgrade of the M5 interchange and
- further detailed design considerations of the freight rail alignment including consideration of integration of the Moorebank Intermodal Terminal project and common rail access.

Bankstown City Council raised the following:

- consideration of the cumulative impact of both the SIMTA and MIT projects operating concurrently;
- consideration of wider traffic impacts on arterial roads;
- impacts to the EHPL and the potential to limit the future expansion of the line, particularly to the south-west growth area; and
- ensuring the prohibition of heavy trucks travelling through designated residential precincts to minimise traffic and noise impacts on residential areas.

Campbelltown City Council objects to the proposal and raised the following:

- impact to the off-site road network remain to be defined. The upgrade to Cambridge Ave and the construction of a connecting road between Glenfield and the M5 should be required as part of any approval;
- prior to the commencement of terminal operations, rail access from the SSFL should be secured;
- consideration of the broader impact to the urban fabric needs to be examined. Council seeks further commitment to the establishment of essential off-site infrastructure, and

- revised noise assessment and controls over dangerous goods transport based on the assumption that terminal generated road traffic will not be restricted to Moorebank Ave only.

Liverpool City Council objects to the proposal and raised the following

- insufficient information has been provided to allow for proper assessment of impacts including scope and operation of the proposal to understand the relationship with adjoining lands.
- the combined impact of the proposal in relation to the adjacent MIT site lacks detailed information including justification for the need for two intermodal terminals in the one location;
- recommended the creation of a master plan should both intermodal terminals proceed;
- clear definition and delineation of off-site infrastructure maintenance requirements is required
- inaccurate traffic modelling which underestimates the level of traffic generated; and
- further analysis of the thresholds for cumulative environmental aspects including noise, air quality, traffic, and greenhouse gas, should be undertaken to establish combined threshold limits to accurately assess the proposal

4.4. Public Submissions 2013

A total of 33 submissions were received from the public during the re-exhibition of the EA in 2013. This included a submission from the Cumberland Conservation Network special interest group. Of the submissions received, 30 (91%) objected to the project, 1 (3%) supported the project and 2 (6%) did not object but provided comments. More than half of public submissions were from residents from the nearby area of Wattle Grove. The key issues raised in public submissions are listed in **Table 2**

Table 2: Summary of Issues Raised in Public Submissions

Issue	Proportion of submissions (%)
Transport and Access	29%
Site Selection	16%
Air Quality	13%
Biodiversity	10%
Noise and Vibration	9%
Cumulative Impacts	6%
Health	5%
Other – hazards, risks, light spill, public consultation, impacts to land value, and the quality of the report.	10%

**Note – Rounding has been used in the calculation of the table above*

The majority of submissions raised concerns over traffic congestion and the ability of the existing road network to cope without further improvements. A number of submissions raised additional issues regarding truck movements on unauthorised local roads, including Anzac Road, accident hot spots in the area, and existing congestion at Moorebank Road, the Hume Hwy, and M5 intersections

Site selection was raised as a key area of concern due to the location of the proposal in close proximity to residential and environmentally sensitive areas. Air quality in western Sydney and the health issues which result from increased diesel emissions from the proposal were also highly represented.

Submissions also raised concern over threats to local endangered ecological communities (EECs) and the impact a 24 hour/day, 7 day/week operation would have on local residents.

The need for an intermodal terminal adjacent to the Commonwealth proposal at Moorebank was also raised as a key area of concern, particularly in relation to the cumulative impact assessments undertaken in the event of both terminals operating.

The Department has considered the issues raised in submissions in its assessment of the Concept Plan, in recommended future assessment requirements and the Proponent's Statement of Commitments. A number of more detailed matters will be considered in any subsequent Development Application for construction.

4.5. Proponent's Response to Submissions (RtS)

The Proponent provided a response to the issues raised in submissions which is included in **Appendix C**. The RtS included the following amendments:

- Reduction in the width of the rail corridor connecting the site to the East Hills Passenger Line from 30 metres to 20 metres.
- Relocation of the rail link within the East Hills railway corridor.
- Introduction of a temporary rail siding;
- Reduction in the maximum height of the light poles; and
- Revised Statement of Commitments.

The Department forwarded a copy of the RtS to the Department of Finance and Deregulation, Australian Rail Track Corporation, Department of Primary Industries, Department of Defence, Office of Environment and Heritage (including the Heritage Branch), the Environment Protection Authority (EPA), Transport for NSW, Bankstown City Council, Liverpool City Council, Campbelltown City Council and its independent traffic consultant for comment. The documents were also placed on the Department's website. A summary of Council and agency comments on the RtS is provided below.

Heritage Council

No further comment, however the Heritage Division advised that a request from Liverpool Council had been received to list the site on the state heritage register.

Department of Primary Industries

- NSW Office of Water – recommends the statement of commitments be revised to reflect the changes indicated in the RtS and requests a Vegetation Management Plan be required as a condition of approval;
- Fisheries NSW – no further comment, and
- Crown Lands - preference for only one bridge crossing, in line with the RtS.

The then **Office of Environment and Heritage**

- The NSW offsetting criteria should be used over the Commonwealth offsetting criteria;
- raised some inconsistencies between the RtS and Statement of Commitments.
- requested that offsets should be identified, and be demonstrated that they can be secured, prior to determination and the offset be secured before vegetation is cleared, and
- does not agree to being prescribed a consultation role as stated in the SoCs.

Environment Protection Authority

- reiterates concerns of the proposed rail link to the SSFL via the Glenfield Waste Facility and recommends conditions of approval to address contamination, air quality and noise.

NSW Health

- recommended best practice mitigation measures be implemented to ensure emissions from all sources are kept as low as reasonably practicable.
- endorsed the requirement to prepare Air Quality Management Plans for future stages;
- recommended modifications to intended noise monitoring locations;
- identified inconsistency between the background annual average $PM_{2.5}$ levels reported in table 4.4 and the cumulative levels reported in table 6.4; and

- raised some queries on the noise modelling undertaken and made recommendations for conditions to support mitigation measures and undertake further operational noise reviews.

Transport for NSW
- Recommended that the rail link be removed from any approval due to insufficient information;
- Requested the Department enter into a planning agreement with the Proponent for road upgrades and public transport measures;
- Reiterated its concern over impacts to the future Moorebank Station site; and
- Recommended a condition requiring the rail noise assessment to include consideration of rail curve noise and brake squeal

Campbelltown City Council
- maintained its objection to the proposal;
- reiterated its concern regarding issues of securing access between the SIMTA site and SSFL, potential road impacts, need for off-site infrastructure,
- requested condition be included requiring noise monitoring in the Campbelltown LGA.
- requested a conditon requiring council be consulted regarding traffic routing, noise and air quality modelling and monitoring and asbestos and dangerous goods transport within Campbelltown LGA be included if concept approval is granted,
- requested further consultation be undertaken with Council on the potential visual impacts on Council's Local Government Area, and
- reiterated requests for the Department to develop an integrated approach to development of the Moorebank site in consultation with council

Liverpool City Council
- maintained its objection to the proposal,
- raised concern over the duplication of rail infrastructure (ie two river crossings taking into account the MIT site),
- reiterated previous concerns on cumulative impacts regarding traffic generation, and
- raised concerns on noise and vibration, stormwater and flooding, heritage, air quality, biodiversity and the Proponent's statement of commitments not being achievable or measurable.

Public Submissions
A number of additional submissions have been received from members of the public. These have been considered by the Department in its assessment in **Section 5** below

5. ASSESSMENT

In consideration of the Environmental Assessment, Response to Submissions, revised Statement of Commitments, and issues raised in agency and public submissions, the Department considers the key assessment issues associated with the proposal to include:

- traffic,
- air quality,
- noise and vibration;
- historic heritage; and
- other issues.

The Department's consideration of these key issues is provided in below.

5.1. Traffic

Methodology

The Proponent's assessment considered the traffic impacts associated with additional vehicle movements to and from the site. This included identification of the study area (**refer Figure 4**), collection of traffic data and modelling of likely future traffic growth (with and without the proposal) to 2031. An assessment of cumulative impacts, to address the neighbouring MIT site, was also included.

In assessing the performance of the existing road network, a 'core area' and 'inner area' were identified. 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.

Existing Network Performance

Surveys indicate that:

- Moorebank Avenue in the vicinity of the subject site carries approximately 17,500 vehicles per day, and comprises approximately 5% heavy vehicles;
- Anzac Road carries approximately 9,500 vehicles per day;
- the M5 Motorway, over the Georges River, carries approximately 128,500 vehicles per day, of which approximately 10% are heavy vehicles, and
- the M5 Motorway has the highest AM and PM peak volumes between the Hume Highway and Moorebank Avenue, with the Hume Highway, Moorebank Avenue and Heathcote Road interchanges accommodating the greatest volume of traffic.

Five key intersections with existing operational issues were identified in the Proponent's modelling. These are Moorebank Avenue / Anzac Road, Moorebank Avenue / M5 Motorway, M5 Motorway / Hume Highway, Moorebank Avenue / Heathcote Road and Moorebank Avenue / Newbridge Road.

Moorebank Avenue / Heathcote Road is operating at capacity in the AM peak and near capacity in the PM peak. In addition, a number of individual movements at the five key intersections were identified as having a LoS of E or F, where F refers to unsatisfactory operation with existing queuing and capacity improvement works required. These movements are:

- the M5 Motorway / Hume Highway intersection east approach – right turn (LoS E); south approach – right turn (LoS E) and north approach – slip lane (LoS E),
- Moorebank Avenue / Heathcote Road intersection south approach – right turn (LoS F), south approach – through (LoS F), and
- Moorebank Avenue / Newbridge Road intersection east approach – through (LoS F).

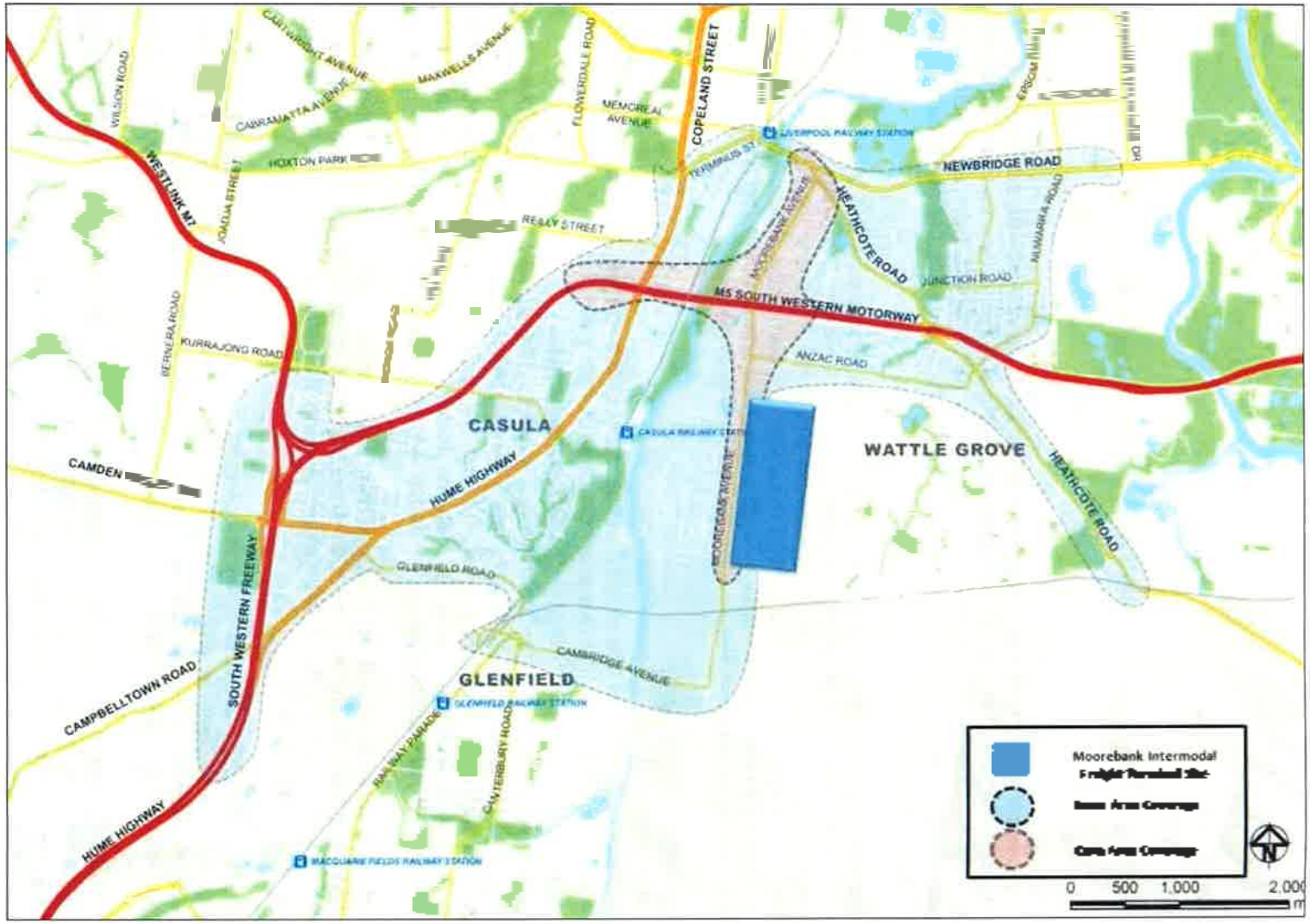

Figure 4: Core and Inner study area

Additionally, the Proponent undertook further modelling on three intersections on Moorebank Avenue (intersections with Heiles Avenue, Church Road and Industrial park access road) in response to comments made by TfNSW. A weaving analysis was also undertaken on the M5 Motorway westbound (in addition to the eastbound analysis already undertaken) in response to agency concerns. The results of this additional modelling further demonstrated that the proposal is located south of a region that is subject to existing heavy traffic congestion.

A similar analysis of intersection performance was undertaken at 8 key intersections outside the core area, including Hume Highway intersections with Camden Valley Way, Kurrajong Road, De Meyrick Avenue, Hoxton Park Road / Macquarie Street and also the Terminus Street / Speed Street, Newbridge Road / Nuwarra Road, Heathcote Road / Nuwarra Road and M5 Motorway / Heathcote Road intersections. The Proponent suggests that the results of the modelling indicate existing *'network capacity issues on the regional road network outside the core area.*

Predicted Network Performance (without the proposal)
Models were developed to understand the 'base' and 'future year' traffic issues with and without the proposal. The modelling indicates that car use in Sydney is predicted to grow between 1.4% and 1.9% per annum to 2031. Truck use is predicted to grow between 2.7% and 3.5% per annum, almost twice that of the car. A future base case network and future background traffic growth based on the Strategic Travel Model (developed by the Bureau of Transport Statistics), M5 West Widening Project (currently under construction) and the Infrastructure Statement 2010-2011 (RMS) were also considered. Predicted peak hour growth in the core study area (refer to Figure 4) of 1.7-1.9% per annum until 2031, and between 2.5-3.1% per annum to 2031 as a result of the M5 West Widening Project.

Intersection performance in the future case (without the proposal) shows that three of the five key intersections would be at level of service F at critical movements and require upgrading without the project (refer to Table 3). Further, the performance of an additional eight intersections outside the core area would be operating at a LoS of F at either the AM or PM peak periods without the proposal.

Table 3: Level of Service (LoS) and Average Delay for key intersections - without the proposal

	AM Peak 2031		PM Peak 2031	
	LoS	Average Delay (seconds)	LoS	Average Delay (seconds)
Moorebank Avenue / Anzac Road	D (B)	49 (24)	C (B)	37 (22)
Moorebank Avenue / M5 Motorway	C (B)	30 (24)	D (B)	44 (26)
M5 Motorway / Hume Highway	F (C)	120 (33)	F (C)	75 (40)
Moorebank Avenue / Heathcote Road	F (E)	103 (67)	F (D)	295 (50)
Moorebank Avenue / Newbridge Road	F (C)	144 (34)	F (C)	124 (39)

Note: Existing (2010) Operation in brackets

Predicted Network Performance (with the proposal)
In assessing the future case, the Proponent assumes that 2,638 truck movements (1,603 articulated trucks and 1,035 rigid trucks) per weekday would be removed from the M5 Motorway, east of Moorebank Avenue as the containers that they would have transported would occur by rail. A maximum additional 3,613 employee car movements are anticipated on the local road network during operation. The majority of staff would work in the warehousing and distribution centres over two shifts per day. Actual start and finishing times could be staggered to minimise parking and traffic impacts.

An analysis of the assumed traffic distribution to the site for both trucks and employee cars shows that the majority of inbound truck movements in the AM peak occur along the M5 Motorway (eastbound), Hume Highway (southbound) and Moorebank Avenue (southbound) (refer to Figure 5). Inbound car movements in the AM peak use the M5 Motorway (both directions), Hume Highway (both directions) and Moorebank Avenue (southbound). Traffic on Moorebank Avenue is predicted to increase by 1.6 to 1.8% by 2031. This includes background growth and Defence's relocated DNSDC operations to the north of the subject site on Moorebank Avenue. With the proposal, traffic on Moorebank Avenue is expected to increase by 3.1%.

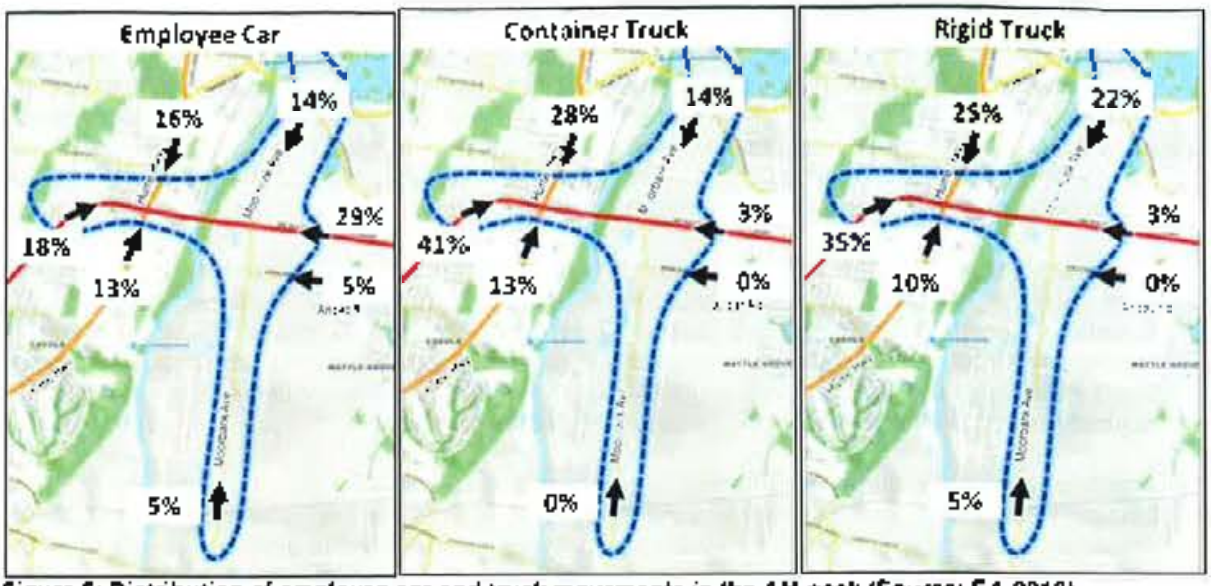

Figure 5: Distribution of employee car and truck movements in the AM peak (Source: EA 2013)

Intersection performance in the future case (with the proposal) was undertaken for the intersections identified as having existing operational issues (refer **Table 4**) In addition to those intersections that would already be operating at a LoS F without the proposal, the Moorebank Avenue / Anzac Road intersection would also deteriorate to LoS F in both the AM and PM peak. The M5 Motorway / Moorebank Avenue intersection would also experience deterioration in efficiency in both the AM peak

Table 4: Level of Service (LoS) and Average Delay for key intersections with the proposal

	AM Peak 2031		PM Peak 2031	
	LoS	Average Delay (seconds)	LoS	Average Delay (seconds)
Moorebank Avenue / Anzac Road	F (D)	71 (49)	F (C)	71 (37)
Moorebank Avenue / M5 Motorway	D (C)	49 (30)	E (D)	68 (44)
M5 Motorway / Hume Highway	F (F)	124 (120)	F (F)	111 (75)
Moorebank Avenue / Heathcote Road	F (F)	152 (103)	F (F)	255 (205)
Moorebank Avenue / Newbridge Road	F (F)	147 (144)	F (F)	134 (124)

Note: Without the proposal in brackets

While the Moorebank Avenue / Newbridge Road and Moorebank Avenue / Heathcote Road intersections would operate at LoS F under both scenarios, average delays for some movements in the AM and PM peak would increase by up to 94 seconds due to the proposal. The Proponent has stated that the proposal would contribute 2-3% growth to each intersection Other intersections are expected to perform satisfactorily in the AM peak, however some movements at each intersection would experience increased delays, some over 300 seconds (total delay) in the PM peak Southbound traffic on Moorebank Avenue is already affected by vehicle queuing (and exceeding capacity) in right turn storage bays (for M5 westbound)

Intersection performance within the inner area (refer **Figure 4**) was assessed for both scenarios and all intersections would experience LoS F at either the AM of PM peak The Proponent indicated that the proposal would result in less than 2% contribution to traffic growth at these intersections.

Proposed Mitigation Measures

The Proponent acknowledges both the positive and negative impact of the proposal on the local and regional road network, and proposes to enter into a VPA with the relevant authority (i.e Council, TfNSW Commonwealth) to facilitate the delivery of a number of road upgrades At full capacity, the site will operate at 1 million TEUs and the VPA would be entered into prior to the approval of stage 1 Development Application. The VPA would include TEU thresholds as trigger points for upgrades, and would be determined to ensure adequate mitigation measures are in place prior to impacts being felt on the road network. The upgrades included in the VPA include the following:

- new traffic signals at the northern access and 750 metres south of the central access to the site
- widening of Moorebank Avenue to four lanes between the M5 interchange and southern access,
- widening of the approach roads at the Anzac Avenue intersection, and

- upgrading of the existing Moorebank Avenue / M5 Motorway interchange including:
  - an additional left turn lane on the M5 westbound on-ramp and off-ramp;
  - an additional right turn lane on the M5 eastbound off-ramp;
  - an extension to the existing left turn lane on the M5 eastbound off-ramp.
  - widening of Moorebank Avenue southbound carriageway to three lanes; and
  - increasing the length of the two existing right turn queue bays at the Moorebank Avenue northern approach

Additionally, to assist in reducing car demand by employees, the Proponent has committed to a range of measures including designing the site to accommodate buses, rationalisation of public bus routes and stops and provision of cyclist facilities.

Department's Consideration

Methodology
The Department recognised that traffic is the key issue for the proposal, particularly given the complexities associated with a potential second intermodal on the MIT site and the potential cumulative impacts. The Department engaged Aurecon Australia Pty Ltd to review the Proponent's Traffic and Transport assessment and to assist in its assessment of traffic and transport related matters for the proposal (**Appendix D**). The review considered the traffic and transport impact assessments (including the cumulative, traffic and transport impacts), submissions on traffic and transport impacts and the response to submissions on traffic and transport impacts.

The review found the Proponent's assumptions for traffic generation as being reasonable but notes that more information to support these assumptions would have reinforced these views particularly in relation to the breakdown of containers being transported by semi-trailers or B-doubles, the proportion of containers being 40ft or 20ft, the proportion of containers being handled on a weekday versus weekend, number of unladen truck movements, or weight of each container. The Department acknowledges that these breakdowns vary depending on the site and operator and considers that the figures provided are based on a 'worse case' scenario and the Proponent's current knowledge of the intended proposed operation.

Outstanding concerns relate to the need for hourly trip generation data. The Department considers the peak hour information is adequate to assess the worst case scenario of traffic generation and notes this would be further considered in subsequent development applications for future stages.

In relation to traffic distribution, the review notes some discrepancies between the 2011 and 2013 adopted distributions for truck movements in the AM peak. However in terms of general traffic impact and given the volume of truck movements per day, these discrepancies are *'unlikely to have a material impact when considering this impact on an hourly basis (reflecting the difference between 1 and 27 vehicles over the whole day)'*. The review also concludes that traffic distribution is flexible and may change over time depending on different constraints within the road network.

The reviewer found no issues with the modelling that was undertaken for existing traffic conditions, and concurs with the traffic impact assessment. Further, the assessment results were found to be reasonable and the *proposal would not have direct significant impacts on the already congested intersections outside the 'core' area.'* Additionally, it is noted that TfNSW's comments on the submissions report did not raise any further concerns in relation to modelling and validation.

Even though the reviewer maintained some concerns relating to modelling, detailed access arrangements and cumulative impacts, the Department is satisfied that the Proponent has adopted a reasonable approach to address these concerns at a Concept Plan stage and the responses provided sufficient detail subject to recommended future assessment requirements which require the Proponent to consult with TfNSW prior to the submission of any Development Application for future works.

Network Performance and Mitigation Measures
The Department acknowledges the concerns raised by local Councils, agencies and members of the public, concerning the predicted impacts on the road network as a result of the proposal. It also acknowledges that the proposal would result in a decrease of heavy vehicle movements along the M5 corridor (between Port Botany and Moorebank Avenue) by approximately 2,700 vehicles per day, and be re-distributed north and west of the Moorebank Avenue / M5 Motorway interchange.

Impacts are likely on Moorebank Avenue in the vicinity of the site, at the M5 interchange with Moorebank Avenue, and for some movements at the Moorebank Avenue / Newbridge Road and Moorebank Avenue / Heathcote Road intersections to the north of the site. The traffic and transport assessment undertaken by the Proponent, and the independent reviewer both state that the proposal is unlikely to have any significant impact outside the 'core' area. It is also acknowledged that TfNSW's main concerns relate to intersections within this core area.

The proposed mitigation measures would be staged depending on the development of the site (TEU throughput). The Department notes that following the M5 Motorway / Moorebank Avenue interchange upgrade, the LoS in 2031 would improve in the AM peak compared to the 'with SIMTA' (no upgrade) scenario (from LoS D to LoS C) and following the completion of the M5 West Widening project, would improve in the PM peak compared to the do nothing scenario (from LoS E to LoS D). The Moorebank Avenue / Anzac Road intersection would also perform with a better LoS than the 'without SIMTA' scenario in the AM peak (LoS D to LoS C) and the 'with SIMTA' (no upgrade) scenario in the PM peak (LoS F to LoS D) in 2031.

The Department notes that a VPA would be entered into by the Proponent prior to the approval of Stage 1 Development Application. The VPA would include trigger points for upgrades depending on the TEU throughput. This staged approach would facilitate the delivery of the proposed road and intersection upgrades and investigation into changes to the Route 901 bus service in a manner that is appropriate for the scale of operations. The Department is satisfied that the mitigation measures and their proposed staging is reasonable and has recommended they be incorporated into the future assessment requirements of any Concept Plan approval. Notwithstanding, no commitment has been made to addressing the impacts of the proposal on some movements at the Moorebank Avenue / Newbridge Road and Moorebank Avenue / Heathcote Road intersections, which is a key area of concern for TNSW.

TNSW acknowledges that these intersections would be operating at a LoS F in 2031 regardless of the proposal. However some movements would suffer increased delays as a result of the proposal (refer **Table 5**). The Department has been advised by TNSW that two key movements should be investigated by the Proponent for possible upgrade. These include, the Moorebank Avenue / Newbridge Road intersection southern approach, right turn movement, where an additional right turn lane is required (but still maintaining 2 separate left turn lanes), and the Moorebank Avenue / Heathcote Road southern approach, right turn movement where additional storage capacity of the right turn lane is required. To mitigate this impact, the Department is recommending that the Proponent investigate these possible upgrades as a future assessment requirement.

Table 5: Level of Service (LoS) and Average Delay for Moorebank Avenue / Heathcote Road and Moorebank Avenue / Newbridge Road intersections with the proposal

Intersection	Approach	AM Peak 2031		PM Peak 2031	
		LoS	Average Delay (seconds)	LoS	Average Delay (seconds)
Moorebank Avenue / Heathcote Road	North	B (B)	15 (16)	C (B)	29 (15)
	East	F (F)	>300 (260)	F (F)	>300 (>300)
	South – Right Turn	F (F)	88 (90)	F (F)	218 (124)
	South - Through	F (B)	72 (28)	F (F)	231 (247)
Moorebank Avenue / Newbridge Road	East – Through	F (F)	>300 (>300)	F (F)	152 (149)
	East – Left Turn	F (F)	>300 (>300)	F (F)	143 (115)
	South – Right Turn	C (C)	29 (30)	F (F)	71 (73)
	South – Left Turn	B (B)	19 (16)	F (F)	78 (99)
	West – Right Turn	F (F)	127 (116)	F (F)	217 (190)
	West - Through	E (E)	60 (52)	F (F)	71 (65)

Note: Without SIMTA in brackets

The Department has also considered the cumulative impacts of the proposal with the neighbouring MIT site. TfNSW indicated that it expects the total number of port related containers to not exceed the single facility estimates provided by the MIT site being a maximum annual throughput of 1.2 million TEUs plus 500,000 TEUs for interstate distribution. Given that this figure has been determined based on modelling and constraints such as the single catchment area and capacity of the SSFL, the total throughput would be shared across two sites, assuming both sites were developed. The Department is satisfied that the cumulative impacts of both proposals would generally result in a similar impact on the efficiency of the network in the core and inner areas as defined by the Proponent, as both sites would be unable to achieve full operational capacity.

On balance, while the proposal would have some impact on the efficiency of the road network, the background traffic growth alone would result in a number of intersections (and individual movements) operating at LoS F. The Department notes the reduction in heavy vehicle traffic between Port Botany and the subject site (up to 2,700 vehicles per day) would be a benefit to the existing road network to the east of the site (particularly the M5 Motorway) and is satisfied that potential traffic impacts as a result of the proposal have been adequately addressed. It is therefore considered that the proposed commitment to enter into a VPA with the relevant authority for road upgrades prior to the approval of Stage 1 Development Application (with TEU trigger points for staged upgrades), in conjunction with recommended future assessment requirements, would adequately contribute towards offsetting additional intersection and network delays caused by the proposal.

Additionally, the Department considers that construction related traffic could be adequately managed with the preparation and implementation of relevant construction management plans and will be further considered during the assessment of subsequent Development Applications.

Rail

Initially, the site would be serviced by five port shuttle services each way per day (24 hour period) at 200,000 TEUs and by 2022, up to 21-22 port shuttle services each way per day at full capacity (1 million TEUs) would be operating. ARTC has provided in-principle support for the proposal but note the need to undertake upgrades to the existing network to ensure sufficient capacity is available for when operational throughput capacity of 1 million TEUs is reached. The Department's assessment of the cumulative impacts concludes that in the unlikely event of two competing facilities operating concurrently, existing constraints ensure the maximum throughput of the precinct would not exceed 1.2M TEUs (as suggested by TfNSW).

One of the key concerns raised by TfNSW is the lack of information demonstrating that the proposal would not prejudice the future quadruplication of the EHPL and considered an alternative alignment outside the existing rail corridor (to the north) to be their preferred option. In response, the Proponent submitted scale drawings demonstrating the existing easement has sufficient width to accommodate the proposed freight line, the existing EHPL, the future quadruplication of the EHPL, gas line, electrical line and associated service roads and fencing. The Proponent considers that the proposed rail link and associated river crossing is the most appropriate location having regard to the opportunities to reduce the potential cumulative impacts, preventing the requirement for either a level crossing or overhead crossing on Moorebank Avenue, both of which would increase visual and noise impacts and be of detriment to traffic flow within the local road network.

In light of the amendments submitted by the Proponent, the Department believes the use of the existing rail corridor would be a more efficient use of the land and would result in a better environmental outcome. Additionally, any Concept Plan approval would still require the Proponent to seek further approvals before commencing construction. In this regard, the Department is recommending the Proponent consult with TfNSW on the detailed design of the proposed sharing of the existing rail corridor before submitting its request for DGRs for the stage 1 Development Application.

With regards to the proposed future Moorebank Station site, TfNSW notes that Moorebank Station is *'not proposed within the 20 year future period of rail planning'* under *Sydney's Rail Future* but raises concern over the interactions between the future station complex and how passengers would access the indicative platforms (shown by the Proponent) across the proposed freight line. The Department notes that further consultation is required and has recommended a future assessment requirement for this additional consultation to occur with TfNSW during preparation of future stages.

Public/Active Transport

The Department acknowledges the suggested public transport measures to be implemented including the preparation of project stage Transport, Mobility and Accessibility Plan (TMAP), reduction of onsite parking, additional/rationalisation of bus services and promotion of walking and cycling. The Department supports the commitments made by the Proponent at the Concept Plan level and is generally satisfied that public and active transport has been adequately considered as part of the EA and revised as a result of public and agency submissions in the RtS.

Conclusion

The Department is satisfied that the traffic modelling undertaken is adequate for identifying existing, future existing and project related traffic conditions. The mitigation measures proposed, and recommended future assessment requirements, would ensure that the construction and operation of the facility would not result in unacceptable impacts on the local and regional network in the short and long term. Additionally, the Department is comfortable with the level of information provided at this Concept Plan stage to demonstrate that the sharing of the East Hills Passenger Line would not prejudice the future quadruplication of this line and that sufficient capacity (with future upgrades) is available on the SSFL to accommodate the proposal. The Department considers construction related traffic impacts can be adequately managed and would be further considered in subsequent Development Applications and through the preparation and implementation of relevant construction management plans. Public/active transport has been adequately considered at this Concept Plan level and would be further considered in subsequent applications. The Department acknowledges the commitments made by the Proponent in this regard.

5.2. Air Quality

Local Councils, agencies and a number of public submissions raised air quality impacts during construction and operation as key issues. The Department has taken into consideration potential air quality impacts arising from the Concept Plan, and also the cumulative impacts as a result of both the SIMTA and MIT site operating concurrently. As part of its assessment in the EA, the Proponent 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 6.

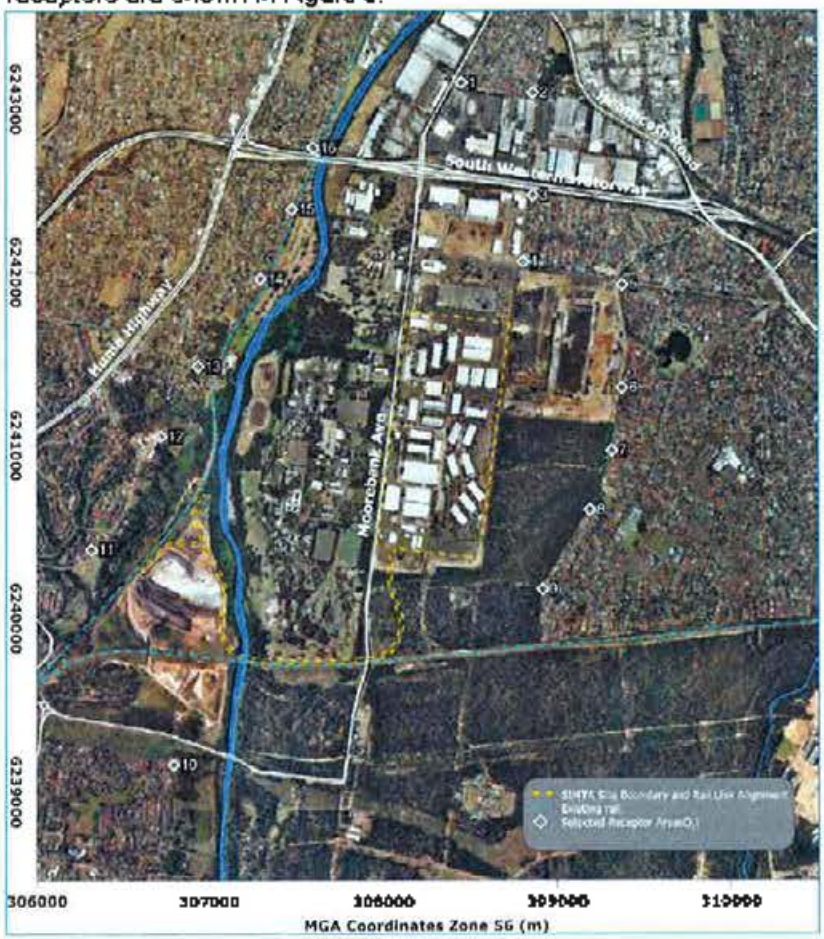

Figure 6: Location of Sensitive Receptor Areas (Source: EA 2013)

Construction

Construction air quality impacts primarily relate to airborne dust. Air quality impacts during construction would be managed under the *Protection of the Environment Operations Act 1997* (administered by the EPA) and through a Construction Environmental Management Plan. As the proposal is for a Concept Plan which does not permit construction without further development consents, only a qualitative assessment has been undertaken with detailed assessment being undertaken in future Development Applications.

The EPA initially raised concerns in relation to the section of proposed rail link over the Glenfield Waste Facility and the possible release of odours and uncontrolled landfill gas emissions during construction. Concerns were also raised regarding volatile organic compounds venting during underground storage tank removal and subsequent site remediation. The EPA advised that it would be supportive of a consultation role with the Proponent during preparation of the Development Application(s) for future stages particularly any stage where impacts to Glenfield Waste Facility are anticipated

Regional Air Quality

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

The EPA's Liverpool air quality monitoring station is located less than five kilometres away and is considered representative of ambient air quality experienced at the subject site. For the period 2010 to 2012, PM_{10} concentrations were consistently below the EPA's annual average reporting goal of 30µg/m^3 and therefore well below the interim goal of 50µg /m^3 (24 hour average). In relation to $PM_{2.5}$, average annual concentrations are mostly below the National Environment Protection Measure (NEPM) of 8µg/m^3. It should be noted that the $PM_{2.5}$ is an advisory goal and not a reporting goal.

An assessment of the 'worst case' air quality impacts for residents in Wattle Grove, Moorebank, Casula and Glenfield, including heavy vehicle traffic along Moorebank Avenue between the site and the M5 Motorway, has demonstrated compliance with applicable ambient air quality criteria (refer Table 6 below) as follows

- maximum daily PM_{10} concentrations at the nearest residential receptors are predicted to be up to 44.1µg/m^3, comparing favourably to an ambient air quality goal of 50µg/m^3 (24 hour average);
- maximum daily $PM_{2.5}$ concentrations at the nearest residential receptors are predicted to be 24.2µg/m^3, which is below the ambient air quality goal of 25µg/m^3 (24 hour average);
- cumulative PM concentrations would not result in any exceedences for PM_{10};
- the predicted increment of $PM_{2.5}$ meets the reporting standards but the cumulative concentration exceeds the average annual goal (driven by the existing elevated background levels), and
- maximum hourly NO_2 concentrations at the nearest residential receptors are predicted to be 118µg/m^3 (including a maximum background concentration of approximately 96µgm^3), which compares favourably to an ambient air quality standard of 246µgm^3 (1 hour maximum).

The EPA considers that the proposal could be developed in a manner that does not cause exceedences of air quality impact assessment criteria and indicated that the assessment approach is acceptable at the Concept Plan stage, however a more detailed and comprehensive assessment would be required at each subsequent Development Application taking into account international best practice for intermodal facilities.

In terms of regional air quality impacts, the results of the analysis concludes that when taking into account the reduction in road traffic and increase in rail traffic between Port Botany and the subject site the net effect would be a reduction of NO_x and PM_{10}. Comparing these net results to the emissions in Sydney in 2008, the proposal would result in a negligible impact at a regional level. Given the assessments have been based on a worst case scenario, the actual air quality impacts expected from normal operation of the intermodal facility are anticipated to be lower.

Table 6: Predicted Cumulative PM and NO_2 Concentration

Receptor Area	Predicted Cumulative PM Concentration (µg/m³)				Predicted NO_2 Concentration (µg/m³) (using OLM)	
	PM_{10}		$PM_{2.5}$			
	24 Hour Maximum (Goal: 50)	Annual Average (Goal: 30)	24 Hour Maximum (Goal: 25)	Annual Average* (Goal: 8)	1 hour maximum (Goal: 246)	Annual average (Goal: 62)
R1	43 7	18 6	23 9	10 2	109	17
R2	43 7	18 6	23 9	10.2	109	16
R3	43 7	18.6	23 9	10 2	109	17
R4	43 7	18.6	23.9	10 3	109	17
R5	43.7	18.6	23 9	10.3	109	17
R6	43 7	18 7	23 9	10.3	109	17
R7	43 8	18.7	23 9	10.3	109	17
R8	43 9	18.7	24.0	10.3	109	17
R9	44 1	18 7	24.1	10.3	109	17
R10	43 7	18.6	24.2	10.2	109	16
R11	43 7	18 6	24 0	10.3	121	17
R12	43 7	18.7	24.0	10 3	125	17
R13	43 7	18.7	24.0	10.3	125	18
R14	43 8	18.7	24.0	10 4	125	19
R15	43 7	18.7	24.0	10.3	125	19
R16	43 7	18.7	24 0	10 3	125	19

Note: **Advisory goal (not a reporting goal).**

Department's Consideration

The Department considers that the proposed mitigation measures to be employed during construction are reasonable and will be refined for subsequent Development Application stages when greater detail is available on construction activities. In addition, the recommended future assessment requirements include the need for the Proponent to undertake a more detailed assessment of air quality impacts during construction and to address the requirements of the EPA in subsequent Development Applications. The Department considers that sufficient assessment has been undertaken to address and identify likely construction related air quality impacts at the Concept Plan level.

During operation, the Department concurs that the key sources of emissions likely to result in air quality impacts are diesel powered locomotives carrying containers and diesel powered heavy vehicles distributing containers to service the catchment area. However, other on-site equipment such as reach stackers would use hybrid (petrol/electric or diesel electric) technology, the automated electric gantry system would operate on electricity and smaller forklifts would operate on LPG.

The Department understands current health advice that there is no established threshold for fine particles below which there are no health effects. Fine particles as small as 2.5 microns ($PM_{2.5}$) are of primary concern to human health as they can be readily absorbed into the lungs. At the Concept Plan level, relevant reporting criteria would be met, but $PM_{2.5}$ would exceed the advisory reporting standard by a negligible amount. This is due to the existing elevated background levels rather than the contribution from the proposal. The Department recognises that air quality impacts was a key issue raised in submissions, particularly from residents in Wattle Grove, Moorebank, Casula and Glenfield and notes that while cumulative concentration of $PM_{2.5}$ exceeds the average annual advisory goal, compliance with applicable ambient air quality reporting criteria would be achieved. Additionally, the Proponent has committed to undertaking a review of national and international best practice for the design and operation of intermodal facilities to identify management strategies to reduce air quality impacts. Details of the review and assessment outcomes are to be detailed in the subsequent Development Applications.

The EPA also identified a number of matters to be addressed in preparing subsequent Development Applications. This includes the abovementioned review of international best practice for the design and operation of intermodal facilities. In addition, the EPA requires the consideration of long duration idling and management of emissions from new and older locomotives, plant and heavy vehicles. The Department notes that at this stage the proposed facility would not require an Environmental

Protection Licence from the EPA, however does not preclude the EPA from requiring a licence in the future

The Department of Health recommended that all reasonable and feasible mitigation measures to control emissions of PM and NO_2 should be investigated with future Development Applications and implemented with the objective of keeping such emissions as low as possible

Based on its assessment and the recommendations of the EPA and the Department of Health, the Department has recommended future assessment requirements which include:

- detailed comprehensive air quality impact assessments for each stage of the proposal (including thorough assessment of mitigation measures), and
- a comprehensive review of intermodal terminal operation best practice process design, emission control and feasible and reasonable management measures that could be applied to each stage of the project (and benchmarking those measures against international best practice)

Cumulative air quality impacts associated with the MIT have also been considered by the Department in its assessment. In this regard, the Department has concluded that the cumulative impact for both the SIMTA and MIT sites is unlikely to result in additional impact when compared to only one of the proposals proceeding. This is due to the throughput of the precinct being constrained by the size of the catchment and capacity of the SSFL. In this regard, both sites would be competing for a limited number of TEUs

The Department is satisfied that the level of assessment of potential air quality impacts, for both construction and operation, is sufficient at Concept Plan level. The Department has recommended future assessment requirements to be adhered to in future Development Applications for the proposal. The Department considers that compliance with these requirements and the implementation of the identified mitigation measures during operation will result in acceptable air quality impacts.

5.3. Noise and Vibration

A Noise and Vibration Impact Assessment was conducted by the Proponent. 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* (DEC), *Assessing Vibration: A Technical Guideline* (DECC), *Environmental Criteria for Road Traffic Noise* (DEC), and the *Guidelines for the Assessment of Rail Infrastructure Projects* (DEC and DoP) and *Interim Construction Noise Guidelines*. 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 MIT have been included in this assessment. The cumulative impact assessment included predicted noise impacts at both the SIMTA and MIT sites and the relocated DNSDC site, taking into account the existing and proposed future activities. The report provides a list of recommended future assessment requirements for subsequent Development Applications and provision for mitigation measures to prevent any exceedences of noise and vibration criteria.

The closest residential properties (receivers) were identified to be located within four main areas, as shown in **Figure 7**, as follows:

- R1 – 500 metres to the east in Wattle Grove;
- R2 – 500 metres to the north in Moorebank;
- R3 – 900 metres to the west in Casula; and
- R4 – 1 500 metres 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.

Background noise levels at these receivers were determined by an unattended background monitoring program at four measurement locations (denoted as L1-L4) and shown in **Figure 7**.

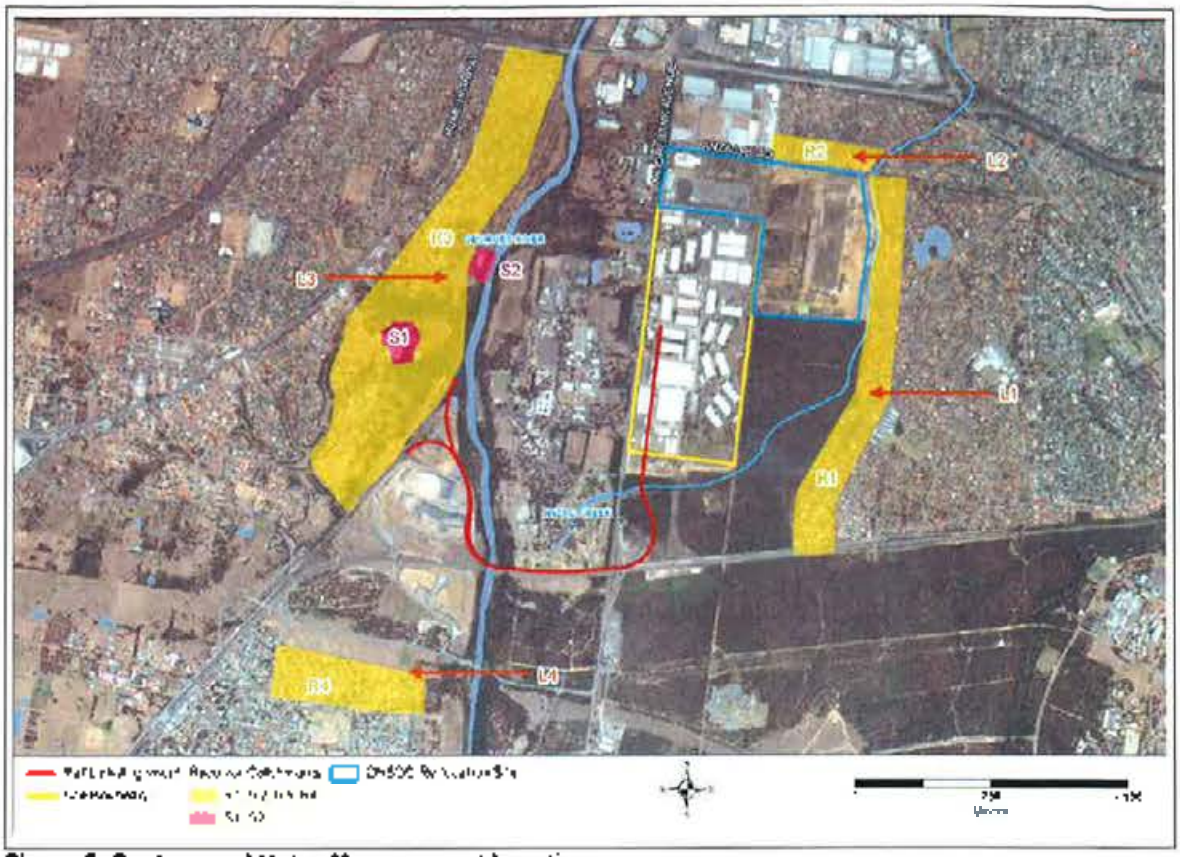

Figure 7: Background Noise Measurement Locations

The rating background noise level results of monitoring at the residential areas are provided in the following table.

Table 7: Rating Background Noise Levels (RBL)

Location	RBL (dBA)		
	Daytime (7am-6pm)	Evening (6pm-10pm)	Night (10pm-7am)
L1	42	37	37
L2	36	36	36
L3	41	37	34
L4	44	44	37

Construction Noise

For the purposes of the noise assessment, the modelling assumed that no warehousing was present on the SIMTA site to the east of the Stage 1 operations. However existing warehousing associated with the current DNSDC operations would remain on site until the commencement of construction of Stage 2 or Stage 3. Therefore the modelled results are regarded as a conservative approach.

Development of the SIMTA project would comprise a series of construction phases including site preparation, earthworks, drainage and utilities, granular base construction, pavement construction, buildings and rail construction. 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). The SWLs were measured at other sites to enable a comparison to be made at the SIMTA site during construction. Modelling over the entire construction site area was conducted to determine the predicted SWLs at each sensitive receiver location and a comparison against the relevant criteria. The results are shown in the following table.

Table 8: Predicted Construction Noise Levels at Sensitive Receivers

Phase	Total SWL	Level LAeq, 15min*						
		R1 (52dBA)	R2 (46dBA)	R3 (51dBA)	R4 (54dBA)	S1 (55dBA)	S2 55dBA)	SME (75dBA)
Site Preparation	122	48	45	46	34	46	55	72
Earthworks, Drainage & Utilities	118	44	41	42	30	42	51	68
Granular Base Construction	110	36	33	34	22	34	33	60
Pavement Construction	121	47	44	45	33	45	44	71
Buildings	119	45	42	43	31	43	42	69
Rail Sidings	119	46	42	60	46	45	42	69

Note: Goal in brackets

The results in Table 8 indicate that construction noise levels are predicted to comply with the noise management levels at all locations, except for one predicted exceedence at residential receiver R3, during rail construction work. This exceedence is predicted to occur where the proposed rail link joins the SSFL. Appropriate mitigation measures would be required as part of subsequent Development Applications and a Construction Noise and Vibration Management Plan to outline how the impact on residential receiver R3 is to be managed.

Potential vibration impacts during construction of the project are most likely to occur during the use of vibratory rollers which have a peak particle velocity (PPV) vibration level of 7.0mm/s at an operating distance of 5 metres and 3.0 mm/s at an operating distance of 20 metres. No vibration sensitive receivers were identified within the vicinity of the SIMTA site and no human comfort impacts were identified to be likely to occur as a result of the construction vibration. With regard to building damage a comparison of vibration criteria with predicted vibration levels during construction indicated that while no building damage is expected to occur in the vicinity of the site, on the site proper there is a potential for damage to existing buildings where construction work using vibratory rollers is required to be conducted in close proximity. The appropriate vibration criterion for these buildings is a limit of 3 mm/s. In order to ensure the construction vibration levels at the existing buildings are within the criterion the vibratory roller should only be used at a distance of 20 metres of any existing on-site building. In situations where it is necessary to operate the vibratory rollers within 20 metres of existing buildings, the available mitigation measures include monitoring the vibration levels and ceasing work should an exceedance of the criterion be detected, and/or implementation of alternative work methods for compacting the ground near these building using alternative equipment.

A program of construction noise and vibration monitoring would be developed for the SIMTA project and included in the Construction Noise and Vibration Management Plan, targeting monitoring of construction impacts in the four residential catchment areas.

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 that the SIMTA site would operate 24 hours per day. The predicted operational noise sources and levels are provided in the following table.

Table 9 Operational Noise Sources

Item	SWL – Individual (dBA – Laeq,15 min)	Quantity	SWL – Total (dBA – Laeq,15 min)
Electric Rail Mounted Gantry	96	15	108
Hybrid/Electric Reach Stacker	95	6	103
Hybrid/Electric Container Forklift	95	6	103
LPG Forklift (inside warehouses)	90	40	106
Trucks (idling & moving)	97	30	112
Train Locomotive	94	4	100
Warehouse HVAC	100	12	111

Table 9 is based on the worst case scenario for a 15 minute operating period of the site based on the maximum capacity of 1 million TEUs per annum. The maximum number of trains operating simultaneously on site has been included in the figures and mobile container handling equipment has been allowed for in addition to the electric rail mounted gantries. Warehousing is an internal activity and therefore not considered to contribute to the overall operational noise emissions of the site.

Modelling was undertaken to determine receiver noise levels during operation of the SIMTA site. It is noted that the surrounding area is subject to temperature inversions which tends to increase noise levels, through the refraction and focussing of sound waves onto a particular receiver. The modelling considered calm meteorological conditions during which temperature inversions do not occur, but this has been corrected. **Table 10** provides the results of operational noise monitoring at receivers.

Table 10 Operational Noise Monitoring Results at Residential Receivers

Receiver Catchment	Calm Metrological Conditions	Adverse Metrological Conditions		Criteria (dBA) Night Time (10pm-7am)		Exceedence (dBA)
	Predicted Level (dBA) $L_{Aeq,\ 15min}$	Predicted Level (dBA) $L_{Aeq,\ 15min}$	Predicted Level (dBA) $L_{Aeq,\ period}$	Intrusiveness $L_{Aeq,\ 15min}$	Amenity $L_{Aeq,\ period}$	
R1	34	39	36	42	40	0
R2	35	39	36	41	45	0
R3	38	43	40	39	40	4
R4	25	31	28	42	40	0

It is indicated in **Table 10** that site operational noise levels are predicted to exceed the criteria at residential catchment area R3 by up to 4 dBA during adverse meteorological conditions. No other exceedences were identified during modelling work. Further, it was identified through the Noise Impact Assessment that noise generated by onsite truck movements is likely to be the main contributor to noise impacts at the R3 catchment. The presence of a noise barrier on the western site boundary has the potential to reduce operational noise within the R3 area by approximately 4dBA. However, it is recognised that the presence of future structures on nearby sites (such as the adjacent MIT site) are also likely to provide shielding that reduces the level of site-generated noise at the sensitive residential receiver locations. Consideration should be given to a noise barrier at the western site boundary to provide noise mitigation for the R3 catchment during the assessment of future Development Applications.

Modelling was also undertaken for non-residential sensitive receivers during operation of the subject facility and it was predicted that no exceedences of operational noise criteria would occur in all weather conditions.

The Noise Impact Assessment provided the following additional results based on information available at the Concept Plan stage in relation to operational noise impacts:

- There is no predicted sleep disturbance impact at sensitive receivers based on the sleep disturbance screening levels, and therefore no further assessment of sleep disturbance is considered warranted.
- The increase in road traffic due to operations at the SIMTA site would result in increased road traffic noise along the M5 Motorway, Moorebank Avenue and north and south of the M5 Interchange. However the predicted increases are minor and comply with the *NSW EPA's Road Noise Policy* (RNP) criteria. Therefore no additional road traffic noise impact in the proximity of sensitive receivers is predicted to occur as a result of the project, and
- Rail noise generated by trains operating along the proposed rail corridor for the proposal has been modelled and is predicted to comply with the *NSW EPA's Interim Guidelines for the Assessment of Noise from Rail Infrastructure Projects* (IGANRIP) at the sensitive receivers.

Cumulative Noise Impact

A cumulative impact assessment was conducted as part of the Noise and Vibration Impact Assessment to consider the future cumulative operational noise impacts of the MIT proposal on land adjacent to the SIMTA site. Modelling of operational noise impacts generated by the concurrent operation of the MIT and SIMTA intermodal sites indicated no further exceedences of noise criteria provided in the *NSW Industrial Noise Policy* at the four residential catchment areas and three non-residential sensitive sites. The modelling results were provided in the Proponent's RtS, as shown in the following table.

Table 11: Cumulative Operational Noise Monitoring Results

Receiver	Predicted Level (dBA) $L_{Aeq,\ night}$		Criteria (dBA) $L_{Aeq,\ 15min}$	Exceedence (dBA)
	SIMTA only	Cumulative		
R1	32	33	40	0
R2	32	34	45	0
R3	34	37	40	0
R4	22	25	40	0
S1	33	36	45	0
S2	34	37	45	0
DSNDC	49	49	70	0

Modelling of road and rail generated noise during the concurrent operation of the SIMTA and MIT sites was not conducted given that it is a Concept Plan. A detailed assessment of operational road traffic and rail generated noise would be required to be included in the cumulative impact assessment for subsequent Development Applications

An operational noise management plan for the proposal would be prepared including a program of operational noise monitoring. This would enable validation of the model and assessment of the accuracy of noise predictions as well as the implementation of mitigation measures should exceedences of noise criteria be identified. Operational noise monitoring would include the four residential catchment areas and would be regularly reviewed to ensure the correct locations are targeted

Submissions received from the EPA and Bankstown, Campbelltown and Liverpool City Councils in response to exhibition of the EA (2013 revision) raised the following issues in regard to the operational noise assessment:

- concern that heavy trucks should be prohibited from travelling through designated residential precincts to minimise noise impacts on residential areas;
- concern that the noise impact assessment is based on an assumption that terminal generated road traffic will be restricted to Moorebank Ave;
- concern about the noise thresholds for future assessment of cumulative impacts;
- a need to consider temperature inversions in the cumulative assessment;
- a need to assess noise impacts of rail operations on the SSFL to sensitive receivers and consider that increases in train length would generated greater noise; and
- the noise impact assessment should take into account the proposed staged construction and operation of the project.

Further, authority submissions stated that the Proponent should be required to implement a range of intermodal operational best practise noise mitigation and management measures, with validation assessment and reporting against predicted noise levels

Noise and vibration was also raised as an issue in a number of public submissions that were received in response to exhibition of the EA (2013 revision). The majority of submissions expressed concern over the impact that 24 hour 7 day a week operations would have on local residential communities and night time noise impacts. In response, the Proponent confirmed that the noise assessment was based on the conservative approach, which has not taken into account the shielding effect of existing warehousing anticipated to remain on site for Stage 1. The cumulative impact assessment included predicted noise impacts at both the SIMTA and MIT sites and the relocated DNSDC site, taking into account the existing and proposed future activities at these sites.

The Proponent's revised Statement of Commitments includes recommended mitigation measures to address any potential noise and vibration impacts associated with the project. This includes a commitment to standard construction hours for the construction phase of the project and the implementation of best practises for the design and operation of the SIMTA site to reduce noise impacts associated with the project

Department's Consideration

A review of the Noise and Vibration Impact Assessment has indicated minor exceedences of noise management levels in the construction and operational phases of the project. The Department acknowledges that, based on the modelling results, exceedence of the noise management level during

construction of rail sidings at residential receivers located in catchment area R3 by up to 9dBA was predicted to occur. Based on the modelling results, the Department understands that no other construction noise exceedences were predicted to occur with potential to impact residential or non-residential sensitive receivers.

The Department considers that appropriate mitigation measures are available to address the construction noise impacts such as the use of temporary noise barriers, use of silencers on machinery and provision of respite periods. Such measures would be developed during the detailed design stage or as part of the Development Application in a Construction Noise and Vibration Management Plan prepared prior to the commencement of construction. The Department also notes that these construction works would be of a temporary nature.

With regard to operational impacts, it is noted that the model used in the Noise and Vibration Impact Assessment was based on Stage 1 only and an annual throughput of 250,000 TEUs. The Department considers this acceptable for the following reasons: Stage 1 is likely to result in the most noise intensive activities (train movements, unloading/loading of containers etc); subsequent stages would act as a noise barrier to sensitive receivers to the east and north east; and subsequent stages comprise predominately of warehousing and a freight village. The Department considers additional modelling would be required in subsequent Development Applications based on the full operating capacity of the SIMTA project and the presence of Stage 2 and Stage 3 warehousing/freight village on site. This has been recommended as a future assessment requirement with input from the EPA, and includes a requirement to ensure all site-dedicated locomotives meet the EPA noise limits for locomotives, and the Proponent prepares a train noise strategy to minimise noise on the rail link and within the intermodal terminal.

The Department acknowledges that the model indicates operational noise impacts associated with the site operations are limited to predicted exceedences of noise criteria at the R3 residential catchment. It is expected that these exceedences would be primarily due to onsite truck movements and could be mitigated by a noise barrier located along the western site boundary. This would be investigated further in subsequent Development Applications.

Further, it is considered that the presence of future buildings in the vicinity of the site, including the future MIT site (if developed), would provide shielding which is likely to effectively reduce the predicted noise impacts to surrounding sensitive receivers. The Department considers that the design and location of a noise barrier and other mitigation measures would be determined based on the results of further operational noise modelling at the Development Application stage. The Department acknowledges that, based on modelling results, sleep disturbance impacts from operation of the site are predicted to be within the relevant NSW policies and guidelines. In addition, the increase in road noise and rail noise resulting from the project during operations are predicted to be within the relevant NSW policies and guidelines.

The Department understands that modelling undertaken for the cumulative operational noise impact assessment of future concurrent operations of the MIT and SIMTA intermodal sites indicated no further exceedences of noise *NSW Industrial Noise Policy* criteria at any of the sensitive receivers. The Department acknowledges that this modelling was based on a number of assumptions and publicly available information at the time. Further, it is noted that modelling of road and rail noise increases at sensitive receivers was not included in the cumulative impact assessment and would be required to be included in subsequent Development Applications. The Department accepts that the cumulative assessment of both road and rail is difficult given the available information at the time of writing, and would expect further information would be available on the MIT site during preparation of subsequent Development Applications. While the Department considers that any impacts are likely to be acceptable, a future assessment requirement has been recommended to address cumulative impacts of the MIT and SIMTA in future applications when a greater degree of publicly available information is available. Notwithstanding, the Department acknowledges the constrained nature of the site in terms of the ability of the precinct to process more than 1.2M TEUs (plus 500,000 interstate TEUs) and is satisfied that the cumulative impacts can be appropriately managed through the preparation and implementation of management plans.

5.4. Historic Heritage

A Non-Indigenous Heritage Assessment was conducted in June 2013 during preparation of the EA (2013 revision) to identify areas and items of non-indigenous heritage significance on the subject site and rail corridor land and to assess potential impacts of the proposal on these items and on non-

indigenous heritage values. The assessment included consideration of the Australian Army Engineers Group and Kitchener House (formerly Anpafeelie), in accordance with the DGRs for the Concept Plan application. The non-indigenous heritage assessment was undertaken having regard to the site context, consideration of Commonwealth, state and local statutory requirements and in accordance with the *NSW Heritage Manual*.

A review of heritage listings on Commonwealth, state and local registers for the site and its immediate surroundings was undertaken in June 2013 and revealed the following heritage listings relevant to the Concept Plan application.

- The subject site (currently occupied by ONSOC), is included on the *Commonwealth Heritage List* and is protected by the EPBC Act due to the presence of 18 intact store buildings dating back to World War II that are considered as significant;
- Kitchener House to the north, Glenfield Farm to the west and the Holsworthy Group to the south-east (comprising a powder magazine and former army-related facilities) are included on the *Register of the National Estate*. The SIMTA site is on the Interim list of the register;
- No *Section 170 Register* listings were found within the study area. Nearby railway viaducts at Woodbridge Road and Congressional Drive, Casula are listed on the RailCorp S170 Register.
- Glenfield Farm is listed on the *State Heritage Register*; and
- The SME site (which the rail corridor is proposed to traverse) is listed in the *Liverpool LEP*. Six other items located in the vicinity of the study area are also listed in the *Liverpool LEP*, including:
  - Casula Powerhouse (former power station), Casula.
  - Rail Viaducts, Casula;
  - Glenfield Farm Group (the homestead, barn, dairy and stables), Casula.
  - Holsworthy Group; and
  - Kitchener House (formerly 'Anpafeelie'), Moorebank

The subject site currently contains 20 timber post and beam buildings dating date back to World War II that provide examples of construction techniques at that time and their associated military uses. These buildings include a Quartermaster's Store and a Carpentry Workshop with a timber frame and internal bays that are constructed of Oregon, an American timber (**refer Figure 8**). The rail corridor land does not contain items of non-indigenous heritage value. Construction of the rail link may result in potential impacts on Glenfield Farm, including visual setting and noise impacts due to an increase in activity along the rail link and SSFL however such impacts are not considered to be significant given the site context and ability to implement appropriate mitigation measures.

Figure 8: Existing Buildings on the subject site

The proposal is likely to impact upon the non-indigenous heritage value of the site. Construction of the new intermodal terminal is expected to involve demolition of World War II buildings. Furthermore, the construction of new buildings, landscaping and the installation of new water, sewerage, trade waste, and power infrastructure is expected to involve widespread subsurface impacts, which would affect known and potential archaeological resources.

The Non-Indigenous Heritage Assessment included an evaluation of several development options and the implementation of mitigation measures in order to minimise potential impacts on the Commonwealth heritage values. Options of conserving the World War II buildings *in situ* or relocation in a manner that preserves the physical fabric of the structures and adaptive reuse in the new development would reduce the overall impact to heritage values. Where demolition is unavoidable, architectural interpretation, archival and photographic recording of the site's military past, including World War II building structures and site layout, would be conducted with copies of the records held at the site.

A range of mitigation measures are proposed in the EA (2013 revision) and have been adopted in the revised Statement of Commitments, including:

- consultation with the appropriate heritage bodies regarding the potential listing of the site on the National Heritage List (NHL) or State Heritage Register (SHR);
- preparation of a Statement of Heritage Impact (SoHI) for each stage of the project, that addresses the legal status of the site pending its heritage register status at the time that approval is sought and the necessary actions for areas of archaeological potential within the development area of the SIMTA proposal;
- preparation of a SoHI for Glenfield Farm in association with the application seeking approval for the rail corridor, taking into account potential impacts on views and setting; and
- notifying the NSW Heritage Council and engaging a heritage consultant/archaeologist if any archaeological deposit or item of heritage significance is located within the study area and is at risk of being impacted.

In regard to the non-indigenous heritage value of surrounding areas, the proposal is unlikely to physically impact on Kitchener House or its setting and views, given its location approximately 65 metres to the north of the northern boundary of the site.

In response to exhibition of the EA (2013 revision), the Heritage Council provided comments confirming that the work completed to date on Non-Indigenous heritage issues at the site are appropriate for this Concept Plan stage of the project. However, additional work in the form of a revised Draft Statement of Commitments and preparation of a SoHI for endorsement by the Heritage Council to address any impacts to Glenfield Farm would be required once the project design is further refined. A SoHI would also be required prior to any historical archaeological investigations taking place on the site and endorsement from the Heritage Council would be required prior to works being approved.

Department's Consideration

The Non-Indigenous Heritage Assessment concluded that the proposal is likely to have a significant impact on the heritage value of the site, particularly due to the proposed demolition of World War II buildings. The Department understands that the heritage value of these structures lies in the timber post and beam construction and internal bays characteristic of architecture of the time and the buildings also serve to preserve evidence of army activity dating to World War II in this location.

It is understood that while the site is currently listed on the *Commonwealth Heritage List* and is protected by the EPBC Act, once Defence relocates the site it will lose its statutory heritage protection. In this regard, Liverpool Council has nominated the site for the State Heritage Register and listing in the Liverpool LEP (this process was commenced in September 2013) to provide for its ongoing protection. A letter from the Heritage Division confirms that it has received this request and is assessing the nomination and considering potential state heritage values before seeking the Heritage Council's advice on progressing the nomination.

While the heritage significance of the site is acknowledged, the existing buildings on site are not suitable for a modern intermodal facility for the following reasons:

- Insufficient height;
- Column centres do not allow for modern day warehouse racking;

- Timber structure not able to withstand collision with pallet fork; and
- Buildings do not meet current fire safety standards.

The Department understands that these reasons are consistent with Defence's justification for relocating to a neighbouring site to the north, and note that there is no viable ongoing use of the timber framing in its current form

In considering these reasons and acknowledging the public benefits of the proposed intermodal facility, the Department concurs with the Proponent's view for demolition of the existing buildings The Department understands that options to preserve the heritage value of the site may be available and a future assessment requirement has been recommended for the consideration of the adaptive re-use of the World War II buildings in a manner that preserves the buildings' structure and integrity The Department understands that re-use of heritage fabric within an interpretive context and archival and photographical recording prior to the commencement of any works would also be available and has been included as a recommended future assessment requirement. A greater level of detailed assessment of any impacts to the non-indigenous heritage value at the site would be undertaken at the Development Application stage.

Further, the Non-Indigenous Heritage Assessment also identified potential impact of the proposal on the non-indigenous value of Glenfield Farm. A SoHI would be required to be prepared at the Development Application stage and prior to the commencement of any work. Consideration would need to be given to the potential impacts of the rail corridor on the non-indigenous heritage value, views and setting of Glenfield Farm.

Overall, based on the available information at the Concept Plan stage, the Department considers that the impact on heritage items are acceptable and that appropriate mitigation measures are available to be considered at the detailed design stage of the proposal. The revised Statement of Commitments and recommended future assessment requirements are appropriate to preserve the non-indigenous heritage value of the subject site and Glenfield Farm, pending the detailed design of the proposal and rail link.

5.5. Other Matters

The Department has also considered other issues raised in submissions and the Proponent's assessment, including Aboriginal heritage visual amenity, contamination biodiversity hazards and risks, stormwater and flooding and greenhouse gas. The Department considers that these issues can be appropriately managed through the Proponent's revised statement of commitments and the proposed future assessment requirements. These issues will also be considered further in subsequent Development Applications for construction

Aboriginal Heritage
An Aboriginal Cultural Heritage Assessment (ACHA) conducted of the site indicated that there are no Aboriginal places within the study area subject to a Declaration under the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* and no native title claims over the site.

No Aboriginal places were found to be registered on AHIMS (Nov 2013) within the SIMTA site Consultation with the Registered Aboriginal Parties (RAPs) during the ACHA indicated that the subject site is not considered to have Aboriginal cultural heritage value, mainly due the site's largely disturbed status.

A total of 24 sites are registered on AHIMS (Nov 2013) as being located within a one kilometre area of the site (comprising 13 artefact scatters, 6 modified trees and 5 PADs).

The AHCA included site surveys and concluded that there is a low potential of indigenous heritage significance on the subject site, predominantly due to past development and extensive earthworks on the site. During the site inspection, flake scars and a potential flake core of mudstone were identified A number of Aboriginal stone artefacts and three PADs were also identified during the field surveys within the proposed rail corridor and on the adjoining land, as shown on **Figure 9**.

PAD1, PAD2 and Area 1 are considered to have moderate scientific significance. Artefacts identified in the rail corridor and on Commonwealth land to the south are considered to have moderate cultural significance No other parts of the study area were considered to have cultural, public or scientific Aboriginal heritage significance Potential impacts to indigenous heritage would be during construction

and caused by excavation, grading or use of metal tracked or heavy vehicles in any of the PADs. These would require further investigation in preparation of future Development Applications. The proposal is not considered likely to impact any other Aboriginal cultural heritage values.

Proposed general and site-specific mitigation measures include testing of the artefacts identified in the southern-most portion of the site and rail corridor directly south of the SIMTA site prior to the commencement of construction. A Care and Control Agreement completed between the Proponent and the RAPs would provide appropriate actions for the future management of the artefacts including recording and reburial nearby.

Mitigation measures proposed specifically for PADs 1 – 3 include a commitment to design the proposal in a manner that avoids ground surface modifications by excavation, grading, and use of heavy or metal tracked vehicles. If avoidance is not possible, test excavations in accordance with current archaeological practice and relevant guidelines would be used to inform subsequent Development Applications or in the Statement of Commitments should the Concept Plan be approved.

Cumulative non-indigenous heritage impacts of the SIMTA proposal and the MIT development were determined to be negligible, subject to the future compliance of the proposal with the recommended mitigation measures. This is based on the highly disturbed status of both sites due to previous and existing activities and past use of fill.

OEH's submission raised concern that impacts to PADs should be avoided and test excavations of any identified potential impact area should be undertaken in accordance with current archaeological practices and relevant guidelines. The revised Statement of Commitments includes preparation of a Statement of Heritage Impact (SoHI) for any test pit excavations.

Figure 9: Indigenous Heritage Sites (Source: EA 2013, AHMS 2012)

The Department acknowledges the highly disturbed nature of the site and notes that Aboriginal artefacts within the subject site are limited to minor findings at the southern boundary. Further, Aboriginal artefacts are present in the adjacent areas to the south and west of the site and the

Department considers the commitment to further impact assessment during subsequent Development Applications to be adequate.

The Department accepts the possible presence of Aboriginal heritage items within the rail corridor land and surrounding the Georges River and concurs with the approach of identification through ongoing Aboriginal consultation and assessments during future Development Applications. The Department considers that mitigation measures are available to manage unexpected finds, including the preparation and implementation of an unexpected finds procedure.

Visual Amenity

A view shed analysis using a Geographic Information System identified 40 key view locations comprising 35 views of the SIMTA site and 9 views of the rail corridor. 3-D modelling of the proposed site layout identified potentially visible project components at each view point shown in **Figure 10**, and considered visual adaptation, sensitivity, and night light spill.

The visual impact of the proposal is predicted to be low given the consistency of the development with the existing site and surrounding light industrial built environment. The site currently has minimal landscaping and virtually no visual screening to shield operations from the public view. A minor increase in visibility of the site's proposed new structures beyond the current levels may occur (refer **Figure 11**), however visual screening is available via vegetation planting across the site as part of the site's landscaping plan. The key areas proposed for screen planting would be the frontage along Moorebank Avenue, the eastern and southern site boundaries and the rail alignment area which provides the most prominent views of the site

Figure 10: Key Locations for View Shed Analysis (Source: EA 2013)

The addition of the proposed railway line is not considered to be a substantial change to the existing overall visual amenity south of the subject site. The heavily vegetated Commonwealth-owned land to the east would screen the proposal from much of the surrounding area.

The cumulative impact of the MIT site and relocated DNSDC proposals is considered to be moderate-high for communities adjacent to these proposals. However the relative contribution of the SIMTA site is considered to be low based on its location and proximity to the other sites and residential receivers. The neighbouring developments would provide a visual shield to most of the proposed development.

Figure 11: Indicative entry on Moorebank Avenue (Source: EA 2013)

Light spill impact is predicted to be within the Australian Standard AS4282-1997 '*Control of the Obtrusive Effect of Outdoor Lighting*' criteria. Mitigation measures, such as reducing the height of lighting, are available and would be assessed during subsequent Development Applications.

The Department of Defence and Department of Finance and Deregulation and Councils raised concerns regarding light spill impacts to residential dwellings and proposed building heights exceeding local planning controls in their submissions. Public submissions raised concern regarding the visual impact of additional heavy vehicles in the locality and of a proposed rail crossing over the Georges River.

The RtS included a reduction in the maximum height of light poles to reduce light spill impacts and the revised Statement of Commitments includes the preparation of an urban design and landscape plan to address potential impacts. Load limits and road treatments would be implemented if required to restrict or prevent residential roads being used by heavy vehicles.

Adjoining light industrial areas and a future MIT proposal to the west and the DNSDC relocation to the north would serve to reduce the contribution of the subject site to the locality's visual environment.

Regarding a proposed rail crossing over the Georges River, the Proponent confirmed that its design would aim to minimise visual impact such as alignment of the piers of the proposed rail bridge with those of the existing rail bridge. This would be the subject of further assessment during subsequent Development Applications.

The Department acknowledges that the visual impact is predicted to be low. This is based on the height of existing buildings, consistency of the proposal within its existing mixed light industrial locality and the proposed mitigation measures that comprise vegetation planting at the site boundaries to screen the intermodal terminal facility from view and the design of lighting. Additionally, a future assessment requirement has been recommended for visual amenity, urban design and landscaping to be addressed in any future Development Application, ensuring these matters will be adequately considered during subsequent applications.

Other issues have been assessed as detailed in **Table 12**.

Table 12: Other issues

Issue	Assessment Outcome
Biodiversity	The site is largely cleared of native vegetation, however pockets of vegetation corresponding to four threatened ecological communities listed in the schedules of the *Threatened Species Conservation Act 1995* are present. The rail corridor passes through vegetated Commonwealth land. A further two listed threatened species (*Persoonia nutans* and *Grevillea parviflora* ssp. *parviflora*) are present in this area and a third threatened species (*Acacia pubescens*) is known from adjacent vegetated areas. Four threatened fauna species were recorded in the broader study area (terminal and rail corridor) including three microbats and the grey-headed flying fox (*Pteropus poliocephalus*). Assessments of Significance indicate that only *Persoonia nutans* is likely to be significantly affected by construction and possibly indirectly by operation of the proposal. The Department accepts that there will be general impacts to flora and fauna and agrees that these impacts can be minimised and managed. Details of the measures used to manage and minimise such impacts are to be developed during the preparation of future Development Applications. In this regard, a future assessment requirement is recommended for further investigations to determine the extent of the impacts will be required. It is expected that these impacts are not likely to be significant and can be managed using standard construction and operational measures. A relatively large population of *P. nutans* is known on Commonwealth land to the south of the terminal site at the northern extent of vegetation and north of Anzac Creek. This population is considered significant due to its size and because it is towards the southern limits of its known distribution. Records are clustered in two patches extending west to east across the width of the site that are fragmented by cleared land and the existing rail spur. The indicative location of the proposed rail line would bisect the western-most and larger cluster of records. Further consideration of opportunities to modify the rail line to minimise impacts is recommended. Notwithstanding, the Department accepts that: • this may have negative consequential operational benefits in terms of site access and increased noise impacts for residential areas to the east as the rail line would move closer, and • it is not land owned by the Proponent and such a relocation may have implications for future use of the land by its owner It is recommended that the potential rail alignment be further investigated to see if any impact benefits could be achieved while not compromising operation or exacerbating social impacts of the proposal. Should this not be possible, the principles of minimise, mitigate and offset would apply. It is recommended that future assessment requirements should also include the need for an offset package be further developed and included in any future Development Application to address the likely biodiversity impacts of future stages. The offset must be developed in accordance with the *draft NSW Biodiversity Offset Policy for Major Projects* (State of NSW & OEH 2014) or any policy relating to offsetting of biodiversity impacts to the extent relevant at the time. DPI recommended that a Vegetation Management Plan be required as a condition of approval. The Department agrees that a framework which outlines the objectives and types of measures that would be employed to ensure impacts to vegetation adjacent to the rail corridor and river crossings is minimised should be included in any future Development Applications. This framework would form the basis of a more detailed management plan required to specify the actual measures that would be employed before, during and after construction.

Issue	Assessment Outcome
Contamination	The Concept Plan is subject to the application of SEPP 55 for the remediation of contaminated land to minimise risk of harm to human health and the environment. In accordance with Clause 7 of SEPP 55, a consent authority must consider whether land is contaminated prior to issuing development consent. A Preliminary Site Assessment of the SIMTA site and rail corridor land and a Phase 1 Environmental Site Assessment of the rail corridor land were undertaken including a review of previous site investigations. *Intermodal site* Eleven areas of concern were identified including underground storage tanks, a waste oil tank, filled areas of unknown material, soil and groundwater contamination, fragments of and an ongoing maintenance order in relation to contamination, as noted on the Section 149 Certificate for part of the SIMTA site on Moorebank Ave. Investigation of these areas during subsequent applications would be conducted to identify required remediation actions. *Indicative Rail Corridor Land* Six areas of potential subsurface contamination were identified and included partially remediated areas of unauthorised dumping, potential UXO, extensive filling of land, potential buried tunnel material contamination associated with the Glenfield Quarry and Waste Disposal Facility, and unidentified buried waste and the use of pesticides and herbicides for pest and weed control. Potential contaminants of concern in the rail corridor land include heavy metals, PAH, Hydrocarbons, Semi-volatile organic compounds VOCs, and phenolic compounds. Phase 2 investigations would be required during the first Development Application for the entire site and prior to the commencement of any construction works. This has been recommended as a future assessment requirement. Preparation of a CMP would provide detailed procedures on the handling, assessing, removal and disposal of potentially contaminated materials encountered during the development works, in accordance with regulatory requirements and followed by a validation audit. A contingency plan would also be prepared for unexpected contaminated materials encountered during the site works. It is noted that the proposed rail link within the Glenfield Waste Disposal Facility has the potential to disturb landfill infrastructure. The EPA raised concerns regarding routing of the proposed rail link to the SSFL via the Glenfield Waste Facility potentially impacting the effectiveness of the landfill pollution control systems, construction disturbing bonded asbestos present from the construction of the SSFL and the likely presence of historical underground fuel storage tanks on the SIMTA site and potential past spills and leaks of unknown quantities. The Department consulted with the EPA and with the owner of the Glenfield Waste Service Facility regarding the potential interactions of a rail link located across the waste disposal landfill site. Glenfield Waste Services confirmed that the method of encapsulation of waste materials within the landfill facility was designed for this proposed land use with load bearing capacity. Additionally Glenfield Waste Services indicated that comprehensive surveys of the landfill site have been conducted in consultation with the EPA to confirm the suitability of the land for the proposed future land use. The EPA supports the Proponent's commitment to undertake an intrusive contamination investigation for the rail corridor land and recommended this be included in the Statement of Commitments (SoCs). Further the EPA agreed to a recommended future assessment requirement which requires the Proponent to consult with the EPA for this aspect of the rail link prior to lodging a Development Application for Stage 1. The Department has also recommended a Contamination Management Plan (CMP) be prepared as part of any subsequent Development Application and would include procedures

Issue	Assessment Outcome
	for landfill gas management for any excavation work required in this location The Department considers that once clearly identified the contaminated lands can be appropriately managed in subsequent Development Applications and has recommended future assessment requirements for further investigations including a Phase 2 environmental site assessment of the rail corridor land. Subject to these requirements and further detailed consideration in subsequent Development Applications, the Department considers the site can be suitable for its future intended use and contaminated land risks can be appropriately managed.
Hazards and Risks	The following key potential hazards and risks were identified: • Presence of asbestos in approximately 15% of all existing buildings and in the soil which poses a construction risk. An asbestos management plan would be prepared during subsequent Development Applications in accordance with *Code of Practice for the Management and Control of Asbestos in the Workplace* (NOHSC, 2005) and may include an asbestos removal control plan and an emergency plan. • Potential transport, storage and handling of dangerous goods on-site and off-site: This operational risk would depend on the specific activities undertaken by each tenant handling dangerous goods on the SIMTA site. A Hazard and Risk Management Plan would be prepared and the Emergency Response Plan for the site that would be required to be signed by each tenant prior to commencement of leases. Further the requirements in the *Code of Practice for storage and handling of dangerous goods* (Work Cover NSW, 2005) would be adopted in these plans. The Site Operational Plan would include management of export and import of dangerous goods at the SIMTA site in accordance with international shipping legislation; and • Bushfire: The land east, south and west of the site comprises predominantly vegetated land which is categorised as Vegetation Category 1 bushfire prone land (Liverpool City Council 2010). In addition, activities at the site may involve fuel loading. Therefore bushfire is both a construction and an operational risk. Mitigation measures may include building protection, designated fuel loading areas in asset protection zones and utility services for emergency service use. A Bushfire Management Plan would be prepared and a future assessment requirement has been recommended requiring the Proponent to undertake an assessment against Planning for Bushfire 2006. Cumulative hazards and risks of the SIMTA and MIT proposals due to the possible simultaneous handling of dangerous goods was determined to be reduced by the separation distance between the two operations. Likewise bushfire risk is not considered to be increased by the operation of both facilities provided that each develops and maintains hazard and risk and bushfire management plans. Additionally, risks could be further mitigated by the preparation of bushfire management and emergency response plans and procedures together and co-ordinated between the SIMTA and MIT operations. The Proponent has included a commitment to prepare further detailed assessment reports for future Development Applications. Specifically, a Preliminary Hazard Assessment as required by the provisions of SEPP 33 would be prepared, taking into account the nature and volume of goods to be handled by each tenant, in addition to the management plans identified above. The Department considers Hazards and Risk at the SIMTA site could be managed appropriately subject to the preparation and implementation of applicable management plans.
Flooding and Soil and Water	As part of the EIS, the Proponent prepared a Stormwater and Flooding Environmental Assessment, a Flood Study and a Stormwater Management assessment. The southern portion of the site and Glenfield Waste Facility land has been

Issue	Assessment Outcome
	identified as being flood affected by Liverpool City Council. The intermodal site comprises three catchments and three existing stormwater discharge outlets. Therefore the potential downstream environmental impacts associated with stormwater and flooding in relation to water quantity, water quality and fish passage and habitat in these locations were assessed. *Soil and Water* Potential impacts associated with the proposal were identified during demolition, construction and operational phases of the proposal. There are a range of mitigation measures available to address the potential stormwater during these phases. The design and installation of a stormwater management system would provide adequate grades for controlled surface drainage across the site, surface water detention structures and erosion and sedimentation controls. In addition, stormwater mitigation measures would be stipulated in a Construction Environmental Management Plan which would include a Soil and Water Management Plan and Erosion and Sediment Control Plan, Operational Environmental Management Plan and spill and emergency response procedures for the site. Progressive development of the site would reduce the total surface area of exposed material at any one time and better manage and reduce sediment mobilisation. Further, scheduling of works would ensure the bulk of the early earthworks is conducted in the driest period of July to September where practical. Prompt and progressive revegetation and rehabilitation of surface areas would be undertaken and all temporary flow diversion barriers and in-stream sediment control barriers would be removed as soon as possible and in a manner that avoids impact. The detailed design of any watercourse crossings required for the proposal would be completed in future Development Applications and would include detailed consideration of water quality and fish passage impacts resulting from crossing structures for Anzac Creek and Georges River. Both the SIMTA and MIT sites would be required to maintain separate stormwater controls during construction and operation in accordance with local, State and Commonwealth regulations therefore the cumulative impacts of the proposal would be negligible as each party would be required to manage stormwater appropriately. *Flooding* Potential flooding impacts associated with the proposal were also identified during demolition, construction and operation of the site, with mitigation measures available to address the potential flooding impacts. Similar to soil and water, flooding impact mitigation measures would also be stipulated in Environmental Management Plan documents during construction, following any approval for Stage 1 works. Liverpool Council and the Department of Defence and Department of Finance and Deregulation raised concern regarding the potential impact to flood levels upstream of the proposal in their submissions. Potential flood impact of the railway link was also raised. Further, the DPI raised the issue of riparian corridors and the width of riparian buffer zones for proposed watercourse crossings for the Georges River and Anzac Creek in its submission. NOW recommended that waterway crossings and outlet structures are designed in accordance with the *NOW Guidelines for Controlled Activities*. NSW Fisheries recommended a 30m wide setback is established on either side of Anzac Creek and appropriate widths along the Georges River according to its riparian requirements. These matters were addressed by the Proponent based on the level of information available at the Concept Plan stage and would be further investigated in future Development Applications. Notwithstanding, the Flood Study undertaken

Issue	Assessment Outcome
	by the Proponent concluded that the proposal could be designed to ensure impacts to surrounding properties are minimised. The associated infrastructure such as the new bridge crossing of the Georges River is likely to result in an increase in afflux by up to 30mm (600 metres upstream) and 10mm (1 kilometre upstream). The proposed culvert over Anzac Creek is considered to have a negligible impact on properties within the Anzac Creek catchment. The Department considers the proposal can be designed to cater for adverse flood events and ensure additional flooding impacts as a result of the proposal are minimised. Mitigation measures are available, such as design of the on-site stormwater detention system to control downstream flows and a flooding emergency response plan. *Conclusion* The Department considers stormwater, flooding and erosion and sediment impacts that may result from the proposal to be a minor issue that can be appropriately managed by the design and implementation of appropriate mitigation measures and management procedures. The Department considers that the environmental impact assessment carried out to date is adequate based on available information at the Concept Plan stage. Outstanding matters such as a detailed stormwater management system for the site would be prepared in subsequent Development Applications. A future assessment requirement has been recommended which requires to Proponent to assess impacts to Georges River and Anzac Creek, and assess flooding impacts and characteristics. This requirement would need to be addressed for the entire site as part of any future application for Stage 1.
Greenhouse gas	The Proponent's assessment calculates greenhouse gas emissions associated with the construction process, construction materials and operation of the proposal. Approximately 16,597 tCO_2e per annum is expected to be emitted during site construction (including preparation). 196,201 tCO_2e embodied within construction materials and 53,668 tCO_2e would be emitted during operation of the proposal. The assessment concluded that the proposal would offset the emissions associated with construction and those embodied in the construction materials within 6 years of operation due to the emissions saved annually (43,206 tCO_2e). This would be primarily as a result of a reduction in freight transport. It is considered that the assessment has been undertaken in accordance with the relevant guidelines and provides an adequate level of information to be considered at a Concept Plan level. The Department notes the emission savings as a result of the proposal and subject to conditions imposed at subsequent stages for construction (such as the preparation of an Energy Efficient Plan and consideration of opportunities to use renewable energy sources), would minimise or optimise energy use during construction and operation.

6. RECOMMENDATION

The Department notes public authority and community submissions focused around the key environmental impacts associated with the proposal including air quality, traffic and transport, noise and heritage and has considered the Proponent's EA, RtS, and revised Statement of Commitments and 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 MIT, can be managed and/or mitigated to an acceptable level

The Department considers the Concept Plan should be recommended for approval and has proposed a range of conditions of approval and future assessment requirements for subsequent Development Applications for the Planning Assessment Commission's consideration These draft conditions and future assessment requirements would ensure that the commitments made in the EA and RtS are implemented as well as strengthening the management and mitigation of identified impacts where the Department, other government agencies and the general public have raised these

The Department considers the proposal will have significant economic benefits to the State of NSW, with a $490 million direct capital investment into the south-western Sydney region and generation of up to 2,840 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 Department acknowledges that the proposal would satisfy this long identified need

It is RECOMMENDED that the Planning Assessment Commission.

- **consider** the findings and recommendations of this report
- **approve** the SIMTA Intermodal Facility Concept Plan subject to the conditions of approval and future assessment requirements; and
- **sign** the attached instrument of approval (**Appendix E**).

12.6.14

Karen Jones 12.6.14
Director
Infrastructure Projects

Chris Wilson
Executive Director
Major Projects Assessment

APPENDIX A ENVIRONMENTAL ASSESSMENT

See the Department's website at:
http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=4400

APPENDIX B SUBMISSIONS

See the Department's website at:
http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=4400

APPENDIX C PROPONENT'S RESPONSE TO SUBMISSIONS

See the Department's website at:
http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=4400

APPENDIX D INDEPENDENT TRAFFIC REVIEW

See the Department's website at:
http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=4400

APPENDIX E INSTRUMENT OF APPROVAL

See the Department's website at:
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APPENDIX F COMMONWEALTH APPROVAL

See the Department's website at:
http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=4400

APPENDIX G SUPPLEMENTARY INFORMATION

See the Department's website at:
http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=4400