

# Moorebank Precinct **East** - Stage 2 Proposal

Response to Submissions - SSD 16\_7628



**SIMTA**

**SYDNEY INTERMODAL TERMINAL ALLIANCE**

Part 4, Division 4.1, State Significant  
Development



# SIMTA MOOREBANK PRECINCT EAST

## Response to Submissions Report

SSD 16\_7628

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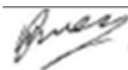
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## GLOSSARY AND KEY TERMS

The table below provides a summary of the key acronyms and terms which are included within this report

Acronym / term	Meaning
<b>Acronyms</b>	
AADT	average annual daily traffic
AAQ NEPM	National Environment Protection (Ambient Air Quality) Measure
ABPP	Australian Bushfire Protection Planners Pty Ltd
ACM	Asbestos containing material
ADG	Australian Code for Transportation of Dangerous Goods by Road and Rail
ADT	average daily traffic
AEP	Annual Exceedance Probability
AIP	Australian Infrastructure Plan (Infrastructure Australia, 2016)
ARTC	Australian Rail Track Corporation
AUD	Australian Dollar
BAR	Biodiversity Assessment Report
BOS	Biodiversity Offset Strategy
BPR	Best Practice Review
CAQMP	Construction Air Quality Management sub-plan
CBD	Central Business District
CBNTCAC	Cubbitch Barta Native Title Claimants Aboriginal Corporation
CCC	Campbelltown City Council
CEMP	Construction Environmental Management Plan
CEP	Community Engagement Plan
CFFMP	Construction Flora and Fauna Management sub-plan
CHMP	Construction Heritage Management sub-plan
CLM Act	<i>Contaminated Land Management Act 1997</i>
CLMP	Contaminated Land Management sub-plan
CNVMP	Construction Noise and Vibration Management Plan
CO	Carbon Monoxide
COPC	Chemicals of Potential Concern
CORTN	Calculation of Road Traffic Noise
CTIA	Construction Traffic Impact Assessment
CTMP	Construction Traffic Management Plan
CZMP	Coastal Zone Management Plan

Acronym / term	Meaning
DAs	Development Applications
DACHA	Darug Aboriginal Cultural Heritage Assessments
DALI	Darug Aboriginal Landcare Incorporated
dBa	decibel
DCAC	Darug Custodian Aboriginal Corporation
DCP	Development Control Plan
DECCW	Department of Environment, Climate Change and Water
DJLU	Defence Joint Logistics Unit
DLO	Darug Land Observations
DoEE	Commonwealth Department of Environment and Energy
ECP	empty container park
EEC	Endangered Ecological Community
EDD	Explosive Detection Dog
EMS	Environmental Management System
ESCP	Erosion and Sediment Control Plan
ESD	Ecologically Sustainable Development
ENM	Excavated Natural Material
EOW	Explosive Ordnance Waste
EPA	Environmental Protection Authority
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EP&A Regs	<i>Environmental Planning and Assessment Regulation 2000</i>
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
EPIs	Environmental Planning Instruments
EPL	Environmental Protection Licence
ERA	Environmental Risk Analysis
ERP	Emergency Response Plan
FBA	Framework for Biodiversity Assessment
FERP	Flood Emergency Response Plan
FFMP	Flora and Fauna Management Plan
FIAB	Freight Infrastructure Advisory Board
GFA	Gross Floor Area
GHG	Greenhouse gas
GHS	Globally Harmonised System
GLALC	Gandangara Local Aboriginal Land Council
GMA	Greater Metropolitan Area

Acronym / term	Meaning
GP	Gross Pollutants
GWP	Global warming potential
GSC	Greater Sydney Commission
HECRAS	Hydrologic Engineering Center River Analysis System
HQ	Hazard Quotient
HRA	Health Risk Assessment
ICNG	Interim Construction Noise Guidelines
INP	Industrial Noise Policy
IPCC	Intergovernmental Panel on Climate Change
KPI	key performance indicator
ISEPP	State Environmental Planning Policy (Infrastructure)
LALC	Local Aboriginal Land Council
LCC	Liverpool City Council
LEPs	Local Environmental Management Plan
LGA	Local Government Area
LLEP	<i>Liverpool Local Environment Plan 2008</i>
LMARI	Liverpool Moorebank Arterial Road Investigations
LNG	Liquefied Natural Gas
LoS	Level of Service
LPT	Liquefied Petroleum Gas
LTEMP	Long-Term Environmental Management Plan
MNES	Matters of National Environmental Significance
Mt	mega-tonnes
MUR	Moorebank Units Relocation
NGA	National Greenhouse Accounts
NML	Noise Management Levels
NO <sub>2</sub>	Nitrogen Dioxide
NOA	Naturally occurring asbestos
NOHC	Navin Officer Heritage Consultants
NW Act	<i>Noxious Weed Act 1993</i>
OEH	Office of Environment and Heritage
OEMP	Operational Environment Management Plan
OOH	Out of Hours
OSD	On-site detention
OTMP	Operational Traffic Management Plan

Acronym / term	Meaning
OTTIA	Operational Traffic and Transport Impact Assessment
PAC	Planning Assessment Commission
PAD	Potential Archaeological Deposits
PCEMP	Preliminary Construction Environmental Management Plan
PCT	Plant Community Type
PCTMP	Preliminary Construction Traffic Management Plan
PFAS	Perfluoroalkyl and Polyfluoroalkyl
PHA	Preliminary Hazard Assessment
PIRMP	Pollution Incident Response Management Plan
PM	Particulate matter
POEO Act	<i>Protection of the Environment Operations Act 1997</i>
POTMP	Preliminary Operational Traffic Management Plan
PPE	Personal Protective Equipment
PRA	Preliminary Risk Assessment
RAE	Royal Australian Engineers
RAP	Remediation Action Plan
RAPs	Registered Aboriginal Parties
RBLs	Rating Background Levels
REP	Regional Environmental Plan
RFS	Rural Fire Service
RING	Rail Infrastructure Noise Guideline
RNP	Road Noise Policy
SEPP	<i>State Environmental Planning Policy</i>
SEPP 33	<i>State Environmental Planning Policy No 33 – Hazardous and Offensive Development</i>
SEPP 55	<i>State Environmental Planning Policy No 55 – Remediation of Land</i>
PP 64	<i>State Environmental Planning Policy No 64 – Advertising and Signage</i>
SF6	Sulfur hexafluoride
SME	School of Military Engineering
SO <sub>2</sub>	Sulfur Dioxide
SSFL	Southern Sydney Freight Line
SSI	State Significant Infrastructure
SWL	Sound Power Level
SWMP	Soil and Water Management Plan

Acronym / term	Meaning
SWSLHD	South Western Sydney Local Health District
TCE	Trichloroethylene
TEC	Threatened Ecological Communities
tCO <sub>2</sub> -e	tonnes of carbon dioxide equivalents
TCS Act	<i>Threatened Species Conservation Act 1995</i>
TLALC	Tharawal Local Aboriginal Land Council
TN	Total Nitrogen
TP	Total Phosphorus
TSP	Total Suspended Particulate matter
TSS	Total Suspended Solids
USTs	Underground storage tanks
UXO	Unexploded ordnance
VENM	Virgin Excavated Natural Material
VMS	Variable Message Signs
VPA	Voluntary Planning Agreement
WHO	World Health Organisation
WM Act	<i>Water Management Act 2000</i>
WSUD	Water Sensitive Urban Design
WWI	World War 1
WWII	World War 2
<b>Key terms</b>	
MPE Concept Approval (MPE Concept Plan Approval)	MPE Concept Approval (MP 10_0193), granted by DP&E on 29 September 2014 for the development of an intermodal terminal facility including; a rail link connecting the site to the Southern Sydney Freight Line, an intermodal terminal, warehousing and distribution facilities and a freight village.
MPE EPBC Approval	Commonwealth Approval (No. 2011/6229) granted in March 2014 under the <i>Environment Protection and Biodiversity Conservation Act 1999</i> , for the impact of the MPE Project on listed threatened species and communities (sections 18 and 18A of the EPBC Act) and Commonwealth land (sections 26 and 27A of the EPBC Act).
MPE Concept EIS	The Environmental Impact Statement prepared to support the application for approval of the MPE Concept Plan under the <i>Environmental Planning and Assessment Act 1979</i> .
MPE Project	The MPE Intermodal Terminal Facility as approved under the MPE Concept Approval (MP 10_0193) and the MPE EPBC Approval (2011/6229).
MPE site	Including the former DSND site and the land owned by SIMTA which is subject to the MPE Concept Plan Approval (Lot 1

## MPE Stage 2 RtS

Acronym / term	Meaning
	DP1048263). The MPE site does not include the rail corridor, which relates to the land on which the rail link is to be constructed.
MPE Stage 1 Proposal	MPE Stage 1 Proposal (14-6766) for the development of the Intermodal terminal facility at Moorebank. This reference also includes associated conditions of approval and environmental management measures which form part of the documentation for the approval.
Proposal	MPE Stage 2 Proposal (the subject of the EIS and this RtS), namely Stage 2 of the MPE Concept Approval (MP 10_0193) including construction and operation of warehousing and distribution facilities on the MPE site within the Moorebank Precinct.
MPE Stage 2 RtS	This report, which was prepared in response to the submissions received regarding the MPE Stage 2 Proposal.
Native vegetation	For the purposes of this assessment, native vegetation is defined as areas of plant community types mapped by Arcadis and WSP Parsons Brinckerhoff in the Moorebank Precinct (including Moorebank Precinct East and Moorebank Precinct West), being a consolidation of all assessments for the Moorebank Precinct conducted since 2011.
Amendments to the Proposal	Amendments proposed to the MPE Stage 2 Proposal to respond to submissions provided by the government agencies and the community and also as part of design progression of the Proposal. Amendments to the Proposal are detailed and assessed in Section 6 of this RtS.
Amended Proposal	The Amended Proposal comprises the Proposal as described in the MPE Stage 2 EIS including Amendments to the Proposal. A full description of the Amended Proposal is provided in Appendix I of this RtS.
Proposal site / Proposal footprint	The subject of the MPE Stage 2 EIS, the part of the MPE site which includes all areas to be disturbed by the MPE Stage 2 Proposal (including the operational area and construction area).
Construction area / Construction footprint	Extent of construction works, namely areas to be disturbed during the construction of the Proposal. This area has been updated in this RtS.
Amended construction area / Amended construction footprint	Extent of construction works, namely areas to be disturbed during the construction of the Amended Proposal, as detailed in this RtS.
Operational area / Operational footprint	Extent of operational activities for the operation of the Proposal.
Amended operational area / Amended operational footprint	Extent of operational activities for the operation of the Amended Proposal, as detailed in this RtS.
IMT facility	The Intermodal terminal facility on the Proposal site, including truck processing, holding and loading areas, rail loading and container storage areas, nine rail sidings, loco shifter and an administration facility and workshop.

Acronym / term	Meaning
Rail link connection	Rail connection located within the Proposal site which connects to the Rail link included in the MPE Stage 1 Proposal (SSD 14-6766).
Proposal operational rail line	The section of the Rail link connection and Rail link between the SSFL and the Rail link connection (included in the MPE Stage 1 Proposal) to be utilised for the operation of the Proposal. and the Rail link connection
Conservation area	Vegetated area to the west of the Georges River, to be retired as a bio-banking site for use as a biodiversity offset, as part of the MPW Project.
Moorebank Precinct	Refers to the whole Moorebank intermodal precinct, i.e. the MPE site and the MPW site.
Rail link	Part of the MPE Stage 1 Proposal (14-6766), connecting the MPE site to the SSFL. The Rail link (as discussed above) is to be utilised for the operation of the Proposal.
Revised Environmental Management Measures (REMMs)	The environmental management measures for the MPW Concept Approval as presented within the <i>MPW Supplementary Response to Submissions</i> (SRtS) (PB, 2015a) and approved under the MPW Concept Approval.

## EXECUTIVE SUMMARY

### Overview

SIMTA are seeking approval for the construction and operation of the Moorebank Precinct East (MPE) Stage 2 Proposal (the Proposal) (SSD 7628), which will be the second stage of development under the MPE Concept Approval (MP 10\_0913).

The Proposal involves the construction and operation of warehousing and distribution facilities on the MPE site and upgrades to approximately 1.5 kilometres of Moorebank Avenue and would comprise the following key components:

- Warehousing comprising approximately 300,000m<sup>2</sup> GFA and additional ancillary offices
- A freight village, comprising 8,000m<sup>2</sup> GFA of retail, commercial and light industrial land uses
- Establishment of an internal road network, and connection of the Proposal to the surrounding public road network
- Ancillary supporting infrastructure
- Subdivision of the MPE Stage 2 site
- An upgrade to Moorebank Avenue
- Upgrading existing intersections along Moorebank Avenue to the south of Anzac Road.

The Environmental Impact Statement (EIS) for the Proposal was publicly exhibited between 13 December 2016 and 24 February 2017.

This Response to Submissions report (RtS) has been prepared in accordance with clause 83 of the *Environmental Planning and Assessment Regulation 2000*, to address submissions raised by government agencies and the community during the public exhibition of the EIS. This RtS provides further information for the Proposal in order to respond to and satisfy the submissions received (refer to Sections 4 and 5 of this RtS).

This RtS also identifies and considers amendments to the exhibited Proposal, now known as the Amended Proposal. The Amended Proposal includes the following components:

- Realignment of the OSD in the north-eastern corner of the Proposal site
- Changes to the horizontal extent of the Moorebank Avenue Upgrade
- Changes to warehouse layout in two separate locations
- Alterations to drainage design to the south of the MPE site
- Amendments to the Construction Area and Operational Area as a result of the above amendments

These amendments to the Proposal have been included to address submissions received, reflect progression in design development since lodgement of the EIS, provide additional clarity, and also to minimise the overall environmental impact of the Proposal where possible (refer to Sections 6 and 7 of this RtS).



## Project benefits

An IMT at Moorebank would respond to Sydney's need for more freight handling capacity. The Amended Proposal is a critical component in responding to this need through the delivery of warehousing that will optimise operation of the IMT and support the movement of containerised freight by rail.

Projected growth in trade volumes will lead to an increase in freight movements to and from interstate, intrastate and across the Sydney Greater Metropolitan Area. This will pose substantial challenges for the supply chain which is currently dominated by road transport. To meet these challenges and to allow for increased use of rail, it is necessary to invest in new IMT capacity and associated warehousing and distribution facilities at locations accessible to freight rail lines.

The MPE project (and the Amended Proposal) would deliver the following significant benefits:

- **Economic benefits:** The unit costs of transporting containers by rail would be reduced, thereby increasing the share of freight movements by rail. This would improve productivity, reduce operating costs, increase reliability, and reduce costs associated with road damage, congestion and accidents. The Amended Proposal would increase operational and cost efficiencies for the handling, storage and distribution of freight
- **Job creation:** The Amended Proposal would result in the creation of approximately 200 construction employment opportunities during the peak construction period of the Amended Proposal and 1,408 full time equivalent staff for the operation of the warehousing area
- **Improved environmental outcomes by contributing to reducing road congestion:** the introduction of an IMT at Moorebank would result in fewer truck journeys every day (to and from Port Botany), resulting in reductions in greenhouse gas emissions, fuel consumption and air pollution and potential improvement in road network performance around Port Botany
- **Social benefits through reducing road traffic and associated noise along key road freight routes between Moorebank and Port Botany and local job creation**
- **Easing the Port Botany bottleneck to enable the Port to more effectively cope with future growth in container trade and provide large scale freight capacity.**

The Amended Proposal would provide supporting freight distribution functionality from the IMT, thereby reducing the need for heavy vehicles to travel to Port Botany and contributing to reducing road congestion. The inclusion of warehouses and distribution facilities at the same location as the IMT contributes to provision of additional capacity on the freight transport network, thereby enhancing the capacity of Port Botany and enabling more efficient business operations.

## Consultation on the Environmental Impact Statement

The EIS was placed on public exhibition between 13 December 2016 and 24 February 2017 in accordance with Section 89F (1)(a) of the *Environmental Planning and Assessment Act 1979* (EP&A Act). During the preparation of the EIS and public exhibition period, consultation activities were undertaken to engage key stakeholders and the community on information in the EIS and provide guidance on the submissions process. This consultation was undertaken through a range of media including emails, phone conversations, face-to-face meetings and letter submissions. Submissions on the Amended Proposal were received by the NSW Department of Planning and Environment (DP&E) during the exhibition period.

## Purpose of this report

This RtS documents and responds to the issues raised in community and stakeholder submissions received during the public exhibition of the EIS. This RtS provides additional clarity on the Proposal, where relevant, and also details amendments made to the exhibited Proposal, identified as the Amended Proposal. The RtS provides a description of the amendments to the Proposal and further environmental assessment of the Amended Proposal undertaken to serve as an addendum to the technical specialist reporting provided within the EIS. A consolidated description of the Amended Proposal, including amendments to the Proposal and the Proposal as exhibited in the EIS has been provided in Appendix I of this RtS.

## Overview of submissions

Submissions were received from a total of eight government agencies, comprising the following:

- Transport for NSW (TfNSW)
- Environment Protection Authority (EPA)
- Office of Environment and Heritage (OEH)
- Geological Survey NSW
- Department of Primary Industries (DPI)
- NSW Heritage Council
- Liverpool City Council (LCC)
- Campbelltown City Council (CCC).

A total of three submissions were received from special interest groups, including immediately surrounding land owners, comprising the following:

- Moorebank Residents Action Group
- ABB Australia
- East Liverpool Progress Association.

In addition to this, DP&E received a total of 156 submissions from community members and landowners, all of which were in opposition to the Proposal.

Of the 156 submissions 77% were from residents in the Liverpool Local Government Area (LGA) with 15% of submissions having not provided a location. The remaining 8% of submissions were from residents within the Campbelltown, Canterbury - Bankstown, Fairfield, North Shore, Sutherland, Georges River, and Parramatta LGA's.

As demonstrated in Section 3 of this RtS, a large number of community submissions received were not directly relevant to the scope of the Proposal, but rather were submitted in relation to the overall MPE Project and the development of an IMT at Moorebank in general, which was the subject of previous approvals (i.e. MPE Concept Approval (MP 10\_0913)). These submissions are included in the documented responses.

### **Key Issues**

The key aspects and issues that were raised by the community and government stakeholders, include:

Traffic and transport (60 submissions)

- Congestion – general concerns about congestion associated with the traffic movements generated by the MPE Stage 2 Proposal.
- Road infrastructure – several intersections and sections of road are not suitable to accommodate the increases in vehicle movements.

Community (45 submission)

- Impacts to community and lifestyle – general concerns about negative impacts on community such as effects on young families with children and a change of character due to the presence of industry in a residential region
- Consultation – issues were raised expressing concern with the consultation process. These concerns were mainly regarding insufficient consultation, responses to community submissions being inadequate and a general feeling that SIMTA has not been listening to the community.

Natural environment (40 submissions)

- Impact on local river systems – concerns that the Proposal will negatively impact South-West river systems in particular to the Georges river
- Flooding – concerns that the Proposal would result in flooding impacts to downstream areas or alter existing flood regimes
- General – submissions expressed concerns with impacts the Proposal would have on the general environment to Moorebank and the surrounding suburbs
- Fill – Concerns around the need for importation of fill for the Proposal and the potential impacts on the natural environment.

Planning process (33 submission)

- Approval / application process – general concerns around the suitability of the chosen planning pathway and requests for a new concept plan.
- Combined project approvals and modifications – issues were raised around the perceived need for a combined approval with other approvals in the Moorebank precinct.
- Stage 2 of the MPE Project – general concerns about the planning and approvals relationship between Stage 2 fits and the broader MPE Project.

### **Other issues**

- Noise (22 submissions)
- Health (19 submissions)
- Economic (18 submissions)
- Air (17 submissions)
- Flora and Fauna (9 submissions)

Figure 1-1 displays the number of submissions received by aspect graphically.

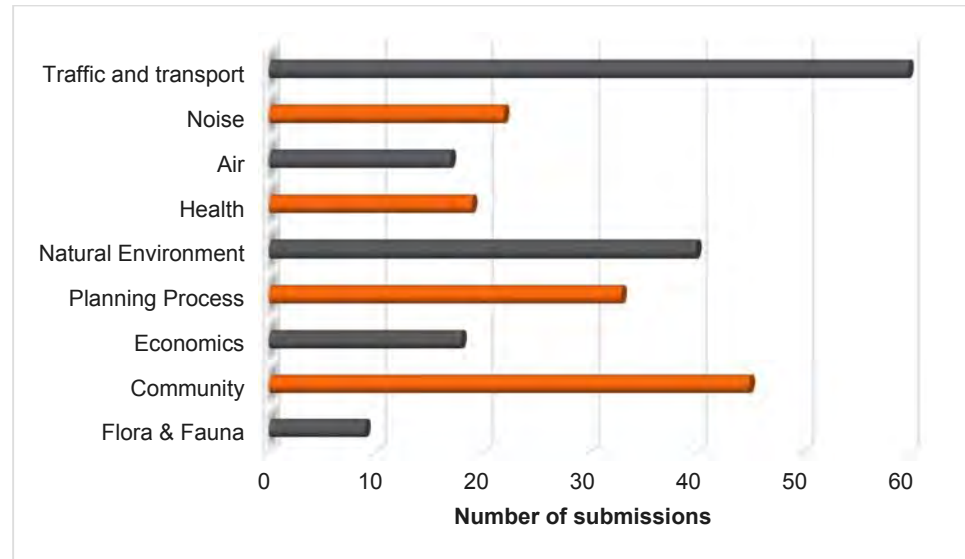


Figure 1-1 Breakdown of aspects by no. of submissions

Sections 4 and 5 of this RtS present the issues raised in the submissions and the corresponding responses.

## Amendments to the Proposal undertaken post exhibition

This RtS also includes amendments to the exhibited Proposal. These amendments have been included to address submissions received, reflect design development, provide additional clarity, and to minimise the overall environmental impact of the Proposal where possible.

The Amendments to the Proposal include the following components:

- Realignment of the OSD in the north-eastern corner of the Proposal site
- Changes to the horizontal extent of the Moorebank Avenue Upgrade
- Changes to warehouse layout in two separate locations
- Alterations to drainage design to the south of the MPE site
- Amendments to the Construction Area and Operational Area as a result of the above amendments

Further details and assessment of the amendments to the Proposal are provided in Section 6 and Section 7 of this RtS, respectively.

## Further investigations

Some of the components of the Amended Proposal required additional assessments to be undertaken to assess their potential environmental impacts.

Detailed environmental assessments have been undertaken for the following potential key issues associated with the Amended Proposal:

- Traffic and transport
- Noise and vibration
- Air quality
- Human health

- Biodiversity
- Stormwater and flooding
- Geology, soils and contamination
- Hazards and risks
- Visual amenity
- Indigenous heritage
- Non-Indigenous heritage
- Greenhouse gas
- Cumulative impacts.

Technical specialist assessments of the above key environmental issues and assessments of other environmental issues have been undertaken in consideration of the issues relevant to the Amended Proposal and those raised within the SEARs for the Proposal.

Overall, the assessments identify that the Amended Proposal would, subject to the implementation of updated mitigation measures (refer to Section 8 of this RtS), result in environmental impacts consistent with those identified within the EIS.

Details regarding these additional assessments are provided in Section 7 of this RtS.

## Consultation on the Submissions report

Consultation with government agencies and key stakeholders has continued subsequent to the exhibition of the EIS and during the preparation of this RtS. The purpose of this consultation has been to gain a greater understanding of any perceived key issues, with a view to resolving these where possible.

Additionally, the DP&E has been consulted regarding various elements of the Proposal on an ongoing basis since early 2016. Consultation with DP&E has included meetings, telephone conversations, correspondence (emails and letters), and the submission of Proposal-related documentation.

DP&E, along with other agencies and stakeholders, have provided a number of comments regarding the content of the EIS and RtS, the design of the Proposal and Amended Proposal, and engagement with stakeholders. These comments have been considered and this RtS has been updated accordingly.

SIMTA is committed to continuing to consult with stakeholders, including the community throughout the planning of the Amended Proposal and the MPE Project on the whole. Feedback can be provided directly to SIMTA at any time via:

- The SIMTA Project website ([www.simta.com.au](http://www.simta.com.au))
- The email feedback system ([consulting@elton.com.au](mailto:consulting@elton.com.au))
- The free-call information line (1800 986 465) which is available between 8:30am and 5:00pm weekdays.

## Next steps

The DP&E will, on behalf of the NSW Minister for Planning, review and assess the EIS and this RtS. Once the DP&E has completed its assessment, a draft assessment report will be prepared for the Secretary of the DP&E, which may include recommended conditions of approval.

The assessment report will then be provided to the Planning Assessment Commission (PAC) for consideration. The PAC would assess and determine the Proposal, with any additional conditions the PAC considers appropriate.

The PAC's determination, including the final conditions of approval and the Secretary's report, will be published on the DP&E's website immediately after determination, together with a copy of this RtS.

SIMTA is committed to continuing to consult with stakeholders, including the community throughout the planning of the Amended Proposal and future stages of development. Further information on the Amended Proposal is available on the SIMTA website: [www.simta.com.au](http://www.simta.com.au).

## 1 INTRODUCTION

Sydney Intermodal Terminal Alliance (SIMTA) are seeking approval for the construction and operation of the Moorebank Precinct East (MPE) Stage 2 Proposal (the Proposal), which would comprise the second stage of development under the MPE Concept Approval (MP10\_0193).

An Environmental Impact Statement (EIS) was prepared for the Proposal seeking approval under Part 4, Division 4.1 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). In particular, the EIS was prepared to address, and be consistent with, the following:

- The Secretary's Environmental Assessment Requirements (SEARs) (SSD 16-7628) for the Proposal, issued by NSW DP&E on 27 May 2016 and amended on 24 November 2016.
- The relevant requirements of the MPE Concept Plan Approval (MP 10\_0193) dated 29 September 2014 (as modified).
- The relevant requirements of the approval under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) (No. 2011/6229, granted in March 2014 by the Commonwealth Department of the Environment (DoE)) (as relevant).

The EIS was publicly exhibited, in accordance with Section 89F (1)(a) of the *Environmental Planning and Assessment Act 1979* (EP&A Act), between 13 December 2016 and 24 February 2017. During the exhibition period, submissions were invited from all stakeholders including members of the community and government stakeholders. A total of 156 public submissions have been received from the community, including landowners and occupants and other members of the public. A total of two submissions have been received from specialist interest groups, one submission from nearby landholders and eight submissions from government stakeholders.

The submission received from the EIS public exhibition from the subject of this report, known as a Response to Submissions (RtS), and have been discussed and addressed within.

### 1.1 Purpose of this report

The purpose of this RtS is to respond to submissions raised by stakeholders during the exhibition of the EIS. This RtS has been prepared to satisfy the provisions of Section 89G of the EP&A Act and Clause 85A of the EP&A Regulations. Each of the submissions received has been collated, analysed and addressed (as relevant).

This RtS also includes amendments to the exhibited Proposal, now known as the Amended Proposal. These amendments have been undertaken to address submissions provided by government agencies and the community, as part of design progression, and to provide additional clarity where relevant.

The RtS provides a description of the amendments and includes the further environmental assessment undertaken to assess the potential environmental impacts or changed environmental impacts associated with the amendments to the Proposal to serve as an addendum to the technical specialist reporting provided within the EIS.

## 1.2 Site context

The Amended Proposal site is located within the MPE site, approximately 2.5 km south of the Liverpool City Centre, 800 m south of the Moorebank Avenue/M5 Motorway interchange and one kilometre to the east of the SSFL. Land surrounding the Amended Proposal site comprises:

- The MPW site, formerly the School of Military Engineering (SME), on the western side of Moorebank Avenue directly adjacent to the MPE site (subject to the MPW Concept Approval)
- The Holsworthy Military Reserve, to the south of the MPE site on the southern side of the East Hills Rail Corridor, which is owned and operated by Sydney Trains.
- Residual Commonwealth Land (known as the Boot Land), to the east of the MPE site between the site boundary and the Wattle Grove residential area.

The Amended Proposal site comprises around 67 hectares of land (Figure 1-1) and is located mostly within Lot 1 in Deposited Plan (DP) 1048263 and Lot 2 in DP 1197707.

Until recently, the MPE site was operating as the Defence National Storage and Distribution Centre (DNSDC), however, the Department of Defence has vacated the site and relocated operations to the Defence Joint Logistics Unit (DJLU), immediately north of the MPE site. While the Department of Defence has vacated the Amended Proposal site, the following infrastructure and features are still present:

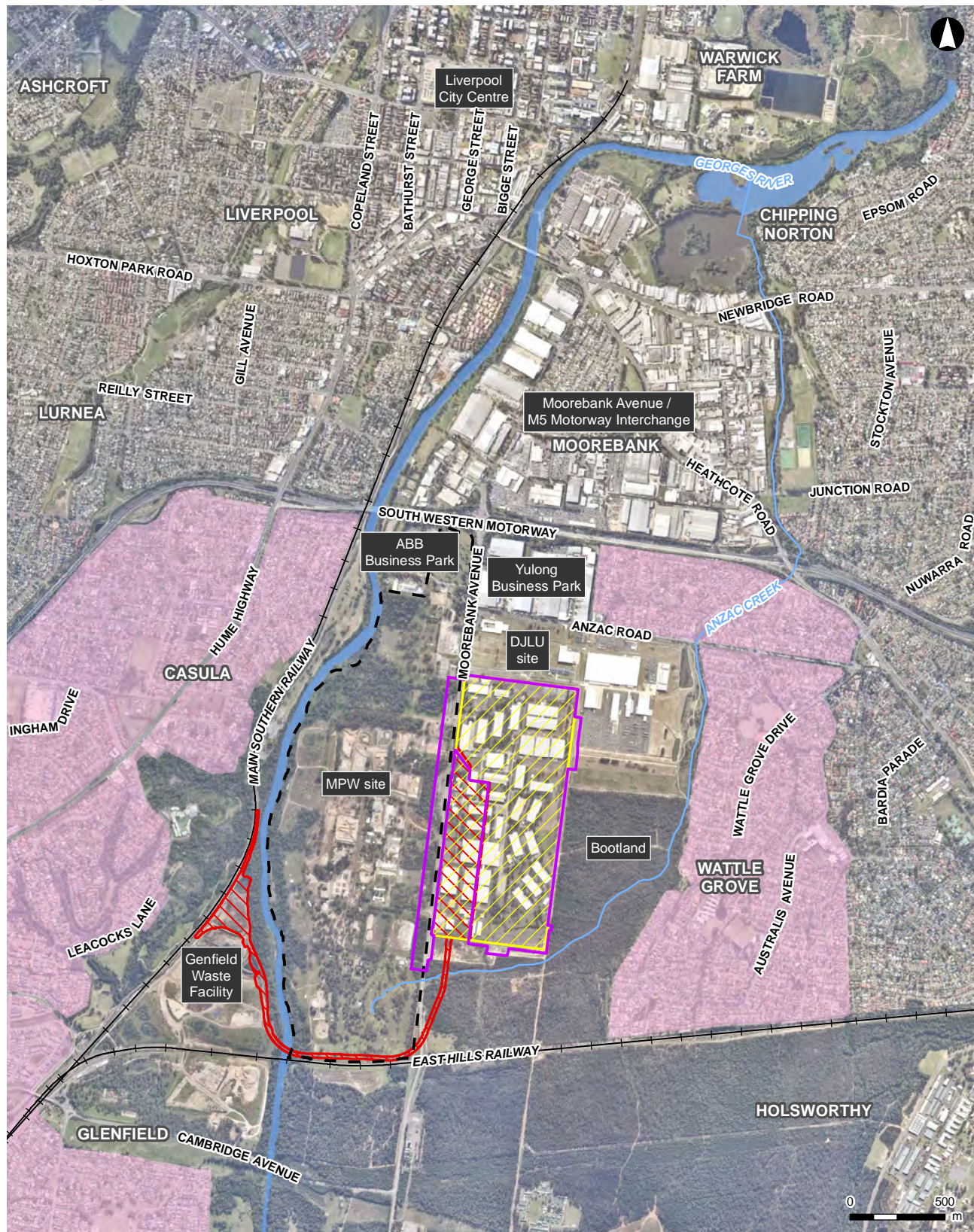
- A number of existing buildings previously utilised by the Department of Defence, comprising a mixture of warehouses, offices and administrative facilities
- An internal road network and areas of large hardstand, typically comprising asphalt and concrete
- A relatively flat topography with a ridge which runs along the central portion of the MPE site, parallel to Moorebank Avenue. This ridge results in surface water drainage flowing in either an easterly direction towards Anzac Creek or a westerly direction to the Georges River
- Planted vegetation along site boundaries, walkways, internal roads and areas of open space
- A primary access point, about one kilometre south of the intersection of Moorebank Avenue and Anzac Road and a number of additional general access points along Moorebank Avenue.

The south-western portion of the MPE site contains the Stage 1 site, the landform of which will be altered as part of the Stage 1 Project. The construction footprint of the Stage 1 Project partially overlaps the Amended Proposal site to the immediate east and north of the Stage 1 site, and potentially along the eastern boundary of the Stage 1 site within the Operational area which have previously been identified within the Stage 1 Project EIS.

Within the Stage 1 Project construction footprint (including the area of overlap with the Amended Proposal site), all existing vegetation and buildings will be cleared and demolished to facilitate construction of an IMT and Rail Link, in accordance with the Stage 1 Project conditions of approval.



## MPE Stage 2 Response to Submissions



### LEGEND

- Amended construction area
- MPE site
- MPW site
- MPE Stage 1 operational area
- Residential area
- Watercourse
- Existing railway

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 Coordinate System: GDA 1994 MGA Zone 56  
 Date issued: July 6, 2017  
 Aerial imagery supplied by nearmap (May, 2017)

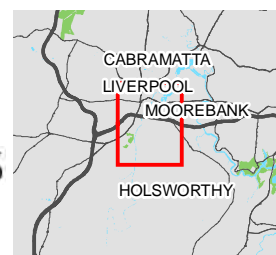


Figure 1-1: Site Location



A number of residential suburbs are located in proximity to the Amended Proposal site, including:

- Wattle Grove, located approximately 360 m to the north-east of the Amended Proposal site
- Moorebank, located approximately 1300 m to the north of the Amended Proposal site
- Casula, located approximately 760 m to the west of the Amended Proposal site
- Glenfield, located approximately 1540 m to the south west of the Amended Proposal site.

The MPE site is located near a number of significant industrial areas, including: Moorebank and Warwick Farm to the north, Chipping Norton to the north-east, Prestons to the west and Glenfield and Ingleburn to the south-west. The industrial area at Moorebank is the closest industrial precinct to the Amended Proposal, comprising around 200 hectares of industrial development, the majority of which is located to the north of the M5 South West between Newbridge Road, the Georges River and Anzac Creek. The Moorebank Industrial Area supports a range of industrial and commercial uses, including freight and logistics, heavy and light manufacturing, offices and business park developments including the Goodman MFive Business Park.

### 1.3 Proposal overview

The Proposal, as detailed and assessed in the EIS, involves the construction and operation of Stage 2 of the MPE Project, comprising warehousing and distribution facilities on the MPE site and upgrades to approximately 1.4 kilometres of Moorebank Avenue between the northern MPE site boundary and 120 m south of the southern MPE site boundary.

Key components of the Proposal include:

- Warehousing comprising approximately 300,000m<sup>2</sup> GFA and additional ancillary offices
- A freight village, comprising 8,000m<sup>2</sup> GFA of retail, commercial and light industrial land uses
- Establishment of an internal road network, and connection of the Proposal to the surrounding public road network
- Ancillary supporting infrastructure within the Proposal site, including:
  - Stormwater, drainage and flooding infrastructure
  - Utilities relocation and installation
  - Vegetation clearing, remediation, earthworks, signage and landscaping
- Subdivision of the Proposal site
- The Moorebank Avenue upgrade would be comprised of the following key components:
  - Modifications to the existing lane configuration, including some widening
  - Earthworks, including construction of embankments and tie-ins to existing Moorebank Avenue road level at the Proposal's southern and northern extents
  - Raking of the existing pavement and installation of new road pavement
  - Establishment of temporary drainage infrastructure, including temporary basins and / or swales

- Raising the vertical alignment by about 2 m from the existing levels, including kerbs, gutters and a sealed shoulder
- Signalling and intersection works
- Upgrading existing intersections along Moorebank Avenue, including:
  - Moorebank Avenue / MPE Stage 2 access
  - Moorebank Avenue / MPE Stage 1 northern access
  - Moorebank Avenue / MPE Stage 2 central access
  - MPW Northern Access / MPE Stage 2 southern emergency access

The Proposal would interact with the MPE Stage 1 Project (SSD\_6766) via the transfer of containers between the MPE Stage 1 IMT and the Proposal's warehousing and distribution facilities. This transfer of freight would be via a fleet of heavy vehicles capable of being loaded with containers and owned by SIMTA. The fleet of vehicles would be stored and used on the Proposal site, but registered and suitable for on-road use. The Proposal is expected to operate 24 hours a day, seven days per week. An overview of the Proposal is shown in Figure 1-2.

### **1.3.1 Overview of amendments to the Proposal**

A summary of the amendments to the Proposal as originally exhibited is as follows:

- Realignment of the OSD Basin 1 and inclusion of a spillway
- Changes to the length of the Moorebank Avenue Upgrade
- Changes to warehouse layout
- Alterations to the drainage design to the south of the MPE site
- Amendments to the Construction Area and Operational Area as a result of the above amendments










Refer to Section 6 of this RfS for additional details.



## MPE Stage 2 Response to Submissions



### LEGEND

- |   |  |
|---|--|
|  Amended operational area  |  MPE Stage 1 operational area |
|  Amended construction area |  Cadastre (LPI, 2017)         |
|  MPE site                  |  Existing railway             |
|  MPW site                  |  Watercourse                  |
|  Proposed rail alignment   |  |

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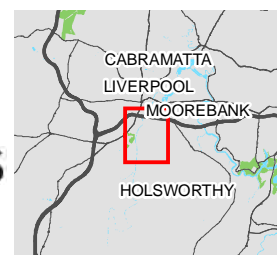


Figure 1-2: Proposal Overview



## 1.4 Statutory Approval Process

Statutory planning approvals to-date for the MPE site as they relate to the MPE Project include:

- EPBC Approval (No. 2011/6229) granted in March 2014 by the Minister for the Environment (Commonwealth) for the impact of the MPE Project on listed threatened species and communities (sections 18 and 18A of the EPBC Act) and Commonwealth land (sections 26 and 27A of the EPBC Act).
- MPE Concept Plan Approval (MP 10\_0193), granted by the PAC as delegate of the Minister for Planning and Environment on the 29 September 2014 for the 'Concept Plan Approval' of the MPE Project under Part 3A<sup>1</sup> of the EP&A Act.

The MPE EPBC and Concept Plan Approvals involved the preparation of design and environmental impact assessment documentation as relevant to the concept plan approval stage. Further, the MPE Concept Plan Approval Conditions of Approval require the construction or operation of any part of the MPE Project to be subject to separate development consent under Part 4, Division 4.1 of the EP&A Act. Additionally, any environmental assessment would be carried out in accordance with the future environmental assessment requirements, specified in Part 2 of Schedule 3 of the MPE Concept Plan Approval Conditions of Approval.

In addition, Section 8(1) of the State and Regional Development SEPP states that;

*'Development is declared to be State significant development for the purposes of the Act if:*

*(a) The development on the land concerned is, by the operation of an environmental planning instrument, not permissible without development consent under Part 4 of the Act, and*

*(b) The development is specified in Schedule 1 or 2.'*

The MPE Project is located on land zoned as IN1 General Industrial under the Liverpool Local Environmental Plan 2008 (Liverpool LEP). The project is classified as a freight distribution facility and warehouse or distribution centre, both of which are permitted with consent under the Liverpool LEP.

In addition to this, clause 12(1) of Schedule 1 of the State and Regional Development SEPP states that development for the purposes of warehouses or distribution centres is considered to be of State significance if *'Development has a capital investment value of more than \$50 million for the purpose of warehouse or distribution centres (including container storage facilities) at one location and related to the same operation'*.

As the capital investment value of the Proposal is estimated to be approximately \$454 million AUD (excluding GST), and would be for the purpose of warehouses or distribution centres, the Proposal is declared to be State significant development (SSD) under the State and Regional Development SEPP.

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<sup>1</sup> 1 Part 3A of the EP&A Act was repealed on 31 October 2011. Transitional arrangements for projects (including concept plans) approved under Part 3A of the EP&A Act before its repeal are provided in Schedule 6A of the EP&A Act.

## 1.5 MPE Concept Plan Approval Modification

The MPE Project was granted Concept Plan Approval on 29 September 2014 under Part 3A of the EP&A Act. A Concept Plan modification application, prepared under Section 75W of the EP&A Act was submitted concurrently with the EIS for the Stage 1 Proposal (Concept Plan modification 1). Concept Plan modification 1 requests approval from the Secretary of DP&E for the following modifications:

Modification A: Inclusion of Lot 1 Deposited Plan (DP) 1130937 in the MPE Concept Plan Approval (MP10\_0193) for the MPE Project. Figure 2-3 in Section 2.5 of this EIS shows the location of this lot.

Modification B: Revision of Condition 1.9 of the MPE Concept Plan Approval (No. 10\_0193) to include an exclusion of terms relating to road infrastructure upgrades and when they will be carried out, and the term relating to investigating possible changes to the 901 bus route.

Modification A is considered consistent with all relevant planning and environmental legislation and due to the scale will result in minor or negligible environmental impacts that will be confined to the MPE Project site. As a result of this limited environmental impact, Modification A is considered to result in minor impacts above those identified in within the previous MPE Concept Plan Approval (MP10\_0193).

Modification B is administrative and will have no impact on the MPE Concept Plan Approval (No.10\_0193). Approval for Concept Plan modification 1 is currently being sought by the Secretary of DP&E.

Approval for the MPE Concept Plan Modification 1 was granted in December 2016.

## 1.6 MPE Concept Plan Approval Modification 2

A second MPE Concept Plan modification application, prepared under Section 75W of the EP&A Act was submitted concurrently with the MPE Stage 2 EIS (MPE Concept Plan Modification 2). MPE Concept Plan Modification 2 requests approval from the Secretary of DP&E for the following modifications to the MPE Concept Plan Approval:

- Inclusion of the Moorebank Avenue upgrade
- Change in the location of the MPE Stage 2 site access
- The use of internal road 2 for heavy vehicle movements
- The importation of clean general fill to facilitate construction and bulk earthworks
- Change in the location of, and land uses within the freight village
- Revisions to the staging of the MPE Project
- Subdivision of the MPE site

The potential impacts of the Proposal that relate to these items have been assessed as part of the MPE Stage 2 EIS. A Response to Submissions (RtS) report for the MPE Concept Plan Modification 2 is currently being prepared and will be submitted concurrently with this RtS.

## 1.7 Structure of this report

The structure of this RtS comprises the following sections:

- Executive summary: provides a brief overview of the RtS including the identification of key issues, Proposal Amendments and associated further environmental assessments
- Section 1 – Introduction: provides an introduction to the Proposal and amendments, the site context, the statutory approval process and the structure of the RtS
- Section 2 – Exhibition and consultation: provides a description of the consultation which has been undertaken as part of the MPE Project and the Proposal to date
- Section 3 – Overview of Submissions: provides an analysis of the submissions received during the exhibition of the EIS and identifies the key issues raised
- Section 4 – Response to Government Agency Submissions: provides a catalogue of responses received from Government Agencies and responses prepared by technical specialists
- Section 5 – Response to Community Submissions: provides a summary of the community responses received and responses to each of these prepared by technical specialists
- Section 6 – Amended Proposal: provides a description of the amendments to the Proposal design including any alterations to the built form, construction methodology and operational procedures presented within the EIS
- Section 7 – Further assessment: provides an environmental assessment of the amendments to the Proposal with reference to technical specialist addendums
- Section 8 – Compilation of mitigation measures: provides an updated list of mitigation measures to include any changes as a result of submissions received
- Section 9 – Conclusion: provides a summary and conclusion to the RtS.

The following Appendices are included in this RtS:

- Appendix A – Community submissions reference table
- Appendix B – Architectural drawings and landscape design:
  - Revised architectural drawings
  - Revised landscape design statement and plan
- Appendix C – Traffic and Transport:
  - M5 Motorway and Moorebank Avenue interchange operational sensitivity analysis
  - SIDRA flow diagrams
- Appendix D – Noise and vibration contour maps
- Appendix E – Stormwater and flooding:
  - EIS Stormwater and Flooding Assessment Appendix C – MUSIC modelling information
  - Revised Stormwater and Drainage Design Drawings
  - TUFLOW modelling maps
- Appendix F – Supplementary visual impact assessment - response to submission information

- Appendix G – Stockpile management protocol
- Appendix H – Environmental Work Method Statement
- Appendix I – Consolidated Project Description
- Appendix J - Liverpool Development Control Plan compliance table
- Appendix K - Consolidated cumulative construction program



## 2 EXHIBITION AND CONSULTATION

The EIS was placed on exhibition between 13 December 2016 and 24 February 2017 in accordance with Section 89F (1)(a) of the EP&A Act. Hard copies of the EIS were available for public review and comment at the following locations for the duration of the exhibition period:

- Liverpool City Council: Administration Building and Customer Service Centre, 33 Moore Street, Liverpool
- Campbelltown City Council: Customer Service Centre, Corner Queen Street and Broughton Street, Campbelltown
- Glenquarie Library: 12 Brooks Street, Macquarie Fields
- Office of Environment and Heritage, Level 6, 10 Valentine Avenue, Parramatta
- DPI Water: Level 11, 10 Valentine Avenue, Parramatta
- Nature Conservation Council: Level 2, 5 Wilson Street, Newtown
- Department of Planning and Environment: Level 14, 338 Pitt Street, Sydney.

The EIS (and associated reporting) was available to the public in electronic format on the DP&E website during this time.

### 2.1 EIS Consultation

Consultation by SIMTA and their project team (on behalf of SIMTA) was undertaken throughout the preparation of the EIS with Government agencies, key stakeholders and the community. Where relevant, this consultation has built on the consultation that has been previously undertaken as part of the development of the MPE Concept Plan, and as part of Stage 1 of the MPE Project. The consultation undertaken as part of previous stages of the MPE project, and as part of the preparation of the EIS has been a key consideration for the design, construction and operation of the Proposal.

SIMTA consulted with a number of statutory agencies and stakeholders throughout the preparation of this EIS including:

- Local, State or Commonwealth Government agencies, including the:
  - Commonwealth Department of the Environment
  - Department of Planning and Environment
  - Environment Protection Authority
  - Office of Environment and Heritage
  - Transport for NSW
  - Department of Primary Industries (Fisheries and Office of Water)
  - NSW Rural Fire Service
  - NSW Health
  - NSW Ports
  - Liverpool City Council
  - Campbelltown City Council

- Service and infrastructure providers:
  - Roads and Maritime Services
  - Australian Rail Track Corporation
  - Sydney Trains
  - Sydney Water Corporation
  - Jemena
  - Endeavour Energy
  - Telstra
  - AGL Upstream Investments Pty Ltd
- Specialist interest groups, including Local Aboriginal Land Councils
- The public, including community groups and adjoining and affected landowners.

This consultation was undertaken through a range of media including emails, phone conversations, face-to-face meetings and letter submissions.

Feedback provided from stakeholders and the community was taken into consideration during the development of the design (post MPE Concept Approval) and the approach for the impact assessment documented in this RtS.

## 2.2 Post Public Exhibition Consultation

Consultation with Government agencies and key stakeholders has continued subsequent to the exhibition of the EIS. The purpose of this consultation has been to discuss the Proposal and submissions received, with a view to resolving identified issues where possible. A summary of this consultation is provided in Table 2-1.

*Table 2-1: Post public exhibition consultation*

Stakeholder	Consultation undertaken
TfNSW and Roads and Maritime	<p>A meeting was undertaken with representatives of TfNSW, Roads and Maritime and DP&amp;E on 9 March 2017 to discuss both agencies (TfNSW's and Roads and Maritime's) respective submissions for the Proposal.</p> <p>Key items discussed at the meeting included:</p> <ul style="list-style-type: none"> <li>• Clarification of conditions and requirements relevant for the Proposal with respect to current and future traffic assessments.</li> <li>• Clarification of the models used for various stages of the MPW Project, noting comparable results with the "full build vision" traffic model being developed by Parson Brinkerhoff (PB). It was also noted that cumulative impacts of both Concept Approvals for the Moorebank Precinct (SSD 5066 and SSD MP10-0193) would be included in current and future models</li> <li>• The use of the "full build vision" traffic model as a validation tool for traffic impacts (both within the vicinity of the Proposal and regional network) with respect to each staged application was discussed. It was also discussed that upgrades, relative contributions and a mitigation package could be formulated once the "full build vision" impacts are identified.</li> </ul>

Stakeholder	Consultation undertaken
	It was agreed that negotiations and discussions of issues outstanding would be the subject of future meetings and ongoing discussions.
Community	<p>SIMTA distributed a newsletter to approximately 10,000 households in the suburbs surrounding the MPE site in November 2016. The purpose of this letter was to provide an update of the Proposal and the approval process.</p> <p>A further letter was distributed in March 2017. This letter mentioned that the MPE Stage 2 EIS has been placed on public exhibition and that SIMTA was in the process of analysing the key issues and working with stakeholders to clarify and resolve concerns raised through the public exhibition process. The March 2017 newsletter also noted that forthcoming newsletters will provide an update on the progress of these response to submissions for the Proposal.</p>

### 2.3 Consultation: Next Steps

As provided in Planning Circular (PS 11-022) (30 September 2011) the criteria for an SSD to be determined by the Planning Assessment Commission (PAC) is based on the following:

- More than 25 members of the public having made a submission on the application
- The Council for the area objects in writing to the application
- A political donation disclosure statement has been lodged with the application (i.e. a political donation has been made by the applicant).

During the exhibition of the Modification Report a total of 184 community submissions were received and Liverpool City Council objected to the Proposal. As a result of both of these factors the Proposal is to be assessed by the PAC. Further information on the PAC assessment process, and consultation included as part of this process, is provided at their website (<http://www.pac.nsw.gov.au/>).

In addition to the above, feedback can also be provided to SIMTA at any time via:

- The SIMTA Project website ([www.simta.com.au](http://www.simta.com.au))
- The email feedback system ([consulting@elton.com.au](mailto:consulting@elton.com.au))
- The free-call information line (1800 986 465) which is available between 8:30am and 5:00pm weekdays.

SIMTA is committed to continuing to consult with stakeholders, including the community throughout the planning of the Proposal and future stages of development.

### 3 OVERVIEW OF SUBMISSIONS

This section provides an overview of submissions received during the exhibition period of the MPE Stage 2 EIS. Submissions received were from both government agencies and the community.

An overview of the submissions and a summary of the process for responding to submissions is provided below.

#### 3.1 Submissions Received

Submissions were received from a total of eight government agencies including the following:

- TfNSW
- EPA
- OEH
- NSW Heritage Council
- Geological Survey NSW (GSNW)
- Department of Industry (DPI)
- NSW Health
- Campbelltown City Council
- Liverpool City Council

In addition to these agency submissions, DP&E received a total of 156 submissions from community members, landowners and special interest groups during the exhibition period, all of which expressed concerns with the Proposal. A large number of the submissions used the phrase “I object to his application and the entire project at this location.” before outlining their specific concerns and the consistent wording indicates that these are a type of form letter.

Of the 156 submissions 77% were from residents in the Liverpool Local Government Area (LGA) with 15% of submissions having not provided a location. The remaining 8% of submissions were from suburbs in the Campbelltown, Canterbury - Bankstown, Fairfield, North Shore, Sutherland, Georges River, and Parramatta LGA's.

Figure 3-1 below highlights the distribution of submissions across suburbs within the Liverpool LGA, with the majority (48%) received from residents located within Wattle Grove, the suburb located directly east of the Proposal site. Moorebank (the location of the Proposal site) provided the second highest number of submissions (23%). Other suburbs that represented a significant proportion of the submissions received included Chipping Norton to the north (8%), Casula to the west (8%), Holsworthy to the south east (7%) and Hammondville to the south-east (4%). Submissions received from other suburbs (Prestons and Sadlier) made up the final submissions (2%) received from within the Liverpool LGA.

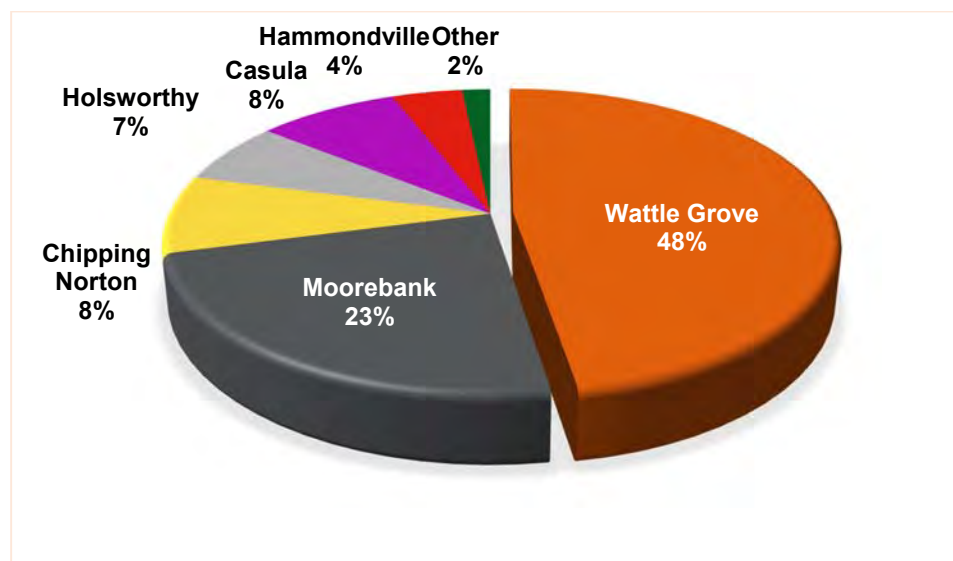


Figure 3-1 Location of community submissions from Liverpool LGA

## 3.2 Submission Response Methodology

### 3.2.1 Technical specialist input to submissions

The nature of submissions provided by government agencies, specialist interest groups and the community forming this report (refer to Section 4 and Section 5 of this RtS) ranged in content and complexity. Submissions were reviewed and summarised by Arcadis and technical specialist input sought, where relevant, to ensure that this RtS adequately captures and responds to all issues raised in the submissions.

The technical specialist responsible for preparing the relevant specialist report prepared technical responses to key issues and other issues raised in both the government agency, and specialist interest groups and community submissions. Technical specialists utilised information provided within the EIS, undertook additional assessment and drew upon information provided within the technical specialists reports, appended to this RtS.

A summary of technical specialists engaged for the preparation of this report is provided below in Table 3-1.

Table 3-1: Technical Specialist Input Summary

Aspect	Company Name
Environmental Impact Assessment	Arcadis
Traffic and transport	Arcadis
Noise and Vibration	Wilkinson Murray
Air Quality	Ramboll Environ
Human health	Ramboll Environ
Biodiversity	Arcadis
Stormwater and flooding	Arcadis
Geology, soils and contamination	Arcadis
Hazards and risk	Arcadis

Aspect	Company Name
Visual/Architectural	Reid Campbell
Landscape Design	GroundInk
Indigenous heritage	Artefact
Non-indigenous heritage	Artefact
Greenhouse Gas	Arcadis
Waste	Arcadis
Bushfire	ABPP
Socio-economic	Arcadis
ESD	Arcadis
Property and infrastructures	Arcadis

### 3.2.2 Government Agencies

As outlined in Section 3.1, a total of eight government agencies provided submissions. Each submission varied in terms of the number and type of items for consideration raised, with some agencies, depending on their function/responsibility, raising more issues than others. Each agency submission was reviewed and either transcribed in full, or summarised to identify the key points.

The submissions were then provided to the SIMTA technical specialists team (where relevant) for consideration and preparation of a response. The information relevant to these responses has been referenced and addressed in the response tables in Section 4 of this RtS. Where additional reporting was required to be prepared it has been provided as an appendix to this RtS.

### 3.2.3 Special interest groups and the community

The community submissions were summarised into key aspects, issues and sub-issues. The process of identifying this detail was iterative, utilising three rounds of review to capture each level of detail – key aspects, issues and sub-issues. Each submission was given a reference number (assigned by DP&E), allowing analysis of submissions at an issue and aspect level.

## 3.3 Summary of community comments

Section 5 of this RtS summarises and analyses the submissions received from the community. A complete table showing all of the aspects, issues and sub-issues raised by the community, by their reference number (assigned by the DP&E) is provided within Appendix A of this RtS.

There were a number of submissions that expressed concern with aspects that were deemed outside the scope of the MPE Stage 2 EIS. Section 3.5 of this RtS addresses these submissions and explains in greater detail the reasons why certain submissions were considered out of scope.

The aspects identified in the submission analysis are outlined in Table 3-2 and Figure 3-2. Note that each submitter may have raised more than one issue and may have raised issues relating to multiple aspects. The most prominent aspects raised in submissions were traffic and transport (raised in 31% of submissions), community (raised in 23% of submissions), natural environment (raised in 21% of submission) and planning process (raised in 17% of submissions). Section 3.4 of this report outlines in greater detail the key issues that the community expressed within these aspects.

Table 3-2 Summary of aspects identified in community submissions

Aspect	No. of submissions raising aspect	% of submissions raising aspect <sup>2</sup>
Traffic and transport	60	31%
Noise	22	11%
Air	17	9%
Health	19	10%
Natural Environment	40	21%
Planning Process	33	17%
Economics	18	9%
Community	45	23%
Flora & Fauna	9	5%

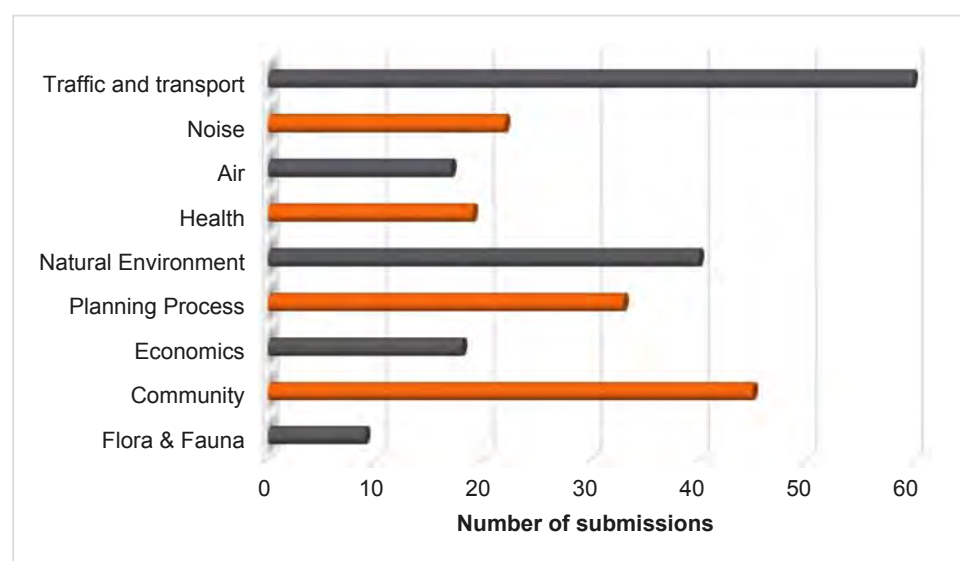


Figure 3-2 Breakdown of aspects by no. submissions

<sup>2</sup> Each percentage in this column is a percentage of the total number of submissions. Note that each submitter may have raised issues relating to multiple aspects within a single submission.

### 3.4 Key Issue Analysis

Table 3-2 shows a summary of all the issues that were raised by the community during the public exhibition of the report. Note that each submitter may have raised more than one issue and may have raised issues relating to multiple aspects. As such, the number of issues raised in an aspect or issue does not sum to the total number of submissions.

*Table 3-3 Summary of key issues raised by the community*

Aspect	Issue	No. of submissions raising issue
Traffic	Congestion/capacity	50
	Road Infrastructure	13
	Assessment	5
	Safety	4
	Use of local roads	2
Noise	General	7
	Operational noise	17
	Assessment	3
Air	Air quality/pollution	17
	Particulate Matter	1
Health	Pollution/air quality	14
	General	8
Natural Environment	Impacts on local river systems	15
	Flooding	11
	General environment	10
	Fill	9
	Pollution	2
	Visual	2
	Bushfire	1
	Aboriginal/European heritage	1



Aspect	Issue	No. of submissions raising issue
Planning Process	Approvals/applications	15
	Combined project/modifications	10
	MPE Stage 2 Application	10
	General	6
	Environmental Management Documents	4
	Tech Studies	3
Economics	General	7
	Reduction in property prices and compensation	8
	Cost of the project	6
Community	Impacts to community and lifestyle	35
	Consultation	8
	Safety	4
	Social	2
Flora & Fauna	General	5
	Impacts to Native species	4
	Vegetation management	1

A Summary and analysis of the top four key aspects has been provided below.

### 3.4.1 Traffic and transport

As shown above, traffic and transport has been identified by the community as being the key aspect impacted by the Proposal. The submissions raised were primarily related to the additional traffic movements posed by the Proposal and the potential impacts this would have on the surrounding road network.

The top two issues identified within the traffic and transport aspect are:

- Congestion – general concerns about congestion associated with the traffic movements generated by the MPE Stage 2 Proposal.
- Road infrastructure – several intersections and sections of road are not suitable to accommodate the increases in vehicle movements.

Figure 3-3 highlights the breakdown of all key issues raised by the community in relation to traffic and transport.

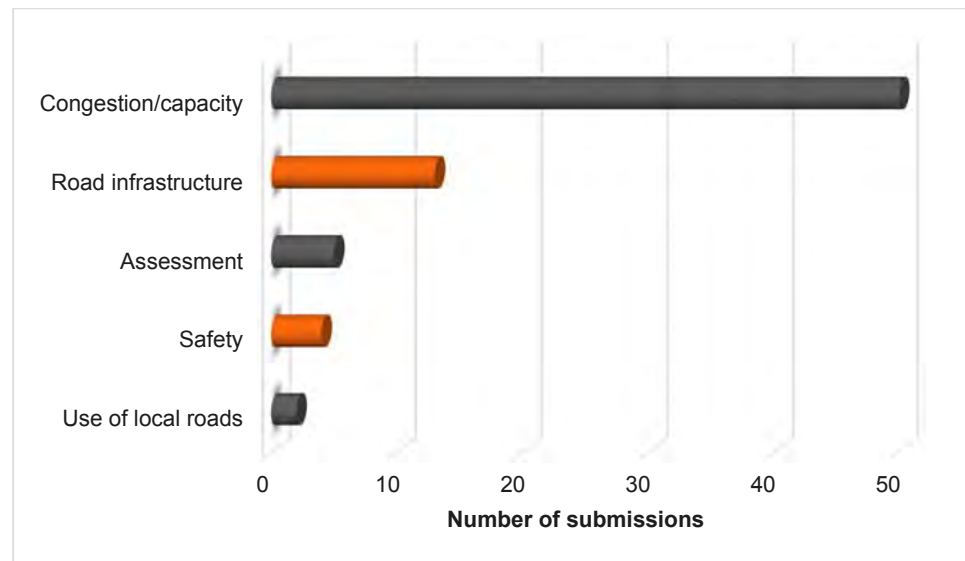


Figure 3-3 Traffic and transport key issue breakdown

### 3.4.2 Community

Impacts to the community in the surrounding areas of Moorebank were identified by the community as the second key aspect. The submissions raised were generally concerned with the impacts the Proposal would have on the community at large, families and lifestyle as well as general health in the area in the short and long term future.

The top two key issues identified within the community aspect are:

- Impacts to community and lifestyle – general concerns about negative impacts on community such as effects on young families with children and a change of character due to the presence of industry in a residential region
- Consultation – issues were raised expressing concern with the consultation process. These concerns were mainly regarding insufficient consultation, responses to community submissions being inadequate and a general feeling that SIMTA has not been listening to the community.

Figure 3-4 highlights the breakdown of all key issues raised by the submissions in relation to community

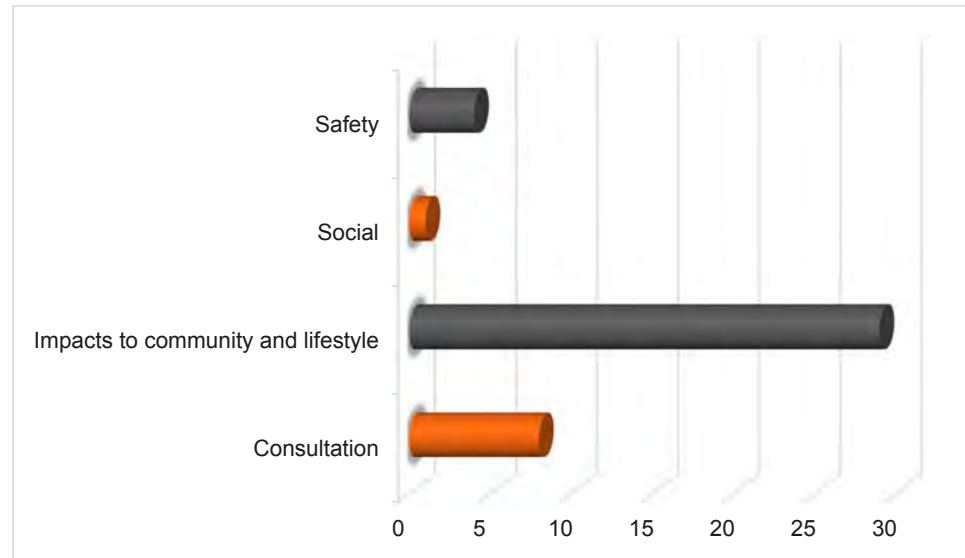


Figure 3-4 Community key issue breakdown

### 3.4.3 Natural Environment

The third most prominent aspect raised by the community was concerning perceived negative impacts to the natural environment as a result of the activities listed in the MPE Stage 2 EIS. The most common submission was related to the impact on local river systems around the Moorebank precinct.

The top four key issues identified within the natural environment aspect are:

- Impact on local river systems – concerns that the Proposal will negatively impact South-West river systems in particular to the Georges river
- Flooding – concerns that the Proposal would result in flooding impacts to downstream areas or alter existing flood regimes
- General – submissions expressed concerns with impacts the Proposal would have on the general environment to Moorebank and the surrounding suburbs
- Fill – Concerns around the need for importation of fill for the Proposal and the potential impacts on the natural environment.

Figure 3-5 illustrates the breakdown of all the key issues raised by the community regarding natural environment.

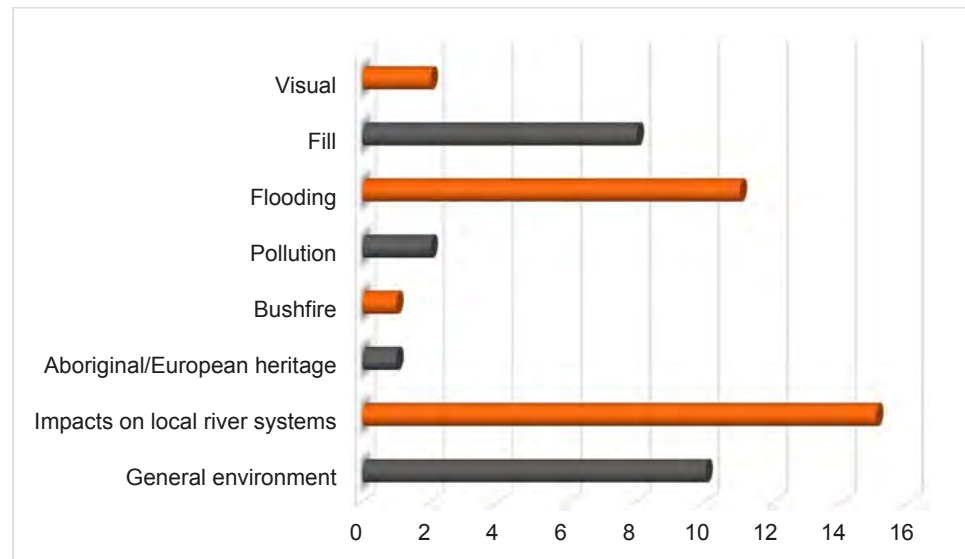


Figure 3-5 Natural environment key issue breakdown

### 3.4.4 Planning process

Issues surrounding the planning process were identified by the community as the fourth key aspect. The submission raised were generally concerning the nature of the chosen planning pathway, the perceived need for a combined planning approval and specific planning issues with aspects of Stage 2 of the MPE Project.

The three key issues identified within the planning process aspect are:

- Approval / application process – general concerns around the suitability of the chosen planning pathway and requests for a new concept plan.
- Combined project approvals and modifications – issues were raised around the perceived need for a combined approval with other approvals in the Moorebank precinct.
- Stage 2 of the MPE Project – general concerns about the planning and approvals relationship between Stage 2 fits and the broader MPE Project.

Highlights the breakdown of all key issues raised by the submissions in relation to the planning process.

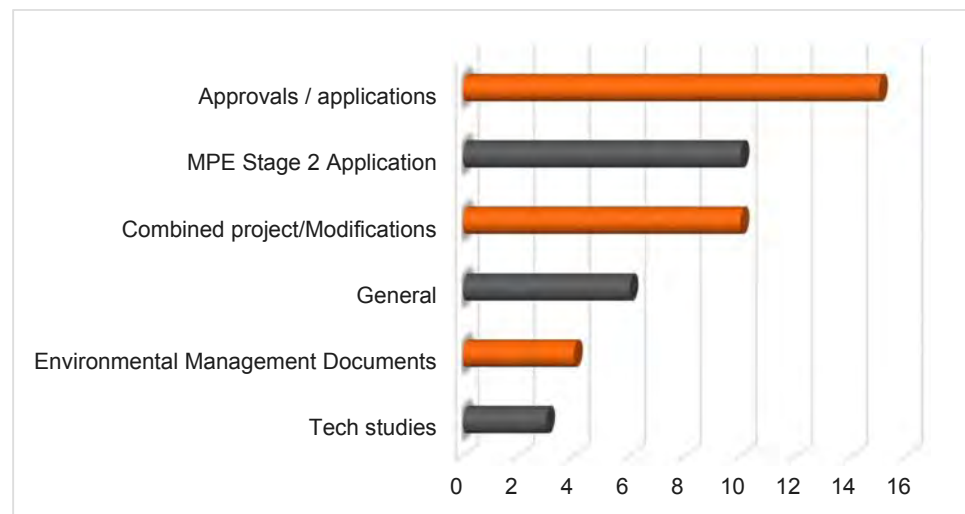


Figure 3-6 Planning process key issue breakdown

### 3.5 Out of Scope submissions

This section has been included in the report due to the large proportion of submissions that raised issues that were deemed to fall outside of the scope of the MPE Stage 2 EIS. Of the 153 submissions that DP&E received, 143 submissions (93%) mentioned issues that are not within the scope of the MPE Stage 2 EIS. These concerns were primarily related to the location of the project itself. The MPE Stage 2 EIS does not include consideration of the project location and site suitability, which has already been determined in the MPE Concept Approval.

## **4 RESPONSE TO GOVERNMENT AGENCY SUBMISSIONS**

The following Local and State government authorities provided responses as part of the public exhibition of the EIS:

- TfNSW
- EPA
- OEH
- NSW Heritage Council
- Geological Survey NSW (GSNW)
- Department of Industry (DPI)
- NSW Health
- Campbelltown City Council
- Liverpool City Council

These submissions have been collated and analysed with responses provided below.

## 4.1 Transport for NSW

A formal submission comprising a letter (dated 10 June 2017) was received from TfNSW. Several comments were provided, as summarised and responded to in Table 4-1 below.

Table 4-1 Response to Government Agency submission – Transport for NSW

Aspect	Issue	Response	Reference
<b>Letter</b>			
Conditional support	<p>TfNSW provides conditional support for the following:</p> <ul style="list-style-type: none"> <li>The MPW Concept Modification RtS progressing to the PAC for consideration</li> <li>The MPE Concept Plan Modification 2 progressing to the PAC for consideration</li> <li>A deferred commencement consent for any approval granted for the MPE Stage 2 Proposal or MPW Stage 2 Proposal requiring an agreement for State Road Network mitigation for ultimate concept plan development, prior to Stage 2 construction.</li> </ul>	<p>TfNSW conditional support for the progression of the MPE Concept Plan Modification 2 is noted.</p> <p>However, a deferred commencement consent for the MPE Stage 2 Proposal is deemed unnecessary as there is considered to be adequate information provided within the EIS to allow for the assessment of the MPE Stage 2 Proposal.</p> <p>An agreement would be made separately in consultation with Roads and Maritime Services regarding any State Road Network mitigation required based on the Precinct model once it is available.</p>	N/A
<b>Annexure A</b>			
Network impacts	<p>The traffic study documented in the proponent's Stage 2 OTTIA found that the broader road network in the study area would need to be upgraded to cater for the forecast traffic increases from the proposed development and general background growth. Despite</p>	<p>Section 7.5.2 of the MPE Stage 2 EIS identifies the following intersections as requiring upgrades as part of the Proposal:</p> <ul style="list-style-type: none"> <li>Moorebank Avenue/MPE Stage 2</li> <li>Moorebank Avenue/MPE Stage 1 northern access</li> <li>Moorebank Avenue/MPE Stage 1 central access</li> </ul>	Section 7.5.2 and section 7.6 of the EIS.

## MPE Stage 2 RtS

Aspect	Issue	Response	Reference
	this, the proponent is not proposing any mitigation works beyond those along Moorebank Avenue, referring to the broader contributions being determined once the ultimate development cumulative assessment is completed.	<ul style="list-style-type: none"> <li>Moorebank Avenue/MPE Stage 1 southern emergency access.</li> </ul> <p>In addition, the Proposal would include upgrades to approximately 1.4 kilometres of Moorebank Avenue. These upgrades would include modifications to lane configurations, including widening, and vertical alignment adjustment.</p> <p>Additional intersections are also identified in Section 7.6 of the EIS that would operate at an unsatisfactory level of service without the Proposal (i.e. resulting from growth in background traffic or cumulative traffic). These intersections include:</p> <ul style="list-style-type: none"> <li>Moorebank Avenue/Anzac Road</li> <li>M5 Motorway/Moorebank Avenue</li> <li>M5 Motorway/Hume Highway</li> <li>Moorebank Avenue/Newbridge Road</li> <li>Moorebank Avenue/Heathcote Road</li> <li>M5 Motorway/Heathcote Road.</li> </ul> <p>Recommended improvements to these intersections are suggested, however as these intersections would operate unsatisfactorily regardless of the Proposal, these improvements are not included as mitigation measures for the Proposal.</p>	
<b>Annexure B</b>			
Trip generation	The proponent shall provide a simplified table, detailing the key assumptions for each stage along with likely accumulative trip generation. The figures should take into account and include an updated delivery schedule, aligned with the trip generation numbers.	A table, detailing the trip generation (daily and peak) for the construction and operation of the Proposal as well as the key operational trip generation assumptions used is provided in Appendix C of this RtS.	Appendix C of this RtS.
Traffic generation	The proponent shall provide information regarding the likely daily and peak hour movements generated	As detailed in Appendix C of the RtS, the Proposal would generate 3,993 light vehicle trips and 564 heavy vehicle trips per day during operation.	Appendix C of this RtS.



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Aspect	Issue	Response	Reference
	by the construction and operational stages of the proposed development.	<p>During the AM peak, the Proposal would generate 252 light vehicle trips per hour, and 99 heavy vehicle trips per hour.</p> <p>During the PM peak, the Proposal would generate 80 light vehicle trips per hour and 105 heavy vehicle trips per hour.</p>	
Traffic Generation	The traffic generation does not include the proposed 8,000sqm of retail, commercial and light industrial uses on the site. Further information is needed regarding the traffic generation of all proposed land uses.	<p>The traffic generation rates used to undertake the traffic analysis has been based on previous traffic surveys undertaken by Parsons Brinckerhoff (PB) at industrial estates in Erskine Park and Eastern Creek which contain comparable retail/ commercial components, as well as light industrial land uses (<i>Analysis of warehouse traffic surveys</i> (Parsons Brinckerhoff, January 2016 (ref: 2189293E-ITP-MEM-Surveys-Updated))).</p> <p>As such, the traffic generation rates have included consideration of the land uses of the freight village (refer to Appendix B of the MPE Stage 2 Operational Traffic and Transport Impact Assessment (OTTIA), Appendix K of the MPE Stage 2 EIS).</p>	<p>Appendix K of the EIS.</p> <p><i>Analysis of warehouse traffic surveys</i> (Parsons Brinckerhoff, January 2016 (ref: 2189293E-ITP-MEM-Surveys-Updated))</p>
Cumulative traffic impacts	It is not clear whether the proponent has considered the cumulative impacts associated with other planned and approved developments within the Precinct.	<p>It is acknowledged that there are a number of other Development Applications (DAs) within the Moorebank Precinct, within and immediately adjacent to the MPE site, including:</p> <ul style="list-style-type: none"> <li>DA 1079-2016: Display suite - The construction and operation of a display suite, including café, signage and parking for 24 cars.</li> <li>DA 1264-2015 (as modified): Buildings 53 and 54 (Cluster 1) - The alteration of existing warehouses for a future end-user.</li> <li>DA 352-2016 and DA 984-2016: Buildings 49-52 (Cluster 2) - The alteration of existing warehouses for a future end-user. Note that DA 352-2016 was for the construction of the development, and DA 984-2016 is for the use of the development.</li> <li>DA 557-2016: Building 82 - Alterations and additions to an existing building and change of use to a warehouse and distribution centre.</li> <li>DA subject to determination - Building 7 and 68 - The alteration of existing warehouses for a future end-user.</li> </ul> <p><b>DA 1079-2016: Display suite</b></p>	N/A

Aspect	Issue	Response	Reference
		<p>The proposed development is intended to be used for a period of approximately five to ten years. It is anticipated for this development to generate 22 additional vehicles during the AM peak and 11 additional vehicles during the PM peak.</p> <p>The assessment of operational traffic impacts associated with this development noted that the operation of the display suite would have no material impact on the operation of the local area network with all intersections in the locality continuing to operate with similar delays and levels of service as currently occurs.</p> <p>As such, no adverse cumulative impacts are anticipated to result from the operation of the proposed development concurrently with the construction of the MPW Stage 2 and MPE Stage 2 Proposals.</p> <p><b>DA 1264-2015 (as modified): Buildings 53 and 54, DA 352-2016 &amp; DA 984-2016: Building 49-52, DA 557-2016: Building 82, undetermined DA: Buildings 7 and 68</b></p> <p>These developments would generate the following additional vehicles:</p> <ul style="list-style-type: none"> <li>• DA 1264-2015: <ul style="list-style-type: none"> <li>– 91 additional vehicles during the AM peak and 91 additional vehicles during the PM peak</li> </ul> </li> <li>• DA 352-2016 and DA 984-2016: <ul style="list-style-type: none"> <li>– 55 additional vehicles during the AM peak and 41 additional vehicles during the PM peak</li> </ul> </li> <li>• DA 557-2016: <ul style="list-style-type: none"> <li>– 18 additional vehicles during the AM peak and 14 additional vehicles during the PM peak</li> </ul> </li> <li>• Undetermined DA: <ul style="list-style-type: none"> <li>– 26 additional vehicles during the AM peak and 19 additional vehicles during the PM peak.</li> </ul> </li> </ul> <p>The environmental assessments undertaken for these developments concluded that there would be adequate existing access, internal road network and hard stand areas available on the site for operations. Additional the abovementioned developments were assessed as having no material impact on the surrounding network compared with that associated with the historic use of the site.</p> <p>As such, no adverse cumulative impacts are anticipated to result from the operation of the proposed developments concurrently with the construction of the MPW Stage 2 and MPE Stage 2 Proposals.</p> <p><b>MPE and MPW Projects</b></p> <p>The MPE Concept Plan Approval (MP 10_0193) (approved on 29 September 2014) included a detailed cumulative traffic impact assessment of the MPE Project and the MPW Project. At the time of the preparation of this cumulative traffic impact assessment an EIS had not been lodged for the MPW</p>	

MPE Stage 2 RtS

Aspect	Issue	Response	Reference
		<p>Project and, therefore, this impact assessment was based on publicly available information. Notwithstanding this, the traffic assessment was adequate and appropriate to both assess, and mitigate, the impacts of the MPE Project in consideration of the impacts identified for the MPW Project.</p> <p>Conversely, the MPW Concept Approval (SSD 5066) included a detailed cumulative traffic impact assessment of the MPW Project and the MPE Project. The MPW Concept Approval (approved on 3 June 2016) was granted subsequent to the MPE Concept Plan Approval and, therefore, additional information was available for the cumulative assessment of both Projects. In particular, Cumulative Scenario A within the MPW Concept RtS provides an assessment which is generally consistent with the current projects, namely 1.55 million TEU through put per annum for two intermodal terminals and 600,000sqm of warehousing for the precinct. The MPW Concept Approval, like the MPE Concept Plan Approval, included measures to mitigate the MPW Project both in isolation and in consideration of the previously approved MPE Project.</p> <p>As a result of the detailed cumulative assessments, and based on discussions with government agencies, the approach for each stage (i.e. SSD Application) for the development for Moorebank Precinct (both MPE and MPW Projects) has been to provide a detailed cumulative assessment for the stage of development for which approval has been sought and any other stages of development that are known to have the potential to be immediately operational (or under construction) at the time of opening (commencement of operations) of that project. This approach considers the proposed development and any neighbouring development (Moorebank Precinct or otherwise) that has suitable design and operational details to provide an informed cumulative impact assessment.</p> <p>To be consistent with the established approach, the MPE Stage 1 Project (approval granted on 12 December 2016) provided a cumulative traffic impact assessment for both the MPE Stage 1 Project full operations and MPW Stage 1 (Early Works) during construction. This assessment was consistent with and built on the MPE Concept Plan Approval cumulative traffic impact assessment, based on detailed design that had been undertaken for both projects subsequent to the approval of the Concept Plan/Concept. The MPE Stage 1 Project provided mitigation measures based on the Concept Plan/Concept to addresses and manage traffic impacts.</p> <p>To continue the above-mentioned approach, the MPE Stage 2 Proposal and the MPW Stage 2 Proposal have both provided individual cumulative traffic impact assessments based on further design and understanding of the operations (and construction timeframe) of the Moorebank Precinct. The MPW Stage 2 Proposal was prepared prior to the design or clarification of operational understanding of the MPE Stage 2 Proposal and, therefore, provides an operational cumulative assessment in consideration of the MPE Stage 1 Project at full operations. The MPE Stage 2 Proposal, furthers this assessment and provides an operational cumulative assessment in consideration of both the MPE Stage 1 Project (full operations) and the MPW Stage 2 Proposal (full operations). The proposals</p>	

MPE Stage 2 RtS

Aspect	Issue	Response	Reference
		<p>separately include mitigation measures that consider the impact of the individual projects and other projects likely to operate reflective of the available information at the time of preparation. As a result, both the MPE Stage 2 and MPW Stage 2 Proposals have provided adequate and suitable cumulative traffic impact assessments with associated mitigation measures (including upgrades and road network improvements), which would facilitate the traffic to be generated by these proposals.</p> <p>The Moorebank Precinct model would provide further assessment and consideration of the cumulative traffic impact reflective of both the information in the MPE Concept Plan Approval and MPW Concept Approval and other potential development proposed for the Moorebank Precinct. As a detailed cumulative traffic impact assessments and associated mitigation measures have been previously provided for the purposes of the MPE and MPW Concept Plan Approvals and periodically for the staged applications, the Moorebank Precinct model is not considered to be required to process the MPE Stage 2 and MPW Stage 2 Proposals. In particular, the Moorebank Precinct model includes elements which albeit relevant to the 'Full + additional build' have already been assessed as part of previous MPE and MPW Concept Plan Approvals. Further information relating to these cumulative assessments is provided in the table attached to Appendix K of this RtS.</p>	
SIDRA Modelling	SIDRA traffic modelling undertaken for MPE Stage 2 is not consistent with the modelling undertaken for the MPW Stage 2 development application and should be updated accordingly.	<p>In response to issues raised by Liverpool City Council in its submission on the MPW Concept Modification (refer to Appendix B of the MPW Concept Plan Modification Supplementary Response to Submissions Report), the SIDRA analysis undertaken as part of the MPW Stage 2 Proposal was revised in accordance with <i>Roads and Maritime Services (Roads and Maritime) Traffic Modelling Guidelines (version 1.0, February 2013)</i>. The updated results were included in the MPW Stage 2 Revised Construction Traffic Impact Assessment (revised CTIA) (refer to Appendix C of the MPW Stage 2 Response to Submissions Report).</p> <p>As part of the MPE Stage 2 Response to Submissions Report, the SIDRA analysis included in the EIS construction traffic impact assessment (CTIA) was revised (refer to Appendix K of the MPE Stage 2 EIS), consistent with the updates made to the MPW Stage 2 SIDRA analysis. The revised SIDRA results are included in Section 7.1 of the RtS, and the revised SIDRA traffic movement diagrams are included in Appendix C of the RtS.</p> <p>As a result, the SIDRA modelling and analysis undertaken for the MPW Stage 2 and MPE Stage 2 Proposals are consistent.</p>	<p>Appendix B of the MPW Concept Plan Modification Supplementary Response to Submissions Report.</p> <p>Section 7 and Appendix K of the EIS.</p> <p>Section 7.1 and Appendix C of the RtS.</p>

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Aspect	Issue	Response	Reference
Intersection LoS	The submitted documentation suggests the Level of Service (LoS) of intersections is predicted to perform better for the “with development” scenarios than the “without development” scenarios. It is not clear how this is derived and is counterintuitive. What road upgrades have been included, along with traffic signal phasing and operations priority to achieve this outcome.	<p>The without development scenario assessed in the MPE Stage 2 operational traffic and transport impact assessment (Appendix K of the MPE Stage 2 EIS) comprised the existing road network, with consideration of committed / planned road network upgrades by the State government on the wider road network.</p> <p>The ‘with development’ scenarios included in the assessment of operational traffic impacts as part of the MPE Stage 2 EIS included network upgrades which are recommended to minimise the impacts of background traffic growth and traffic from the cumulative operation of the Proposal with the MPE Stage 1 Project and the MPE Stage 2 Proposal. The proposed network upgrades and the indicative timing for these upgrades are described in more detail in Section 7 and Appendix K of the MPE Stage 2 EIS.</p> <p>Network improvements are required to mitigate the impacts of the cumulative operational scenario (i.e. the concurrent operation of the Proposal with the MPE Stage 1 Project and the MPW Stage 2 Proposal) at key intersections within the study area, and these are either directly as a result of the cumulative development scenario, or to cater for background traffic growth.</p> <p>As these upgrades are not directly a result of the Proposal, they have been nominated as assumed network upgrades and adopted to complete the modelling for the operational traffic and transport impact assessment (refer to Section 7.6 and Appendix K of the MPE Stage 2 EIS, and section 7.1 of the RtS for more information).</p> <p>As a result of considering the proposed network upgrades in line with the development scenario, there are some resulting improvements to intersection performance with the operation of the Proposal.</p>	<p>Section 7 and Appendix K of the EIS.</p> <p>Section 7.1 of the RtS.</p>
Traffic signal improvements	<p>It is not clear what changes have been proposed to “improve signals” operation within the submitted traffic modelling.</p> <p>RMS will not support reducing green time on arterial approaches to an intersection.</p>	<p>‘Improve signals’ refers to adjustments to signal phasing and times to improve the intersection performance, based on the proposed intersection upgrades and layouts.</p> <p>The traffic signal green times for the major traffic movements at some intersections (i.e. on arterial roads) (refer to Section 7.2.5 of the MPE Stage 2 EIS) were:</p> <ul style="list-style-type: none"> <li>Decreased due to the change of road layouts (i.e. more lanes provided for road upgrades)</li> <li>Increased due to the more green time required for particular movements or the change of signal phase plans.</li> </ul> <p>The overall intersection performance was generally improved for traffic operation, mostly without ‘compromising’ the major traffic movements (i.e. on arterial roads)</p>	Section 7.2.5 of the EIS.

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Aspect	Issue	Response	Reference
M5 Weave	It is not clear whether the SIDRA modelling has accounted for the M5 weave issues, and should be clarified by the proponent's traffic consultant.	<p>The SIDRA analysis undertaken for the assessment of construction traffic impacts of the MPW Stage 2 and MPE Stage 2 Proposals (refer to Appendix M of the MPW Stage 2 EIS and Appendix L of the MPE Stage 2 EIS) did not account for the M5 weave issues as the SIDRA software package was not appropriate to be used for investigation of highway weaving.</p> <p>The modelling for weaving normally is undertaken using microsimulation modelling which simulates <i>"the movement of individual vehicles based on car-following, lane changing and gap acceptance algorithms that are updated several times every second."</i> (Roads and Maritime Services Traffic Modelling Guidelines, 2013).</p> <p>In the assessment of the operational traffic impacts of the MPW Stage 2 and MPE Stage 2 Proposals (refer to Section 7.1 and Appendix C of the RtS and Appendix K of the EIS and Section 7.1 of the RtS), AIMSUN modelling undertaken included consideration of the weaving of vehicles on the M5 Motorway due to the inclusion of microsimulation pockets within the model.</p> <p>AIMSUN modelling conducted for the Proposal considered the potential vehicular conflict and delays associated with weaving and merging of traffic at the M5 interchange. In assessing weaving impacts the AIMSUN model examines driver behaviour, vehicle acceleration and deceleration characteristics and the road geometry. It was noted in the OTTIA prepared for Proposal that this weaving issue is not something that is directly related to the presence of the project and is a broader existing road network issue affected by background traffic growth.</p>	<p>Section 7.1 and Appendix C of the RtS.</p> <p>Section 7 and Appendix K of the EIS.</p>
Construction and operational site access	Details of the proposed accesses for the construction and operational stages have not been provided. It is not clear whether the accesses comply with relevant Australian Standards (ie vehicle swept paths, geometry, sight lines, pedestrian safety, aisle widths, etc).	<p><u>Construction site accesses</u></p> <p>Access to and egress from the MPE Stage 2 site during construction of the Proposal would be via the existing DSNDN northern access, to the north of the MPE Stage 1 Project. At the completion of construction, this access point would transition to the main operational entry point for vehicles accessing and egressing the MPE Stage 2 site's warehouse and distribution facilities (refer to Section 4.3.8 of the MPE Stage 2 EIS). The construction site access for the Proposal will be subject to detailed design development. As part of detailed design, the relevant Australian Standards relating to site access will be considered, including Austroads design guides and Roads and Maritime's supplements to Austroads guides.</p> <p><u>Operational site accesses</u></p> <p>Access to and egress from the MPE Stage 2 site during operation of the Proposal would be via the existing DSNDN northern access, to the north of the MPE Stage 1 Project. As part of the MPE Stage 2 RtS, Revised Stormwater and Drainage Design Drawings have been included at Appendix E, which include a swept path analysis of the MPE Stage 2 operational site access.</p>	<p>Section 4.3.8 of the EIS.</p> <p>Appendix E of the RtS.</p>

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Aspect	Issue	Response	Reference
		<p>A road safety audit has also been carried out for MPE Stage 2, which considers pedestrian safety and sight lines and can be made available at TfNSW's request.</p> <p>The geometry, aisle widths and further information pertaining to the operational layout of the MPE Stage 2 site access will be considered as part of further detailed design development and will consider the relevant Australian Standards relating to site access will be considered, including Austroads design guides and Roads and Maritime's supplements to Austroads guides.</p>	
Construction and operational site access	It is not clear how the proposed vehicular and pedestrian accesses for the other development applications will conflict with pedestrian and vehicle movements from this development proposal.	<p>The cumulative construction traffic impact assessment for the MPE Stage 2 Proposal, as detailed in Section 19 of the EIS, considered peak construction of the MPE Stage 2 Proposal being undertaken concurrently with the MPW Stage 2 Proposal and construction of the MPE Stage 1 Project.</p> <p>The cumulative operational traffic impact assessment for the MPE Stage 2 Proposal as detailed in Section 19 of the EIS considered the concurrent operation of the MPE Stage 2 Proposal with the MPE Stage 1 Project and the MPW Stage 2 Proposal.</p>	Section 19 of the EIS.
		<p>It is acknowledged that in addition to the cumulative scenarios detailed above, there are a number of other Development Applications (DAs) across the Moorebank Precinct, all of which are located within the MPE site:</p> <ul style="list-style-type: none"> <li>• DA 1079-2016: Display suite - The construction and operation of a display suite, including café, signage and parking for 24 cars.</li> <li>• DA 1264-2015 (as modified): Buildings 53 and 54 (Cluster 1) - The alteration of existing warehouses for a future end-user.</li> <li>• DA 352-2016 &amp; DA 984-2016: Building 49-52 (Cluster 2) - The alteration of existing warehouses for a future end-user. Note that DA 352-2016 was for the construction of the development, and DA 984-2016 is for the use of the development.</li> <li>• DA 557-2016: Building 82 - Alterations and additions to an existing building and change of use to a warehouse and distribution centre.</li> </ul> <p>Vehicle access to the display suite (DA 1079-2016) would be via the existing Moorebank Avenue intersection with the northern DSND site access, which also forms the MPE Stage 2 site access.</p> <p>Vehicle access to the existing warehouses which would be altered for future end-users as part of DA 1264-2015, DA 352-2016, DA 984-2016 and DA 557-2016 would also be via the MPE Stage 2 Proposal site access.</p> <p>Pedestrian access to the display suite and the warehouses which are to be altered for future end-users would be via existing pedestrian infrastructure within the MPE site.</p>	N/A

MPE Stage 2 RtS

Aspect	Issue	Response	Reference
		<p>It is not expected that there would be any conflicts with pedestrian and vehicular access to the MPE site between the abovementioned development applications and the Proposal. The proposed developments are intended to be used for a period of approximately five to ten years.</p> <p>The environmental assessments undertaken for the abovementioned developments concluded that there would be <i>'no material impact on the operation of the local area network with all intersections in the locality continuing to operate with similar delays and levels of service as currently occurs'</i></p> <p>Pedestrian and vehicular access to and from the MPE site for the abovementioned development applications and the Proposal would be managed with the implementation of the Construction Traffic Management Plan (CTMP) and Operational Traffic Management Plan (OTMP) for the Proposal at Appendix K of the EIS, where relevant.</p>	
Service vehicle movements	Details of service vehicle movements and access arrangements should be provided.	<p>Service vehicles would access and egress the Proposal site via the MPE Stage 2 site access (refer to Figure 4-1 in Section 4.1 of the EIS) and travel within the Proposal site via the internal road network (refer to the revised architectural drawings at Appendix B for more information regarding the internal road network layout).</p> <p>The MPE Stage 2 site access and the internal road network have been designed to accommodate super B-doubles and A-doubles. As service vehicles would be smaller than a Super-B double and A-double, adequate turning provisions will exist for service vehicles throughout the Proposal site. Site access arrangements that would apply to service vehicles are described in Section 5.4 of the OTTIA.</p> <p>At the time of writing the EIS and the MPE Stage 2 RtS, the type of service vehicles, and their likely arrival and departure times were unknown, as service contractors have not yet been engaged for the operation of the Proposal. As a result, the service vehicle types to be used are currently unknown. The likely arrival and departure times of service vehicles at the time of writing is therefore unknown, and would be dependent on the service contractors, once identified.</p> <p>Where possible, service vehicle movements to, from and within the Proposal site would be undertaken outside of the AM and PM peak periods. It is expected that once available, further details regarding the service vehicle type(s), and arrival and departure times of service vehicles accessing and egressing the Proposal would be incorporated into the Operational Environmental Management Plan (OEMP) and Operational Traffic Management Plan (OTMP) for the Proposal at Appendix K.</p>	<p>Section 4.1 of the EIS.</p> <p>Section 5.4 of the OTTIA at Appendix K of the EIS.</p>



MPE Stage 2 RtS

Aspect	Issue	Response	Reference
Vehicle accidents	The submitted documentation states that vehicle accidents are likely to increase as a result of the proposed development. It is not clear how this was determined and what mitigation measures will be implemented to improve road and pedestrian safety on the surrounding network, particularly within the intermodal site.	<p>The calculation of predicted crash rates with the Proposal for the 2 EIS was undertaken by:</p> <ul style="list-style-type: none"> <li>Determining the average number of crashes per year based on existing conditions</li> <li>Multiplying the average crash rate by the percentage increase in traffic volumes as a result of the proposal to upscale the existing crash rate from existing (without Proposal) to future (with Proposal).</li> </ul> <p>The 'with development' scenarios included in the assessment of operational traffic impacts as part of the MPE Stage 2 EIS and MPW Stage 2 EIS included network upgrades which are recommended to minimise the impacts of background traffic growth and traffic from the cumulative operation of the Proposals. The proposed network upgrades and the indicative timing for these upgrades are described in more detail in Section 7.6 and Appendix K of the MPE Stage 2 EIS and Section 7.6 and Appendix M of the MPW Stage 2 EIS.</p> <p>The upgrades included in the MPE Stage 2 EIS and MPW Stage 2 EIS would result in Moorebank Avenue being upgraded to the current Roads and Maritime road design standards and will improve overall safety for road users and pedestrian/ cyclists within the Moorebank Precinct.</p> <p>Measures to avoid, minimise and mitigate impacts to road safety for vehicle users, pedestrians and cyclists during construction and operation of the MPE Stage 2 and MPW Stage 2 Proposals will be managed with the implementation of final Construction Traffic Management Plans (CTMPs) and Operational Traffic Management Plans (OTMPs) for the MPW Stage 2 and MPE Stage 2 Proposals.</p>	
Moorebank Avenue Upgrade	Further details regarding the proposed change in level of Moorebank Avenue by up to 2 metres is required, including but not limited to; verge treatment, hydrology and stormwater management, service impacts, boundary levels and tie-ins.	<p>The Moorebank Avenue upgrade comprises (refer to Section 1.2.3 of the EIS):</p> <ul style="list-style-type: none"> <li>Modifications to the existing lane configuration, including some widening</li> <li>Earthworks, including construction of embankments and tie-ins to existing Moorebank Avenue road level at the Proposal's southern and northern extents</li> <li>Raking of the existing pavement and installation of new road pavement</li> <li>Establishment of temporary drainage infrastructure, including temporary basins and / or swales</li> <li>Adjusting the vertical alignment by about two metres from the existing levels, including kerbs, gutters and a sealed shoulder</li> <li>Signalling and intersection works</li> </ul> <p>The eastern verge of the Moorebank Avenue upgrade would comprise landscaping in accordance with the MPE Stage 2 Landscape Design Statement and Plan, included at Appendix B of this RtS.</p>	Section 1.2.3 of the EIS.

MPE Stage 2 RtS

Aspect	Issue	Response	Reference
		<p>Stormwater runoff along the section of Moorebank Avenue being upgraded as part of the Proposal would be conveyed through a pit and pipe system to the western OSD, located to the west of Moorebank Avenue. Water from the OSD would then discharge to a culvert that flows westwards through the MPW site and discharges to the Georges River.</p> <p>Utilities and services for the Proposal would be within the road reserve of the Moorebank Avenue upgrade. The location of these services are to be confirmed as part of detailed design development and would be integrated into the construction staging of the Moorebank Avenue upgrade.</p> <p>Site levels within the Moorebank Avenue upgrade portion of the Proposal would be graded so that they integrate with the final site levels of the MPE and MPW sites. As the Moorebank Avenue upgrade approaches the northern and southern boundaries, the final levels would be graded to tie-in with the level of the remainder of Moorebank Avenue. An amendment to the Proposal, as described in Section 6 of the MPE Stage 2 RtS includes an extension to the length of the Moorebank Avenue upgrade to provide adequate room for the Moorebank Avenue upgrade to tie-in to the south of the Proposal.</p>	
Moorebank Avenue construction staging	Staging plans demonstrating how 2 lanes of traffic will be maintained along Moorebank Avenue, whilst the road is raised by 2 metres.	<p>Construction staging plans for the Moorebank Avenue upgrade will be developed as part of the detailed design development of the Proposal.</p> <p>As detailed in the mitigation measures included in section 8 of the EIS Construction Traffic Impact Assessment (refer to Appendix K of the EIS), Traffic Control Plans (TCP) will be produced for specific construction staging scenarios, depicting vehicle, pedestrian, bus and cyclist restrictions and protection measures.</p> <p>It is expected that as part of detailed design and prior to the commencement of construction, the Preliminary Construction Traffic Management Plan (PCTMP) would be updated to include these plans.</p>	Appendix K of the EIS.
Realignment of Moorebank Avenue	The proponent is to provide information on the status of the proposed realignment of Moorebank Avenue, which could have significant impacts on the proposed function of the road and access to the site.	The realignment of Moorebank Avenue does not form part of the Proposal. Should this realignment be undertaken, the associated environmental approval documentation would include an assessment of a cumulative impacts regarding the MPW Stage 2 or MPE Stage 2 Proposals. The specific timing for the realignment of Moorebank Avenue has yet to be determined.	N/A

## 4.2 NSW Environment Protection Authority

A formal submission comprising a letter (dated 27 February 2017) was received from the NSW EPA. Several comments were provided, as summarised and responded to in Table 4-2 below.

Table 4-2 Response to Government Agency submission – NSW Environment Protection Authority

Aspect	Comment	Response	Reference
Construction working hours	<p>The assessment proposed, without justification, out of hours works including material delivery, direct placement or stockpiling, crushing and the Moorebank Avenue upgrade:</p> <ul style="list-style-type: none"> <li>• between 6am and 7am on weekdays</li> <li>• between 6pm and 10pm on weekdays</li> <li>• between 7am and 8am Saturdays</li> <li>• between 1 pm and 6pm Saturdays.</li> </ul> <p>The Interim Construction Noise Guideline suggests that out of hours work should only occur with strong justification. The concept approval for the site also requires "Where work hours outside of standard construction hours are proposed, clear justification and detailed assessment of these work hours must be provided, including alternatives considered, mitigation measures proposed and details of construction practices, work methods, compound design, etc".</p> <p>Any proposed out of hours works should only be allowed if further justification is provided, to the Department of Planning and Environment's (DPE) satisfaction and for reasons other than convenience, for example if it is unsafe to do certain work during standard hours.</p> <p><b>Recommendation</b></p> <p><b>Before approving the project, DPE should require the proponent to justify, to DPE's satisfaction, why out of hours construction works are necessary (for reasons other than convenience).</b></p>	<p>Out-of-hours works would be required for the Proposal. Section 8.4.1 of the EIS outlines the likely timing and nature of the out-of-hours activities for the Proposal. Out-of-hours activities are required to reduce impacts associated with noise and the potential for traffic congestion during the AM and PM peak periods. Activities have been selected and restricted to comply with the NSW EPA IGNG guidelines, i.e. SIMTA do not propose any works that would impact on the surrounding land uses above the relevant criteria. SIMTA undertook a considerable amount of preliminary assessment to reduce and mitigate these impacts prior to the preparation of the chosen construction methodology outlined in the EIS.</p> <p>The construction activities for the Proposal are divided into distinct out-of-hours periods to spread the least noise-intensive construction activities into off-peak traffic periods, thereby ameliorating local traffic disruptions associated with materials delivery (OOH period 1) and materials delivery and direct placement or stockpiling (OOH periods 2, 3 and 4).</p> <p>The out of hours works are considered necessary to reduce traffic impacts of the Proposal, while complying with the relevant noise criteria. This construction noise would be further managed through the implementation of both noise monitoring and the Construction Noise and Vibration Management Plan, as part of the CEMP, during construction of the Proposal (refer to Section 22 of the EIS and Section 8 of the RtS).</p>	<p>Section 8.4.1 of the MPE Stage 2 EIS</p> <p>Section 22 of the MPE Stage 2 EIS</p>

Aspect	Comment	Response	Reference
Crushing and concrete batch plant	<p>The project includes using a crushing plant and one or more concrete batch plant. These appear to be proposed so that concrete products can be produced on site rather than bought from another supplier. Based on the assessment, the crushing plant will run for about a year and the batch plant will run for about 21 months.</p> <p>Use of construction noise criteria for temporary batch plants when concrete is locally available may lead to undesirable outcomes where louder temporary plants are preferred over established operational plants. Before approving this proposal, DPE should require the proponent to explain, to DPE's satisfaction, why onsite crushing and concrete batch plant are desirable in this case. For example:</p> <p>Are there materials which should be recycled onsite, to avoid unnecessary transport impacts?</p> <p>Are suitable products not available, so they need to be produced on site?</p> <p>Any potential benefits of on-site recycling and reductions to transport volumes need to be balanced against increased impacts caused by on-site processing during the construction phase, including noise.</p> <p><b>Recommendation</b></p> <p><b>Before approving the project, DPE should require the proponent to justify, to DPE's satisfaction, why onsite crushing and concrete batch plant are desirable in this case.</b></p>	<p>The provision of onsite crushing capacity has a number of benefits including allowing re-use of demolition waste, thereby reducing transport impacts and the ability to crush unsuitable imported clean general fill material for site construction.</p> <p>Onsite crushing capacity is required as imported clean general fill material may contain large rock material that would require crushing to make it suitable as engineered fill for site construction. Demolition waste may also be crushed for potential recycling of suitable products and reuse on the site as general fill. This would reduce transport impacts generated by the importation of clean general fill and the offsite disposal of demolition waste.</p> <p>The proposed batching plant is required to produce concrete for the warehouse foundations, ground slabs and aprons across the Proposal site. Premade cement, sand and aggregate would be brought to site for mixing as ingredients of the final batched concrete. The inclusion of a batching plant onsite would reduce traffic impacts during construction by eliminating the requirement for pre-mixed concrete to be imported to site for immediate pour. Concrete pours typically would occur in the mornings within the morning peak traffic period, and by having a batching plant onsite, the concrete constituents can be brought to site during off-peak periods and mixed when required with site water sources, thereby alleviating traffic impacts generated by the Proposal construction.</p> <p>The predicted noise impacts associated with onsite batching plant and crushing facilities during construction are assessed in Section 8.4 of the EIS. Specifically, this section outlines sound power levels associated with both the batching plant and crusher, which would be used during works period B (crushing) and works periods E (crushing and concrete batching) and F (concrete batching) during standard working hours. A comparison of predicted noise levels against NMLs generated for the Proposal indicate that noise levels during standard construction hours would be below criteria during all construction works periods at all receiver locations.</p> <p>The use of onsite batching is considered to be justified given the reduced transport impacts and the compliance with applicable construction criteria.</p>	Section 8.4 of the MPE Stage 2 EIS

Aspect	Comment	Response	Reference
Construction noise and vibration management plan	<p>The assessment predicted that construction noise from the project, in combination with stage 1 and Moorebank Precinct West, would exceed standard hours noise management levels by about 2 A-weighted decibels (dBA) in Casula. The assessment stated that a construction noise and vibration management plan would be developed, and that commitment should be adopted in any approval for the project.</p> <p><b>Recommendation</b></p> <p><b>Any approval for the project should require a construction noise and vibration management plan</b></p>	<p>Agreed and noted. A Construction Noise and Vibration Management Plan, as part of the CEMP for the Proposal is to be implemented during construction (refer to Section 22 of the EIS and Section 8 of the RtS).</p>	<p>Section 22 of the EIS and Section 8 of the RtS</p>
Detailed design	<p>The assessment stated that using horns and tonal reversing alarms would be strongly discouraged, and the restrictions detailed in the Operational Noise Management Plan. Because road trucks will access the site, tonal alarms will be used at times by road trucks on the site. Truck reversing alarms were predicted to meet the sleep disturbance screening criterion at all receivers, but detailed design should still minimise the need for reversing at the site.</p> <p>The assessment stated that pneumatic trailer brakes on trucks would exceed the sleep disturbance screening criterion by 1 dBA in Wattle Grove, which "is considered negligible". The EPA suggests that this exceedance can be adequately mitigated during detailed design of the project, for example by encouraging trucks to stop only in shielded areas. Truck trailer brake valves are located close to the ground, and should not be difficult to shield effectively.</p> <p><b>Recommendation</b></p> <p><b>Detailed design of the project should minimise the need for reversing on the site and for trucks to stop in exposed areas</b></p>	<p>Efforts to reduce or minimise tonal reversing alarms are considered in Section 8.2 of the EIS. It is noted that reversing alarms are required for safety reasons, however, the Proposal layout has been designed in such a manner to reduce the need for vehicles to reverse where possible.</p> <p>Further measures to mitigate noise impacts from truck trailer brake valves would be considered during detailed design.</p>	<p>Section 8.2 of the EIS</p>

Aspect	Comment	Response	Reference
Operational noise	<p>Other reports on the Moorebank Precinct have acknowledged that sensitive receivers would see both Moorebank projects as the one facility. The assessment compared their combined contribution to the amenity criteria at sensitive receiver locations. If the projects are likely to be viewed as one facility, the proponent should also predict the maximum intrusive contribution of the two projects in combination.</p> <p><b>Recommendation</b></p> <p><b>The proponent should predict the maximum Leq(15min) operational noise contribution expected from the combination of the project and Moorebank Precinct West.</b></p>	<p>A cumulative noise impact assessment for the Proposal in conjunction with the Stage 1 of the MPE Project and, Stage 1 (Early Works) and Stage 2 of the MPW Project is provided in Section 19.4 of the EIS.</p> <p>The <math>L_{Aeq, period}</math> noise levels at sensitive receivers as a result of the concurrent operation of these proposals have been predicted by combining the computer noise models developed for each proposal. Since the noise sources within the sites are very similar, they are expected to have noise 'signatures' which are almost identical.</p> <p>The operational noise assessment has been conducted in general accordance with the NSW Industrial Noise Policy (INP). The INP recommends that the amenity criterion, which is based on <math>L_{Aeq, period}</math> noise levels is used to place an upper limit on cumulative noise levels from multiple industrial sources. Accordingly, the cumulative operational noise assessment in the NVIA is based on <math>L_{Aeq, period}</math> noise levels and the amenity criterion.</p> <p>As identified in Table 7-12 of Appendix L of the EIS, the cumulative operational noise levels at sensitive receivers (<math>L_{Aeq, period}</math> noise levels) are predicted to comply with the relevant amenity criteria during all times of the day. The <math>L_{Aeq(15min)}</math> maximum noise levels are not likely to generate any additional exceedance of criteria when assessed cumulatively, given the two proposals possess a very similar 'noise signature'.</p>	<p>Section 19.4 of the EIS</p> <p>Appendix L of the EIS</p>

### 4.3 NSW Office of Environment and Heritage

A formal submission comprising a letter (dated 24 February 2017) was received from the NSW EPA. Several comments were provided, as summarised and responded to in Table 4-3 below.

Table 4-3 Response to Government Agency submission – NSW Office of Environment and Heritage

Aspect	Comment	Response	Reference
<b>Biodiversity</b>			
Green and Golden Bell Frog Surveys	Surveys for Green and Golden Bell Frog (GGBF) were conducted at the wrong time of the year. However, the GGBF habitat has mosquito fish ( <i>Gambusia</i> ) infestation so presence is considered highly unlikely. In addition, only 0.01 ha of GGBF habitat will be impacted by the proposal which is less than 2% of the total area of 0.67 ha.	<p>A detailed assessment of the likelihood of Green and Golden Bell Frog (GGBF) to occur on the MPE Site and adjoining areas of native vegetation to the south was included in the Flora and Fauna Assessment prepared for the MPE Concept Approval (Hyder Consulting 2013).</p> <p>This assessment found that the closest known extant population of GGBF is approximately 3.5 km east of the MPE Site at Hammondville. Habitat connectivity between this population and the MPE site is low. Targeted diurnal and nocturnal surveys for GGBF for the assessment in May 2011, as well as other recent projects nearby, did not record this species. While there are some preferred habitat features for GGBF, the presence of Mosquito Fish in aquatic habitats reduces the likelihood that the species occurs in the MPE Site or in nearby areas.</p> <p>The Amended Proposal includes modifications to the stormwater and drainage design, resulting in the removal of the southern drainage channel and outlet to Anzac Creek. As such, the 0.01 ha of Coastal freshwater lagoons of the Sydney Basin and Southeast Corner assessed as impacted in the BAR, which may also form marginal potential habitat for GGBF, would not be subject to impacts from the Amended Proposal.</p>	MPE Concept Plan EIS
Assessment methodology – assessment circles	The assessment circles are centred on the development, not the impacted vegetation. This may mean some entries in the calculator (before and after native vegetation cover within the assessment circles) are incorrect but it is considered unlikely erroneous credit calculations would result.	<p>The native vegetation cover in the 100 ha assessment circle was measured as approximately 27.25 ha. The future native vegetation cover was determined by subtracting the area of native vegetation to be cleared (0.16 ha) from the 27.25 ha.</p> <p>Given that only 0.16 ha of native vegetation is proposed to be cleared, the extent of native vegetation in assessment circles before and after development would be extremely unlikely to fall within different native vegetation cover intervals, regardless of the placement of the assessment circles.</p>	Appendix O of the EIS.



MPE Stage 2 RtS

Aspect	Comment	Response	Reference
Floristic data	No floristic plot data was provided, however, the identified Plant Community Types are consistent with other mapping and the assessment of the SIMTA Stage 1 proposal.	Noted	N/A
Assessment methodology – data for Vegetation Zone area	The data for Vegetation Zone area in the calculator are different to the provided GIS data (i.e. areas for VZ1, VZ2 and VZ3 are respectively 0.10 ha, 0.05 ha and 0.01 ha in the calculator but 0.11 ha, 0.03 ha and 0.01 ha in the GIS data). However, it is considered unlikely any meaningful changes to credit calculations would result as they are rounded to the nearest whole numbers.	<p>The area value entered into the calculator for VZ2 was 0.05 because the at the time of the calculation, the FBA calculator would not accept a value of 0.03 – the minimum value accepted was 0.05. It is not clear why the value of 0.03 was not accepted, as a value of 0.01 was able to be entered for VZ3.</p> <p>The difference in area for VZ1 is assumed to be related to updates to the mapped area after the calculation was commenced, that were not subsequently incorporated into the calculator.</p> <p>Given the very small areas of vegetation zones to be impacted, it is agreed that the credit value would be unlikely to increase or decrease substantially with the addition or subtraction of 0.1 ha increments.</p>	Appendix O of the EIS.
Biodiversity offset strategy	There is no biodiversity offset strategy provided. However, the offsets required are small and considered likely to be provided through the offset package being developed for Moorebank Precinct East Stage 1 (and associated rail link) and the Moorebank Precinct West proposals.	A comprehensive Biodiversity Offset Strategy (BOS) for the MPE Project is required to be prepared and implemented under Stage 1 of the MPE Project. The BOS is currently under preparation in accordance with the NSW Biodiversity Offsets Policy for Major Projects including the Framework for Biodiversity Assessment (OEH 2014), consistent with the 'avoid, minimise or offset' principle. The BOS considers and offsets the impacts of the Proposal and therefore a separate BOS has not been provided.	N/A
Impact assessment	OEH considers these issues to be minor and the assessment of direct impacts of the proposal on biodiversity to be adequate.	Noted	N/A
Indirect impacts to biodiversity	In relation to indirect impacts, OEH is concerned about the adequacy of assessment on the high biodiversity values of the adjoining Boot land to east and south as a result of the proposed earthworks and landscaping. Achieving the intended finished surface levels will require the importing of up to 680,000 m3 of fill with cut and fill depths up to 1.5m and 2.5m respectively along the Boot land boundary. The BAR acknowledges the potential impacts of increased sedimentation, risk of weed invasion and changes to	<p>In response to OEH's submission on the Proposal during public exhibition, additional targeted threatened flora surveys have been undertaken within 30 m of the eastern boundary of the MPE Site where it adjoins the Boot land, and within 30 m of the portion of the Boot land south of the MPE Site that adjoins the fenceline south of the MPE Stage 2 amended construction area (refer to Figure 6-2).</p> <p>Targeted surveys were conducted on 11 and 18 May 2017 and were undertaken using parallel walking transects spaced approximately 5 m apart. Where detected,</p>	Appendix O of the EIS. Section 7.5 of this RtS.

Aspect	Comment	Response	Reference
	<p>hydrology on threatened flora populations in the adjacent Boot land, however, these concerns appear to be restricted to locations of <i>Persoonia nutans</i> known when the BAR was prepared. Given the threatened species found during more recent flora surveys of the Boot land south of Anzac Creek (e.g. <i>Hibbertia puberula</i> and <i>Hibbertia fumana</i>), OEH recommends additional flora surveys be undertaken along the eastern and southern boundary at least 30m into the Boot land. Measures to avoid, mitigate or offset unavoidable indirect impacts should be assessed if additional threatened flora species are found.</p>	<p>the number of individuals was recorded. Threatened flora species targeted as part of the additional surveys included:</p> <ul style="list-style-type: none"> <li>• <i>Acacia bynoeana</i> (Bynoe's Wattle)</li> <li>• <i>Acacia pubescens</i> (Downy Wattle)</li> <li>• <i>Grevillea parviflora subsp. Parviflora</i> (Small-flowered Grevillea)</li> <li>• <i>Hibbertia fumana</i></li> <li>• <i>Hibbertia puberula subsp. Puberula</i></li> <li>• <i>Persoonia nutans</i> (Nodding Geebung).</li> </ul> <p>Given that detailed surveys for <i>Persoonia nutans</i> have previously been undertaken in the area south of the MPE Site, this species was not targeted or counted within the mapped vegetation in this part of the survey area. Cleared areas along the fenceline to the south of the MPE site, where <i>Persoonia nutans</i> had not previously been identified, were searched for the species.</p> <p>Four threatened flora species were recorded in the survey area during the additional surveys:</p> <ul style="list-style-type: none"> <li>• <i>Acacia pubescens</i> – a stand of this species was recorded near the cleared edge of Broad-leaved Ironbark - Melaleuca decora shrubby open forest to the east of the MPE site.</li> <li>• <i>Grevillea parviflora subsp. parviflora</i> – scattered individuals were recorded in the Hard-leaved Scribbly Gum - Parramatta Red Gum heathy woodland to the east of the MPE site.</li> <li>• <i>Hibbertia puberula subsp. puberula</i> – this species was recorded across all areas to the east and south of the MPE Site mapped as Hard-leaved Scribbly Gum - Parramatta Red Gum heathy woodland, as well as in cleared areas in the western extent of the surveyed area. The species was able to be positively identified as most individuals observed had flowering or fruiting material remaining on the plant. A few individuals were noted to be in flower or bud.</li> <li>• <i>Persoonia nutans</i> – one isolated mature individual was recorded at the edge of Broad-leaved Ironbark - Grey Box - Melaleuca decora grassy open forest to the east of the MPE site, and scattered regenerating plants were recorded in cleared areas adjoining the fenceline to the south of the MPE site.</li> </ul>	

Aspect	Comment	Response	Reference										
		<p>The number of plants or stems of each species recorded during the targeted surveys is listed below.</p> <table><tr><th>Species</th><th>Number of plants/stems recorded</th></tr><tr><td><i>Acacia pubescens</i></td><td>43</td></tr><tr><td><i>Grevillea parviflora</i> subsp. <i>parviflora</i></td><td>6</td></tr><tr><td><i>Hibbertia puberula</i> subsp. <i>puberula</i></td><td>58</td></tr><tr><td><i>Persoonia nutans</i></td><td>5</td></tr></table> <p>The extent of the survey area and locations of threatened species recorded within this area is included in Section 7.5 and shown in Figure 7-2 of the Response to Submissions.</p> <p>Amendments to the construction and operational area do not encroach on these threatened species identified to the east or south of the MPE site during surveys carried out in May 2017. No threatened species recorded during these additional surveys require removal for the Amended Proposal.</p> <p>The Amended Proposal would result in construction phase biodiversity impacts consistent with those already identified and assessed as part of the EIS (refer to Section 11.4 and Appendix O of the EIS). The modifications to the stormwater and drainage design would not change the type or extent of potential stormwater and flooding impacts assessed in the MPE Stage 2 EIS (refer to Section 12 and Appendix O).</p> <p>It should be noted that in response to the issues raised by NSW DPI on the EIS and as part of design development, the stormwater and drainage design has been modified by converting the southern drainage swale presented in the EIS to a fill mound that would direct surface flows away from the MPE site, and removing the drainage outlet from this swale into Anzac Creek.</p> <p>As a result of the Amended Proposal, the removal of 0.01 hectares of Freshwater Wetlands on Coastal Floodplains of the NSW North Coast, Sydney Basin and South</p>	Species	Number of plants/stems recorded	<i>Acacia pubescens</i>	43	<i>Grevillea parviflora</i> subsp. <i>parviflora</i>	6	<i>Hibbertia puberula</i> subsp. <i>puberula</i>	58	<i>Persoonia nutans</i>	5	
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<i>Persoonia nutans</i>	5												

Aspect	Comment	Response	Reference
		<p>East Corner bioregions TEC (refer to Table 7-15 for additional information) would no longer be required, and direct impacts to other areas of associated aquatic habitat would no longer occur</p> <p>Accordingly, these potential impacts would be managed and mitigated in accordance with Section 12.4.1 and Appendix O of the EIS.</p>	
<b>Stormwater and Flooding</b>			
Floodplain Risk Management	<p>OEH has reviewed the methodology applied in Stormwater and Flooding Report and notes a set of flood models has been developed to address local and mainstream flooding.</p> <p>The models outcomes indicate that, there is no increase in flood levels in the 100 year ARI for nine hour critical duration. However, the proposal could potentially increase flood depth by 0.3 m in the vicinity of the north east neighbouring area in the PMF event. Where the proposed flood mitigation measures are unable to mitigate the adverse impacts, the impacted properties may need to be appropriately compensated.</p>	<p>Section 7.6 of this RtS includes an assessment of stormwater and flooding impacts from the Proposal on the Defence Joint Logistics Unit (DJLU) site to the north and north-east of the Proposal. Further, Appendix E of this RtS includes TUFLOW flood mapping of the flood impacts of the Amended Proposal on the DJLU site, north-east of the Proposal site. The assessment indicates that the Proposal and its associated works in the north eastern corner of the Proposal site would adequately mitigate potential flood impacts on the neighbouring downstream areas.</p>	<p>Section 7.6 of this RtS</p> <p>Appendix E of this RtS</p>
	<p>Section 4.4 indicates that Flood Emergency Response Plans (FERPs) would be prepared for the construction and operational stages of the proposal. OEH highlights that FERPs should be prepared in consultation with the State Emergency Service to ensure their integration to existing emergency management plans within the broader catchment.</p>	<p>As stated in Section 4.4 of the Stormwater and Flooding Assessment Report (Appendix P of the EIS), Flood Emergency Response Plans (FERPs) would be prepared for both construction and operation of the Proposal.</p> <p>It is agreed that, during the preparation of these documents, consultation with the SES would be undertaken, and the outcomes of this consultation would be considered in the FERPs. The mitigation measures have been updated in Section 8 of this EIS to document the commitment to this consultation.</p>	<p>Appendix P of the EIS</p>
	<p>OEH considers the assessment detailed in the Stormwater and Flooding Report is reasonable and appears to follow accepted floodplain risk management practice.</p>	Noted	N/A

## 4.4 NSW Heritage Council

A formal submission comprising a letter (dated 23 January 2017) was received from the NSW Heritage Council. A summary of, and response to this submission is provided in Table 4-4 below.

Table 4-4 Response to Government Agency submission – NSW Heritage Council

Aspect	Comment	Response	Reference
Mitigation of heritage impacts	<p>The assessment outlines suggested measures including conservation in situ of some, or all, of the WWII structures, adaptive reuse of some or all of the WWII structures, or demolition of the structures with prior comprehensive archival recording.</p> <p>Additional mitigation measures involve monitoring and recording of PADs V and W, which have the potential to contain archaeological remains of local significance.</p> <p>It is further provided that a recording would be undertaken by a suitably qualified archaeologist, who would assess the likely significance of any archaeological deposits encountered, and provide advice regarding appropriate further action.</p> <p>The Assessment indicates that should highly significant remains be identified during monitoring; additional monitoring of former structures or test excavations would be carried out.</p> <p>A Heritage Interpretation Strategy will be prepared prior to commencement of the proposed works, providing appropriate interpretive measures for the MPE site.</p> <p>The above mitigation measures are considered appropriate for the site and its heritage.</p>	Support is noted.	Section 15, 16, Appendix S and Appendix T of the EIS.

## 4.5 Geological Survey NSW

A formal submission comprising a letter (dated 20 December 2016) was received from the Department of Industry (Resources and Energy). The submission advised that the Geological Survey of New South Wales (GSNSW) has no mineral resource concerns regarding the Amended Proposal as there are no current mineral, coal or petroleum titles over the site. The Department's advice that the Amended Proposal should have no impact upon mineral, coal or petroleum resources is noted.

## 4.6 Department of Primary Industry

A formal submission comprising a letter (dated 24 February 2017) was received from the Department of Primary Industry. A summary of, and response to this submission is provided in Table 4-5 below.

Table 4-5 Response to Government Agency submission – Department of Primary Industry

Aspect	Comment	Response	Reference
Details of drainage works to the south of the MPE Site	<p>The proponent should provide details on the proposed drainage works to the south of the MPE site, including:</p> <ul style="list-style-type: none"> <li>• Clarification on whether the swale needs to feed into Anzac Creek or whether it can be located and operate outside the riparian corridor to minimise impacts to the creek;</li> <li>• a description of the proposed drainage works;</li> <li>• a description of the proposed temporary side track crossings;</li> <li>• representative drawings of the drainage swale and temporary crossing structures;</li> <li>• a scaled map which clearly shows the location of: <ul style="list-style-type: none"> <li>– Anzac Creek</li> <li>– top of bank</li> <li>– the 30 m wide riparian corridor along either side of the creek</li> <li>– existing native vegetation within the riparian corridor</li> <li>– the proposed drainage works</li> <li>– the proposed temporary side track crossings</li> </ul> </li> <li>• details on the depth, length and width of the drainage works</li> <li>• details on how the drainage swale is proposed to feed into the creek,</li> </ul>	<p>As part of the EIS, the stormwater runoff to the south of the Proposal site was intended to be managed through the provision of a drainage swale to direct stormwater flows away from the site through a swale, discharging to Anzac Creek.</p> <p>The stormwater and drainage design has been amended at the southern end of the MPE site through design development and the submission received from DPI during the public exhibition of the Proposal relating to impacts from the drainage outlet to Anzac Creek.</p> <p>To respond to issues raised by NSW DPI on the EIS and as part of design development, the stormwater and drainage design has been modified as follows:</p> <ul style="list-style-type: none"> <li>• Conversion of the southern drainage swale presented in the EIS to a fill mound that would direct surface flows away from the MPE site.</li> <li>• Removal of the southern drainage channel and outlet to Anzac Creek.</li> <li>• Provision of a fill batter along the southern boundary of the MPE site.</li> <li>• Inclusion of a spillway along the eastern boundary of the MPE site immediately south of the south-eastern drainage outlet to manage flows during a PMF event.</li> </ul> <p>This southern area is largely cleared of treed vegetation, and existing rainfall runoff would generally be sheet flow in nature, rather than channelized. As such, it is proposed to locally re-grade this area to discharge southward to Anzac Creek, rather than provide swales that may otherwise result in flow concentrations and potential scouring.</p> <p>Civil and Stormwater Plan Sheet 3', SSS2-ARC-CV-DWG-0203, provided as part of the revised drainage and design drawings at Appendix F of this RtS provides the revised drainage design to the south of the MPE site.</p>	Section 6, 7.6 and Appendix F of this RtS.

Aspect	Comment	Response	Reference
	<ul style="list-style-type: none"> <li>• Details of any scour protection works;</li> <li>• whether the works will result in temporary or permanent clearing of riparian vegetation;</li> <li>• Any measures to mitigate impacts as a result of the works being carried out</li> </ul>		
Impacts to riparian vegetation	<p>The Stormwater and Flooding Environmental Assessment indicates that the construction site would be left in a condition that promotes native revegetation. Where riparian vegetation is temporarily cleared for construction purposes it should be actively revegetated and replanted with relevant local native plant species at the completion of the works.</p>	<p>As detailed in the response above, the stormwater and drainage design has been amended at the southern end of the MPE site through design development and the submission received from DPI during the public exhibition of the Proposal relating to impacts from the drainage outlet to Anzac Creek.</p> <p>To respond to issues raised by NSW DPI on the EIS and as part of design development, the stormwater and drainage design has been modified as follows:</p> <ul style="list-style-type: none"> <li>• Conversion of the southern drainage swale presented in the EIS to a fill mound that would direct surface flows away from the MPE site.</li> <li>• Removal of the southern drainage channel and outlet to Anzac Creek.</li> <li>• Provision of a fill batter along the southern boundary of the MPE site.</li> <li>• Inclusion of a spillway along the eastern boundary of the MPE site immediately south of the south-eastern drainage outlet to manage flows during a PMF event.</li> </ul> <p>As a result, the removal of 0.01 hectares of Freshwater Wetlands on Coastal Floodplains of the NSW North Coast, Sydney Basin and South East Corner bioregions TEC (refer to Table 7-15 for additional information) would no longer be required, and direct impacts to other areas of associated aquatic habitat would no longer occur. As riparian vegetation would not be impacted, this issue is no longer considered relevant to the Proposal.</p>	Section 6 and 7.5 of this RtS.
Stormwater flows through the site	<p>The proponent should clarify whether the concrete channel, which conveys flows from Moorebank Precinct East site through the Moorebank Precinct West site, is proposed to be repaired and rehabilitated as part of the works to mitigate sediment /scour erosion impacts affecting the downstream environment of the Georges River.</p>	<p>The condition and rehabilitation of the channel through the MPW site that discharges to the Georges River has been considered as part of the MPW Stage 2 Proposal and is outside of the scope of the MPE Stage 2 Proposal.</p> <p>A detailed description of the channel failure and site photos are provided in Section 5.1 of the MPW Stage 2 EIS Stormwater and Drainage Assessment Report (Refer to Appendix R of the MPW Stage 2 EIS).</p> <p>As discussed in Section 4 of the MPW Stage 2 EIS, a channel would be installed at this location replacing the existing channel, including the failed areas (refer to</p>	<p>Section 4 and Appendix R of the MPW Stage 2 EIS.</p> <p>Appendix B and Appendix H</p>



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Aspect	Comment	Response	Reference
		Appendix R of the MPW Stage 2 EIS). This channel would bypass Basin 5 on the MPW site and then drain via a proposal channel outlet into the Georges River. The Revised Landscape Design Statement and Plans (refer to Appendix B of the MPW Stage 2 RtS) and the Revised Stormwater and Drainage Design Drawings (refer to Appendix H of the MPW Stage 2 RtS) provide further design details for the channel and the scour protection for this outlet.	of the MPW Stage 2 RtS.
Hydrogeological relationship of the site to the Groundwater Dependent Ecosystems	The hydrogeological relationship of the site to the Groundwater Dependent Ecosystems should be investigated and reported.	<p>As detailed in Section 8.6 of the BAR, included at Appendix P of the EIS, geotechnical and Phase 2 investigations of the Proposal site have found groundwater at depths of between 5.2 and 12.4 m below ground level (BGL) (1.7 and 9.11 m Australian Height Datum (AHD)). Groundwater flow is inferred to be west to the north-west towards the Georges River (Parsons Brinckerhoff 2014a).</p> <p>It is probable, due to local hydrogeology, that groundwater across the Proposal site and the wider region is interconnected. As such, if stygofauna were present they are unlikely to be isolated to the vicinity of the Proposal site.</p> <p>A search of the Australian Government's Atlas of Groundwater Dependent Ecosystems was undertaken on 7 April 2016. No data on subterranean groundwater-dependent ecosystems (GDEs) is available for the locality. Notwithstanding this, several GDEs with potential reliance on subsurface groundwater were identified in the locality including in the Proposal site (Bureau of Meteorology 2016).</p> <p>Further, as reported in Section 7.5 of this report, there is not expected to be any change in impacts on groundwater dependent ecosystems for the Amended Proposal when compared with the proposal considered in the EIS.</p>	<p>Section 8.6 of the BAR at Appendix O of the EIS.</p> <p>Section 7.5 of this RtS.</p>
Consultation	The proponent should consult directly with DPI Water (water.referrals@dpi.nsw.gov.au) and DPI Fisheries (ahp.central@dpi.nsw.gov.au) on the Construction Environmental Management Plan and Erosion and Sediment Control Plan prior to construction	Noted.	N/A
Mitigation measures	<p>The following additions should be included in the mitigation measures:</p> <ul style="list-style-type: none"> <li>The proponent should notify DPI Water should there be any potential to intercept, or affect groundwater as a license may be required.</li> </ul>	Additional mitigation measures have been included as part of the revised mitigation measures in Section 8 of this RtS.	Section 8 of this RtS

Aspect	Comment	Response	Reference
	<ul style="list-style-type: none"> <li>A Trigger Action Response Plan should be developed to deal with groundwater (should it be intercepted during excavation) including collection and testing and disposal methods.</li> </ul>		
Mitigation measures	<p>The proponent should consider the following additions to existing mitigation measures to improve rehabilitation outcomes for riparian areas:</p> <ul style="list-style-type: none"> <li>Mitigation Measure 4A in the EIS to prepare a Construction Flora and Fauna Management Plan should be amended to include the following: <ul style="list-style-type: none"> <li>Clear identification of vegetation proposed to be cleared outside the site as part of the southern and eastern swales and the presence of potential GDEs.</li> <li>Native plants that are to be cleared from the site should be transplanted into riparian areas which are to be rehabilitated along the Anzac Creek riparian corridor, the Georges River conservation area or the landscaped areas around the boundaries of the MPE site.</li> <li>Topsoil (and seedbank) from native vegetation areas that are to be cleared should be collected and reused in the revegetation of riparian areas.</li> </ul> </li> </ul>	<p>As described in Section 6 of this report, the drainage to the south of the MPE site has been altered as a result of design development and the submission received from DPI during the public exhibition of the Proposal relating to impacts from the drainage outlet to Anzac Creek.</p> <p>As part of this RtS, the assessment of the biodiversity-related impacts of the amendments to the Proposal, including the alteration to drainage was undertaken (refer to section 7.5 of this report). The assessment of biodiversity-related impacts of the amendments to the Proposal concluded that the 0.01 hectares of instream vegetation identified as requiring removal in the EIS (refer to Section 11.4.5) would no longer be required, and direct impacts to other areas of associated aquatic habitat would no longer occur. As a result of the amendments to the Proposal riparian land to the south of the MPE site along Anzac Creek would no longer be directly affected.</p> <p>The Construction Flora and Fauna Management Plan will include a map of the Proposal site, including mapping which details the vegetation to be cleared to facilitate drainage to the south of the MPE site.</p> <p>Groundwater dependent ecosystems in the vicinity of the Proposal site were shown in Figure 8-2 of the BAR, provided at Appendix P of the EIS. This figure will be updated to take into account the amendments to the Proposal, and included in the Construction Flora and Fauna Management Plan for the Proposal.</p> <p>As detailed in Table 11-1 of the BAR, provided at Appendix P of the EIS, the following mitigation measures would be undertaken during the construction phase, including works period B, of the Proposal:</p> <ul style="list-style-type: none"> <li>Relocate native plants from areas that are to be permanently cleared and transplant them into the riparian areas/conservation area identified for rehabilitation</li> <li>Collect topsoil (and seedbank) from native vegetation areas that are to be permanently cleared and to use this in the revegetation of riparian areas</li> </ul>	<p>Section 11.4.5 of the EIS.</p> <p>Figure 8-2 and Table 11-1 of the BAR at Appendix O of the EIS.</p> <p>Section 6 and 7.5 of this RtS.</p>

Aspect	Comment	Response	Reference
		These mitigation measures are the responsibility of the construction contractor and would be included in the CEMP for the Proposal.	
Key fish habitat	To protect nearby key fish habitat from potential significant indirect impacts the proponent should ensure mitigation measures relating to erosion and sediment control, stormwater treatment, and aquatic biodiversity are implemented during and following construction, and that proposed water quality measures operate to their full capacity over time.	<p>Measures to managed erosion and sediment, water quality and associated impacts have been included in Section 12 and Appendix P of the EIS.</p> <p>During construction of the Proposal a Soil and Water Management Plan (SWMP) and Erosion and Sediment Control Plan (ESCP), or equivalent, would be incorporated into the CEMP. The SWMP and ESCPs would be developed in accordance with the principles and requirements of Managing Urban Stormwater – Soils &amp; Construction Volume 1 ('Blue Book') (Landcom, 2004) and Volume 2 (DECC 2008) and consider the Preliminary ESCPs (Appendix P of the EIS).</p> <p>Under operational conditions, the provision of flooding and stormwater mitigation measures incorporated into the Proposal site development is to include:</p> <ul style="list-style-type: none"> <li>On-site detention (OSD) storages which capture, convey and adequately control site discharges to the existing downstream waterways.</li> <li>Stormwater quality improvement devices, designed to meet the performance targets identified in Georges River Estuary including, Gross Pollutant Traps and raingardens, or equivalent, in the base of the OSD channels.</li> </ul> <p>A water quality monitoring program for the operational phase of the Proposal would be prepared as part of the OEMP for the Proposal and would detail:</p> <ul style="list-style-type: none"> <li>The frequency and duration of sampling</li> <li>Background water quality conditions</li> <li>Sampling methodology</li> <li>Reporting requirements</li> </ul> <p>Water quality monitoring would be undertaken for both Anzac Creek and the Georges River to monitoring the efficacy of water quality measures.</p>	Section 12 and Appendix P of the EIS.

## 4.7 NSW Health

NSW Health did not make a detailed submission on the MPE Stage 2 Proposal, and advised that the issues raised in their submission dated 4 July 2015 on the MPW Concept Proposal and Stage 1 Early Works RtS, should be considered in relation to each stage of the entire Moorebank Intermodal Precinct. A response to the issues raised in the 4 July 2015 submission, relevant to the Proposal is provided in Table 4-6 below.

Table 4-6 Response to Government Agency submission – NSW Health

Aspect	Comment	Response	Relevant section of the Modification Report
Air quality	The quantitative risk assessment [for MPW Concept Approval] uses approaches that NSW Health supports - i.e. to quantitatively estimate the incremental additional impact of various pollutants on health outcomes.	<p>A Human Health Risk Assessment (HRA) was prepared for the MPE Stage 2 Proposal. The HRA includes quantitative evaluation of potential risks to human health.</p> <p>The HRA concludes that no significant adverse health effects are expected in relation to short-term and long-term exposure to key air pollutants associated with the operation of the MPE Stage 2 Proposal alone, and also a cumulative assessment scenario (i.e. a scenario that includes the Proposal in addition to MPE Stage 1 and MPW Stage 2).</p>	Section 10 (Human health), Section 19 (Cumulative impacts) and Appendix N of the EIS.
	In relation to the assessment of cumulative impacts from the operation of both the Moorebank and SIMTA sites, the predicted health impacts are generally considered to be low (not significant); however there is the potential for risks in adjacent commercial/industrial areas to be at a level that are considered unacceptable. The assessment suggests further mitigation measures need to be implemented to minimise exposure to particulates in the adjacent workplaces. This should be detailed further.	<p>A cumulative operational HRA for the MPE Stage 2 Proposal (including the elements of the Modification Proposal) was prepared by Ramboll Environ (2016) (Appendix N of MPE Stage 2 EIS) to assess potential changes in health outcomes due to the concurrent operation of the of the MPE Stage 1, MPE Stage 2 and MPW Stage 2 proposals.</p> <p>For commercial/industrial workers, the HRA assumed that exposure may occur eight hours per day, 240 days per year for 30 years.</p> <p>The HRA found that the increases in mortality and morbidity due to the MPE Stage 2 Proposal and the cumulative Proposal (i.e. including MPE Stage 1 and MPW Stage 2) were low and in most cases, were negligible. The excess lifetime cancer risks were also below or within the acceptable risk range. The HRA concludes that in relation to air quality there are no significant adverse health effects expected surrounding communities in relation to short-term</p>	Section 19 (Cumulative impacts) and Appendix N of the EIS.

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Aspect	Comment	Response	Relevant section of the Modification Report
		<p>and long-term exposure to key air pollutants associated with the operation of the cumulative Proposal.</p> <p>The mitigation measures identified in Section 9 (Air Quality) and Section 10 (Human Health) of the EIS are were found to be sufficient to address potential cumulative human health impacts, including those potentially affecting the adjacent workplaces.</p>	
Noise	<p>There is potential for sleep disturbance from rail pass-by events. As detailed in the Revised Project Report for Noise and Vibration maximum levels at Casula and Glenfield would exceed the sleep disturbance objective for industrial premises. We note there is no separate allowance for wheel squeal. The report correctly indicates that sleep disturbance will depend on the frequency of events and the time of day/night. Appropriate mitigation measures should be considered. Advice should be sought from the Environment Protection Authority about appropriate mitigation but may include, track lubrication, effective maintenance regimes for locomotives and carriages, electrification, and low noise barriers. Consideration should be given to requiring noise monitoring and a Noise Management Plan as a condition of consent.</p>	<p>The Rail link is to be constructed under the MPE Stage 1 Project (SSD 14-6766).</p> <p>The HRA for the MPE Stage 2 Proposal compares predicted noise levels with guideline criteria for health provided by the WHO. The WHO guidelines for community noise are designed to protect against the key health effects of annoyance, sleep disturbance, and cognitive impairment (WHO, 1999). The ratio of the predicted noise level to the guidelines is termed the hazard quotient, with a hazard quotient of less than 1 considered to be an acceptable level of risk.</p> <p>The HRA identifies that for total noise (i.e. including rail noise) for the cumulative Proposal (i.e. including MPE Stage 2, MPE Stage 1 and MPW Stage 2), hazard quotients for annoyance, sleep disturbance and cognitive impairment were less than or equal to one (1) at all residential and educational receivers. This indicates that the operational noise from the cumulative Proposal does not pose an unacceptable risk to the health of these communities. Noise from the cumulative Proposal would result in a predicted hazard quotient of greater than 1 for annoyance and cognitive impairment at the nearest industrial receiver, however, this is considered acceptable given the hazard quotients for existing ambient noise at this receiver already exceed 1 for these health effects.</p> <p>The operation of the Rail link is subject to the MPE Stage 1 Approval (SSD 14-6766), and MPW Stage 2 Proposal (SSD 16_7709).</p>	<p>Section 8 (Noise and vibration), Section 10 (Human health), Section 19 (Cumulative impacts), Appendix L and Appendix N of the EIS.</p>

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Aspect	Comment	Response	Relevant section of the Modification Report
		<p>Mitigation measures 3B, 3C and 3D documented in the MPE Stage 1 RtS address noise from the Rail link, including the potential for wheel squeal. These measures include use of friction modifiers, rail grinding and preparation of a Rail Noise Management Plan (RNMP). As further outlined within measure 3C, background rail noise monitoring will be undertaken during preparation of the RNMP to establish existing levels of rail noise levels in accordance with the RING and prescribe mitigation measures where modelling predicts and /or operational monitoring shows an exceedance attributable to the Proposal that RING prescribes as reasonable and feasible to mitigate.</p> <p>Continuation of existing ambient noise monitoring surveys throughout construction and operation of the MPW Stage 2 Proposal, applicable to the Rail link, is proposed in mitigation measures 2B and 2C respectively of the MPW Stage 2 RtS (refer to Section 8). The noise surveys would quantify any potential noise from the Project and identify any trends/changes in the ambient noise environment during the progressive development, and prescribe appropriate mitigation accordingly.</p>	
Traffic congestion	The predicted health outcomes relating to traffic congestion should be positive as long as all the proposed mitigation measures are implemented.	Noted.	N/A
Light spill	There is potential for light spill during the construction and operation phases. This may be increased by trains running at night, which have the potential to impact on Casula residents. The EIS considers this risk to be low.	<p>The potential for light spill associated with the construction and operation of the MPE Stage 2 Proposal is considered in Section 15 (Visual amenity, urban design and landscape) of the EIS.</p> <p>It is noted that an assessment of the potential light spill from the operation of locomotives between the MPW Stage 2 rail connection and the SSFL was included in the Rail Access Report for the MPW Stage 2 Proposal (included in Appendix F of the MPW Stage 2 EIS).</p>	<p>Section 15 (Visual amenity, urban design and landscape) of the EIS</p> <p>Appendix F of the MPW Stage 2 EIS</p>

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Aspect	Comment	Response	Relevant section of the Modification Report
Hazardous material	On site hazardous materials are to be limited to fuel for refuelling purposes and CO <sub>2</sub> for fire fighting. The EIS considers there to be negligible risk of offsite impacts on the local community.	Hazardous materials are addressed by Section 14 (Hazards and risks) of the EIS.  An Operational Hazard and Risk Management Plan would be developed for the MPE Stage 2 Proposal site and would be implemented as part of the OEMP for the Proposal. This plan would be reviewed regularly and updated should goods entering the site change. As a minimum, the plan would adopt the requirements of the <i>Code of Practice for Storage and Handling of Dangerous Goods</i> (WorkCover NSW, 2005).	Section 14 (Hazards and risks) of the MPE Stage 2 EIS.
Human health risks and impacts	Support Mitigation Measure 17A - As part of wider ongoing monitoring and evaluation processes, monitoring data for air quality, noise and traffic would be regularly reviewed against the guidelines developed in the specialist studies supporting this EIS, as they are based on protecting the health of the community. Should exceedances be identified in these key indicators as a result of the Project, then a further and more targeted monitoring and management program would be developed as required.	Noted. REMM 17A applies to MPW, including the MPW Stage 2 Proposal.  It is noted that the EIS includes measures requiring monitoring in relation to noise and traffic. Refer to mitigation measures 1D, 2A, 2E in Section 18 (Compilation of mitigation measures) of the MPE Stage 2 EIS.	Section 18 (Compilation of mitigation measures) of the EIS.
Grey water and black water recycling	If the use of grey water and black water recycling is considered, it will need to comply with the relevant guidelines and agency approval. Recycling water would most likely be used for toilet flushing and/or landscape irrigation	Noted. Onsite wastewater treatment is not currently proposed.	N/A
Revised Environmental Management measures	The revised environmental management measures outlined in chapter 9 and the mitigating measures are extensive. Many of these impact directly or indirectly on human health and are supported.	Noted. These REMMs apply to MPW, including the MPW Stage 2 Proposal.  The compilation of mitigation measures included in Section 8 of this RtS address the potential environmental impacts of the MPE Stage 2 Proposal, including those aspects most relevant to human health (air quality, noise, hazardous materials).	Section 8 of this RtS



## 4.8 Campbelltown City Council

A formal submission comprising a letter (dated 24 February 2017) was received from the Campbelltown City Council. A summary of, and response to this submission is provided in Table 4-7 below.

Table 4-7 Response to Government Agency submission – Campbelltown City Council

Aspect	Comment	Response	References
Traffic impacts on Moorebank Avenue	The largest impact on the shifting of the rail siding is its reduction in truck access points along Moorebank Avenue. The Stage 2 proposal has one intersection with Moorebank Avenue while the concept approval had 3 for the same length of frontage. The implications of this are that where the concept approval allowed multiple trucks to enter Moorebank Avenue on synchronised signal phases, the current proposal only allows trucks to enter at a single point. This is likely to have significant impact on the performance of all traffic facilities on Moorebank Avenue as in order to facilitate efficient egress of trucks into Moorebank Avenue from the terminal, Moorebank Avenue and Anzac Road priority will significantly change. Should the 3 points remain as originally approved, the entry of trucks can be staggered along Moorebank Avenue, rather than being focussed on what is already a relatively busy intersection.	<p>The comment provided in the submission relates to access arrangements for the MPW site and is not directly relevant to the MPE Stage 2 Proposal.</p> <p>The MPW Stage 2 site access provides sufficient capacity for the operational vehicle movements associated with the Proposal, and as such, the other two access points are not required.</p> <p>Access to and from the MPE Stage 2 site would be from Moorebank Avenue via the existing northern DSND site access. Site access at this location would allow for vehicular access to warehouse and distribution facilities to enable the direct delivery and dispatch of goods to the warehouses, and would provide sufficient capacity to accommodate Proposal operational traffic.</p> <p>The Operational Traffic and Transport Assessment (Appendix K of the EIS) provided an assessment of intersection performance including the Proposal site access. This intersection is predicted to operate at an acceptable level of service during both the AM and PM peak demonstrating that additional entry points would not be required.</p> <p>Further detail on site access is provided in Section 7 and Appendix K of the EIS.</p>	Appendix K of the MPE Stage 2 EIS
Impacts of amended queue lengths at intersections	The impacts of amended queue lengths at intersections resulting from the modification to internal site layout and land use types should consider the interaction of queues on adjoining intersections. As a minimum, SIDRA modelling with this extended capacity should be used.	<p>The assessment methodology for the assessment of traffic impacts during construction and operation of the Proposal was included at Section 7.2 of the EIS.</p> <p>SIDRA Intersection software (Version 7.0.5.6563) was used to undertake the assessment of construction traffic impacts for the</p>	Section 7.2 of the EIS.

Aspect	Comment	Response	References
		<p>Proposal. SIDRA modelling as part of this assessment considered the impact of upstream and downstream queueing on adjacent intersections.</p> <p>The assessment of the operational traffic impacts of the Proposal was undertaken using AIMSUN mesoscopic modelling software, which takes into account the impact of queueing.</p>	
Operational traffic management – Cambridge Avenue	<p>Council requests that the proponent identify the means by which the following statement would be adhered to by operations at the terminal, with respect to Cambridge Avenue:</p> <p><i>About 56% of heavy vehicle movements generated by the Proposal would travel to the Proposal site via the M5 Motorway to the west. The remainder of traffic travelling from the Proposal site would be via the Hume Highway and Moorebank Avenue from the north of the M5 Motorway. Traffic travelling along Moorebank Avenue would originate from Newbridge Road. In general, all heavy vehicles would travel to and from the Proposal site via Moorebank Avenue. No container trucks would travel to the Proposal site via Anzac Road (east of Yulong Close) or Cambridge Avenue.</i></p> <p>The preliminary operational traffic management plan does not readily detail the manner by which trucks using Cambridge Avenue to head south would be restricted. A physical restriction (aside from turn angle) does not appear to be proposed within Moorebank Avenue. The 'driver code of conduct' referenced in the report could not be located and may have not been prepared as yet.</p> <p>Having regard to the size of the road and the articulation potential of some vehicles servicing the site, the left turn heading south towards Cambridge Avenue is still considered to be feasible.</p> <p>Use of Cambridge Avenue for heavy vehicle traffic associated with this development is of significant concern to Campbelltown</p>	<p><u>Management of heavy vehicle movements during operation through the Operational Traffic Management Plan (OTMP)</u></p> <p>Operational heavy vehicle movements to and from the Proposal site would be undertaken in accordance with the final OTMP, which would form part of the OEMP for the Proposal. It is intended that the OTMP would be prepared by updating the Preliminary Operational Traffic Management Plan (POTMP) which was provided at Appendix K of the EIS.</p> <p>The OTMP will include measures to prevent the movement of container trucks via Anzac Road and/ or Cambridge Avenue, including:</p> <ul style="list-style-type: none"> <li>• The description of mandatory haulage routes for heavy vehicles.</li> <li>• Should a heavy vehicle operator be identified as not complying with the mandatory haulage routes, corrective actions will be implemented as identified in Section 6.3 of the Preliminary Operational Traffic Management Plan (POTMP).</li> </ul> <p>In addition, consistent with the Concept Plan Conditions of Approval, Section 5.2 of the POTMP notes that to maintain the amenity of road users and the general public, a driver code of conduct will be developed and implemented as part of the OTMP prior to the commencement of the site operation to ensure all users of the site are aware of mandatory haulage routes and driving practices both within the site and on the surrounding road network.</p>	<p>Section 7.4.2 of the EIS.</p> <p>Section 6.3 of the EIS POTMP, at Appendix K of the EIS.</p> <p>Appendix C of the MPE Stage 2 RtS</p>

Aspect	Comment	Response	References
	Council, upon consideration of the causeway structure's current width and the road formation nearby.	<p><u>Design of the Proposal to restrict the movement of heavy vehicles along Cambridge Avenue</u></p> <p>The geometrical alignment of MPE Stage 2 site access road will prohibit heavy vehicles from being able to turn left onto Moorebank Avenue and travel south to Cambridge Avenue during operation of the Proposal. Additionally, signage banning the left turn movement will also be provided at this intersection. The intersection layout of the MPE Stage 2 site access is provided in Appendix C of the MPE Stage 2 RtS.</p>	
Construction traffic along Cambridge Avenue	<p>Similarly, construction traffic should be restricted from using the Cambridge Road access, due to its physical constraints. Council would expect construction traffic management plans associated with the Stage 2 development to be considerate of this requirement.</p> <p>It is also noted that Cambridge Avenue intersections were assessed for operational impacts but not for construction impacts (Table 7-3).</p>	<p>As detailed in Section 6.2 of the Construction Traffic Impact Assessment (CTIA) no light or heavy vehicles are anticipated to use Cambridge Avenue during construction with the exception of a small number of truck movements via Cambridge Avenue for disposal of unsuitable material to the Glenfield Waste Facility, if required.</p> <p>During operation of the proposal, a small proportion of light vehicles are anticipated to use Cambridge Avenue and as such an assessment of the likely impacts from the operation traffic was warranted for the Operational Traffic and Transport Impact Assessment (OTTIA). However, as no construction traffic is expected to utilise Cambridge Avenue during the peak construction period (as assessed as part of the CTIA), an assessment of the Moorebank Avenue / Cambridge Avenue intersection was not warranted as part of the assessment of construction traffic impacts of the Proposal. .</p>	Section 6.2 of the EIS CTIA, at Appendix K of the EIS.
Level of service results	<p>The traffic assessment in Chapter 7 shows an improvement in the level of service at the two Cambridge Avenue intersections from the current conditions (Table 7-9) to the future 2019 conditions without the proposal (Table 7-11).</p> <p>Council is unsure how this change might be occurring in the examples used. Similar comments for 2029 without the proposal (Table 7-12) for Cambridge/Glenfield might indicate that after consideration of Table 7-22, there appears to be an issue with Table 7-9.</p>	<p><u>Modelling methodology</u></p> <p>As detailed in Section 7.2.5 of the EIS, future traffic growth and modelling data was sourced from RMS' wider Liverpool Moorebank Arterial Road Investigations (LMARI) model built in AIMSUN modelling software version 8.0.9 (R35843). AIMSUN was used to provide strategic, mesoscopic and microsimulation modelling. The AIMSUN model has been supplemented with additional operational traffic modelling using SIDRA Network version 7 for the modelling of intersection performance. The SIDRA modelling was used to determine intersection layouts,</p>	<p>Section 7 and Appendix K of the EIS.</p> <p>Section 7.1 and Appendix C of this RtS</p>

Aspect	Comment	Response	References
	<p>Further, the detailed SIDRA results are not presented, making it impossible to verify the parameters used and their suitability.</p> <p>With only a single LoS for each intersection presented, it is not possible to determine if one leg of an intersection is being adversely impacted as a result of the development</p>	<p>signal phasing and timing, which was then integrated into the AIMSUN model to determine impacts to the surrounding road network.</p> <p>The 2015 intersection delays and level of service (LoS) in Table 7-9 of the EIS (Modelled level of service for the existing conditions at key intersections in 2015) were determined using SIDRA.</p> <p>The 2019 and 2029 intersection delay and LoS in Tables 7-11, 7-12 and 7-22, which formed part of the operational assessment of the Proposal were determined using the AIMSUN modelling software.</p> <p>The results from the SIDRA modelling analysis and AIMSUN modelling analysis vary slightly (4 to 5 seconds), and are considered to be minor, resulting in no major impact to the overall traffic analysis undertaken to assess the impacts of the Proposal on traffic.</p> <p><u>Details of SIDRA results</u></p> <p>Section 7 of this RtS includes the SIDRA traffic flow diagrams used to undertake the assessment of construction traffic impacts from the Proposal.</p> <p><u>Presentation of Level of Service</u></p> <p>As per the RTA Guide to Traffic Generating Developments (Section 4.2.2), “<i>The best indicator of the level of service at an intersection is the average delay experienced by vehicles at that intersection. For traffic signals, the average delay over all movements should be taken.</i>” As such only the intersection Level of Service from the AIMSUN and SIDRA model has been reported. However, upstream/downstream queuing impacts at intersections were examined in the AIMSUN and SIDRA model in determining the appropriate mitigation measures.</p>	
Car parking spaces	There is some concern that the RMS Guide to Traffic Generating Developments has been used to determine the required number of parking spaces.	The number of car parking spaces to be provided within the Proposal site was determined by undertaking an analysis of the car parking requirements for staff and staff and visitor use in warehouse and terminal operations. This analysis considered	<i>Liverpool City Council Development Control</i>

Aspect	Comment	Response	References
	<p>This guide generally applies to developments where staff arrives in one shift and leaves in one shift. Allowance needs to be made for overlap where the following shift is arriving before the concluding shift has finished. It is unclear if this has been accounted for in the study presented in the application.</p>	<p>the current guidelines for parking provisions, namely the <i>Liverpool City Council Development Control Plan 2008</i> (Liverpool DCP) and the <i>Guide to Traffic Generating Development</i> (RTA, 2002).</p> <p>A prediction of staff-generated parking demand was undertaken using a 'first principles' approach, whereby the operational staff breakdown was used to determine the likely parking and traffic generation, which was then compared to the requirements for car parking on the Proposal site under the two abovementioned guidelines.</p> <p>The first principles approach, which included the development of a parking accumulation model, determined that car parking requirements for the Moorebank Precinct, including the Proposal should be based on the <i>Guide to Traffic Generating Development</i>, rather than the Liverpool DCP.</p> <p>The parking analysis recommended that the Roads and Maritime Services (Roads and Maritime) parking rates be adopted for the warehouse and office components of Moorebank Precinct East Project are as follows:</p> <ul style="list-style-type: none"> <li>• 1 car space per 300 m<sup>2</sup> Gross Floor Area (GFA) for warehouses</li> <li>• 1 car space per 40 m<sup>2</sup> GFA for offices</li> </ul> <p>The determination of car parking provisions has been applied consistently within the MPE site.</p> <p>The Amended Proposal includes an amended warehouse layout and the car parking allocation for the amended layout continues to adopt the above car parking rates. The car parking spaces associated with the warehouses has been included in the consolidated description of the Proposal, included at Appendix I of this RtS.</p>	<p><i>Plan 2008</i> (Liverpool DCP)</p> <p><i>Guide to Traffic generating Development</i> (RTA, 2002)</p> <p>Appendix I of this RtS.</p>
Vehicle mix used in assessment	<p>The mix of vehicles cited in the 'Traffic and Transport Impact Assessment' includes B-doubles, semi-trailers and rigid trucks.</p> <p>There is no mention of A-doubles, which are increasingly being used, particularly where containerised transport is being moved.</p>	<p>GML Type 1 A-double road trains are not currently permitted to travel on roads near the Proposal, including the Hume Highway and M5 Motorway. As such, A-doubles were not included in the EIS OTTIA, included at Appendix K of the EIS.</p>	<p>Appendix K of the EIS</p> <p>Appendix F of this RtS.</p>

Aspect	Comment	Response	References
	Council recommends that these vehicles be considered as part of the development's traffic assessment.	However, it is acknowledged that the use of A-doubles for vehicle transport is increasing across the State and National road networks. So as to not preclude A-double access and egress into in the future, A-double trucks have been considered in the swept path analysis undertaken for access to the freight terminals only (i.e. IMEX terminal and IMT terminal), with only B-doubles being considered for access to the Proposal (i.e. warehousing) (refer to Appendix F of this RtS). Should the use of A-doubles be considered in the future, further operational traffic impact assessment of the use of these vehicles as part of the operation of the Amended Proposal will be considered, where necessary.	
Construction traffic movements to Glenfield Waste Facility	<p>The 'Construction Traffic Impact Assessment' states that:</p> <p>There is expected to be a small number of truck movements via Cambridge Avenue for disposal of unsuitable material at the Glenfield Waste Facility if required.</p> <p>Council would like the 'unsuitable material' to be clarified further, having regard to the fact that the Glenfield facility is not (to the Council's understanding) permitted to accept contaminated or hazardous waste. See below excerpts from relevant approvals:</p> <p>a. Compliance with the applicable development consents issued for the operation of the Glenfield Waste Facility, refer:</p> <p>i. Campbelltown City Council Interim Development Approval No. B3945 for development described as the "Establishment Of A Non-Putrescible Solid Waste Disposal Depot". Refer specifically 'Condition B 7. That wastes received on the site be restricted to non-putrescible solid wastes which are non-toxic and non-odorous and which, when deposited, will create no threat to the surrounding environment.'</p> <p>ii. Liverpool City Council Development Consent No. 329/90 for development described as "Sand and Soil Extraction and the Disposal of Non-Putrescible, Non Toxic and Non Odorous Waste".</p>	<p>Unsuitable materials are not necessarily contaminated or hazardous and could include a range of wastes such as demolition waste, green waste or fill that is unsuitable for re-use on site. Where reasonable and feasible, waste materials would be re-used on site. Measures to mitigate the effect of the construction waste streams would be incorporated into the Proposal's CEMP</p> <p>Campbelltown City Council have correctly identified that the proposed 'Glenfield Waste Services Materials Recycling Facility' (SSD Application 13_6249) would not allow for disposal of hazardous materials such as asbestos or chemical waste. However, this proposal is only applicable to the southern portion of the Glenfield Waste Facility (south of main south rail line). The northern portion of the Glenfield Waste facility would continue to operate in accordance with the EPL issued for the site. The licence allows Asbestos waste disposal (application to land) with no restrictions on volumes. All waste disposal at the Glenfield Waste facility would be undertaken in accordance with relevant licence conditions for that facility.</p>	N/A

<u>Aspect</u>	<u>Comment</u>	<u>Response</u>	<u>References</u>
	b. Inconsistency with the terms of the proposed 'Glenfield Waste Services Materials Recycling Facility', currently being considered by the Department (Application SSD 13 6249). Refer specifically to the 'Materials Recycling Facility Environmental Impact Statement' - namely that: "The proposed facility will not accept hazardous materials such as asbestos or chemical waste." (Page 12)		



## 4.9 Liverpool City Council

A formal submission comprising a letter (dated 27 February 2017) was received from Liverpool City Council. Several comments were provided, as summarised and responded to in Table 4-8 below.

Table 4-8 Response to Government Agency submission – Liverpool City Council

ID	Aspect	Comment	Response	Reference
<b>Human Health</b>				
LCC-1	Traffic assumptions	Noise and Air Quality impacts on human health during both construction and operation are likely to be greater than identified in the EIS due to the traffic assumptions used.	<p>It is unclear what traffic assumptions in particular are being referred to in the submission provided. The forecast daily traffic volumes (ADT) for operation of the Proposal were derived from the truck generation and origin-distribution for the Proposal, and assuming a staff shift assumption of three shifts per day (refer to Appendix B and C of the EIS OTTIA at Appendix K of the EIS). These assumptions, were used to form the basis of the noise and vibration, air quality and human health impact assessments and therefore, all impact assessments are considered consistent and representative of the operational traffic generation of the Proposal. Consultation with Transport for NSW and Roads and Maritime Services was undertaken to agree on the methodology for the operational traffic impact assessment of the Proposal, as detailed in Section 6.6.2 of the EIS.</p> <p>The forecast daily traffic volumes of 1,936 cars (3,872 movements) and 282 trucks (564 movements) entering the Proposal site each day was adopted for the Noise and Vibration Impact Assessment (Wilkinson Murray, 2016) and emissions estimation in the Air Quality Impact Assessment (Ramboll Environ, 2016) (refer to Appendix L and Appendix M respectively).</p>	Section 6.6.2, Appendix K, L and M of the EIS
LCC -2	Traffic assumptions	The review of the traffic and transport movements associated with the Project identified that the Project would impact on road congestion in proximity to the site, noise, air quality, visual amenity and subsequently human health and thus a thorough assessment of the traffic environment and associated impacts is critical for both the construction and operational stages.	<p>The EIS included an assessment of the impacts of the Proposal on the environment during construction and operation, including in relation to traffic and transport, noise and vibration, air quality, visual amenity and human health.</p> <p>Section 7 of the EIS provides a comprehensive construction and operational traffic assessment for the Proposal. The assessment concluded that the Proposal (and cumulative scenario including the Proposal) would result in only marginal traffic impacts to the surrounding road network, with the implementation of the proposed mitigation and management measures.</p> <p>The noise and vibration, air quality and human health assessments undertaken for the Proposal considered the findings of the traffic assessment</p>	Section 7, 8, 9, 10 and 16 of the EIS.

ID	Aspect	Comment	Response	Reference
			<p>and concluded that the Proposal would not have a significant impact on these aspects during construction or operation.</p> <p>The visual impact assessment of the construction and operation of the Proposal concluded that during construction, any visual impacts would be localised and temporary in nature and the operation of the Proposal would be in keeping with the surrounding land uses and any impacts would be effectively minimised through the use of landscaping and urban design.</p>	
LCC -3	Noise and Vibration impacts on human health	<p>As local residents are currently exposed to unacceptable levels which are understood to be above World Health Organisation community noise guideline criteria, it is implied that they are able to tolerate future noise level exceedances. If existing rail noise is identified as an issue for sensitive receivers, it is concerning that the Project is being considered without amelioration of noise levels from the Southern Sydney Freight Line. In addition to existing sources, further intensive development in this region is likely to result in background noise creep which may lead to a greater potential for annoyance and impacts on amenity and sleep disturbance.</p>	<p>The MPE Stage 2 Proposal does not seek approval for the construction or operation of rail infrastructure and will not result in operational rail noise impacts on residential receivers.</p> <p>The Noise and Vibration Assessment of the Proposal (Section 8 and Appendix M of the EIS) included an assessment of construction and operational noise impacts associated with the warehousing and distribution facilities on the Proposal site. This assessment, as summarised in section 8 of the EIS, determined that the operational levels from the Proposal would comply with the relevant criteria, including relevant sleep disturbance goals, except at the most affected receivers in Wattle Grove where exceedances of the established screening criterion for sleep disturbance by 1 dB are anticipated under adverse meteorological conditions only. A 1 dB exceedance is considered imperceptible.</p> <p>Section 19 of the EIS included a cumulative assessment of noise related health impacts. Consistent with WHO guidelines, the approach included an assessment of total noise generated by the cumulative Proposal (including rail noise from the MPE Stage 1 Project) plus the existing ambient background noise, which included consideration of rail operations associated with the MPE Stage 1 Project and the MPW Stage 2 Proposal.</p> <p>As detailed in Section 19, the cumulative noise assessment determined that there is no recognisable difference between the existing ambient and total noise levels in each of the three noise catchments, indicating that the cumulative Proposal would have minimal impact on noise impacts in the local area, and that the existing ambient noise is the major contributor to total noise (see sections 8, 18 and Appendix L of the EIS).</p>	Section 8, 18 and Appendix L of the EIS
LCC -4	Noise and Vibration impacts on human health	<p>Exposure to noise can be associated with direct auditory and non-auditory health effects, including cardiovascular disease, cognitive impairment, sleep disturbance, tinnitus, annoyance and hearing impairment</p>	<p>The EIS included an assessment of the noise and vibration and human health impacts of the Proposal during construction and operation.</p> <p>The technical assessments, included at Appendix L and Appendix N of the EIS demonstrates that the noise from the Proposal meets the WHO</p>	Section 8.2, Appendix L and Appendix N of the EIS.

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ID	Aspect	Comment	Response	Reference
		(WHO, 2011). Sleep disturbance is one of the most common complaints raised by noise exposed communities and can have a significant impact on health and quality of life. Children may be particularly vulnerable to the effects of noise on cognitive impairment and noise may interfere with learning at a critical developmental stage	<p>community noise guidelines at all receivers and does not pose an unacceptable risk to the health of nearby communities.</p> <p>As detailed in Section 8.2 of the EIS, <i>'the predicted <math>L_{Amax}</math> noise levels comply with the established sleep disturbance screening criteria for receiver locations at Wattle Grove North, Casula and Glenfield, and no further assessment of sleep disturbance was warranted in these catchments. The predicted <math>L_{Amax}</math> noise levels at the most affected receivers in Wattle Grove are predicted to exceed the established screening criterion by 1 dB, under adverse meteorological conditions only. However, a 1 dB exceedance is considered negligible and therefore does not require mitigation'</i>.</p> <p>As a result, sleep disturbance during construction and/ or operation of the Proposal is therefore not expected to have a significant impact on health and/ or quality of life on nearby communities, including children.</p>	
LCC -5	Noise and Vibration impacts during out of hours works periods	<p>Similar to the Concept Plan Modification application, an inconsistency was noted in the 'MPE Stage 2 Noise &amp; Vibration Impact Assessment (Report No. 12186-S2, Version C) prepared by Wilkinson Murray (2016). Table 6-9 of the aforementioned report indicates that construction noise levels at Wattle Grove are predicted to exceed the noise management level during the out-of-hours (OOH) period 2 (6.00pm – 10.00pm weekdays) by 1 dB.</p> <p>However, according to the consultant, these results indicated that 'construction noise levels in Wattle Grove, Wattle Grove North and Casula were not predicted to exceed applicable NML at sensitive receivers during OOH Period 2, 3 or 4'. These findings contradict the consultant's following sentence which stated that 'construction noise levels during OOH Periods 2, 3 or 4 are predicted to exceed the NML in Wattle Grove by up to 1 dB'.</p> <p>Worst-case cumulative construction noise levels are also predicted to exceed the NML</p>	<p>There is an error in the wording in the Noise and Vibration Impact Assessment, included as Appendix L and Section 8 of the EIS. It should have stated that:</p> <p><i>'Construction noise levels in Wattle Grove North, Casula and Glenfield are not predicted to exceed applicable NML at sensitive receivers during out of hours periods 2, 3 or 4. Predicted construction noise levels during out of hours periods 2, 3 &amp; 4 are predicted to exceed the NML in Wattle Grove by up to 1 dBA'</i>.</p> <p>As detailed in Section 8.4.1 of the EIS, this exceedance is considered imperceptible, and does not warrant mitigation given the conservative nature of the assessment assuming that all plant would be operating simultaneously. Worst-case cumulative construction noise levels are presented in Table 6-10 of Appendix L of the EIS. It should be noted that since the construction noise assessments for each proposal are conservative (whereby all plant items are assumed to be operating simultaneously), the cumulative assessment is also conservative since it assumes the highest predicted construction noise levels at the receivers from each proposal. In addition, as the works will be conducted in accordance with a Construction Noise and Vibration Management Plan, it is unlikely that the predicted exceedance would occur.</p>	Section 8 and Appendix L of the EIS.

ID	Aspect	Comment	Response	Reference
		at the most affected residential receivers in Casula by up to 2 dB. Although the consultant reported that these exceedances are negligible, this advice serves as a forewarning and acknowledgement that noise limits are likely to be exceeded during out-of-hours construction periods.		
LCC -6	Exceedances of sleep disturbance criteria at Wattle Grove.	Furthermore, a marginal exceedance was also noted at Wattle Grove where L <sub>Amax</sub> noise levels are predicted to exceed the sleep disturbance criteria by 1 dB. Although considered 'negligible', these marginal exceedances may gradually lead to increased background noise levels in the surrounding area. Instead, the applicant should be required to identify opportunities to mitigate noise impacts arising from the Proposal to strengthen compliance with the Noise Management Levels and prevent background noise creep.	<p>Sleep disturbance criteria for the Proposal were provided at Section 7.1 and assessment of sleep disturbance for the Proposal was included in Section 7.5 of the Noise and Vibration Impact Assessment, provided as Appendix L of the EIS.</p> <p>The predicted L<sub>Amax</sub> noise levels included in Table 7-11 of the NVIA exceed the established sleep disturbance screening level at the most potentially affected receiver in Wattle Grove by 1 dB during adverse meteorological conditions. This exceedance is not expected to occur often, and is considered imperceptible and not requiring further assessment. In cases where L<sub>Amax</sub> noise levels are predicted to significantly exceed sleep disturbance screening levels, a more detailed assessment of potential sleep disturbance is typically conducted in accordance with the EPA's Industrial Noise Policy (INP) Application Notes.</p> <p>The INP Application Notes recommend that detailed assessments of sleep disturbance adopt the guidance on potential impacts from the review of research results presented in the NSW Road Noise Policy (RNP), and that they consider:</p> <ul style="list-style-type: none"> <li>• How often the noise events will occur;</li> <li>• Time of day (normally between 10.00pm and 7.00am); and,</li> <li>• Whether there are times of day when there is a clear change in the noise environment (such as during early morning shoulder periods).</li> </ul> <p>The RNP advises that:</p> <p><i>"From the research on sleep disturbance to date it can be concluded that:</i></p> <ul style="list-style-type: none"> <li>• <i>Maximum internal noise levels below 50-55 dB(A) are unlikely to awaken people from sleep</i></li> </ul>	Section 7.1 and 7.5 of Appendix L of the EIS.

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ID	Aspect	Comment	Response	Reference
			<ul style="list-style-type: none"> <li>One or two noise events per night, with maximum internal noise levels of 65-70 dB(A), are not likely to affect health and wellbeing significantly."</li> </ul> <p>To aid in assessing the potential for sleep disturbance, it is useful to convert the above internal noise levels to equivalent external noise levels. The attenuation of noise through a window left ajar, is approximately 10 dBA. Therefore, it is appropriate to say that, according to NSW Government noise guidelines, external L<sub>Amax</sub> noise levels of below 60-65 dBA are unlikely to awaken people from sleep, and one or two noise events per night, with external L<sub>Amax</sub> levels of 75-80 dBA are not likely to affect health and wellbeing significantly.</p> <p>The predicted external L<sub>Amax</sub> noise level at the most potentially affected receiver in Wattle Grove is 53 dBA. In accordance with the above guidance, this level is unlikely to awaken people from sleep.</p> <p>Maximum noise level events typically do not influence L<sub>90</sub> noise levels and are therefore unlikely to contribute to background noise creep.</p>	
LCC-7	Additional considerations	Air quality and noise/vibration impacts can directly impact on the health and wellbeing of the surrounding community and thus the HRA (Ramboll 2016c) and EIS (Arcadis 2016a) should be reviewed and revised in consideration of any amendments to either the air quality and/or noise and vibration impact assessments.	<p>Amendments to the Proposal since the public display of the EIS are described in Section 6 and assessed in Section 7 of this RtS. The assessment in Section 7 includes consideration of the impacts of the amendments to the Proposal on air quality, noise and vibration and human health.</p> <p>Section 7.2 provides an assessment of the noise and vibration impacts of the amendments to the Proposal. This assessment concluded that construction and operation of the Proposal would not result in the exceedance of the relevant criteria, and no additional mitigation measures would be required.</p> <p>Section 7.3 of this RtS provided an assessment of the air quality impacts of the amendments to the Proposal. This assessment concluded that the amendments to the Proposal would not alter the construction activities required for the Proposal and would not change the assessment of construction stage air quality impacts included in the MPE Stage 2 EIS. Similarly, the amendments to the Proposal would not alter the emissions predictions presented in the MPE Stage 2 EIS. Therefore, no further assessment of operational-related air quality impacts is considered necessary. No additional mitigation of air quality impacts is required as a result of the amendments to the Proposal.</p> <p>Section 7.4 of this RtS provides an assessment of the human health risks associated with the amendments to the Proposal. This assessment concluded</p>	Section 6 and 7 of this RtS. Section 8.5 and 9.5 of the EIS.

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ID	Aspect	Comment	Response	Reference
			that the amendments to the Proposal would not substantially alter the construction activities required for the Proposal, and would therefore not alter the human health risks identified and assessed as part of the MPE Stage 2 EIS. Similarly, all amendments to the Proposal would not result in changes to the operational-related human health risks identified and assessed as part of the EIS and no further assessment of operational-related human health impacts is considered necessary. The mitigation measures outlined in Section 8.5 (for Noise) and 9.5 (for Air Quality) of the EIS are considered adequate to address human health risks associated with the Amended Proposal.	
LCC -8	Additional considerations	The assessment of site landscape and visual character, local ecology, traffic congestion, road safety, pedestrian and cycle accessibility, flood control, water quality, land contamination and waste management were all considered independently in the MPE Stage 2 EIS, however many of these aspects which can also relate to human health were not reviewed in the HRA as only assessments of air and noise impacts were provided relating to health impacts.	<p>The HRA for the Proposal was prepared in accordance with approved Australian guidelines for performing risk assessments, in particular:</p> <ul style="list-style-type: none"> <li>• <i>Health Impact Assessment – A Practical Guide</i> Centre for Health Equity Training, Research and Evaluation (CHETRE, 2007)).</li> <li>• Environmental Health Risk Assessment: Guidelines for Assessing Human Health Risks from Environmental Hazards (enHealth, 2012a).</li> </ul> <p>The HRA focussed on the health impacts to key residential and sensitive locations in the vicinity of the Proposal (refer to Section 10.4 of the EIS) incurred from air and noise emissions generated by the operational phase of the Proposal and is considered adequate to meet the requirements of the SEARs for the Proposal (SSD 16_7628).</p>	Section 10.4 and Appendix N of the EIS.
LCC -9	Additional considerations	It was also noted in the AQIA that supports the EIS that the operation of the warehouses on the MPE Stage 2 site would not be controlled by SIMTA as the Proponent, and precinct wide air quality management and monitoring requirements for prospective tenants would not be enforced. The same would potentially apply for noise impact monitoring and impact mitigation. It is noted that the responsibility for the management of emissions associated with warehousing, including forklifts and gas heating/ cooling, would therefore fall with each tenant. It is recommended that clear lines of ongoing control and responsibilities of impact monitoring and management across the site	<p>Responsibility for the management of emissions associated with warehousing, including forklifts and gas heating / cooling, rests with each tenant.</p> <p>Roles and responsibilities for environmental management during operation of the Proposal, including monitoring requirements relating to air quality would be outlined in the Operational Environmental Management Plan (OEMP) to be developed for the Proposal. As part of tenant lease agreements, adherence to the OEMP would be required, including management of environmental impacts, inclusive of air quality.</p>	Appendix M of the EIS

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ID	Aspect	Comment	Response	Reference
		should therefore be confirmed by DP&E prior to this project being determined.		
LCC-10	Additional considerations	Detailed floor and section plans for food premises in the freight village shall be submitted to the Department prior to the issue of the construction certificate. The plans shall demonstrate compliance with the Food Act 2003, Australia New Zealand Food Standards Code and Australian Standard (AS) 4674-2004 Design, Construction and Fit-Out of Food Premises. Additionally, the Department shall confirm whether regulated systems as defined under the Public Health Act 2010, such as warm water or water-cooling systems will be installed on the premises.	<p>As detailed in Section 4 of the EIS, any food premises located within the freight village would be constructed and operated to meet legislative requirements and Australian Standards (as relevant), including:</p> <ul style="list-style-type: none"> <li>• <i>Australian Standard AS 4674-2004: Design, construction and fit out of food premises</i></li> <li>• <i>Australian Standard AS 4322-1995: Quality and performance of commercial electrical appliances - Hot food storage and display equipment</i></li> <li>• <i>Australian Standard AS ISO 22000—2005: Food safety management systems—Requirements for any organisation in the food chain.</i></li> </ul> <p>In addition, operations for food premises within the freight village would comply with the Australia New Zealand Food Standards Code.</p> <p>Floor plans, elevations and sections for the freight village were provided in the Architectural Drawings included at Appendix D of the EIS. Revised architectural drawings which consider amendments to the Proposal have been included in Appendix B of this RtS.</p>	<p>Appendix D of the EIS.</p> <p>Appendix B of this RtS.</p>
LCC-11	Reoccurring themes	Further commitments are required, prior to consent being issued for this proposal, to introduce appropriate mitigation measures to reduce noise exposure to surrounding communities to levels that meet all aspects of the WHO guidelines, irrespective of existing ambient noise levels.	<p>As outlined within Section 10 and Appendix N of the EIS, the WHO has established guidelines for community noise to protect against the key health effects. The WHO community noise guidelines apply to total noise, including existing ambient noise, not just the increment from a particular source.</p> <p>The comparison of the predicted noise levels to the corresponding health-based WHO guideline values (called risk characterisation) is included in section 5.3 of Appendix N of the EIS. The ratio of the predicted noise level to the guideline is termed as hazard quotient (HQ).</p> <p>A HQ of less than or equal to 1 is considered to be an acceptable level. All HQs for operation of the Proposal were less than or equal to 1 at all receivers, indicating that noise from the operational of the Proposal in isolation does not pose an unacceptable risk to the health of these communities.</p> <p>When operational noise from the proposal is added to existing ambient noise, the existing ambient noise is the higher of the two values and HQs. Accordingly, noise resulting from the operation of the Proposal combined with existing ambient noise would be the same as the existing ambient noise HQs. The Proposal would, therefore, not increase the HQs of total noise levels in the local area.</p>	<p>Section 10, 22 and Appendix N of the EIS.</p>



ID	Aspect	Comment	Response	Reference
			<p>HQs for operational noise from the cumulative Proposal were less than or equal to 1 at the residential and educational receivers selected for assessment, indicating that the operational noise from the cumulative Proposal does not pose an unacceptable risk to the health of these communities.</p> <p>The HQs were greater than 1 for annoyance and cognitive impairment at the nearest industrial receiver. It is noted, however, that the HQs for existing ambient noise already exceed 1 for annoyance and cognitive impairment at this location, and when background noise is added to the cumulative operational noise, there is no change in the HQ for total noise derived from the Proposal.</p> <p>Based on the results of the health risk assessment included in Section 10 and Appendix N of the EIS, no additional mitigation measures above those included in Section 10.5 and 22 of the EIS are considered necessary. The revised mitigation measures included in Section 8 of this RtS, which take into account the potential impacts associated with the construction and operation of the Amended Proposal are considered appropriate to minimise the potential for noise impacts to surrounding communities.</p>	
LCC-12	Reoccurring themes	If the Project is approved, comprehensive air and noise monitoring initiatives should be undertaken during the construction and operational phases of the proposed development to facilitate adherence with the Approval, Environment Protection Licences and encourage environmental best practice	Precinct-wide monitoring of air quality and noise and vibration is to be undertaken during construction and operation of the MPE and MPW Projects to facilitate adherence with the relevant Conditions of Approval, Environment Protection Licences and encourage environmental best practice, where reasonable and feasible.	Section 8, Section 9 and Section 22 of the EIS.
LCC-13	Reoccurring themes	A clear outline and process of site environmental impact management and mitigation responsibilities for prospective tenants will need to be provided by the proponent prior to the project being approved as the proponent acknowledge limitations on SIMTA's control in the future as it is noted that the responsibility for the ongoing management of emissions associated with warehousing activities during operations.	<p>Measures to manage environmental impacts from operation of the Proposal would be included in an OEMP to be developed and implemented for the Proposal.</p> <p>As part of tenant lease agreements, adherence to the OEMP would be required, including management of environmental impacts, including air quality.</p>	N/A

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ID	Aspect	Comment	Response	Reference
LCC-14	Recommendations	<p>The recommendations below are identified to address the identified human health impacts and to allow a comprehensive assessment of the Project:</p> <p>Air quality and noise/vibration impacts can directly impact on the health and wellbeing of the surrounding community and thus the HRA (Ramboll 2016c) and EIS (Arcadis 2016a) should be reviewed and revised in consideration of any further amendments to either the detailed air quality and/or noise and vibration impact assessments.</p>	Refer to issue LCC-7 (Additional considerations) for a response to this comment.	LCC-7
LCC-15	Recommendations	<p>Further commitments are required, prior to consent being issued for this proposal, to introduce appropriate mitigation measures to reduce noise exposure to surrounding communities to levels that meet all aspects of the WHO guidelines, irrespective of existing ambient noise levels.</p>	Refer to issue LCC-11 (Additional considerations) for a response to this comment.	LCC-11
LCC-16	Recommendations	<p>Due to the complexity of the development, noise monitoring and annual reporting shall be undertaken during the construction and operational phases of the Project and continue for the life of the development.</p>	<p>Sections 8 and 9 of the EIS present the assessment of noise and air quality impacts respectively from construction and operation of the Proposal. The sections also propose mitigation measures to manage potential impacts from the Proposal.</p> <p>These sections identified that air quality and noise impacts would be within acceptable limits with the implementation of the proposed management and mitigation measures included in Section 22 of the EIS, and that ongoing monitoring would not be required.</p> <p>However, precinct-wide monitoring of air quality and noise and vibration is expected to be undertaken during construction and operation of the MPE and MPW Project's to facilitate adherence with the relevant Conditions of Approval, Environment Protection Licences and encourage environmental best practice, where reasonable and feasible.</p> <p>The outcomes of this monitoring would be documents in regular reporting, as specified by the projects Conditions of Approval.</p>	Section 8, 9 and 22 of the EIS.

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ID	Aspect	Comment	Response	Reference
LCC-17	Recommendations	If the Project is approved, comprehensive air and noise monitoring initiatives should be undertaken during the construction and operational phases of the proposed development to facilitate adherence with the Approval, Environment Protection Licences and encourage environmental best practice.	Refer to issue LCC-12 (Additional considerations) for a response to this comment.	LCC-12
LCC-18	Recommendations	<p>If the Project is approved, all best practice and mitigation measures outlined in the AQIA (Appendix M of the EIS) should be implemented to further reduce air pollution levels and the associated health risks.</p> <p>If the Project is approved, all best practice measures and mitigation measures outlined in the Noise and Vibration Impact Assessment (Appendix L of the EIS) should be implemented to further reduce noise and vibration impacts and the associated health risks to the community.</p>	The revised mitigation measures included in Section 8 of this RtS would be implemented during construction and operation of the Proposal, including all mitigation measures outlined in Section 22, Appendix L and Appendix M of the EIS to minimise the impacts of the Proposal on air quality, noise and vibration and human health.	<p>Section 22, Appendix L and Appendix M of the EIS.</p> <p>Section 8 of this EIS.</p>
LCC-19	Recommendations	A clear outline and process of site environmental impact management and mitigation responsibilities for prospective tenants will need to be provided by the proponent prior to the project being approved as the proponent acknowledge limitations on SIMTA's control in the future as it is noted that that the responsibility for the ongoing management of emissions associated with warehousing activities during operations.	<u>Refer to issue LCC-13 (Additional considerations) for a response to this comment.</u>	LCC-13
LCC-20	Recommendations	A comprehensive review of the EIS and Health Risk Assessment should be undertaken by NSW Health.	During public display of the EIS, NSW Health have been provided the opportunity to review the EIS, inclusive of the HRA.	N/A

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ID	Aspect	Comment	Response	Reference
LCC-21	Recommendations	The proponent should also submit detailed floor and section plans for food premises in the freight village to DP&E prior to the issue of the construction certificate. The plans shall demonstrate compliance with the Food Act 2003, Australia New Zealand Food Standards Code and Australian Standard (AS) 4674-2004 Design, Construction and Fit-Out of Food Premises. Additionally, DP&E shall confirm whether regulated systems as defined under the Public Health Act 2010, such as warm water or water-cooling systems will be installed on the premises.	Refer to issue LCC-10 (Additional considerations) for a response to this comment.	Appendix D of the EIS. Appendix B of this RtS.
<b>Biodiversity</b>				
LCC-22	Ecosystem credits	Under the Framework for Biodiversity Assessment (FBA) (OEH, 2014), ecosystem credits are a measurement of the value of EEC, CEECs and threatened species habitat for species can be reliably predicted to occur within a Plant Community Type (PCT). PCT's are defined by OEH (2016), and are the effective trading unit for 'offsets' using biodiversity credits in NSW. The following comments relate to the assessment of ecosystem credits within the BAR and BOS (Arcadis 2016):	Noted.	Section 11 and Appendix O of the EIS.
LCC-23	Mapped native vegetation	<p>There is relatively small amount of mapped native vegetation in the development site by Arcadis (2016g) (~0.16 ha), consisting of three Plant Community Types</p> <ul style="list-style-type: none"> <li>• Hard-leaved Scribbly Gum – Parramatta Red Gum heathy woodland of the Cumberland Plain, Sydney Basin (0.10 ha)</li> <li>• Broad-leaved Ironbark – Melaleuca decora shrubby open forest on clay soils</li> </ul>	Noted.	Section 11 and Appendix O of the EIS.

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ID	Aspect	Comment	Response	Reference
		<p>of the Cumberland Plain, Sydney Basin Bioregion (0.05 ha)</p> <ul style="list-style-type: none"> <li>Coastal freshwater lagoons of the Sydney Basin Bioregion and South East Corner Bioregion (0.01 ha)</li> </ul>		
LCC-24	Vegetation classification	<p>As this was a desktop review, field validation of the vegetation classification and mapping boundaries provided in Arcadis (2016g) was not undertaken, although this review was supplemented by analysis of regional vegetation mapping, aerial photography and Google Street view. These PCT's are known from the area and vegetation mapping is most likely to be accurate.</p>	Noted.	Section 11 and Appendix O of the EIS.
LCC-25	Species credits	<p>This class of biodiversity credit is required for impacts on threatened species that cannot be reliably predicted based on habitat surrogates. It is of most relevance to threatened flora, but some cryptic or rare threatened fauna are also considered to be 'species credit species'</p>	<p>The BAR for the Proposal (refer to Appendix O of the EIS), prepared in accordance with OEH's <i>Framework for Biodiversity Assessment</i> (FBA) under the <i>NSW Biodiversity Offsets Policy for Major Projects</i> (OEH 2014), requires that the likelihood of threatened species to occur in a site is derived from the Plant Community Types (PCTs) identified within that same site. Section 9.2 of the BAR for the Proposal lists all threatened species that are identified as either ecosystem credit species and/or species credit species by the Threatened Species Profile Database, that have been derived from the PCTs identified in the Proposal site.</p>	MPE Concept EIS
LCC-26	Species credits	<p>Flora: The Arcadis (2016g) assessment identifies the presence of four species credit species in the land directly adjacent to the southern boundary of the development site, known as The Boot land. These are, <i>A. pubescens</i>, <i>Persoonia nutans</i>, <i>Grevillea parviflora subsp. parviflora</i> and <i>Hibbertia puberula subsp. puberula</i>. A 10m vegetated buffer has been recommended as a 'mitigation measure' to avoid indirect impacts to these species. This may be sufficient to reduce edge effects such as weed invasion and changes in hydrology as suggested, but there is no discussion on where this 10m</p>	<p>The mitigation measure specified in Section 11.5.1 of the MPE Stage 2 EIS states "The threatened plant populations identified to the south of the Proposal site would be protected by a minimum 10 metre buffer between the edge of the area of occupied habitat and the Proposal site". The intention of this buffer was to provide a setback of the Proposal from the locations of threatened flora species, in which no construction would occur, and potential indirect to threatened species could be minimised and/or avoided. The mitigation measure does not prescribe revegetation within this buffer; the existing environment would be maintained in-situ. This area is currently cleared of native vegetation as it supports a vehicular maintenance track, which has provided access to and allowed for maintenance of boundary fencing and the electrical easement.</p>	Section 11.5.1 of the EIS.

ID	Aspect	Comment	Response	Reference
		buffer is derived from. For example, by reference peer reviewed publications or to the relevant Recovery Plans or Environmental Impact Assessment guidelines (NPWS 2003, 2002, 2004, DEC 2005). Further, this area is currently cleared of native vegetation and whilst there is a recommendation for a Flora and Fauna Management Plan as a mitigation measure, it is not specified whether this is to include revegetation along the southern boundary.	The location of proposed revegetation for the Proposal is shown in the Landscape Design Statement and Landscape Plans which were prepared to support the EIS (Appendix E of this EIS). Landscaping would use local species as understory planting to support and enhance local habitat values. Revegetation within the Boot land will be managed in accordance with a Biobanking Agreement. The Boot land comprises the Wattle Grove Offset Area, one of three biodiversity offset sites relevant to the Moorebank Intermodal Terminal (IMT) Facility. A Biobanking Agreement Application for these three biodiversity offset sites has been submitted to, and is currently being assessed by, the NSW Office of Environment and Heritage. This Biobanking Agreement prescribes management actions and performance measures that are guaranteed commitments to be carried out on the offset sites, including any revegetation.	
LCC-27	Species credits	Further, there is no discussion of the critically endangered plant species, <i>Hibbertia fumana</i> . This is recently rediscovered species (OEH 2017; RBGDT 2017), known from only one location directly adjacent to the proposed development, in the area recognised as The Boot. For a species of such high conservation significance, this seems a large oversight and further discussion of adequate survey, and avoidance and mitigation that are considered appropriate should be provided in the BAR.	<p><i>Hibbertia fumana</i> was identified during threatened flora surveys conducted on the Boot land south of the MPE Site in October and November 2016. The species was provisionally listed as a critically endangered species under the TSC Act on 16 December 2016.</p> <p><i>Hibbertia fumana</i> has not been identified within or immediately adjacent to the Proposal site. Locations of <i>Hibbertia fumana</i> are generally contained to the southern extent of the Bootland, south of Anzac Creek. The northernmost, and closest, record of <i>Hibbertia fumana</i> is located approximately 250 metres south of the Proposal site.</p> <p>The entire population of <i>Hibbertia fumana</i> recorded to date falls within a proposed biobank site to be established under a proposed Biobanking agreement. A Biobanking agreement application that includes this area has been submitted to, and is currently being assessed by, the NSW Office of Environment and Heritage.</p> <p>As described in section 7.5.3 of the RtS, additional targeted threatened flora surveys were carried out in May 2017 along the eastern and southern boundary of the MPE site, at least 30 metres into the Boot land. While a number of threatened flora species were identified in this survey area, <i>Hibbertia fumana</i> was not identified. Plants of <i>Hibbertia puberula</i> subsp <i>puberula</i> recorded in May 2017 could be positively identified due to the presence of dried flowering and fruiting material remaining on the stems.</p> <p>Accordingly, the Amended Proposal will not directly impact any known locations of <i>Hibbertia fumana</i>. Indirect impacts are unlikely, given the location</p>	Section 7.5.3 of the EIS.

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			of the species (the species is not located in proximity to the Amended construction or operational area) and the implementation of appropriate mitigation measures.	
LCC-28	Species credits	<p>Green and Golden Bell Frog: it is uncertain whether appropriate survey for this species has been undertaken, as there is not discussion of climatic conditions during the time of nocturnal survey. Ideal survey conditions for Green and Golden Bell Frogs are warm, wet nights following prolonged periods of rainfall. There is no discussion on whether the surveyors checked a reference site to determine if the species was calling at the time of survey. There is however some impact to the habitat of this species, as it is noted in Table 9.3 (Arcadis 2016g) that habitat in MEME003 and ME003. There is also further comment about constructed drainage areas outside of the mapped native vegetation, although this has not been mapped.</p>	<p>A detailed assessment of the likelihood of Green and Golden Bell Frog (GGBF) to occur on the MPE Site and adjoining areas of native vegetation to the south was included in the Flora and Fauna Assessment prepared for the MPE Concept Approval (Hyder Consulting 2013).</p> <p>This assessment found that the closest known extant population of GGBF is approximately 3.5 km east of the MPE Site at Hammondville. Habitat connectivity between this population and the MPE site is low. Targeted diurnal and nocturnal surveys for GGBF for the assessment in May 2011, as well as other recent projects nearby, did not record this species. While there are some preferred habitat features for GGBF, the presence of Mosquito Fish in aquatic habitats reduces the likelihood that the species occurs in the MPE Site or in nearby areas.</p> <p>The Amended Proposal includes modifications to the stormwater and drainage design, resulting in the removal of the southern drainage channel and outlet to Anzac Creek. As a result, the 0.01 ha of Coastal freshwater lagoons of the Sydney Basin and Southeast Corner assessed as impacted in the BAR, which may also form marginal potential habitat for GGBF, would no longer be subject to impacts from the Amended Proposal.</p>	MPE Concept EIS
LCC-29	Recommendations	<p>The recommendations below are identified to address the identified ecological impacts to allow a comprehensive assessment of the Project:</p> <ul style="list-style-type: none"> <li>Further justification that proposed mitigation measures to avoid 'indirect impacts' to species credit species recorded along the southern boundary should be provided.</li> </ul>	Refer to issue LCC-26 (Species credits) for a response to this comment.	LCC-26
LCC-30	Recommendations	<ul style="list-style-type: none"> <li>Further survey and justification should be discussed in detail for the critically endangered <i>Hibbertia fumana</i>, given the high conservation significance of the species, which is known from only one</li> </ul>	Refer to issue LCC-27 (Species credits) for a response to this comment.	LCC-27

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		site which is highly likely be indirectly impacted from the proposal assessed in the BAR.		
LCC-31	Recommendations	<ul style="list-style-type: none"> <li>Further justification of whether the GGBF survey was undertaken in appropriate climatic conditions should be provided along with if the reference site was checked to determine whether this species was indeed active during the survey period.</li> </ul>	Refer to issue LCC-28 (Additional considerations) for a response to this comment.	LCC-28
<b>Air quality</b>				
LCC-32	Insufficient Reporting Detail	<p>Within the AQIA, information on model emission source configuration is limited to the statement in Appendix 1: "All emissions source activities for construction and operation are represented by a series of volume sources, located according to site layout". Accordingly, the assumptions and accuracy of the model configuration have not been reviewed.</p> <p>With regard to this assessment, emission source parameters of interest include:</p> <ul style="list-style-type: none"> <li>Emission source number and location. Spatial allocation of the emission inventory.</li> <li>Temporal representation of emissions (e.g. hours in which emission sources are active).</li> <li>Modelled pollutant emission rates.</li> </ul>	<p>As part of the AQIA of the Proposal (refer to Appendix M of the EIS), emission sources were modelled using the line-volume source function available in the AERMOD view software. This allows a single line-volume source to be allocated across the relevant area; for example, along the length of internal roadways or across warehousing areas. The single line-volume source then assigns multiple separated or adjacent volume sources, depending on the assigned plume width or horizontal spread (i.e. bigger spread = less sources).</p> <p>The initial horizontal spread of the volume source is assigned such that the source, be it a warehouse or roadway, is adequately represented. The same source locations are used for both construction and operations, as the areas of activity are the same (i.e. bulk earthworks for construction of warehouses is the same source as the operation of the warehouse).</p> <p>The emissions estimates and modelling for construction assume activity for 11 hours per day, Monday to Friday (i.e 7am to 6pm) and 5 hours a day on Saturdays (i.e 8am to 1pm), consistent with the construction hours presented in Section 4.3.6 of the EIS. The emissions estimates and modelling for the operational phase assume 24/7 operations.</p> <p>The modelled pollutant emissions rates for the operational phase in grams per second are simply a function of the annual emissions (kg/year) divided by hours of the year, seconds in the hour and converted from kilograms to grams (and then split evenly across the number of sources relevant to each activity).</p> <p>The modelled pollutant emission rates for construction are dealt with in a more complicated manner. For sources independent of wind speed, emissions are evenly apportioned for each hour of the year, similar to operations emissions,</p>	Section 4.3.6 and Appendix M of the EIS.



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			<p>although only emitted during construction hours. For wind-sensitive sources hourly varying emissions are derived based on their relationship to the hourly wind speed. For example, wind erosion sources are adjusted according to the cube of the hourly average wind speed and normalised so that the total emission over all hours in the year adds up to the estimated annual total emission.</p> <p>A full description of the approach can be found here - <a href="http://www.epa.nsw.gov.au/resources/air/upper-hunter-air-particle-report.pdf">http://www.epa.nsw.gov.au/resources/air/upper-hunter-air-particle-report.pdf</a></p>	
LCC-33	Insufficient Reporting Detail	<p>It is noted that the level of detail is not consistent with the reporting requirements outlined within the Approved Methods, and that assumptions around these parameters can have a material influence on the magnitude of modelling predictions. The level of detail should be addressed, with reporting undertaken in accordance with the Approved Methods prior to a determination being made.</p>	<p>The reporting in the AQIA (refer to Appendix M of the EIS) is in general accordance with the Approved Methods. It is agreed that the calculations of pollutant emissions rates to get from kg/annum to g/s have not been reported, and not every source parameter used for modelling is listed.</p> <p>It is also noted that as part of consultation activities undertaken for the EIS (in accordance with the Conditions of Approval for the Project SSD MP10_0193), NSW Health were directly consulted on the approach taken for the HRA, and invited to provide comment as part of the public exhibition process. In response, no issues were raised by NSW Health with regards to the human health impacts associated with the importation of clean general fill to site as part of construction of the Proposal.</p> <p>It is also noted that consultation with the NSW EPA was undertaken in November 2016 in accordance with the SEARs for the Proposal, via a letter which included the approach adopted for the AQIA. In response, no issues were raised or further information requested by the NSW EPA regarding the reporting methods undertaken for the AQIA.</p>	Appendix M of the EIS.
LCC-34	Assessment of Construction Impacts	<p>Within the emission inventory, the assumed construction operating hours are 11 hours per day, despite the proposed construction hours of 6 am and 10 pm (Wilkinson Murray 2016), which equates to a total of 16 hours. Given that no detail is provided, it is not possible to understand whether emissions have been modelled after sunset, which given the prevalence of stable conditions in the region, could result in significantly higher predictions. The presence of trucks hauling and dumping fill during these hours should be specifically addressed. In addition, the</p>	<p>Emissions for construction are modelled between the hours of 7am and 6pm Monday to Friday and 8am to 1pm on Saturdays, consistent with the construction hours presented in Section 4.3.6 of the EIS, with the exception of wind erosion, which can occur in any hour of the day.</p> <p>While certain activities may occur outside of these hours, construction work programs are staged and do not all occur at the same time. The construction-modelling scenario included as part of the AQIA focused on the stages of construction with the highest potential for dust emissions – i.e. bulk earthworks – which were assumed to occur between the hours of 7am and 6pm.</p>	Section 4.3.6 of the EIS.

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		ancillary equipment associated with these operations is not outlined (e.g. dozers to manage dump piles).		
LCC-35	Assessment of Construction Impacts	<p>Annual emission rates for the construction phase do not agree with the documented assumptions. As an example, a TSP dozer emission rate of 2.6 kg/hr is estimated based on the equations provided in Appendix 5 of the AQIA and an assumed control of 50%. Annual dozer TSP emissions are documented within Table 5-1 to be 10,483 kg/annum. At the calculated emission rate, this implies a total of 4,031 hours of dozer operations per annum. This is not consistent with the documented assumption of 4 dozers operating 11 hours per day at an utilisation 70%, which would equate to 11,242 dozer hours per year. This value is approximately 2.8 times higher than that documented within the AQIA. Whether the AQIA estimate reflects a short term period of dozer operation is unclear. In addition, the emission rates for the estimation of 24 hour and annual averages are not provided, nor are when the emissions were modelled to occur.</p>	<p>The indicative construction program for MPE Stage 2 estimates that bulk earthworks would occur over the first three quarters of the year, therefore dozer hours for the movement/ spreading of fill material were estimated based on 6 months of annual operation, rather than a full year. It is acknowledged that the assumptions in the report are not clear in this regard. If the operational hours for dozers were increased for a full 12 month period, this would increase TSP emissions by 23% which in turn would increase the receptor maximum annual average TSP concentration from 0.6 µg/m³ to 0.7 µg/m³ (i.e. no significant change and would not alter the conclusions of the assessment). It is noted that the same assumption was applied for PM<sub>10</sub> and PM<sub>2.5</sub>, however the reviewer may not have found the same discrepancy for PM<sub>10</sub> because the emission inventory had inadvertently left out the 50% control for PM<sub>10</sub>.</p> <p>Regardless, any assumption used in the emission inventory may be subject to difference of opinion or interpretation; however, the modelling predictions are sufficiently low that changing these assumptions will be largely inconsequential to the overall conclusions of the assessment.</p> <p>The annual emissions are reported and how emission rates are derived for sources independent and dependent on wind speed are described previously. Sources are modelled/emitted as per the reported construction hours.</p>	Section 9 and Appendix M of the EIS.
LCC-36	Regional Assessment	<p>The AQIA does not include a regional assessment of air emissions as required under the instrument of approval for the Concept Plan approval. Rather, assessment is limited to steady-state dispersion modelling of air quality impacts within 1 to 3 km of the Stage 2 Project.</p>	<p>Consistent with all other staged approval applications for the precinct, the air quality assessment for the Proposal focuses on local air quality impacts. The assessment of regional air emissions undertaken for the MPE Concept Approval (refer to Section 8 of the MPE Concept EIS), is considered the most appropriate approval stage for considering regional air impacts. This assessment, undertaken by Pacific Environment (2013) included an assessment of regional air quality impacts, which noted that there would be reductions in emissions of NO<sub>x</sub>, PM<sub>10</sub> and CO<sub>2</sub> associated with the transfer of freight from road to rail. The changes in emissions resulting from the Proposal would be negligible when considered at the regional level and it can therefore be concluded with confidence that the impacts on regional air quality will also be negligible.</p>	Section 8 of the MPE Concept EIS.

ID	Aspect	Comment	Response	Reference
LCC-37	Emissions from Excavation and Remediation of Contaminated Land	The AQIA makes assessment of the requirements for managing the mobilisation of contaminants during excavation and remediation of soils at the site. Within the site contamination summary (JBS&G, 2016) it is identified that asbestos, heavy metals, as well Non-Aqueous Phase Liquid (NAPL) hydrocarbons present within soil and/or groundwater on the Site. Given the presence of intrusive works and remediation activities, these issues should be identified and assessed such that risks can be managed appropriately.	<p>A draft air quality management plan, which includes measures to minimise dust emissions during construction of the Proposal was included in Appendix 7 of the AQIA at Appendix M of the EIS. It is anticipated that this plan will form the basis of the air quality management sub-plan, to be included in the CEMP for the Proposal, which will include more detailed mitigation measures and procedures for the management of dust emissions, including handling of contaminated soils.</p> <p>Furthermore, as identified within Section 13.2.3 of the EIS, each of these contaminants are recognised as contaminants of potential concern (COPC) from the history of the site.</p> <p>A non-statutory site audit and Site Audit Report was completed in 2002, for the former DNSDC site (i.e. the SIMTA site), with the Site Auditor certifying the SIMTA site as suitable for ongoing commercial/industrial use subject to implementation of a Site Management Plan (SMP), which was to include a range of actions relating to further investigation, remediation, groundwater monitoring and management controls. It is not known whether a SMP was prepared or implemented, or whether any recommended actions were undertaken. Subsequent to this, and at the request of the Department of Defence, another non-statutory site audit was completed for the site in 2016, excluding the former DNSDC Refuelling Area. The Site Auditor certified that the site is suitable for commercial / industrial use subject to compliance with the Environmental Management Plan (EMP) prepared for the site in July 2016. It is therefore concluded that the site is suitable for use without remediation and encountering these COPC during construction is not anticipated.</p>	Section 13.2.3 and Appendix M of the EIS.
LCC-38	Operational Impacts	The application of 50% utilisation to forklifts is considered potentially optimistic. Values in the vicinity of 85% would be considered more consistent with typical intermodal fleet operations. As an example, adoption of an 85% fleet utilisation would result in an increase of 70% of LNG forklift emissions which are a significant emission source within the AQIA.	<p>The assumptions used for utilisation have been provided by the proponent of the facility, based on previous experience as an operator of other intermodal terminals. We believe this to be a realistic assumption regarding the operation of the Proposal.</p> <p>Should it be identified at a future stage of the Proposal that the utilisation of forklifts within warehouses changes from that included in the EIS AQIA (refer to Appendix M of the EIS), a consistency review of operational air emissions would be undertaken to determine any potential impacts.</p>	Section 9 and Appendix M of the EIS.

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ID	Aspect	Comment	Response	Reference
LCC-39	Cumulative Assessment	<p>A review of the Stage 2 MPW AQIA (Ramboll, 2016b) identified a range of optimistic assumptions, which if changed to use assumptions typical of those adopted within the air quality assessment would potentially influence the outcomes of the assessment, and the required levels of mitigation. A summary of these changes is outlined in Table 3.4, whilst further detail can be found in the Council's submission on the Stage 2 MPW project approval. The changes outlined in Table 3.4 are considered to be potentially material with regard to the prediction of compliance with air quality criteria, and identification of the required levels of mitigation. Given the reliance of the cumulative assessment on the Stage 2 MPE emission estimates, the conclusions of the cumulative assessment are not supported until these issues are resolved</p>	<p>As part of the Liverpool City Council's response to the MPW Stage 2 EIS during public display, the following comment was made:</p> <p><i>The emissions inventory is based on annual average quantities, not differentiating between peak and average emission scenarios. The derivation of emission rates from annual inventory quantities is considered appropriate for the estimation of annual average pollutant impacts. Noting this, the use of annual average quantities (as applied within the AQIA) is considered optimistic for the assessment of short-term criteria (24 hours and less), where emissions should either reflect peak levels of activity that occur under routine operations, or address the variability of emissions directly within the model.</i></p> <p>A response to this issue raised as part of the MPW Stage 2 Proposal is included in Section 4 of the MPW Stage 2 Response to Submissions Report (MPW Stage 2 RtS) (Arcadis, 2017).</p> <p>Similar to the response provided for MPW Stage 2, all assumptions used in the emissions inventory for the MPE Stage 2 Proposal are based on information provided within Section 4 and 9 of the EIS that reflect proposed levels of activity for the Proposal. The MPE Stage 2 EIS incorporated a sufficient level of conservatism to appropriately assess the potential air quality impacts of the Proposal.</p>	<p>Section 4 and 9 of the EIS.</p> <p>MPW Stage 2 RtS (Arcadis, 2017)</p>
LCC-40	Recommendations	<p>The following recommendations are made to allow a comprehensive assessment of the proposal:</p> <ul style="list-style-type: none"> <li>In accordance with the concept plan instrument of approval, the assessment should include a cumulative operational air quality assessment for the Moorebank intermodal facilities when operating at design capacity. The assessment should assess local and regional air quality impacts of the facilities including the following:</li> </ul>	<p>The air quality assessment has included a cumulative operational air quality assessment for the facility, at design capacity for the relevant stage. The assessment focuses on local air quality impacts, consistent with all other staged approval applications for the MPE and MPW projects. As discussed above, a regional assessment of air quality impacts was included as part of the MPE Concept EIS, which is considered the most appropriate approval stage for considering regional air quality impacts. This assessment, provided in Section 8 of the Concept EIS Air Quality Impact Assessment (Pacific Environment, 2013), noted that there would be reductions in emissions of NO<sub>x</sub>, PM<sub>10</sub> and CO<sub>2</sub> associated with the transfer of freight from road to rail. The changes in emissions resulting from the Proposal would be negligible when considered at the regional level and it can therefore be concluded with confidence that the impacts on regional air quality will also be negligible.</p>	<p>Section 8 of the MPE Concept EIS.</p>
LCC-41	Recommendations	<ul style="list-style-type: none"> <li>Incorporation of emission estimates that reflect the extent of air emissions that are proposed as part of the</li> </ul>	<p>Refer to issue LCC-39 (Cumulative assessment) for a response to this comment.</p>	<p>LCC-37</p>

ID	Aspect	Comment	Response	Reference
		Project, including an allowance for peak levels of activity that would occur under routine operations		
LCC-42	Recommendations	<ul style="list-style-type: none"> <li>– Qualification of the scale of emissions from the facilities in the context of regional emission inventory (e.g. those for the Local Government Area).</li> </ul>	It is unclear from the LCC comment what additional value is gained from comparing emissions from the Proposal with regional emissions for the Liverpool LGA. This is not typically required for a local air quality assessment and as such, has not been undertaken as part of the assessment of the impacts of the Proposal on air quality.	N/A
LCC-43	Recommendations	<ul style="list-style-type: none"> <li>– Addressing of regional impacts with a consideration of potential impacts on regional ozone exceedances as well as assessment methods outlined in (Environ, 2011) Tiered Procedure for Estimating Ground-level Ozone Impacts from Stationary Sources.</li> </ul>	The <i>Tiered Procedure for Estimating Ground-level Ozone Impacts from Stationary Sources</i> (ENVIRON, 2011) is not an appropriate tool for the Proposal, as it is designed for stationary sources (whereas the majority of emissions from the Proposal are from mobile sources). Notwithstanding, the Proposal would not require an assessment under the Tiered Procedure because it is well below the emissions threshold that triggers an assessment under the abovementioned procedure. An assessment of potential impacts on regional ozone exceedances would be largely irrelevant, based on the scale of the emissions from the facility. For example, NOx emissions for the Proposal are the equivalent of 1% of the estimated NOx emissions for the Western Sydney Airport, and the regional ozone assessment for this development found no change to peak ozone on a regional basis. Finally, it is noted that the Proposal, which replaces freight transport by truck with freight transport by rail, has a role to play in reducing road transport emissions on a regional scale.	<i>Tiered Procedure for Estimating Ground-level Ozone Impacts from Stationary Sources</i> (ENVIRON, 2011)
LCC-44	Recommendations	<ul style="list-style-type: none"> <li>– Reporting in accordance with the requirements of the Approved Methods.</li> </ul>	Refer to issue LCC-33 (insufficient reporting detail) for a response to this comment.	LCC-33
LCC-45	Recommendations	<ul style="list-style-type: none"> <li>– Requirements for assessment of these contamination-related air quality issues be incorporated into the SOC's for the concept approval, such that subsequent planning processes can incorporate the appropriate consideration of environmental and human health risks, including quantitative assessment as required.</li> </ul>	Refer to issue LCC-37 (Emissions from Excavation and Remediation of Contaminated Land) for a response to this comment.	LCC-37

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LCC-46	Recommendations	<ul style="list-style-type: none"> <li>Specific assumptions for the modelling undertaken to inform the assessment should be identified and reviewed prior to any determination. These assumptions should then be and incorporated into the AQMP's and SOC's for the Construction Environmental Management Plan's (CEMPs).</li> </ul>	<p>The Statement of Commitments relate to the concept plan level of assessment of the MPE Project. Where relevant, these commitments have been considered, in the EIS for the Proposal. A summary of where the EIS considers/ addresses the relevant SoC is included in Appendix A of the EIS. The Proposal, which represents stage 2 of the MPE Project, provides an assessment of air quality impacts of this stage of the MPE Project in accordance with the SEARs for the Proposal (SSD 16_7628), the concept plan Conditions of Approval and SoC.</p> <p>All assumptions used in the emissions inventory for the MPE Stage 2 Proposal are based on information provided within Section 4 and 9 of the EIS that reflect proposed levels of activity for the Proposal.</p> <p>The potential impacts of the Proposal during construction and operation, as they relate to air quality are proposed to be managed in accordance with the revised mitigation measures included at Section 8 of this RtS, including the preparation of an AQMP as part of the CEMP for the Proposal.</p> <p>The assessment of air quality impacts associated with stage 2 of the MPE Project does not warrant or require any update or change to the SoC for the MPW Project.</p>	<p>Section 9 and Appendix M of the EIS.</p> <p>Section 8 of this RtS.</p>
<b>Noise and vibration</b>				
LCC-47	Construction Noise Criteria	<p>Details of the sound power spectra of the construction fleet are provided in Section 6.3 of the NVIA. It is not clear if consideration has been given to activities identified as highly annoying in the ICNG (DECC 2009), such as vibratory rollers and compactors, excavators with hammers, concrete saws and jackhammers.</p>	<p>No adjustments have been made for particularly annoying sources (as defined in the ICNG), given the large distances to receivers and the conservative assumptions built into the assessment conducted, such as modelling all construction plant operating continuously and at the same time.</p>	<p>Section 8 of the EIS</p>

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LCC-48	Construction Noise Criteria	<p>Out of standard hours (OOH) noise criteria should consider background noise levels relative to the out of hours period. RBLs adopted should consider background noise conditions specific to the OOH period for each noise catchment area and whether lower ambient levels occur during the specific OOH period when a greater proportion of residents are typically home.</p>	<p>Section 6.5 of the NVIA provided an assessment of construction noise from the Proposal during OOH works periods.</p> <p>Background noise levels during each OOH period have been considered when establishing OOH construction Noise Management Levels (NML) for the construction of the Proposal. The noise monitoring data indicates that ambient <math>L_{90}</math> noise levels in nearby residential noise catchment areas typically increase from 5:00am and are normally equal to or greater than the daytime RBL from approximately 6:00am onwards. Therefore, the daytime RBL is considered representative of the background noise levels in OOH periods 1, 3 and 4. OOH period 2 occurs during the evening (6:00pm – 10:00pm) period and therefore, the evening RBL has been used to establish the OOH NML during this period. It should be noted that the evening RBL in Casula, Glenfield and Wattle Grove, established in accordance with the INP, are equal to the daytime RBL. Therefore, the established OOH noise management levels in each catchment are constant.</p>	Section 6.5 of Appendix L of the EIS.
LCC-49	Noise Modelling Inputs	<p>The operational noise assessment provides detail of the noise sources and model assumptions applied. However, to verify the findings of the assessment, additional information would be required to understand the modelling inputs and outputs.</p> <p>Aspects requiring clarification include:</p> <ul style="list-style-type: none"> <li>Figures showing source locations adopted during acoustic modelling (construction and operations)</li> <li>A summary table detailing number as well as type of sources in each model scenario (construction and operations)</li> <li>Assessment of annoying characteristics in consideration of the ICNG (DECC 2009) for particular annoying construction noise sources.</li> </ul>	<p><u>Source locations – construction</u></p> <p>When predicting the worst-case noise levels at sensitive receivers due to construction of the Proposal, construction activities were modelled at the extremities of the Proposal site.</p> <p>For instance, to predict worst-case construction noise levels in Casula, construction activities were modelled in the north-west corner of the site. Similarly, these activities were modelled in the south-east corner of the site to predict the worst-case construction noise levels in Wattle Grove.</p> <p><u>Source locations – operation</u></p> <p>Information in relation to the location of operational infrastructure including rail lines and warehousing, and operational truck routes are shown in Section 4 of the EIS. For clarity, the following operational equipment would generally be associated with the use of the following operational areas:</p> <ul style="list-style-type: none"> <li>Warehousing – container handling equipment, heavy and light vehicle movements loading and unloading</li> <li>Internal road network and truck holding areas – heavy and light vehicle movements.</li> </ul> <p>A full list of operational noise sources included in the noise assessment is included in Section 8 and Appendix L of the EIS.</p>	Section 8 and Appendix L of the EIS



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			<p><u>Number and type of sources in each model scenario</u></p> <p>The type and number of operational noise sources are described in Section 7.3 of the Noise and Vibration Impact Assessment (Appendix L of the EIS).</p> <p><u>Assessment of annoyance characteristics</u></p> <p>The total sound power level of each construction scenario is presented in Table 6-6 of Appendix N of the EIS. No adjustments have been made for particularly annoying sources as defined in the ICNG, given the large distances to receivers and the conservative assumptions built into the assessment conducted, such as modelling all construction plant operating continuously and at the same time.</p>	
LCC-50	Noise contribution from internal vehicle movements	The volumes of traffic within the site was assessed in the MPE report, however the assessment of movement of vehicles between the site and the IMT and MPW has not been clarified. Noise contribution from internal truck movements would be expected and could potentially contribute to overall noise emissions.	Heavy vehicle movements, including movements between the MPE and MPW precincts and internal movements have been incorporated into the operational noise model developed for the Proposal. The operational noise assessment for the Proposal, including the methodology and assumption is included in Section 7 of the EIS NVIA, included as Appendix L of the EIS.	Section 8 and Appendix L of the EIS
LCC-51	Reoccurring themes	<p>The noise impacts assessed in the MPW Stage 2 EIS do not sufficiently consider the extent and impacts of activities identified as highly annoying in the Interim construction noise guideline (ICNG) (DECC 2009), such as vibratory rollers and compactors, excavators with hammers, concrete saws and jackhammers.</p> <p>To verify the findings of the operational noise assessment, additional information would be required to understand the modelling inputs and outputs, which includes.</p> <ul style="list-style-type: none"> <li>Figures showing source locations adopted during acoustic modelling (construction and operations)</li> <li>A summary table detailing the number as well as type of sources in each model scenario (construction and operations)</li> </ul>	Refer to issue LCC-49 (noise modelling inputs) for a response to this comment.	LCC-49



ID	Aspect	Comment	Response	Reference
		<ul style="list-style-type: none"> <li>Assessment of annoying characteristics in consideration of the ICNG (DECC 2009) for particular annoying construction noise sources</li> </ul>		
LCC-52	Reoccurring themes	<p>The volumes of traffic within the site was assessed in the MPE report, however the assessed movement of vehicles between the Stage 2 site and the remainder of the IMT, as well as the MPW has not been clarified. Noise contribution from internal truck movements would be expected and could potentially contribute to overall noise emissions.</p>	Refer to issue LCC-50 (noise contribution from internal vehicle movements) for a response to this comment.	LCC-50
LCC-53	Reoccurring themes	<p>The level of detail currently provided does not allow for an independent assessment to replicate or authenticate model assumptions or results, therefore:</p> <ul style="list-style-type: none"> <li>Input data should be presented in greater detail, including number, type, and location of equipment referenced in each assessment scenario, duration adjustments and model assumptions applied should be clearly documented for clarity in the acoustic assessment.</li> <li>Clarification on whether modifying correction factors as defined in the NSW Industrial Noise Policy (EPA 2000) needs to be provided to demonstrate they have been considered in the prediction of operational noise impacts.</li> </ul>	<p><u>Input data</u></p> <p>The type and number of operational noise sources are described in Section 7.2 of the Noise and Vibration Impact Assessment (Appendix L of the EIS). Construction equipment have been modelled as an area source in the vicinity of where each construction activity would be undertaken. Cars and trucks during both construction and operation have been modelled as line sources on the internal roads.</p> <p><u>Correction factors</u></p> <p>Modifying factors, as defined in the <i>NSW Industrial Noise Policy</i>, have been considered for the Proposal and deemed unlikely to be applicable at any nearby sensitive receivers.</p>	Section 7 and Appendix L of the MPE Stage 2 EIS
LCC-54	Recommendations	<p>Input data should be presented in greater detail, including number, type, and location of equipment referenced in each assessment scenario, duration adjustments and model assumptions applied should be clearly documented for clarity in the acoustic</p>	Refer to issue LCC-53 (recurring themes) for a response to this comment.	LCC-53

ID	Aspect	Comment	Response	Reference
		assessment. The level of detail currently provided does not allow for an independent assessment to replicate or authenticate model assumptions or results.  Clarification on whether modifying correction factors as defined in the NSW Industrial Noise Policy (EPA 2000) have been considered in the prediction of operational noise impacts.		
<b>Waste</b>				
LCC-55	Operational waste targets	Targets for reuse and recycling of waste – further detail needs to be provided in the EIS and OEMP to better outline how performance targets will be set, monitored and reported on during operations.	A number of measures designed to encourage waste reuse, recycling and waste minimisation are provided in Section 20.1 of the EIS, for inclusion into the OEMP.	Section 20.1 of the EIS
LCC-56	Construction	Education initiatives – Further details should be incorporated in the future OEMP on how education and training programs will be provided and waste management objectives are communicated to all staff working on the site. This should include information in formal training and induction programs, access to site management plan requirements for all personnel, provision of appropriate waste bins and signage providing clear communications on where and how recyclable, reusable and waste material should be stored and managed.	An education programme and on-going monitoring for training personnel to properly sort and transport waste into the right components and destinations is included in Section 20.1 as a measure to be included in the OEMP for the Proposal.	Section 20.1 of the EIS
LCC-57	Recommendations	Education initiatives during construction – All waste management implementation plans designed to deliver the NSW Waste Avoidance and Resource Recovery Strategy 2014-2021 targets need to include an education and behaviour change element. Therefore further details should be incorporated in both the CEMP and OEMP to provide details on how education and training	Key mitigation measures applicable to education and training with regard to waste management as well as implementation of waste management objectives under the Proposal include: <ul style="list-style-type: none"> <li>An education programme and on-going monitoring for training personnel to properly sort and transport waste into the right components and destinations is included within Section 20.1 as a measure to be included into the OEMP for the Proposal.</li> </ul>	Section 20.1 of the EIS

ID	Aspect	Comment	Response	Reference
		programs will be provided and waste management objectives are communicated to all staff working on the site. This should include information in formal training and induction programs for all personnel, provision of appropriate waste bins and signage providing clear communications on where and how recyclable, reusable and waste material should be stored and managed.	<ul style="list-style-type: none"> <li>Characterisation of construction waste streams in accordance with the NSW Waste Classification Guidelines has been included as a mitigation measure (refer to Section 22 of the EIS), with details to be provided in CEMP.</li> <li>A number of measures designed to encourage waste recycling and waste minimisation are provided within Section 20.1 of the EIS, for inclusion into the OEMP.</li> </ul>	
LCC-58	Recommendations	Targets for reuse and recycling of waste – further detail needs to be provided in the EIS and OEMP to better outline how performance targets will be set, monitored and reported on during operations.	Refer to issue LCC-55 (Operational waste targets) for a response to this comment.	LCC-53
<b>Socio Economic</b>				
LCC-59	Socio-economic impacts during construction	The construction phase impacts on access arrangements, community perception, air quality, noise, visual amenity and traffic/transport would occur for a period of between 24 and 36 months (duration of construction). These impacts are classed in the EIS as “negative short-term”. However, with the construction anticipated to be conducted for a period up to 36-months, it is more appropriately categorised at a minimum as medium-term. The EIS has identified that these impacts will only be temporary, however due to the anticipated duration of the construction phase these impacts should be considered as significant. This is compared with the positive impacts of increased employment which is only classified as “positive”. As both positive and negative impacts of construction occur over the same duration, they should be consistently referred to in their duration.	<p>The assessment of the 36-month construction period as ‘short-term’ is considered appropriate when considering the health and amenity of community values in the context of the lifespan of the Project (greater than 20 years).</p> <p>It is also important to note that this 36-month construction period includes seven separate works periods covering a range of different activities. Many of these activities would result in significantly lower noise, traffic, air and visual impacts than during the peak construction period, which is anticipated to occur for approximately 15 to 18 months.</p> <p>Sections 7-9 and 15 of the EIS address Traffic, Noise, Air and Visual impacts generated during Proposal construction, respectively. Each of these aspects have prescribed mitigation measures to manage impacts to community health and amenity during construction, in accordance with relevant guidelines and standards.</p> <p>In response to LCC’s concern regarding the consistent reference to positive and negative socio-economic impacts during construction; the impact of employment could be considered as a short-term positive impact for the duration of construction rather than ‘positive’ as stated in Table 20-24, consistent with the assessment of all other socio-economic impacts considered as part of the construction impact assessment. However; the indication of impacts during positive or short-term positive would not change</p>	Section 7, 8, 9, 15 and 20.5 of the EIS

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			the outcomes of the construction socio-economic impact assessment included in the EIS.	
LCC-60	Socio-economic impacts during construction	Similar to the above, the cumulative impacts of the Proposal with the additional activities proposed to take place in the surrounding area have also been downplayed. There may be some truth in the assessment that the Stage 2 Proposal along with associated other operations will not increase the severity of the identified socio-economic impacts on the community, it is likely that together the impacts are experienced more regularly than if all of the proposed operations were developed in isolation. This increase in frequency as a result, is unsuitably categorised as negligible and would be more appropriately categorised at a minimum as slight.	As outlined in section 20.5.4 of the EIS, the cumulative socio-economic impact from construction of the Proposal has been categorised as 'slight short term negative'. During operation of the Proposal, the cumulative socio-economic impact has been categorised as 'negligible'.  The rating of negligible has been based on the outcome of the impact assessment that demonstrates that the cumulative impact from operation of the Proposal concurrently with MPE Stage 1 Proposal, MPW Stage 2 Project, and other planned proposals in the local area would not result in significant additional impacts or exceedance of applicable criteria. As such, the 'negligible' rating is considered appropriate.	Section 20.5.4 of the EIS.
LCC-61	Socio-economic impacts during operation	A positive identified is the decrease of road freight on a regional level. This reduction, however must be considered against the large increase in the road freight that would be anticipated around the proposed site within the Liverpool LGA. There is anticipated to be an increase of approximately 1,022 round trip truck movements per day entering/exiting the proposed site during construction. This is a significant increase of heavy vehicles in the area which will have negative impacts on road maintenance and increased road safety risks. This can also be considered significant during the operation of the MPE site.  The operation of the IMT will directly result in a significant increase in heavy vehicle movements within the local road network which will further increase road safety risk and reduce the design life of the existing	Section 7.4 of the EIS outlines the potential traffic impacts generated by the Proposal to the surrounding environment, including that of the local Liverpool LGA. It has been established within this assessment that during operation the Proposal would generate approximately 564 truck trips (2-way) per day, not 1,022.  The Traffic Impact Assessment provided in Section 7 and Appendix K of the EIS identifies that the Proposal (and cumulative scenario, which included concurrent operation of the Proposal with the MPW Stage 2 Proposal and the MPE Stage 1 Project). As demonstrated in Section 7.4 of the EIS, the impacts from Proposal-related operational traffic do not result in the need for upgrades to intersections (other than the Moorebank Avenue/ MPE Stage 2 Access intersection) as these intersections would continue to operate at an acceptable LoS with operation of the Proposal. However, network improvements are required to mitigate the impacts of the cumulative scenario and these are either directly as a result of cumulative developments, and/ or to cater for background traffic growth. As these upgrades are not solely a direct result of the MPE Stage 2 Proposal, they have been nominated as assumed network upgrades.	Section 7.4 and Appendix K of the EIS.

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		roads. When this is cumulatively observed with the proposed MPW site operation, which is aiming to utilise the same local road network the impacts are negatively compounded.	<p>The assumed network upgrades at the M5 Motorway / Moorebank Avenue intersection and Moorebank Avenue / Anzac Road intersection are expected to perform satisfactorily at LoS C/D with the addition of cumulative traffic in the opening year 2019 and 2029.</p> <p>The modelling indicated satisfactory operations at both existing Cambridge Avenue / Glenfield Road and Cambridge Avenue / Canterbury Road roundabouts with LoS A/B with cumulative traffic in 2019 and 2029 (with the assumed network upgrades).</p> <p>The existing Moorebank Avenue / DJLU Access and proposed Moorebank Avenue / MPE Stage 2 Access intersections are expected to perform satisfactorily with the addition of Proposal traffic in 2019. With the assumed network upgrade at Moorebank Avenue / DJLU Access intersection, and the proposed upgrade at Moorebank Avenue / MPE Stage 2 Access intersection, both intersections provide sufficient capacity to meet the projected traffic demand in 2029.</p>	
LCC-62	Socio-economic impacts during operation	A positive aspect of the Proposal is the access to technical and trade services from the local community. With technical and trade services being identified as one of the top local professions it has been mentioned that these roles may be filled from the local area. Although this is mentioned, there have been no commitments made to utilising local workforce for permanent or contract employment and as a result there is potential for the economic benefit to be spread across the greater region, rather than the benefits being received by the community within the Liverpool LGA	The workforce (including technical and trade services) selected for the Proposal would seek to utilise labour resources where most effective. As outlined in Section 20.5 of the EIS, employment opportunities would be generated during both construction and operation of the Proposal, and it is envisaged that many positions would be filled by residents from the local and regional area.	Section 20.5 of the EIS.
LCC-63	Recommendations	<p>The recommendations below are identified to address the identified impacts associated with Socio-economic to allow a comprehensive assessment of the Project:</p> <ul style="list-style-type: none"> <li>The negative socio-economic construction impacts have been down played, by suggesting that they will only be experienced temporarily. More focus</li> </ul>	<ul style="list-style-type: none"> <li>Potential socio-economic impacts identified in Section 20.5 of the EIS include changes to access, community perception, air quality, health, visual and traffic. When reviewed in conjunction with mitigation and management measures outlined within Section 22 of the EIS, it is demonstrated that impacts relating to air, noise, traffic, health and visual would be managed to levels that would not result in significant long term environmental impacts, which in turn would minimise socioeconomic impacts. Furthermore, assessments conducted and provided in</li> </ul>	Section 20 and 22 of the EIS Appendix M, N, O, P and T of the EIS

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		should be given to mitigation measures of these expected negative impacts prior to approval being granted.	Appendices K (Traffic), L (Noise), M (Air) and N (Health) of the EIS indicate that predictive impacts were often based on conservative estimates and worst case scenarios, thereby giving conservative worst case results from which management measures are designed to mitigate.	
LCC-64	Recommendations	<ul style="list-style-type: none"> <li>It is recommended that a tracking system be developed as part of the CEMP and OEMP, to ensure all community feedback and complaints are captured, assessed and the appropriate action taken. This can be covered by a Statement of Commitments to demonstrate how all negative impacts to the local community will be mitigated during construction and operation of the Project.</li> </ul>	<ul style="list-style-type: none"> <li>As outlined in Section 20.5 of the EIS, stakeholders and community members will be able to provide feedback through a variety of mediums over the course of the detailed design, construction and operational phases of development, which will be further detailed within the Community Information and Awareness Strategy (sub-plan to the CEMP). Formal feedback in the form of submissions from the community, and responses to concerns are outlined in Section 5 of this RtS. The Consultation Outcomes Report (Appendix J of the EIS) outlines the strategy behind developing awareness of the Project within the community and tracking feedback. Key components of this strategy includes an email feedback system, that commits all complains/queries submitted by the community would be responded to within 48 hours, and a 24-hour free call information line.</li> </ul>	Section 20.5 of the EIS.
LCC-65	Recommendations	<ul style="list-style-type: none"> <li>Commitments should be made to employ 25% of the construction and operational workforce from within the Liverpool LGA to ensure that the identified positive socio-economic impacts are realised</li> </ul>	<ul style="list-style-type: none"> <li>The workforce selected for the Proposal would seek to utilise labour resources where most effective. As outlined in Section 20.5, employment opportunities would be generated during both construction and operation of the Proposal, and it is envisaged that many positions would be filled by residents from the local and regional area.</li> </ul>	Section 20.5 of the EIS.
LCC-66	Recommendations	<ul style="list-style-type: none"> <li>Any assessment of operational workforce should account for future trends and emerging technologies in optimisation and automation of similar facilities to accurately capture life-cycle employment levels of the facility during operation.</li> </ul>	<ul style="list-style-type: none"> <li>As outlined in Section 4.4.3 of the EIS the Project would have an operational workforce of approximately 1,408 FTE per year. This workforce would be made up mostly of warehouse workers, who would not be replaced with automated technology within the foreseeable future. Additionally, there is significant uncertainty around the predictions for future employment trends and emerging technologies. Any assessment of these aspects would be based on a 'best guess' and would likely be inaccurate and unhelpful.</li> </ul>	Section 4.4.3 of the EIS.
LCC-67	Recommendations	<ul style="list-style-type: none"> <li>The developer should provide a register of preferred suppliers to ensure that procurement of workforce and sub-contractors comes from local businesses. This will ensure identified positive socio-</li> </ul>	<ul style="list-style-type: none"> <li>As stated, procurement of workforce and subcontractors would be determined by a range of factors, including the skill set and capabilities of those selected. Proximity to the Project site would not be used as a standalone procurement measure, however materials would be sourced</li> </ul>	Section 4.4.3 and Section 20.5 of the EIS.

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		economic impacts are realised in the local area.	from local vendors, where possible, to reduce travelling distances and associated environmental impacts.	
LCC-68	Recommendations	<ul style="list-style-type: none"> <li>As economic conditions are fluid, anticipated employment numbers and greater economic impacts should be reassessed prior to construction approval being granted to ensure that an accurate representation of the employment and local socio-economic impacts can be reviewed.</li> </ul>	<ul style="list-style-type: none"> <li>As discussed in Section 20.5, the employment and local socio-economic demographics used to determine the existing conditions of the Liverpool LGA were derived from both the Liverpool City Council Website and data obtained from the Australian Bureau of Statistics. Anticipated employment numbers are considered to be relatively rigid for the construction and initial operational period, as the scope of works and workers are relatively accurately defined. It is, therefore, considered impractical to carry out another assessment based on largely the same data, as the outcomes would largely be the same.</li> </ul>	Section 20.5 of the EIS.
LCC-69	Recommendations	<ul style="list-style-type: none"> <li>A full net economic assessment of the Liverpool LGA should be conducted and provided to ensure that negative impacts like increased road maintenance, increased congestion, decreased air quality can be quantified against social and economic benefits.</li> </ul>	<ul style="list-style-type: none"> <li>A full net economic assessment of the Liverpool LGA is considered out of the scope of the Proposal. The purpose of the EIS is to identify, assess and mitigate potential environmental impacts generated as a result of the Proposal. The EIS includes a range of specialist assessments that consider impacts to surrounding receivers from the Proposal and cumulative impacts of the Proposal when assessed in conjunction with surrounding developments.</li> </ul>	N/A
LCC-70	Recommendations	<ul style="list-style-type: none"> <li>A Statement of Commitment should be prepared to detail how the developer is going to mitigate anticipated negative impacts to noise and vibration, air quality, visual amenity and traffic will be carried out.</li> </ul>	<ul style="list-style-type: none"> <li>Mitigation measures for noise, air quality, visual amenity and traffic have been detailed in Section 22 of the EIS and updated for the Amended Proposal in Section 8 of this RtS.</li> </ul>	Section 22 of the EIS. Section 8 of this RtS.
LCC-71	Recommendations	<ul style="list-style-type: none"> <li>The developer should investigate the potential for local TAFE and University campuses to conduct employment development training courses to encourage local community members to enrol and improve their personal skills. This could lead to an improved skilled workforce within the local community, which will be able to service the expected.</li> </ul>	<ul style="list-style-type: none"> <li>The Proposal provides potential employment benefits for the local community throughout both the construction and operation phases. As stated, procurement of workforce and subcontractors would be determined by a range of factors, including the skill set and capabilities of those selected. While providing employment development training within the local area may improve the skilled local workforce as a whole and may be investigated in the future, it is considered out of the subject scope for this EIS.</li> </ul>	N/A

ID	Aspect	Comment	Response	Reference
<b>Greenhouse Gas and Ecologically Sustainable Development</b>				
LCC-72	Assumptions	Although the structure of the assessment and the assumptions provided are considered a reasonable approach to assessing the quantum of emissions, the basis for many of the assumptions used in the GHG assessment calculations are not provided. Therefore it is difficult to cross check the assumptions and correlations between the assumptions used in other key impact assessments such as for traffic and air quality to ensure consistency of data inputs which are used for the GHG assessment.	SEARs pertaining to the assessment of GHG emissions specified the requirement to update and review GHG emissions in reference to the MPE Concept Plan GHG assessment. Consequently, the GHG assessment has been prepared to update the GHG assessment prepared as part of the MPE Concept Plan Approval.  An assessment of potential GHG emissions associated with the amendments to the Proposal has been included in Section 7 of this RtS.	Section 18 and Appendix V of the EIS. Section 7 of this RtS.
LCC-73	Construction materials	Substitution of construction materials has been considered as part of the GHG assessment and some opportunities have been identified to utilise alternative non-standard blends of concrete which could significantly reduce embodied emissions. Therefore, should the proposal be approved then a condition of consent should include a detailed review and specification of alternative low embodied energy construction materials (including but not limited to low embodied energy concrete and recycled steel materials) should occur as part of procurement policies and be considered during detailed design and prior to construction, to ensure embodied energy and resulting GHG emissions are minimised	As outlined in Section 18.4.3 of the EIS, consideration will be given to material substitution where reasonable and feasible to reduce embodied energy of construction materials.	Section 18.4.3 of the EIS.



ID	Aspect	Comment	Response	Reference
LCC-74	Reporting requirements under the NGER Act 2007.	<p>Arcadis (2016) have also correctly noted that corporate emissions over 50,000 tCO<sub>2</sub>-e/year would trigger reporting requirements under the National Greenhouse and Energy Reporting (NGER) Act 2007. The Proposal would generate over 50,000 tCO<sub>2</sub>-e/year, however obligations under the NGER Act are based on which members have operational control over facilities, that meet a facility threshold or that contribute to meeting a corporate level threshold.</p> <p>The Proposal has noted models of tenant occupation of warehouses are currently not defined and therefore there is a potential that liability under the NGER Act may be apportioned between multiple controlling members. It will therefore be important for this model to be clarified to the Department of Planning and Environment prior to operation commencing, so that potential liabilities under the NGER Act are identified and formally confirmed to determine any ongoing requirements for monitoring or reporting.</p>	Any liabilities under the NGER Act that are the responsibility of SIMTA, as the Proponent of the Proposal, will be identified prior to the commencement of operation of the Proposal. The Commonwealth Department of the Environment and Energy (DoEE) has formal oversight of the NGER Scheme and responsibility for tracking progress against Australia's international emission reduction commitments. Any liability for SIMTA under the NGER scheme and responsibility will be confirmed and administered with/ by DoEE, rather than NSW DP&E. It should also be noted that subject to confirmation of the reporting entity, liability for reporting the operational emissions under NGER may not sit with SIMTA. .	Section 6.3 of the Greenhouse Gas and Climate Change Assessment at Appendix V of the EIS.
LCC-75	Assumptions	The economic and emission benefits from application of additional emission abatement technology options outlined in have also been assessed in Section 9 of the Greenhouse Gas and Climate Change Impact Assessment (Arcadis 2016). Here it has been identified that potential cost/savings of reducing GHG emissions by 27% would equate to average annual savings of approximately \$8.7 million per year (if all costs are assumed to be averaged over the life of a technology), with an average saving of \$273 per tCO <sub>2</sub> -e abated. The analysis indicated that the implementation of the cost	The mitigation measures, management strategies and abatement opportunities presented in Section 18 and Appendix V of the EIS will be considered for incorporation into the Operational Environmental Management Plan (OEMP), where appropriate.	Section 18 and Appendix V of the EIS.

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ID	Aspect	Comment	Response	Reference
		saving technologies alone (electric forklifts, waste diversion and solar panels) would achieve a saving in GHG emissions of 16,676 tCO <sub>2</sub> -e or 14 per cent reduction in total annual operational emissions (118,733 tCO <sub>2</sub> -ie). Consequently, these technologies alone achieve more than half of the targeted 27 per cent reduction. The use of electric forklifts alone would save approximately 9,230 tCO <sub>2</sub> -e. Therefore, should the proposal be approved all recommended emission abatement opportunities identified should be implemented to ensure that the environmental and cost benefits can be achieved.		
LCC-76	Recommendations	<p>Based on this review, the following recommendations are made in relation to the GHG assessment for the Project:</p> <ul style="list-style-type: none"> <li>The Greenhouse Gas and Climate Change Impact Assessment (Arcadis 2016) presented as Appendix V of the EIS, should be reviewed and revised in the event that updates are made to either the traffic or air quality impact assessment for the MPE Stage 2 Proposal.</li> </ul>	<ul style="list-style-type: none"> <li>Section 6 of this RtS provides a description of the amendments to the Proposal. The potential impacts of these amendments, including on greenhouse gas, traffic and air quality impacts have been assessed in Section 7 of this RtS. Section 7.12 of this RtS provides an assessment of the impacts of the amendments to the Proposal as they relate to greenhouse gas.</li> </ul> <p>The amendments to the Proposal would not alter the construction activities required for the Proposal and would not change the assessment of construction-related GHG and climate change impacts included in the MPE Stage 2 EIS. On this basis, further assessment of construction-related GHG and climate change impacts are not considered necessary for the amendments to the Proposal.</p> <p>Amendments to the Proposal would not result in significant changes to the operational traffic movements or other emissions sources assessed in the EIS. No changes to the operational GHG as reported in the EIS are expected and no further assessment is considered necessary.</p> <p>The following amendments to the Proposal may be impacted by future climate change risks:</p> <ul style="list-style-type: none"> <li>Realignment of OSD Basin 1</li> <li>Changes to the drainage design to the south of the MPE Site.</li> </ul>	Section 18 and Appendix V of the EIS.

ID	Aspect	Comment	Response	Reference
			<p>Modelling of the stormwater and flooding impacts of these amendments to the Proposal has been undertaken, and is included in Section 7.6 of this RtS. The modelling demonstrated that sufficient capacity can be provided within the stormwater structures proposed as part of the Amended Proposal to effectively drain the Proposal site in a 100 year ARI event, including during the Climate Change Scenario. Subsequently, climate change risks to the Amended Proposal are considered to be consistent with those already identified and assessed in the EIS.</p> <p>On this basis, further assessment of operational-related GHG and climate change impacts are not considered necessary for the amendments to the Proposal.</p>	
LCC-77	Recommendations	<ul style="list-style-type: none"> <li>Should the proposal be approved then a condition of consent should include a detailed review and specification of alternative low embodied energy construction materials (including but not limited to low embodied energy concrete and recycled steel materials) should occur as part of procurement policies and be considered during detailed design and prior to construction, to ensure embodied energy and resulting GHG emissions are minimised.</li> </ul>	<ul style="list-style-type: none"> <li>As outlined in Section 18.4.3 of the EIS, consideration will be given to material substitution where reasonable and feasible to reduce embodied energy of construction materials.</li> </ul>	Section 18.4.3 of the EIS
LCC-78	Recommendations	<ul style="list-style-type: none"> <li>Should the proposal be approved then the Proponent will need to prepare and implement a GHG Management Plan as per details outlined in Section 8.1 of the Greenhouse Gas and Climate Change Impact Assessment (Arcadis 2016) prior to construction and operations commencing.</li> </ul>	<ul style="list-style-type: none"> <li>As per the conditions of the Concept Plan Approval, a Greenhouse Gas Management Plan will be prepared for each of the major stages of the MPE Project. The plan will be developed based on the updated GHG assessment developed for the Proposal (Appendix V of the EIS).</li> </ul>	Appendix V of the EIS
LCC-79	Recommendations	<ul style="list-style-type: none"> <li>Should the proposal be approved then the Proponent will need to ensure all GHG emissions reduction and mitigation measures as outlined in Section 8.2 of the</li> </ul>	<ul style="list-style-type: none"> <li>The mitigation measures, management strategies and abatement opportunities presented in this EIS will be reviewed and considered where appropriate for incorporation into the CEMP and OEMP. These actions will</li> </ul>	N/A

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ID	Aspect	Comment	Response	Reference
		Greenhouse Gas and Climate Change Impact Assessment (Arcadis 2016) are implemented prior to construction and operations commencing.	be implemented, where reasonable and feasible, for mitigation of GHG emissions during the construction and operation of the Proposal.	
LCC-80	Recommendations	<ul style="list-style-type: none"> <li>Should the proposal be approved then the Proponent will need to ensure that the GHG emission abatement options outlined in Section 9 of the Greenhouse Gas and Climate Change Impact Assessment (Arcadis 2016) should be implemented into the detailed design prior to construction commencing. The procurement of any materials and equipment should also follow these recommendations.</li> </ul>	<ul style="list-style-type: none"> <li>The mitigation measures, management strategies and abatement opportunities presented in the EIS will be reviewed and considered where appropriate for incorporation into the Operational Environmental Management Plan (OEMP).</li> </ul>	N/A
LCC-81	Recommendations	<ul style="list-style-type: none"> <li>Should the proposal be approved then the Proponent will need to ensure that the GHG climate change risk and adaptive responses outlined in Section 10 of the Greenhouse Gas and Climate Change Impact Assessment (Arcadis 2016) should be implemented prior to operations commencing.</li> </ul>	<ul style="list-style-type: none"> <li>Section 10 of Appendix V of the EIS details proposed adaptation measures and controls. Adaptation responses for treatment of the climate change risks identified under the Climate Change Risk Assessment would be incorporated into the design and operation of the Proposal to promote resilience to projected future climate change.</li> </ul>	Appendix V of the EIS
LCC-82	Recommendations	<ul style="list-style-type: none"> <li>As the Proposal would generate over 50,000 tCO<sub>2</sub>-e/y there are liabilities under the NGER Act that the Proponent will need to meet. Should the proposal be approved then the proponent should clarify how these obligations will be met to the Department of Planning and Environment prior to operations commencing.</li> </ul>	<ul style="list-style-type: none"> <li>Refer to issue LCC-74 (Reporting requirements under the NGER Act 2007) for a response to this comment.</li> </ul>	LCC-74
<b>Property</b>				
LCC-83	Alternative IMT Sites	Consideration in the EIS has not been given to alternative locations for an IMT or for	The MPE Concept Approval, granted by the PAC on 29 September 2014, approved the use of the Proposal site for the MPE Project. The location of the	Section 3 of the EIS.

ID	Aspect	Comment	Response	Reference
		<p>alternative uses of the Project site. Consideration should be given to alternative locations that may require less capital investment and will have reduced environmental impacts. This could be achieved through upgrading of existing IMT sites that are currently operational. Proposed alternative locations for an IMT hub are detailed below:</p> <p><u>Badgerys Creek/Western Sydney Airport</u></p> <p>The development of a Western Sydney Airport will result in major government infrastructure investment within the area and Badgerys Creek becoming a focus of the Western Sydney Region. The area will be required to become a transport hub and with immediate access to air freight, provides a great alternative location for an IMT facility. The Plan for growing Sydney (DoP 2014) places a significantly higher importance on the Badgerys Creek location for development of an IMT, with associated rail freight infrastructure proposed that it will be sufficiently isolated from residential areas and communities, limiting the impacts of noise, vibration, reduced air quality, etc., to members of the community. The Badgerys Creek option will be reliant on access to Port Botany via rail, however with the development of the Western Sydney Airport, it provides further justification for the expansion of the South West Rail Link.</p> <p><u>Enfield</u></p> <p>Prior to construction, the Enfield site was originally proposed as a 500,000 TEU facility, however this was reduced to 300,000 TEU after community consultation. As a result the current operating site has been design for</p>	<p>MPE Project, inclusive of the Proposal, are not subject to the development application for the Proposal. Section 3 of the EIS outlines the strategic justification for the Proposal from a State and Commonwealth perspective, and includes a summary of alternative site locations for the Proposal. In addition, Section 3.1 of the MPE Concept EIS provides discussion regarding the suitability of the MPE site.</p> <p>As detailed in Section 3 of the EIS, there has been strong and consistent support at State and Commonwealth Government levels for the development of an IMT in Moorebank. The Proposal site has been earmarked as a highly suitable location for an IMT in both freight and distribution strategy and there is demonstrable demand for an IMT within the area (refer to Section 3 of the EIS). Development of the land for the purposes of an IMT is therefore considered the most suitable and highest and best use for the land.</p> <p>The Commonwealth and State governments have further endorsed the development of an IMT on the MPE site through granting approvals including the MPE Concept Plan Approval and the MPE EPBC Approval.</p>	

ID	Aspect	Comment	Response	Reference
		<p>potential future expansion. The Enfield site has greater rail access compared to the MPW site as it is located approximately 17kms from Port Botany and has double track rail access for the full distance, compared to approximately 40kms of mixed single and double rail track access along the SSFL for the MPW site. The potential community and environmental impacts of expanding the Enfield site should be justified against the impacts of the MPW Project in order to fully understand the benefits of a potential upgrade.</p> <p><u>Chullora</u></p> <p>The Chullora IMT facility has the capability to increase its capacity from 300,000 to 600,000 TEU. Historically Chullora has been the major interstate rail freight IMT hub for Sydney. With the surrounding area containing many industrial sites and with existing rail sidings, repurposing this site into a larger IMT facility would have minimal environmental impact. Chullora has the advantage of not being dependent on one individual intersection for its road traffic and as a result has a strategical advantage flexibility over the MPW site.</p> <p><u>Smaller Existing IMT Facilities</u></p> <p>Currently small IMT facilities exist in Villawood, Yennora, Cooks River, Minto, Leumeah and Ingleburn. Upgrading all of these existing facilities could realise a potential increased throughput of 500,000 TEU per annum. If this approach was taken, impacts would be spread over the Sydney region rather than focused on one greatly impacted site.</p>		

ID	Aspect	Comment	Response	Reference
		With the exception of constructing an IMT hub at Badgerys Creek, upgrades to existing facilities would involve much less capital investment compared with the estimated cost of the MPW site.		
LCC-84	Developer contributions	<p>The proposal has identified the requirement for changes to some existing infrastructure to ensure sufficient service is provided to the proposed development. Such infrastructure includes intersection upgrades as discussed earlier in the traffic assessment and augmentation to Sydney Water and Endeavour Energy utilities.</p> <p>The EIS has not identified specific contributions that the developer will provide to these organisations and has highlighted that the contributions will be addressed when required. This is vague and creates uncertainty as to the general scope of developer contributions. The framework for developer contributions should be mentioned and estimated costs quantified to give Council, Sydney Water and Endeavour Energy an understanding of anticipated contributions to infrastructure upgrades.</p>	<p>As described in Section 20.3.4 of the EIS, developer contribution discussions to address traffic impacts would be undertaken with Roads and Maritime subsequent to the finalisation of the Precinct Model. The apportionment of developer contributions would be subject to the outcomes of the Precinct Model and would be discussed further, and as necessary an agreement determined, between MIC, SIMTA and the relevant government agencies (Roads and Maritime and Liverpool City Council, as relevant).</p> <p>Discussions relating to other potential infrastructure works, with Endeavour and Sydney Water, have commenced as part of the Proposal EIS (Section 6). Discussions would continue to establish a suitable approach to contributions or 'works in kind' as suitable.</p> <p>The above approach is considered a suitable framework to ensure that developer contributions are discussed and provided, as relevant, for the Proposal.</p>	Section 20.3.4 of the EIS.
LCC-85	Developer contributions	<p>The EIS indicates that there are three areas that SIMTA should consider developer contributions are required from. These include Transport due to the requirement to upgrade a number of intersections in the area due to increased traffic, Drainage through the impacts of the proposal on stormwater management and on Landscape Buffer areas around the new development. The consideration contained in the EIS indicates that some form of developer contribution is required for transport but does not detail to what amount deferring this decision to the</p>	<p>As described in Section 20.3.4 of the EIS, developer contribution discussions to address traffic impacts would be undertaken with Roads and Maritime subsequent to the finalisation of the Precinct Model. The apportionment of developer contributions would be subject to the outcomes of the Precinct Model and would be discussed further, and as necessary an agreement determined, between MIC, SIMTA and the relevant government agencies (Roads and Maritime and Liverpool City Council, as relevant).</p>	Section 20.3.4 of the EIS.

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ID	Aspect	Comment	Response	Reference
		completion of a Moorebank Precinct Model which is envisaged to be available towards the end of 2016 (as yet not released).		
LCC-86	Capital investment value	The capital investment values of the project has been inconsistently reported throughout the EIS documentation prepared for the MPE Stage 2 proposal. The executive Summary indicates that the proposal has a capital investment value of \$454 million while it is detailed as \$356 million within section 1.7 of the EIS. This is a considerable variation in proposal costing and accuracy is essential in Council's determination of developer contributions that are required to be paid for by the proponent. The assessment of capital investment value appears to lack rigour and a thorough assessment must be undertaken prior to determination of this proposal.	The inclusion of \$356 million in Section 1.7 of the EIS is a typographical error. The capital investment value for the Proposal is approximately \$454 million.	Section 1.7 of the EIS.
LCC-87	Developer contributions	The continued deferral of detail on developer contributions for not only this proposal but for the entire Moorebank Precinct creates continued uncertainty for Council and the various other organisations that provide essential services to this precinct. The framework for developer contributions should be detailed and estimated costs quantified to give Council, Roads and Maritime and Sydney Water an understanding of anticipated contributions to infrastructure upgrades.	As described in Section 20.3.4 of the EIS, developer contribution discussions to address traffic impacts would be undertaken with Roads and Maritime subsequent to the finalisation of the Precinct Model. The apportionment of developer contributions would be subject to the outcomes of the Precinct Model and would be discussed further, and as necessary an agreement determined, between MIC, SIMTA and the relevant government agencies (Roads and Maritime and Liverpool City Council, as relevant).  Discussions relating to other potential developer contributions would be discussed with the relevant government agencies (Sydney Water, Liverpool City Council and Sydney Water) as necessary.  The above approach is considered a suitable framework to ensure that developer contributions are discussed and provided, as relevant, for the Proposal.	Section 20.3.4 of the EIS.
LCC-88	Consistency with Concept Approval	The SEARs requires consideration to be given to the Liverpool City Council's Developer Contributions Plan including giving special attention to the contributions plan for the Prestons Industrial Area. Consideration has been given, however there is no	As described in Section 20.3.4 of the EIS, developer contribution discussions to address traffic impacts would be undertaken with Roads and Maritime subsequent to the finalisation of the Precinct Model. The apportionment of developer contributions would be subject to the outcomes of the Precinct Model and would be discussed further, and as necessary an agreement	Section 20.3.4 of the EIS.



ID	Aspect	Comment	Response	Reference
		commitments to developer contributions. It has been identified that the Preston Industrial Area has significant differences with the current Proposal and as a result the developer contributions for the Preston Industrial Area may not be appropriate for this Proposal. Major aspects of the Preston Industrial Area contributions, including but not limited to; location to surrounding developments, drainage infrastructure, need for transport infrastructure and ownership agreements differ from this Proposal and may require different developer contributions.	determined, between MIC, SIMTA and the relevant government agencies (Roads and Maritime and Liverpool City Council, as relevant).  Discussions relating to other potential developer contributions would be discussed with the relevant government agencies (Sydney Water, Liverpool City Council and Sydney Water) as necessary.  The above approach is considered a suitable framework to ensure that developer contributions are discussed and provided, as relevant, for the Proposal.	
LCC-89	Recommendations	<p>The recommendations below are identified to address the identified impacts associated with existing and future infrastructure to allow a comprehensive assessment of the Project:</p> <ul style="list-style-type: none"> <li>• A rigorous determination of capital investment value be undertaken to inform Council's requirements for developer contributions associated with this stage of the proposal.</li> </ul>	<ul style="list-style-type: none"> <li>• Refer to issue LCC-86 (Capital investment value) for a response to this comment.</li> </ul>	LCC-86
LCC-90	Recommendations	<ul style="list-style-type: none"> <li>• As previously mentioned in past assessments, a large deficiency in developer contributions exist, which should be addressed prior to determination. The EIS has identified that Council does not have a contributions framework in place for this type of development. It is recommended that a VPA be established between Council and SMITA to ensure developer contributions towards existing infrastructure is captured.</li> </ul>	<ul style="list-style-type: none"> <li>• Refer to the following issues for a response to this comment: <ul style="list-style-type: none"> <li>– LCC-84</li> <li>– LCC-85</li> <li>– LCC-87</li> </ul> </li> </ul>	LCC-84, LCC-85 and LCC-87

ID	Aspect	Comment	Response	Reference
<b>Road Traffic and Transport</b>				
LCC-91	Roadworks – Moorebank Avenue	<p>There is no evidence or details of typical schematic cross sections along Moorebank Avenue describing the proposed new road level and integration with the shared path and pedestrian facilities proposed in Section 5.13 of the report.</p> <p>There is no evidence of potential sight distance issues identified at the intersections. It is not clear if share paths and pedestrian facilities would be raised or how the earthworks would impact these provisions.</p>	<p>An indicative cross section of the Moorebank Avenue two and four lane configurations is shown on Figure 4-5 and Figure 4-6 of the EIS.</p> <p>Generally, the existing pedestrian infrastructure in the area is considered adequate. A sealed footpath is provided on the western side of Moorebank Avenue with pedestrian crossing facilities located at signalised T-intersections along Moorebank Avenue. Direct connection to the surrounding pedestrian paths on Moorebank Avenue and Anzac Road from the Proposal site is proposed to be through the Moorebank Avenue / MPE Stage 1 site access intersection. Pedestrian links along Moorebank Avenue would be maintained but would be raised to align with the proposed road levels.</p>	Figure 4-5 and Figure 4-6 of the EIS.
LCC-92	Reference Traffic Study, Data and Modelling	<ul style="list-style-type: none"> <li>Report states in Section 1.11 that Roads and Maritime provided the Aimsun 2026 and 2036 future base models (Do Minimum) and a supplement assessment was undertaken using SIDRA.</li> <li>Traffic volumes extracted from the Aimsun models 2026 and 2036 and used in the SIDRA assessment are not provided.</li> <li>Traffic assessment methodology for future years 2019 and 2029 is not described. It is not clear if this has been this done as interpolation from the Roads and Maritime Aimsun models or using the listed annual traffic growth.</li> <li>This is a particular issue when understanding the traffic flows changes in the Aimsun Models with 'do minimum' upgrades in the wider network affecting</li> </ul>	<ul style="list-style-type: none"> <li>Noted</li> <li>2018 SIDRA input volumes used for the EIS CTIA are provided in Section 7.1 of this RtS.</li> </ul> <p>Please note, the assessment years adopted in the CTIA and OTTIA were 2018, 2019 and 2029. The demands from the original AIMSUN models (provided by Roads and Maritime) were used to estimate the demands for these assessment years.</p> <ul style="list-style-type: none"> <li>A summary of the strategic and network based traffic modelling was included in Section 7.2.5 of the EIS. As detailed, for the purpose of the operational traffic and transport impact assessment, future traffic growth and modelling data was sourced from RMS' wider Liverpool Moorebank Arterial Road Investigations (LMARI) model built in AIMSUN modelling software version 8.0.9 (R35843). AIMSUN was used to provide strategic, mesoscopic and microsimulation modelling. Additional information regarding the traffic assessment methodology is included throughout section 7.2 and Appendix K of the EIS.</li> <li>As detailed in Section 7.2.5 of the EIS, the LMARI AIMSUN traffic model has been developed, calibrated and validated by Jacobs<sup>3</sup> and subsequently updated by GTA consultants<sup>4</sup> (GTA) on behalf of Road and</li> </ul>	<p>Section 7.1 of this RtS.</p> <p>Section 7.2 and Appendix K of the EIS.</p>

<sup>3</sup> Liverpool Moorebank Arterial Road Investigations, MITRA Base Model Calibration and Validation Report, Final Revision B.0, Jacobs, 12 October 2015

<sup>4</sup> Moorebank Intermodal Terminal AIMSUN Existing Conditions Model – Modelling Review Summary, Memorandum, GTA Consultants, 26 November 2015

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		directly the traffic flows in the local road network.	Maritime. The LMARI model was provided by Roads and Maritime on 20 June 2016 which included the future base model (Do Minimum) for the 2026 and 2036 operational years. For the purpose of traffic modelling for the Proposal, Arcadis used the AIMSUN traffic model provided by Roads and Maritime, dated 20 June 2016.	
LCC-93	Intersection Assessment	<p>Relevant issues for clarification:</p> <ul style="list-style-type: none"> <li>The intersection assessment of the Moorebank Avenue and Bapaume Road is not included in this assessment. This intersection is proposed to be changed to a left in/ left out access only for the MPW site on the western side. Additional traffic from MPE may affect the performance of this intersection</li> </ul>	The SEARs for the Proposal did not identify the Moorebank Avenue/ Bapaume Road intersection as a key intersection for the assessment of the traffic impact of the Proposal. The layout of the Moorebank Avenue/ Bapaume Road intersection is to be changed from an all-movement three-leg priority controlled intersection to a left-out only intersection as part of the MPW Stage 2 Proposal, which is outside of the scope of this assessment.	<p>MPW Stage 2 EIS (Arcadis, 2016).</p> <p>MPW Stage 2 Response to Submissions Report (Arcadis, 2017)</p>
LCC-94	Intersection Assessment	<ul style="list-style-type: none"> <li>The Summary of SIDRA results are limited to average delay and Level of Service (LoS). There is no information providing details of the back of queue at intersections.</li> </ul>	<p>As per the <i>Guide to Traffic Generating Developments</i> (Roads and Maritime, 2002) (Section 4.2.2),</p> <p><i>"The best indicator of the level of service at an intersection is the average delay experienced by vehicles at that intersection. For traffic signals, the average delay over all movements should be taken".</i></p> <p>As such only the intersection Level of Service from the AIMSUN and SIDRA models have been reported. However, upstream/downstream queuing impacts at intersections were considered in the AIMSUN and SIDRA models in determining the appropriate mitigation.</p>	<i>Guide to Traffic Generating Developments</i> (Roads and Maritime, 2002)
LCC-95	Intersection Assessment	<ul style="list-style-type: none"> <li>The report does not include intersection layouts used in SIDRA for the intersection performance assessment; (existing and future conditions)</li> </ul>	All SIDRA intersection layouts (both existing and future conditions) have been modelled to either existing conditions for Scenario 1 of the CTIA or to layouts adopted in the EIS OTTIA, consistent with the design of the Proposal and the MPW Stage 2 Proposal (where relevant for the assessment of cumulative impacts).	Appendix K of the EIS.
LCC-96	Intersection Assessment	<ul style="list-style-type: none"> <li>It was noticed few discrepancies in the previous intersection assessments done by WSP Parsons Brinckerhoff (2014), former Hyder (2015b) and the new Arcadis (2016d, 2016f) results for MPW and MPE. Particularly attention to the SIDRA inputs used for modelling</li> </ul>	<p>SIDRA 6 modelling software was used for the Traffic Impact Assessment prepared for the MPW and MPE Concept EIS and MPE Stage 1 EIS, while SIDRA 7 modelling software was used to analyse traffic scenarios for the MPW Concept Modification Report, MPW Concept Modification RtS, MPW Stage 2 EIS and MPE Stage 2 EIS (modelling undertaken in 2016).</p> <p>The approach adopted considers the most updated software available at the time of assessment to be the most appropriate. The different versions of the</p>	Section 7.1 and Appendix C of this RtS.

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		purposes that can be manipulated manually and not in compliance with the Roads and Maritime Standards.	<p>same software (SIDRA) used for separate assessments is indicative of the different timeframes of when the respective assessments were undertaken.</p> <p>The approach adopted considers Section 14.1.1 of the Roads and Maritime Traffic Modelling Guidelines (version 1.0, February 2013) where Roads and Maritime requires 'The latest version/update of SIDRA INTERSECTION should be used where possible.' The different versions of the same software (SIDRA) used for separate assessments is indicative of the different timeframes of when the respective assessments were undertaken whereby the latest version of SIDRA at the time of the assessment was utilised (i.e. version 7 was released in 2016).</p> <p>Additionally, discrepancies in modelling inputs were identified as part of the MPW Concept Modification Supplementary Response to Submissions Report. Updated SIDRA modelling has been undertaken as part of this RtS, in response to the issues raised in Liverpool City Council's submission on the MPW Concept Modification. The revised SIDRA results are included in Section 7.1 of this RtS.</p>	
LCC-97	Intersection Assessment	<ul style="list-style-type: none"> <li>To fully assess and review the traffic impacts at the above mentioned intersections, the SIDRA model files are required.</li> </ul>	Key intersection summary results are provided in Section 7.1 of this RtS and updated SIDRA traffic flow diagrams are included in Appendix C. The information provides an appropriate level of detail for the assessment of construction traffic impacts of the Proposal, in accordance with the SEARs and Concept Plan Conditions of Approval. As such, the modelling files are not required to be issued.	Section 7.1 and Appendix C of this RtS.
LCC-98	Intersection Assessment	<ul style="list-style-type: none"> <li>Particular attention should be considered for the interchange (I-2) M5 Motorway / Moorebank Avenue. Assessment omits to provide detailed information of the performance of each entry and exit ramp and how the development has or not direct impact to the capacity, storage length and number of lanes.</li> </ul>	Ramp capacity of the M5 Motorway/ Moorebank Avenue interchange has been considered in the AIMSUN modelling through the use of micro-simulation pockets within the AIMSUN model. For example, the operation of the Moorebank Avenue on/ off ramps and the weaving/ merging of vehicles on the M5 main carriageway have been considered in the AIMSUN model.	N/A
LCC-99	Intersection Assessment	<ul style="list-style-type: none"> <li>The change of traffic patterns and increase traffic volumes due to the Proposal can be diluted in the overall performance of the intersection without considering that one or two particular</li> </ul>	<p>As per the <i>Guide to Traffic Generating Developments</i> (Roads and Maritime, 2002) (Section 4.2.2),</p> <p><i>"The best indicator of the level of service at an intersection is the average delay experienced by vehicles at that intersection. For traffic signals, the average delay over all movements should be taken".</i></p>	<i>Guide to Traffic Generating Developments</i> (Roads and Maritime, 2002)

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		movements of the interchange are directly impacted by the Proposal.	As such only the intersection Level of Service from the AIMSUN and SIDRA models have been reported in order to compare the overall impact on key intersections. However, although only the overall intersection results have been reported, the performance of movements and approaches has been considered in the AIMSUN and SIDRA models when determining appropriate mitigations.	
LCC-100	Peak Hour Volumes	Report does not provide peak hour traffic volumes on the M5 and Moorebank Avenue interchange entry and exit ramps. It is not possible to review the capacity of the interchange ramps.	Peak hour traffic volume movement diagrams, including for the M5 Motorway/Moorebank Avenue interchange, are provided within Appendix A of the EIS CTIA.	Appendix A of the EIS CTIA, at Appendix K of the EIS.
LCC-101	Future Intersection Performance without the Proposal	Summary of results in Table 4-2 and Table 5-6 are identical, same situation for summary of results in Table 4-3 and Table 5-7. It is not clear what traffic flows and road network inputs were considered in the assessment provided in Sections 4 and 5 of the report.	<p>Table 4-2 and Table 4-3 of the EIS OTTIA present the intersection level of service without the Proposal in 2019 and 2029 respectively. Table 5-6 and Table 5-7 of the EIS OTTIA provides a comparison of the intersection level of service with and without the Proposal in 2019 and 2029 respectively.</p> <p>The repetition of the data included in Table 4-2 and Table 4-3 in Table 5-6 and Table 5-7 is to enable the reader to compare the intersection level of service with the Proposal in 2019 and 2029 to what the level of service would be in those years without the Proposal. It should be noted that in addition to including the same intersection level of service without the Proposal data, Table 5-6 and Table 5-7 also provide the intersection level of service in 2019 and 2029 for the following scenarios and is, therefore, not identical:</p> <ul style="list-style-type: none"> <li>• With the Proposal, under the do-minimum scenario</li> <li>• With the Proposal, with assumed network upgrades.</li> </ul> <p>Peak hour traffic volume movement diagrams are provided in Appendix A of the EIS OTTIA.</p>	<p>Appendix A of the EIS OTTIA, at Appendix K of the EIS.</p> <p>Section 1.11 of the EIS OTTIA, at Appendix K of the EIS.</p>
LCC-102	Proposed Site Access and Network Upgrades	<ul style="list-style-type: none"> <li>• Proposed location of the site access for MPE Stage 2 (Existing Intersection) and proposed access for MPE Stage 1 on Moorebank Avenue are separated for approximately 180 metres.</li> </ul>	Figure 5-5 of the EIS OTTIA details the Moorebank Avenue access strategy for the Proposal, and details the proposed site access points for the Proposal and the MPE Stage 1 Project. The intersection locations were included in the OTTIA of the Proposal. These intersections were considered within the cumulative assessment (Scenario 2) of the OTTIA, at Appendix K of the EIS.	Figure 5-5 of the EIS OTTIA, at Appendix K of the EIS
LCC-103	Proposed Site Access and Network Upgrades	<ul style="list-style-type: none"> <li>• SIDRA files or detailed summary of results showing back of queue at the above mentioned intersections are not</li> </ul>	Due to the MPE Stage 1 operational intersections (as shown in Figure 6 of the CTIA) not being utilised until the commencement of operation of the MPE Stage 1 Project, no modelling of these intersections was undertaken in SIDRA	Figure 6 of the EIS CTIA, at

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		provided. It is not possible to assess if the short distance between the two proposed site accesses would operate satisfactorily.	as part of the CTIA to assess potential impacts relating to queuing along Moorebank Avenue. The proposed construction access point for MPE Stage 2 is the same location for the MPE Stage 1 Main Construction Compound Access point, which is approximately 400m north of the MPE Stage 1 Secondary Construction Compound Access point.	Appendix K of the EIS.
LCC-104	Proposed Site Access and Network Upgrades	<ul style="list-style-type: none"> <li>Lane configuration and length of slip lanes for the proposed site access for MPE Stage 2 are not provided. It is not possible to assess the intersection road design.</li> </ul>	The configuration of the site access for the Amended Proposal is shown in the Architectural drawings and the revised Stormwater and Civil Design Drawings at Appendix B and Appendix E, respectively of this RtS.	Appendix B and Appendix E of this RtS.
LCC-105	Impact on Network Operation with the Proposal	<ul style="list-style-type: none"> <li>It is required to provide details of the increased traffic volumes of the Proposal at the M5 and Moorebank Avenue Interchange entry and exit ramps, (eastbound and westbound)</li> </ul>	Section 5.7.2 of the OTTIA details the peak hour traffic volumes at the key intersections near the Proposal, as specified in the SEARs, including the M5 Motorway/ Moorebank Avenue intersection. In 2019, the Proposal would contribute 4% of AM peak traffic and 2% of PM Peak traffic. In 2029, the Proposal would contribute 0.4% of AM peak traffic and 0.2% traffic in the PM peak at the Moorebank Avenue/ M5 Motorway interchange.	Section 5.7.2 of the EIS OTTIA, at Appendix K of the EIS.
LCC-106	Impact on Network Operation with the Proposal	<ul style="list-style-type: none"> <li>There is a high risk that the capacity of the ramps would be deteriorated by the additional traffic generated by the Proposal.</li> </ul>	<ul style="list-style-type: none"> <li>Ramp capacity has been considered in the AIMSUN modelling undertaken to determine the operational traffic impacts of the Proposal (refer to Appendix K of the EIS) through the use of micro-simulation pockets within the AIMSUN model. For example, the operation of the Moorebank Avenue on/off ramps and weaving/merging of vehicles on the M5 main carriageway have been considered in the AIMSUN model. and presented in associated results.</li> </ul> <p>Appropriate mitigation measures have been provided to ensure the capacity of key intersections, which has high impact from the Proposal (i.e. the M5 / Moorebank Avenue interchange), is sufficient to accommodate additional traffic generated by the Proposal.</p>	<i>Guide to Traffic Generating Developments</i> (Roads and Maritime, 2002)
LCC-107	Impact on Intersection Performance 2019 and 2029	<p>The assessment concludes that the Proposal would not directly deteriorate the performance of the study intersection. This statement cannot be confirmed based on the provided information provided and summary of results.</p> <p>Performance of the M5 Interchange ramps is not provided.</p>	As per the <i>Guide to Traffic Generating Developments</i> (Roads and Maritime, 2002) (Section 4.2.2), "The best indicator of the level of service at an intersection is the average delay experienced by vehicles at that intersection. For traffic signals, the average delay over all movements should be taken." As such only the intersection Level of Service for the M5 Motorway/ Moorebank Avenue interchange from the AIMSUN model has been reported, inclusive of the M5 ramps. Based on the reported summary results presented in Section 4 of the EIS OTTIA, it is evident that under existing conditions (i.e.	<i>Guide to Traffic Generating Developments</i> (Roads and Maritime, 2002) Section 4 of the EIS OTTIA at

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			<p>without the Proposal) in 2029 the capacity of various intersections throughout the network are at or beyond capacity.</p> <p>The M5 Motorway/ Moorebank Avenue interchange ramp capacity has been included in the AIMSUN modelling through the use of micro-simulation pockets within the AIMSUN model as part of the EIS OTTIA. For example, the operation of the Moorebank Avenue on/off ramps and weaving/merging of vehicles on the M5 main carriageway have been considered in the AIMSUN model.</p>	Appendix K of the EIS.
LCC-108	Impact on Intersection Performance 2019 and 2029	<p>The Bridge over the Georges River (Bottle neck) on the M5 between the Moorebank Avenue and Hume Highway Interchanges is not described. The area is known for the traffic issues and weaving manoeuvres between the two interchanges.</p> <p>Considering that the traffic generated from the Proposal; (73% of the total of heavy vehicles and 49% of the total of light vehicles) would use this section of the M5 Motorway, particularly the westbound entry ramp and the eastbound exit ramp, it is not clear how the traffic impacts on the ramp are mitigated.</p>	<p>Using the AIMSUN model, detailed analysis and modelling have been conducted for the M5 Motorway and intersections on the M5 Motorway including:</p> <ul style="list-style-type: none"> <li>• M5 Motorway / Moorebank Avenue</li> <li>• M5 Motorway / Hume Highway</li> <li>• M5 Motorway / Heathcote Road.</li> </ul> <p>The impact of weaving and merging traffic between these interchanges along the M5 Motorway, including the M5 ramps of Moorebank Avenue and the Hume Highway, have been considered in the AIMSUN modelling their impacts reported in the OTTIA in terms of the intersection LoS at the M5 Motorway / Moorebank Avenue and M5 Motorway / Hume Highway intersections.</p> <p>However, as detailed in section 5.7.2 of the EIS OTTIA, in 2019, the Proposal would contribute 4% of AM peak traffic and 2% of PM Peak traffic. In 2029, the Proposal would contribute 0.4% of AM peak traffic and 0.2% traffic in the PM peak at the Moorebank Avenue/ M5 Motorway interchange. Given the small proportion that the Proposal traffic would constitute along the M5 Motorway, the mitigation measures in the POTMP are considered appropriate to mitigate traffic impacts on the M5 ramps.</p>	<p>EIS OTTIA at Appendix K of the EIS.</p> <p>Section 5 of the POTMP at Appendix K of the EIS.</p>
LCC-109	Impact on Intersection Performance 2019 and 2029	<p>Table E-1, Assumed Network Upgrades, indicates the analysis has identified the need for a number of intersections to be upgraded (in part or full) in order to address the impacts of background and cumulative traffic i.e. not due to the Proposal.</p> <p>For the purpose of the assessment the upgrades (as shown in Table E-1) have been</p>	<p>As detailed in Section 5.7 of the EIS OTTIA, the impacts from the Proposal related traffic do not result in the need for upgrades to intersections other than the Moorebank Avenue / MPE Stage 2 Access intersection (refer Tables E-1 or Table 6-1 in the EIS OTTIA).</p> <p>The upgrades identified in Table E-2 or Table 6-2 have been nominated as assumed network upgrades to complete the cumulative development modelling. Specifics of the upgrades have been included.</p>	Section 5.7 of the EIS OTTIA



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		assumed within the modelling, however the upgrades are not nominated for delivery with the Proposal.		
LCC-110	Impact on Intersection Performance 2019 and 2029	The quantitative assessment does not provide a clear understanding of the impacts due to background growth and traffic generated from the Proposal.	<p>Section 3.3 of the OTTIA and Section 7.1 of this RtS show the intersection performance results for both with and without the proposal for both the Proposal only and cumulative assessment (i.e. MPE Stage 1, MPW Stage 1/Early Works, MPW Stage 2 and the Proposal (MPE Stage 2)).</p> <p>Tables 4-2 and 4-3 in the EIS OTTIA provide the intersection performance results for the year of opening (2019) and ten years after opening (2029) without the Proposal. These tables demonstrated that a number of intersections were assessed to operate at LoS E or above without the Proposal. According to the intersection performance criteria specified by Roads and Maritime, the future intersections need to operate at LoS D or better, or the development should demonstrate a no worsening of the intersection performance than it would already perform with background traffic only. The network improvements suggested are needed so that the intersection performed at LoS D or better after the increase in background traffic. Section 7.1 of this RtS show the network improvements satisfy the intersection performance criteria.</p>	EIS OTTIA at Appendix K of the EIS. Section 7.1 of this RtS.
LCC-111	Impact on Intersection Performance 2019 and 2029	<p>The proposed upgrades listed in Table E-1 requires fundamental traffic assessment results and justification as listed in previous section of this revision.</p> <p>Upgrades required on the M5 Motorway and Moorebank Avenue refer to specific improvements in the road network. These improvements are assumed and can only be estimated based on a traffic assessment from modelling results. No information is provided in the report to justify the improvements or to indicate the impact from the background traffic or from the Proposal</p>	<p>As detailed in Section 5.7 of the EIS OTTIA, the impacts from the Proposal related traffic do not result in the need for upgrades to intersections other than the Moorebank Avenue / MPE Stage 2 Access intersection.</p> <p>However, network improvements are required to mitigate the impacts of the cumulative operational traffic scenario and these are either directly as a result of cumulative developments, or to cater for background traffic growth. As these upgrades are not directly as a result of the Proposal, they have been nominated as assumed network upgrades to complete the modelling and specifics of the upgrades have been included in Table 6-1 of the EIS OTTIA.</p>	Section 5.7 of the EIS OTTIA at Appendix K of the EIS.
LCC-112	Bicycle Facilities Provisions / Cycling Impacts	It is not clear if road safety for cyclists riding along Moorebank Avenue with mixed heavy traffic has been considered in the assessment.	All proposed carriageway and intersection upgrades will undergo Road Safety Audits throughout the design process to identify any potential safety risk for removal or mitigation. Additionally, traffic management plans are required by	Section 7 and Appendix K of the EIS.



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		The proposal has not provided details of the shared paths and crossings.	the SEARs, both in the construction and operations phases to manage the safety risks for all road users.  The proposed connectivity between the Proposal site and the surrounding pedestrian and cycling network is described in Section 7 and Appendix K of the EIS.	
LCC-113	Impacts on Crashes/Accidents	It is not clear if traffic mitigation has been considered to reduce the number of crashes or reduce the severity. The assessment is limited indicating a correlation of ADT, recorded crashes and increased traffic.	Section 2.5 of the OTTIA includes a historical crash analysis. Estimates of the expected increase in the crash rate due to increases in traffic volumes on Moorebank Avenue (which provides the main access to the Proposal) and Cambridge Avenue (due to safety concerns raised in the SEARS) were provided in Section 5.11 of the OTTIA.  All proposed carriageway and intersection upgrades as part of the Proposal (i.e. MPE Stage 2 site access and the Moorebank Avenue upgrade) will undergo Road Safety Audits throughout the design development process to ensure any potential safety risk is identified and avoided or mitigated. Additionally, an OTMP will be prepared, which will include mitigation measures relating to reducing road safety risks for road users near the Proposal. The final OTMP would form part of the OEMP for the Proposal. It is intended that the OTMP would be prepared by updating the POTMP which was provided at Appendix K of the EIS.	Section 2.5 and 5.11 of the EIS OTTIA, at Appendix K of the EIS.
LCC-114	Level of Service at Key Intersections	<ul style="list-style-type: none"> <li>It appears that the traffic results for year 2018 with the additional background traffic are performing better than in year 2015 and worse than in year 2019 as shown in the Operational Traffic Report. Refer Table 3.3</li> <li>SIDRA files and complete summary of results are not provided. It is not possible to assess the parameters used in the SIDRA modelling to identify compliance with current Roads and Maritime guidelines and how were applied to the modelling years 2015, 2018 and 2019.</li> </ul> <p>SIDRA files are strongly recommended to be provided assessing the performance and discrepancies of the key intersections results.</p>	<p>The AIMSUN modelling software package was used for the operational assessment in the OTTIA and the SIDRA modelling software was used for the construction assessment in the CTIA. Intersection Level of Service (LoS) results were extracted and reported using AIMSUN and SIDRA. Due to the different software utilised for the assessments, differences in intersection performance results have been reported with the AIMSUN model taking into consideration of dynamic traffic assignment and network wide impacts (i.e. redistribution of traffic as a results of driver behaviour, network congestion, etc.), whereas the SIDRA models were based on analytical traffic operation estimation (i.e. estimated static traffic volumes and confined network). The differences in delay for LoS between AIMSUN and SIDRA are generally considered small (within 5s to 15s). In addition, the traffic volumes were different between operational traffic in OTTIA and construction traffic in CTIA.</p> <p>Appendix A of the Construction Traffic Impact Assessment included at Appendix K of the EIS includes the SIDRA traffic flow diagrams used to undertake the assessment of construction traffic impacts from the Proposal.</p>	<p>Appendix K of the EIS.</p> <p>Appendix A of the EIS CTIA, at Appendix K of the EIS.</p>

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LCC-115	Peak Hour Traffic Generation	Table 6-2 provides an estimate of construction traffic movements for the AM and PM peak periods. Table 6-2 shows that during the AM peak period car trips are not generated. This appears to be a non-conservative approach assessing the peak hour considering that there would be at least three different construction work activities occurring at the same time; Fill Haulage for MPE Stage 2, Raising of Moorebank Avenue and Warehouse Construction	As identified in Section 3.5 of the EIS CTIA, construction works for the Proposal generally starts at or before 7am on a daily basis, excluding Sundays. Based on this anticipated start time, the assumed traffic distribution for staff cars has accounted for the arrival of all workers before the 7am start time, before the commuter peak of 8-9 am, which is considered realistic for construction of the Proposal.	Section 3.5 of the EIS CTIA, at Appendix K of the EIS.
LCC-116	Potential Carriageway Closures	Report states that a Construction Traffic Management Plan (CTMP) would define the works for the proposal. It is not clear the frequency and duration of carriageway closures.	Should a road closure be required as a result of the construction of the Proposal, the appropriate application and consultation process will be sought in accordance with the approved CEMP and CTMP which is to be produced following approval of the Proposal. This will be subject to approval by NSW DP&E. The duration of road closures will be determined by the construction contractor whereby appropriate steps to mitigate adverse impacts will be presented, if necessary. The Preliminary Construction Traffic Management Plan (PCTMP - refer to Appendix K of the EIS) provides guidance on potential road closures.	Section 5.2 of the EIS POTMP at Appendix K of the EIS.
LCC-117	Potential Carriageway Closures	Based on the information provided in the Operational Traffic report indicating that by year 2019 key intersections would perform with deteriorated level of service (LoS) it is recommended to consider maximum duration of closures and most suitable time of day minimising traffic disruptions	During operation of the Proposal, no road closures are anticipated. However, should a road closure be required during operation of the Proposal, the Operational Traffic Management Plan will identify traffic management procedures to ensure delays to road users are appropriately managed and minimised, as described in Section 5.2 of the Preliminary Operational Traffic Management Plan (POTMP)	Section 5.2 of the POTMP at Appendix K of the EIS.
LCC-118	Mitigation Measures	The proposed road upgrades along Moorebank road comprises a length of road of approximately 2km. It is not clear if the proposed mitigation measure for a maximum 40 km/h construction zone along Moorebank Avenue would be in place for the entire length of the roadworks.  The NSW Traffic Control at Work Sites Guidelines indicates that the maximum	A CTMP would be prepared, based on the PCTMP prepared as part of the EIS (refer to Appendix K of the EIS).  During construction, a construction zone speed limit of 40 kilometres per hour would apply along the Moorebank Avenue diversion road to maintain driver safety.	Appendix K of the EIS.

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		desirable length of roadworks signposted at 40km/h is 500 metres length.		
LCC-119	Trip generation	<p>Based on trip generation rate for warehouse development specified in RMS Guide to Traffic Generating Developments, the proposed development is likely to generate more than 1,540 vehicle trips in peak hour and 12,320 vehicle trips each week day.</p> <p>However, Appendix Kb (Arcadis, 2016d) estimates that the stage 2 development would generate a total of 564 truck trips and 3,993 car trips each week day. This is an underestimation of the expected traffic generation by using the trip generation rate in the RMS Guide</p>	<p>Section 5.1 of the EIS summarises trip generation assumptions for the Proposal. These assumptions have previously been reviewed by Roads and Maritime and were sourced from the following:</p> <ul style="list-style-type: none"> <li>Moorebank Intermodal Terminal Precinct – Traffic Generation and Underlying Assumptions, Memorandum, Parsons Brinckerhoff, 1 September 2016</li> <li>MPE Stage 2 Proposal / MPW Stage 2 Proposal – Container Handling Movements, Neil Matthews Consulting Pty Ltd, 4 August 2016.</li> </ul> <p>The trip generation and expected traffic generation used in the Proposal are therefore considered appropriate.</p>	Section 5.1 and Appendix K of the EIS.
LCC-120	Car Parking spaces	<p>Furthermore, the development has proposed a total of 1,474 car parking spaces which is higher than the estimated car parking demand of 1,000 car parking spaces based on car parking provision specified for warehouse use in the Guide. The proposed high car parking provision will attract higher traffic volume</p>	<p>Section 5.1 of the OTTIA (Appendix K of the EIS) included details regarding trip generation for the Proposal. As described in Section 5.1, as well as Section 1.12 of the OTTIA, the trip generation used to prepare the operational traffic impact assessment were discussed and agreed in consultation with TfNSW, Roads and Maritime and Liverpool City Council. Section 5.1 of the EIS also includes a summary of the assumptions used for light and heavy vehicle trip generation. Appendix B of the OTTIA further details the traffic generation and underlying assumptions used in the operational traffic impact assessment.</p> <p>The number of car parking spaces to be provided within the Proposal site was determined by undertaking an analysis of the car parking requirements for staff and terminal operations and in consideration of the trip generation of the Proposal. This analysis considered the current guidelines for parking provisions, namely the <i>Liverpool City Council Development Control Plan 2008</i> (Liverpool DCP) and the <i>Guide to Traffic Generating Development</i> (RTA, 2002).</p> <p>A prediction of staff-generated parking demand was undertaken using a 'first principles' approach, whereby the operational staff breakdown was used to determine the likely parking and traffic generation, which was then compared to the requirements for car parking on the Proposal site under the two abovementioned guidelines.</p>	<p><i>Liverpool City Council Development Control Plan 2008</i> (Liverpool DCP)</p> <p><i>Guide to Traffic generating Development</i> (RTA, 2002)</p> <p>Appendix J of this RtS.</p>

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			<p>The first principles approach, which included the development of a parking accumulation model, determined that car parking requirements for the Moorebank Precinct, including the Proposal should be based on the Guide to Traffic Generating Development, rather than the Liverpool DCP.</p> <p>The parking analysis recommended that the RMS parking rates be adopted for the warehouse and office components of the intermodal terminal facility as follows:</p> <ul style="list-style-type: none"> <li>• 1 car space per 300 m<sup>2</sup> Gross Floor Area (GFA) for warehouses</li> <li>• 1 car space per 40 m<sup>2</sup> GFA for offices</li> </ul> <p>The determination of car parking provisions has been applied consistently within the MPE site.</p>	
LCC-121	Assessment of peak hour generation scenarios	<p>In the Secretary's Environmental Assessment Requirements (SEARs) (SSD 16-7628), the proponent is required to undertake a realistic and justified range of peak hour generation scenarios (to be determined in consultation with TfNSW, RMS and Liverpool City Council) including assumptions about heavy vehicle movements and the percentage of deliveries by railway and road.</p> <p>The vehicle trip generation from the IMT developments has not been addressed to Council's satisfaction</p>	<p>In the preparation of this traffic assessment, and to fulfil the requirements of the SEARs, SoC and CoA, consultation was undertaken with the key stakeholders including Roads and Maritime, Transport for New South Wales, Liverpool City Council and Campbelltown City Council. Through-out the traffic study, key stakeholders were consulted through a series of meetings, emails and phone calls to present the scope of the study, impact assessment methodology and preliminary findings of the traffic study.</p> <p>Key meetings and presentations to key stakeholders have included:</p> <ul style="list-style-type: none"> <li>• Meetings with NSW Roads and Maritime Services (Roads and Maritime) to discuss Roads and Maritime AIMSUN modelling and assessment methodology on 10 February 2016 and 9 June 2016</li> <li>• Presentation on Traffic Methodology and Preliminary Findings to Liverpool City Council (LCC) on 31 October 2016</li> <li>• Presentation on Traffic Methodology and Preliminary Findings to Roads and Maritime and Transport for New South Wales (TfNSW) on 8 November 2016.</li> </ul>	Section 6 of the EIS.
LCC-122	Development impacts	<p>The proposed development (stage 2) as part of the proposed ultimate developments within Moorebank Intermodal Terminal precinct will significantly increase traffic movements, heavy particularly vehicle movements, on the surrounding road network including M5,</p>	<p>The traffic generated from the MPE Stage 1 Proposal and MPW Stage 2 Proposal was considered in the context of the Proposal and the combined traffic impacts of this cumulative scenario were assessed. As detailed in Section 7 and Appendix K of the EIS, overall, it is concluded that the Proposal (and cumulative scenario including the Proposal) would result in only marginal traffic impacts to the surrounding road network in the presence of mitigation and management measures.</p>	Section 7 and Appendix K of the EIS.

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		<p>Hume Highway, Moorebank Avenue and Newbridge Rd.</p> <p>The expected traffic flow increase would exacerbate congestions on the surrounding road network.</p>		
LCC-123	Assumed network upgrades	<p>Appendix Kb (Arcadis, 2016d) has assumed that a number of road improvements including road widening along Moorebank Avenue would be carried out by 2019. However, none of those improvement works have been committed to by the developer or RMS.</p>	<p>A summary of the intersections which would operate at an unsatisfactory level of service without the Proposal are provided in Section 7.6 of the EIS. As these intersections perform at an acceptable level of service with the Proposal traffic, and are only unsatisfactory as a result of either the growth in background traffic or the cumulative traffic (refer to section 19 of this EIS), these upgrades have been assumed for the purpose of the Proposal's Transport and Traffic Impact Assessment. These are presented as assumed road network upgrades and are not nominated for delivery for the Proposal.</p> <p>Commitment to the identified 'assumed network upgrades' included as part of the traffic impact assessment of the Proposal is subject to ongoing consultation between SIMTA and Roads and Maritime</p>	<p>Section 7.6, 19, 20.3 and Appendix K of the EIS.</p>
LCC-124	Developer contributions – traffic	<p>It is noted that the SIMTA stage 1 development was approved without any transport improvements. Council, RMS and TfNSW met and discussed the impact of stage 2 development and agreed that any further development shall not be approved until the cumulative impacts of ultimate developments have been completed and funding mechanism agreed with RMS/TfNSW and Council.</p> <p>As stated in the section 1.9 of the determination to SIMTA Moorebank Intermodal Facility Concept Plan:</p> <p>Prior to the determination of any future Development Application pursuant to this Concept Plan, the Proponent shall provide written evidence to the Secretary that it has executed a Voluntary Planning Agreement with the relevant authority consistent with terms outlined in the Revised Statement of Commitments, except for the terms relating</p>	<p>Condition 1.9 of the MPE Concept Plan Approval (MP 10_0193) was deleted as part of the modification (MOD 1) approved on 12 December 2016 (approved concurrently with the MPE Stage 1 Approval). This condition was deleted to recognise that a Voluntary Planning Agreement (VPA) was not the only or necessarily the most suitable mechanism for securing developer contributions. Of particular note, is that this condition specifically excludes road infrastructure upgrades to be secured under a VPA.</p> <p>Schedule 3, Section 2, condition 2.1 "Section 94 Contributions" identifies the potential for a Voluntary Planning Agreement (as one of many mechanisms) to be prepared for the purposes of improvement of public amenities and services.</p> <p>As described in Section 20.3.4 of the EIS, developer contribution discussions to address traffic impacts would be undertaken with Roads and Maritime subsequent to the finalisation of the Precinct Model. The apportionment of developer contributions would be subject to the outcomes of the Precinct Model and would be discussed further, and as necessary an agreement determined, between MIC, SIMTA and the relevant government agencies (Roads and Maritime and Liverpool City Council, as relevant).</p>	<p>Section 20.3 of the EIS.</p>

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		<p>to road infrastructure upgrades and when they will be carried out</p> <p>Hence, the development should not be approved until such time that funding and delivery of the required improvement works are confirmed to Council's satisfaction.</p> <p>In addition, the subdivision application shall not be approved until an overall infrastructure plan is in place which determines contribution rates for developments on the site.</p>	<p>Discussions relating to other potential developer contributions would be discussed with the relevant government agencies (Sydney Water, Liverpool City Council and Sydney Water) as necessary.</p>	
LCC-125	Public transport provision	<p>The report indicates that a consultation will be undertaken to extend the 901 bus service. However, there is no confirmation from TfNSW and bus provider(s) with regard to the proposal. The agreement shall be reached between TfNSW, the developer and bus provider(s) prior to the determination of the application.</p>	<p>As identified in Mitigation Measure 1F (section 22 of the EIS) consultation would be undertaken with relevant bus provider(s) regarding the potential to extend the 901 bus service (or equivalent) and additional regular service bus stops with the aim of maximising public transport accessibility to, from and within the Proposal site.</p> <p>Appropriate conditions of approval in this regard would be determined by DPE.</p>	Section 22 of the EIS.
LCC-126	Internal road and warehouse layout	<p>Swept path analysis shall be submitted to the Department of Planning and Environment (DP&amp;E) and Council demonstrating that the longest vehicle can undertake the following manoeuvres:</p> <p>Entering and exiting the site in a forward direction</p> <ul style="list-style-type: none"> <li>• Circulating within the subject site and internal road network</li> <li>• Manoeuvring into and out of the loading dock</li> </ul> <p>The swept path analysis shall be endorsed by Council and RMS prior to the development application being determined</p>	<p>Swept path analysis has been carried out for the largest vehicles (A-Double and Super B-Double) entering and exiting the site via the Moorebank Avenue/ MPE Stage 2 site access, in addition to key constraint locations within the site and internal road network. Swept path analysis is shown in the Stormwater and Civil Design Drawings at Appendix E of this RtS.</p> <p>A swept path analysis of loading docks, to ensure there is sufficient manoeuvrability will be undertaken as part of the detailed design development of the Proposal.</p> <p>The SEARs for the Proposal require swept path analysis be included as part of the EIS; however, endorsement of the swept path analysis by Council and/ or Roads and Maritime is not required under the SEARs for the Proposal, or the Concept Plan CoA and/ or SoC. As such, the submission of swept path analysis for endorsement by Council and/ or Roads and Maritime is not required nor necessary.</p>	Appendix E of this RtS.
LCC-127	Other comments	<p>Any proposed modifications to the existing traffic signals along Moorebank Avenue shall be forwarded to RMS for approval.</p>	<p>Modifications to Moorebank Avenue as part of the Proposal including signalling and intersection works are described in Section 4 of the EIS.</p>	Section 4 of the EIS.

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		The section of Moorebank Avenue between M5 and Anzac Road is currently a local road. With the expected increase of traffic, particularly heavy vehicle, Council recommends that the road section shall be reclassified as a state road. Any road works on this section of Moorebank Avenue requires Council and RMS approval.	Road classification is the responsibility of RMS and is outside of the scope of this EIS; however, as part of the design development of the Proposal, any modifications to existing traffic signals will be forwarded to RMS for approval, separate to the environmental assessment of the Proposal.	
LCC-128	Other comments	The proposal shall assess constructability constraints of proposed upgrade(s) at key intersections, such as vehicle sweep paths, geometry and sight lines in accordance with the section (d) of the SEAR. The details shall be submitted to Council for review prior to the determination of the application.	As part of the construction and operation of the Proposal, no road works are proposed along the section of Moorebank Avenue between the M5 and Anzac Road.  Impacts from construction of the Proposal have been assessed for each environmental aspect in sections 7 to 20 of the EIS.	Section 7 to 20 of the EIS.
LCC-129	Other comments	The electronic copy of SIDRA models (Existing & Future) shall be submitted to RMS/ Council for review.	Details of the SIDRA modelling including model outputs and assumptions has been provided in Appendix A and B of Appendix K - Operational Traffic and Transport Impact Assessment of the EIS.	Appendix K of the EIS
LCC-130	Other comments	Traffic and Transport Section supports all the comments made in Cardno peer review report for SIMTA Intermodal Terminal Project – Moorebank Precinct East Stage 2 dated 7 February 2017.	Noted	N/A
LCC-131	Congestion and road safety	The increase in anticipated traffic movements entering/exiting the proposed site from surrounding road networks will significantly increase the heavy vehicles in the area, which would then have negative impacts on road maintenance and reduced road safety. The community have also raised significant concerns about increased congestion and associated stressors for commuters and local businesses.	As outlined in Section 7.4 of the EIS, during construction of the Proposal, the performance of intersections near the Proposal are expected to generally operate at a level of service similar to the operation of these intersections without construction in 2018. All modelled intersections near the Proposal would operate at an acceptable level of service during the AM and PM peak during peak construction. The Proposal would, therefore, not significantly impact on road maintenance or safety aspects on the surrounding road network. Restriction of haulage routes during construction, through signage and education to restrict heavy vehicles in residential areas, is included within the Construction Traffic Management Plan for the Project (Appendix K of the EIS).  As shown in Section 7.4 of the EIS, intersection performance levels during the 2019 opening year of operations would be a similar level of service with and without the Proposal. Intersection Level of Service as modelled in 2029 would	Section 7.4 and Appendix K of the EIS.



ID	Aspect	Comment	Response	Reference
			<p>be unacceptable both with and without the Proposal in its existing form, thus highlighting the need for upgrades irrespective of the Proposal. It is, therefore, concluded that ongoing maintenance and safety issues concerning this location would arise irrespective of the Proposal development.</p> <p>Operational traffic controls, included within the Preliminary Operational Traffic Management Plan (POTMP) are included to prevent heavy vehicles travelling along Anzac Road, Moorebank Avenue (south of the Proposal) or through the suburb of Wattle Grove to access the Proposal site.</p> <p>Overall, the traffic assessment concluded that the Proposal (and cumulative scenario including the Proposal) would result in only marginal traffic impacts to the surrounding road network in the presence of the proposed mitigation and management measures, including the assumed network upgrades.</p> <p>The analysis shows that all of the key intersections within the study area, including the Moorebank Avenue / M5, would require upgrades to manage existing and projected background traffic volumes before the addition of the traffic generated by the Proposal. Upgrades to the Moorebank Avenue / Anzac Road intersection are recommended as part of the MPW Stage 2 Proposal, subject to negotiations with Roads and Maritime.</p>	
LCC-132	Reoccurring themes	<p>A number of the assumptions used to inform the environmental assessments are either not identified or not considered rigorous or conclusive enough to fully assess traffic impacts. The Project's traffic and transport assessment is a key consideration with the potential to create impacts across a number of environmental aspects.</p>	<p>It is unclear what traffic assumptions in particular are being referred to. Assumptions used within the traffic and transport assessment have been included in Appendix K of the EIS.</p> <p>It should be noted that as part of the preparation of the traffic assessments for the Proposal, and to fulfil the requirements of the SEARs, SoC and CoA, consultation was undertaken with the key stakeholders including Roads and Maritime, Transport for New South Wales, Liverpool City Council and Campbelltown City Council. Through-out the traffic study, key stakeholders were consulted through a series of meetings, emails and phone calls to present the scope of the study, impact assessment methodology and preliminary findings of the traffic study.</p> <p>Key meetings and presentations to key stakeholders have included:</p> <ul style="list-style-type: none"> <li>• Meetings with NSW Roads and Maritime Services (Roads and Maritime) to discuss Roads and Maritime AIMSUN modelling and assessment methodology on 10 February 2016 and 9 June 2016</li> <li>• Presentation on Traffic Methodology and Preliminary Findings to Liverpool City Council (LCC) on 31 October 2016</li> </ul>	



ID	Aspect	Comment	Response	Reference
			Presentation on Traffic Methodology and Preliminary Findings to Roads and Maritime and Transport for New South Wales (TfNSW) on 8 November 2016. Concluding statement as per earlier comment	
LCC-133	Cardno review comments	<p>Cardno has provided a detailed review of the assessment methodology and assumptions for modelling which are outlined further in <b>Section 3.3</b>.</p> <p>This review found numerous issues with the methodology employed with the primary issues associated with the lack of detail in the assessments conducted. This included;</p> <ul style="list-style-type: none"> <li>Intersection performance for the M5/Moorebank Avenue interchange, including detailed assessment of each of the entry and exit ramps for both construction and operational phases. This intersection is a key interchange for both MPE and MPW projects, as well as within the region as a whole. Study of this intersection is significantly lacking, with the methodology employed appearing to lessen what are potentially significant impacts.</li> </ul>	<p>The analysis undertaken for both the CTIA and OTTIA assessed the performance of the M5 Motorway / Moorebank Avenue interchange during construction and operation of the Proposal, compared to traffic performance without the Proposal. The construction and operational traffic impacts detailed in Section 7 and Appendix K of the EIS demonstrated the Proposal would result in no worsening of the performance of the M5 Motorway/ Moorebank Avenue interchange.</p> <p>As part of the intersection performance assessment, the delay of each movement and approach were captured to inform the overall intersection performance (i.e. LoS and delay), which included the on/off-ramps at the M5 / Moorebank Avenue interchange.</p>	Section 7 and Appendix K of the EIS.
LCC-134	Cardno review comments	<ul style="list-style-type: none"> <li>Future impact on the M5/Moorebank Avenue intersection, as well as the Georges River Bridge crossing of the M5 between the Moorebank Avenue and Hume Highway interchanges.</li> </ul>	<ul style="list-style-type: none"> <li>Using the AIMSUN model, detailed analysis and modelling have been conducted for the M5 Motorway and intersections on the M5 Motorway including: <ul style="list-style-type: none"> <li>M5 Motorway / Moorebank Avenue</li> <li>M5 Motorway / Hume Highway</li> <li>M5 Motorway / Heathcote Road.</li> </ul> </li> </ul> <p>The impact of weaving and merging traffic between these interchanges along the M5 Motorway, including the M5 ramps of Moorebank Avenue and the Hume Highway, have been considered in the AIMSUN modelling and their impacts reported in the OTTIA in terms of the intersection LoS at the M5 Motorway / Moorebank Avenue and M5 Motorway / Hume Highway</p>	EIS OTTIA at Appendix K of the EIS.

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			intersections. A solution to the existing M5 weave is not considered necessary for the Proposal, however resolution by the motorway operator would improve performance in terms of LoS at the above intersections.	
LCC-135	Cardno review comments	<ul style="list-style-type: none"> <li>Network improvements are assumed to all occur and form the basis of background and cumulative traffic impacts. The details of this modelling are lacking.</li> </ul>	<ul style="list-style-type: none"> <li>The do-minimum scenario used to determine background and cumulative traffic impacts assumes that ongoing improvements will be made to the broader transport network including some new infrastructure and intersection improvements to improve capacity and to cater for traffic growth. The assumed network improvements (i.e. Do-Minimum) were based on a series of planned and committed network improvements identified by Roads and Maritime, which are detailed in Table 1-9 of the EIS OTTIA (Appendix K of the EIS). The road network in the model was amended based on the layouts or the information from Roads and Maritime regarding these planned and committed network improvements.</li> </ul>	EIS OTTIA at Appendix K of the EIS.
LCC-136	Cardno review comments	<ul style="list-style-type: none"> <li>Intersection performance and Level of Service (LoS) data is incomplete, lacking intersection layouts and back of queue information throughout.</li> </ul>	<p>As per the <i>Guide to Traffic Generating Developments</i> (Roads and Maritime, 2002) (Section 4.2.2),</p> <p><i>"The best indicator of the level of service at an intersection is the average delay experienced by vehicles at that intersection. For traffic signals, the average delay over all movements should be taken."</i></p> <p>As such only the intersection Level of Service from the AIMSUN and SIDRA model has been reported. However, upstream/downstream queuing impacts at intersections were examined in the AIMSUN and SIDRA model and considered in determining the appropriate mitigation measures.</p> <p>Appendix A of the Construction Traffic Impact Assessment included at Appendix K of the EIS includes the SIDRA traffic flow diagrams used to undertake the assessment of construction traffic impacts from the Proposal.</p>	<p><i>Guide to Traffic Generating Developments</i> (Roads and Maritime, 2002)</p> <p>EIS CTIA at Appendix K of the EIS.</p>
LCC-137	Cardno review comments	<ul style="list-style-type: none"> <li>Numerous discrepancies between Traffic studies for both the MPE and MPW projects across all stages. Specifically, SIDRA inputs are not conducted in accordance with Roads and Maritime standards.</li> </ul>	<ul style="list-style-type: none"> <li>SIDRA 6 modelling software was used for the Traffic Impact Assessment prepared for the MPW and MPE Concept EIS and MPE Stage 1 EIS, while SIDRA 7 modelling software was used to analyse traffic scenarios for the MPW Concept Modification Report, MPW Concept Modification RtS, MPW Stage 2 EIS and MPE Stage 2 EIS (modelling undertaken in 2016). The approach adopted considers the most updated software available at the time of assessment to be the most appropriate. The different versions of the same software (SIDRA) used for separate assessments is indicative of the different timeframes of when the respective assessments were undertaken. The approach adopted considers Section 14.1.1 of the Roads</li> </ul>	Section 7.1 of this RtS.

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			<p>and Maritime Traffic Modelling Guidelines (version 1.0, February 2013) where Roads and Maritime requires '<i>The latest version/update of SIDRA INTERSECTION should be used where possible.</i>' The different versions of the same software (SIDRA) used for separate assessments is indicative of the different timeframes of when the respective assessments were undertaken whereby the latest version of SIDRA at the time of the assessment was utilised (i.e. version 7 was released in 2016).</p> <p>Additionally, discrepancies in modelling inputs (such as background traffic, gap acceptance settings and peak flow factor settings) were identified as part of the MPW Concept Modification Supplementary Response to Submission. Updated SIDRA modelling has been undertaken as part of this RtS, in response to the issues raised in Liverpool City Council's submission on the MPW Concept Modification. The revised SIDRA results, which address the discrepancies raised, are included in Section 7.1 of this RtS.</p>	

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LCC-138	Traffic impacts from the Proposal on the M5 Motorway/ Moorebank Avenue interchange	The effect on the M5/Moorebank Avenue interchange has been significantly downplayed and requires comprehensive assessment in conjunction with the associated impacts on this intersection caused by the neighbouring MPW project. The impact on these intersection needs to be understood from a Local Government Area (LGA) and Regional perspective.	<p>Cumulative impacts were considered as a part of the OTTIA (Appendix K of the EIS). The cumulative construction traffic impact assessment considered construction of the Proposal concurrently with construction of the MPE Stage 1 Project, MPW Stage 2 Proposal and MPW Early Works. The cumulative operational traffic impact assessment considered construction of the Proposal concurrently with construction of the MPE Stage 1 Project and MPW Stage 2 Proposal.</p> <p>As detailed in Section 5.7 of the OTTIA, the impacts from the Proposal related traffic do not result in the need for upgrades to intersections other than the Moorebank Avenue / MPE Stage 2 Access intersection. However, network improvements are required to mitigate the impacts of the cumulative operational traffic scenario and these are either directly as a result of cumulative development impacts, or to cater for background traffic growth. As these upgrades are not directly required as a result of the Proposal, they have been nominated as assumed network upgrades to complete the modelling and specifics of the upgrades have been included in Table 6-1 of the OTTIA.</p> <p>A precinct traffic model is currently being prepared to update the cumulative impacts of the MPW and MPE Project, most recently presented in the traffic assessment for the MPW Concept Approval, in the context of the LMARI model. This precinct traffic model will demonstrate the upgrades proposed in each of the current applications (i.e MPE Stage 2 SSD-7628) are consistent with the upgrades required to cater for the traffic demand of the development at completion.</p>	EIS OTTIA at Appendix K of the EIS.
LCC-139	Impacts of heavy vehicles on road maintenance and safety	The increase in anticipated traffic movements entering/exiting the proposed site from surrounding road networks will significantly increase the heavy vehicles in the area, which would then have negative impacts on road maintenance and reduced road safety. The community have also raised significant concerns about increased congestion and associated stressors for commuters and local businesses.	<p><u>Operational traffic impacts on road maintenance</u></p> <p>An Operational Environmental Management Plan (OEMP) would be prepared for the Proposal, which would provide the overarching framework for the management of all potential environmental impacts resulting from the operation of the Proposal (refer to Section 4.6 of the EIS). Ongoing maintenance which would be undertaken periodically throughout operations would include, but not be limited to, ongoing surface and joint repair of the Moorebank Avenue upgrade depending on the pavement type, with subgrade repair where necessary.</p> <p><u>Operational traffic impacts on road safety</u></p> <p>A final OTMP would form part of the OEMP for the Proposal. It is intended that the OTMP would be prepared by updating the Preliminary Operational Traffic</p>	Section 4.6 and Appendix K of the EIS.

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			<p>Management Plan (POTMP) which was provided at Appendix K of the EIS and included mitigation measures (in Section 5 of the POTMP) relating to the maintenance of safety and amenity of road users and the general public.</p> <p>It is acknowledged that a number of submissions have been received from the community relating to impacts from congestion, including on the community and local businesses. Responses to the issues raised by the community during the public display of the Proposal is provided in Section 5 of this RtS.</p>	
<b>Stormwater and flooding</b>				
LCC-140	Erosion and sediment control	Although the EIS and the Stormwater and Flooding Report provide details of Erosion and Sediment Control (E&SC) criteria, guidelines etc. no concept plan has been provided. A preliminary E&SC plan (or Stormwater Management Plan (SWMP)) providing details on treatment measures should be provided for review.	<p>Preliminary erosion and sediment control plans (ESCPs) have been developed for the Proposal and are included in the Drawings associated with the Stormwater and Flooding Assessment Report (Appendix P of the EIS).</p> <p>The Stormwater and Civil Design Drawings at Appendix E of this RtS also includes an ESCP for the Proposal.</p>	<p>Appendix P of the EIS.</p> <p>Appendix E of this RtS.</p>
LCC-141	Sediment basins	Sediment basins are proposed to capture and treat sediment laden water during construction. The local soils have been confirmed by Arcadis as Type F soils (which are fine grained and require long residence times to settle from suspension). Flocculation is recommended for all proposed basins prior to discharge (pumping). Details of potential flocculants should be included as part of the E&SC strategy.	<p>Preliminary basin sizes have been calculated in accordance with <i>Soils and Construction Volume 1: Managing Urban Stormwater</i> (the 'Blue Book', NSW OEH, 2004) and are based on Berkshire Park Group soils ('Type F').</p> <p>Management of sediment during construction would be undertaken in accordance with the ESCP developed for the Proposal.</p>	Appendix P of the EIS
LCC-142	Appendix C of the EIS Stormwater and Flooding Assessment	Section 5.3 of the Stormwater and Flooding Report states that the Model for Urban Stormwater Improvement Conceptualisation (MUSIC) model layout is provided in Appendix C. Appendix C is not included in the Stormwater and Flooding Report. The Stormwater and Flooding report was downloaded from the EIS documents on the DP&E Major Projects Assessment website. The MUSIC model layout provides a visual	Appendix C to the Stormwater and Flooding Report was erroneously excluded from the Proposal EIS. This appendix has been included as Appendix E of this RtS.	Appendix E of this RtS

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		representation of the proposed water quality treatment devices and should be reviewed.		
LCC-143	Existing drainage infrastructure	<p>Section 4.1.1 provides details on twin culverts (2.1m x 2.0m) which convey flows from the MPE site under Moorebank Avenue, into an open channel and finally to the Georges River. These culverts have been identified as susceptible to blockage. Options to alleviate the blockage at these locations should be explored.</p>	<p>The existing drainage infrastructure located within the MPW site, including the open channel that directs water from the Proposal site to the Georges River have been considered and assessed as part of the MPW Stage 2 EIS and MPW Stage 2 RtS. The drainage works proposed as part of the MPE Stage 2 Proposal are included as base-case (i.e. existing) conditions for the Proposal.</p> <p>Section 4.1.1 of the EIS Stormwater and Flooding Assessment noted that the upstream headwall entrance to the twin culverts appears highly susceptible to blockage due to a combination of full height channel grating, walkway and fencing.</p> <p>Section 5.2 of the Stormwater and Flooding Assessment notes that water sensitive urban design (WSUD) principles and a treatment train approach have been applied to address potential stormwater quality impacts of the Proposal, including the use of Gross Pollutant Traps (GPTs) as the primary stormwater treatment measure. The results of the water quality assessment, included in section 5.4 of the EIS Stormwater and Flooding Assessment demonstrates that the performance of the proposed treatment measures (i.e. GPTs and rain gardens) complies with the catchment specific targets of the Georges River Estuary Coastal Zone Management Plan and also the site specific targets contained in the SEARs.</p> <p>The following conclusions and recommendations (relevant to the Proposal) were made within the MPW Stage 2 EIS (Arcadis, 2016). The DRAINS modelling results indicate that:</p> <ul style="list-style-type: none"> <li>• The proposed drainage systems and OSDs would provide adequate system capacities and mitigate potential adverse flood impacts that may otherwise result from the MPW Stage 2 Proposal site works.</li> <li>• The introduction of a significant channel system downstream of the existing MPE site culvert crossing Moorebank Avenue, would adequately convey flows through the MPW Stage 2 Proposal site to the Georges River.</li> </ul>	Section 4, 12 and Appendix P of the EIS.
LCC-144	Existing drainage infrastructure	<p>Section 4.1.3 provides details of a concrete lined trapezoidal channel that conveys flows from the MPE site through the MPW site and into the Georges River. The concrete channel has catastrophically failed at a location</p>	<p>The channel between Moorebank Avenue and the Georges River has been considered as part of the MPW Stage 2 Proposal, which includes the reconstruction of the portion of the channel that has catastrophically failed.</p>	

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		approximately halfway between Moorebank Avenue and the Georges River. The failed section of the channel should be rectified.		
LCC-145	Channel grade	<p>Section 4.2.5.3 provides details of an OSD/open channel system used to provide flood mitigation and conveyance. A minimum grade of 0.5% has been specified for this channel. Some consideration should be given to increasing the grade of this channel as due to construction tolerances there could be some areas of localised ponding / wet areas once the channel is built.</p>	<p>The proposed OSD basin/ open channel system for MPE Stage 2 has three main purposes.</p> <ul style="list-style-type: none"> <li>• Provide detention storage for flood mitigation</li> <li>• Provide areas for raingarden (bioretention) and required extended detention for water quality treatment</li> <li>• Provide conveyance through the site</li> </ul> <p>The OSD basin/ open channel system is proposed to have a porous invert with 0% longitudinal gradient to accommodate the proposed WSUD raingarden(bioretention). The raingarden (bioretention) are purposely designed with extended detention to achieve treatment targets, and are to include infiltration beds with subsoil drainage. Localised ponding is not expected.</p>	Section 5.2 of Appendix P of the EIS.
LCC-146	Recommendations	<p>The recommendations below are identified to address the identified impacts associated with stormwater and flooding to allow a comprehensive assessment of the Project:</p> <ul style="list-style-type: none"> <li>• Given that the development works area far exceeds 2,500 m<sup>2</sup>, development of a SWMP would be appropriate, rather than an E&amp;SC plan, as per guidance contained within the Blue Book (Landcom, 2004).</li> </ul>	<p>A Soil and Water Management Plan (SWMP) will be prepared as part of the CEMP for the Proposal, as outlined in Section 12.4 and Section 22 of the EIS. The SWMP and ESCPs would be developed in accordance with the principles and requirements of <i>Soils and Construction Volume 1: Managing Urban Stormwater</i> (the 'Blue Book', NSW OEH, 2004), as required under both SEARs and REMMs for the Proposal, and based on the Preliminary ESCPs provided in the Stormwater and Flooding Assessment Report (Appendix P of the EIS).</p> <p>The EIS Stormwater and Flooding assessment included at Appendix P of the EIS, includes an assessment of the downstream impacts of the Proposal. The Proposal would result in an increase in surface water generation and pollutant loads as a result of the increase in impervious surfaces on the site. Onsite detention (OSD) in the form of sediment basins, outlet channels and water sensitive urban design (WSUD) elements has been sized to provide adequate system capacities and mitigate potential adverse flood impacts and increases in stormwater discharge from the site that may otherwise result from the Proposal.</p>	Section 12.4 and 22 of the EIS.
LCC-147	Recommendations	<ul style="list-style-type: none"> <li>• A SWMP typically provides more detail than an E&amp;SC plan. As such, the following should be included in the SWMP, or additional supporting documentation provided in the report as necessary: <ul style="list-style-type: none"> <li>– High-flow bypass weir designs for sediment basins.</li> </ul> </li> </ul>	<p>Section 5.6.2.1 of the EIS Stormwater and Flooding assessment included at Appendix P of the EIS provides detail regarding sedimentation basins and their role as part of construction of the Proposal for erosion and sediment</p>	Section 5.6.2.1 of Appendix P of the EIS.

ID	Aspect	Comment	Response	Reference
		<ul style="list-style-type: none"> <li>– Sediment basin overflow discharge locations and connections. The note provided advising that this be determined by the contractor is not considered to be sufficient for a project of this scale and significance.</li> <li>– Expected clean-out frequency of basins.</li> <li>– Flocculation details</li> <li>– Clean and dirty water drains.</li> </ul>	control. Section 5.6.2.1 notes that sediment basins have been sized and located to ensure sediment concentrations in site runoff are within acceptable limits. Preliminary basin sizes have been calculated in accordance with the Blue Book and are based on Berkshire Park Group soils ('Type F').	
LCC-148	Recommendations	<ul style="list-style-type: none"> <li>• Further consideration of the current condition of existing drainage infrastructure downstream of the subject site (culvert outlets, trapezoidal channel etc.) and potential upgrades / rectification to improve stormwater conditions in the local area.</li> </ul>	<p>As part of the EIS Stormwater and Flooding assessment (refer to Appendix P of the EIS), DRAINS modelling was undertaken to compare the existing and post-development flows at locations downstream of the Proposal site. The results of the DRAINS modelling, included at Section 4.2.3 of Appendix P indicate that the proposed detention storages included as part of the Proposal should adequately mitigate potential flow increases leaving the Proposal site.</p> <p>The EIS Stormwater and Flooding assessment (refer to Appendix P of the EIS) concluded that the proposed drainage systems and OSDs would provide adequate system capacities and mitigate potential adverse flood impacts that may otherwise result from the Proposal site works. As such, improvements to the condition of existing drainage infrastructure downstream of the subject site are not considered necessary as part of the Proposal.</p>	Appendix P of the EIS.
<b>Soils and Contamination</b>				
LCC-149	Proposed Development	<p>The proposed activities have potential to create and/or interact with contamination as described below:</p> <ul style="list-style-type: none"> <li>• Demolition of existing buildings and structures could result in the release of hazardous building materials such as asbestos fibres, lead-based paint and PCB containing capacitors.</li> <li>• Major earthworks could result in disturbance of unexpected areas of contamination such as burial sites.</li> </ul>	An assessment of potential sources of contamination including those described in the submission is included in Section 13 of the EIS. The EIS also includes measures to manage contamination during construction and operation of the Proposal as presented in Section 13.3.	Section 13 of the EIS.



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		<p>Additionally, chemicals required during earthworks, such as fuels, could result in contamination during uncontrolled releases or spillages.</p> <ul style="list-style-type: none"> <li>Importation of fill from offsite sources could result in importation of undesired contaminant impacted material</li> </ul>		
LCC-150	Contamination and geotechnical considerations	<p>The nature and extent of contamination at the site has been investigated extensively, however, Section 13.2 of MPE Stage 2 Proposal EIS (Arcadis, 2016) does not provide sufficient context or a list of relevant reports associated with previous contamination assessments, remediation and validation. It is noted that a more complete list of historic assessments is provided in Appendix Q.</p>	<p>Section 13.2 of the EIS is intended to provide a summary of the appended contamination assessment and investigations to date (Appendix Q of the EIS). As noted by the submitter, further detail on the existing environment and historic assessments is included in Appendix Q of the EIS.</p>	Section 13.2 of the EIS.
LCC-151	Contamination mitigation measures during construction	<p>Section 13.3.1 of the EIS provides mitigation measures that would be implemented during the construction phase of the proposal, including preparation and implementation of a contamination management plan (CMP). The CMP (or similar) should also be considered as a mitigation measure during the operational phase of the proposal to manage ongoing monitoring requirements/ obligations such as regulatory groundwater monitoring associated with storage of dangerous goods for example underground and/or aboveground petroleum storage tanks. The EIS lacks discussion of management of potential contamination producing activities during the operational phase.</p>	<p>As detailed in Section 13.2.5 of the EIS, oils, fuels, lubricants and other chemical substances would be required for vehicles plant and machinery during operation of the Proposal. Five classes of dangerous goods would also be transported to or from, and stored within warehouses on the Proposal site (see Section 14 of the EIS for further details on the storage, handling and risks associated with dangerous goods).</p> <p>Accidental spills and leaks within the Proposal site have the potential to result in contaminants being transported into the surrounding environment and groundwater. As the majority of the Proposal site would be hardstand, the potential for the migration of fuels and chemicals to soil and groundwater is considered to be low. Materials would be stored appropriately to minimise the risk of on or off site contamination</p> <p>As detailed in Section 13.3.2 and section 22 of the EIS, an Emergency Response Plan would be prepared and implemented. The plan would meet the requirements of Clause 153C of the POEO Act and the POEO (General) Regulation (Cl. 98B) and specify the procedure to be followed in the event of a spill, including the notification requirements and use of absorbent material to contain the spill. Spill kits would be provided on the Proposal site at all times.</p>	Section 13.2.5, 13.3.2 and 22 of the EIS.

ID	Aspect	Comment	Response	Reference
			<p>It is expected that the Emergency Response Plan would appropriately manage potential contamination producing activities during the operational phase of the Proposal.</p> <p>The Proposal would not involve the storage of petroleum in either aboveground or underground storage tanks.</p>	
LCC-152	Extent of contamination assessment - PFCs	<p>Section 13.2.3 of the EIS states that aqueous film forming foam (AFFF) compounds, which contain PFCs, were present in soils and groundwater at some locations, however, concentrations were typically low and below the nominated investigation levels. The EIS, including Appendix Q, does not detail the extent of the assessment undertaken such as the number of groundwater monitoring events completed and whether concentrations of PFCs are decreasing, stable or increasing.</p>	<p>The assessment as included in Appendix Q of the EIS provides a summary of a number of contamination investigations that have been undertaken on the Proposal site to date.. The contamination summary identified:</p> <ul style="list-style-type: none"> <li>• Previous investigations have considered potential contamination risk at the Proposal site (including risks associated with PFC-containing AFFF).</li> <li>• There is no evidence of widespread residual contamination at the Proposal site.</li> <li>• The MPE Stage 2 site has been certified by a NSW EPA-accredited Site Auditor to be suitable for commercial / industrial use subject to all works being carried out in accordance with 2016 GHD EMP.</li> </ul> <p>Based on the outcomes of these investigations, as summarised, it was considered that further testing and investigation for the Proposal was not required</p>	Appendix Q of the EIS.
LCC-153	Existing sources of contamination	<p>Section 13.2.4 of the EIS states that the construction of the Proposal will have the potential to release and/or expose existing sources of contamination into the surrounding environment through disturbance of soils and groundwater. The wording of the sentence makes it seem that there are existing sources of contamination at the site that have potential to release and/or expose contaminants. If existing contamination sources are known to exist at the site then they should be specifically identified and considered for remediation.</p>	<p>As identified in Section 13.2.3 of the EIS, no evidence of widespread residual contamination at the site has been reported, however isolated areas of the site have been reported to be impacted by lead, ACM, UXO, EOW and potentially contaminated fill / soil materials. A site-wide UXO, EO, and EOW Management Plan (or equivalent) would be developed for the Proposal site. This plan would be included within the CEMP and address the unexpected discovery of UXO, EO or EOW during construction.</p> <p>There are no specific areas requiring direct remediation within the Proposal site. However, the unexpected discovery of contaminants of potential concern could impact on the Proposal site should they not be managed appropriately.</p> <p>As detailed in Section 13.3.1 of the EIS, A Contamination Management Plan (CMP) (or equivalent) would be prepared and included within the CEMP for the Proposal. The CMP would be prepared in consideration of the outcomes of the Environmental Management Plan (GHD, 2016) and Site Audit Statement and Site Audit Report (JBS&amp;G, 2016) and would contain procedures on the following:</p>	Section 13 of the EIS.

ID	Aspect	Comment	Response	Reference
			<ul style="list-style-type: none"> <li>Handling, stockpiling and assessing potentially contaminated materials encountered during the development works.</li> <li>A management tracking system for excavated potentially contaminated materials to ensure the proper management material movements at the Proposal site, particularly during excavation</li> <li>Assessment, classification and disposal of waste in accordance with relevant legislation</li> <li>A contingency plan for unexpected contaminated materials (unexpected finds protocol), such as materials that are odorous, stained or containing anthropogenic materials, that may be encountered during construction.</li> </ul>	
LCC-154	Volume of clean general fill to be imported as part of the Proposal	The EIS summary provided at the front of the document states that 680,000 m <sup>3</sup> of clean fill would be imported to site, whereas, Section 13 of the EIS states that 690,000 m <sup>3</sup> of clean fill would be imported.	<p>It should be clarified that the volume of clean general fill to be imported for construction of the Proposal is as detailed in Table 4-9 in Section 4.3.4 (Earthworks) of the Proposal Description, being 695,100m<sup>3</sup> (631,900m<sup>3</sup> for the MPE Stage 2 site and 63,200m<sup>3</sup> for the Moorebank Avenue site).</p> <p>Therefore, the EIS summary should have stated:</p> <p><i>'Construction of the Proposal would also involve the importation of approximately 695,000 cubic metres of clean fill to the site to achieve the finished surface levels'.</i></p> <p>Section 13.1.3 should have stated:</p> <p><i>'Overall, approximately 695,000 cubic metres of clean general fill would need to be imported to the site to achieve the finished surface levels'.</i></p> <p>Although the volume of clean general fill to be imported was inconsistently stated across the EIS Summary and Section 13.4.1, the impacts of this construction activity have been assessed consistently with the volumes presented in Section 4.3.4 of the EIS, therefore, no further environmental assessment of this aspect of the Proposal is considered necessary.</p>	EIS summary, section 13.4.1 and section 4.3.4 of the EIS.
LCC-155	Clean general fill definition	The EIS states that "clean fill" (volume TBC) would need to be imported to the site. The term "clean fill" is indistinct and unclear. It is recommended that the EIS include a specific definition of clean fill that describes what soil types are considered suitable for importation to the site. The definition should include reference to any relevant NSW EPA guidelines. To address contamination risk	The term "clean general fill" refers to material meeting the NSW EPA's resource recovery orders and exemptions ( <a href="http://www.epa.nsw.gov.au/wasteregulation/orders-exemptions.htm">http://www.epa.nsw.gov.au/wasteregulation/orders-exemptions.htm</a> ), including but not limited to Excavated Natural Material (ENM) and Virgin Excavated Natural Material (VENM), according to EPA definitions for these materials ( <a href="http://www.epa.nsw.gov.au/waste/virgin-material.htm">http://www.epa.nsw.gov.au/waste/virgin-material.htm</a> ).	Appendix G of this RtS.

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ID	Aspect	Comment	Response	Reference
		associated with importation of fill, the EIS should contain a section describing a suitable fill management protocol that would ensure appropriate quality assurance / quality control (QA/QC) measures that satisfy the expectations of the NSW EPA, Council and Australian Standards.	Definitions for these material categories, and a protocol for management is included in the Stockpile Management Protocol, provided as Appendix G of this RtS.	
LCC-156	Source of clean general fill to be imported.	The EIS states "clean fill" would be imported to the site and used as fill material. Importation of soil from offsite sources carries risk of possible introduction of contamination such as but not limited to asbestos and acid sulfate soils. The EIS should include a detailed description of the desired fill type and the process/procedure that will be implemented to ensure an adequate assessment of contamination has been undertaken. The EIS should provide an indication of the possible source(s) of imported fill e.g. surplus spoil generated during local civil construction projects	<p>The fill selected to be imported to Proposal site would be accompanied with relevant waste classification certificates verifying that it is VENM/ENM and suitable for use as clean fill on the site.</p> <p>Further information regarding the fill importation procedure to ensure it of suitable quality and free from contamination is provided in the Principles of Stockpile Management Protocol (refer to Appendix G of this RtS).</p> <p>Where possible, clean general fill would be sourced from the construction of other Sydney infrastructure projects nearby.</p>	Appendix G of this RtS.
LCC-157	Asbestos management during construction	Section 14 of the EIS discusses the presence, nature and proposed management of hazardous building materials including asbestos containing material (ACM) in eight (8) existing structures and soil. Due to the potential for airborne asbestos fibres during demolition of structures known to contain ACM there should be a more detailed discussion of the associated contamination risk in Section 13 of the EIS.	<p>Asbestos that is not within buildings (ie in, or on the ground) has been discussed and assessed from a contamination perspective in Section 13 (Soils, groundwater and contamination) of the EIS.</p> <p>Asbestos in buildings and soils from a hazards and risk perspective (risk to health) has been assessed in Section 14 of the EIS. The following construction activities have the potential to cause asbestos fibres to become airborne, thereby posing a risk to human health:</p> <ul style="list-style-type: none"> <li>• The demolition of the existing buildings known to contain asbestos (i.e. building no. 32, 43, 49, 62, 63, 80 and 91, refer to Table 18-4 and Figure 18-1 of the EIS for more information))</li> <li>• Any excavation or disturbance of soil potentially containing asbestos</li> </ul> <p>The excavation, movement and disposal of ACM would be undertaken in strict accordance with procedures detailed in an Asbestos Management Plan and the Work Health and Safety Regulation 2011.</p>	Section 13 and 14 of the EIS.

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ID	Aspect	Comment	Response	Reference
			Mitigation measures to be implemented during construction of the Proposal to manage potential impacts associated with asbestos are provided in Section 14.5 of the EIS.	
LCC-158	Risk of exposing contamination beneath the footprint of existing buildings and concrete slabs	Section 13 of the EIS does not include sufficient discussion of the risk of exposing contamination beneath the footprints of existing buildings and concrete slabs. It is common to identify areas of contamination and filling beneath existing buildings and structures, particularly if the building was utilised in a commercial / industrial setting	As outlined in Section 13.3 of the EIS, a Contamination Management Plan (CMP) (or equivalent) would be prepared and included in the CEMP for the Proposal. The CMP would include a contingency plan for unexpected contaminated materials (unexpected finds protocol), such as materials that are odorous, stained or containing anthropogenic materials (eg asbestos) that may be encountered during construction.	Section 13.3 of the EIS
LCC-159	Recommendations	<p>The recommendations below are to address the identified impacts associated with contamination that have not been addressed by the Stage 2 Proposal EIS:</p> <ul style="list-style-type: none"> <li>In order to provide context and an understanding of historic investigations, Section 13 of the EIS should provide a list of relevant reports associated with previous contamination assessments, remediation and validation at the site. It is noted that the list of historic assessments is provided in Appendix Q.</li> </ul>	<ul style="list-style-type: none"> <li>The list of relevant reports associated with previous contamination assessments, remediation and validation at the site was provided in Appendix Q of the EIS and is not intended to be replicated in the EIS chapter.</li> </ul>	Appendix Q of the EIS
LCC-160	Recommendations	<ul style="list-style-type: none"> <li>The CMP (or a separate document) should also be considered as a mitigation measure for the operational phase of the proposal that manages any required ongoing monitoring such as monitoring associated with and NSW EPA environment protection licence (EPL) or regulatory groundwater monitoring associated with storage of dangerous goods for example underground and/or aboveground petroleum storage tanks.</li> </ul>	<ul style="list-style-type: none"> <li>As detailed in Section 13.3.2 and section 22 of the EIS, an Emergency Response Plan would be prepared and implemented. The plan would meet the requirements of Clause 153C of the POEO Act and the POEO (General) Regulation (Cl. 98B) and specify the procedure to be followed in the event of a spill, including the notification requirements and use of absorbent material to contain the spill. Spill kits would be provided on the Proposal site at all times. It is expected that the Emergency Response Plan would appropriately manage potential contamination producing activities during the operational phase of the Proposal.</li> </ul>	Section 13.3.2 and 22 of the EIS

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ID	Aspect	Comment	Response	Reference
LCC-161	Recommendations	<ul style="list-style-type: none"> <li>The EIS should include more detail regarding the extent of the PFC assessment, including specifying the areas assessed, the number of groundwater monitoring events completed and whether concentrations of PFCs are decreasing, stable or increasing.</li> </ul>	<ul style="list-style-type: none"> <li>Refer to issue LCC-152 (Extent of contamination assessment - PFCs) for a response to this comment</li> </ul>	LCC-142
LCC-162	Recommendations	<ul style="list-style-type: none"> <li>Section 13.2.4 of the EIS states that "construction of the Proposal will have the potential to release and/or expose existing sources of contamination into the surrounding environment through disturbance of soils and groundwater". This sentence makes it appear that existing sources of contamination at the site have potential to release and/or expose contaminants. The EIS should be updated to include further detail of the remaining sources of contamination.</li> </ul>	<ul style="list-style-type: none"> <li>Refer to issue LCC-153 (Existing sources of contamination) for a response to this comment</li> </ul>	LCC-143
LCC-163	Recommendations	<ul style="list-style-type: none"> <li>The volume of fill that is expected to be imported to site during the proposal should be confirmed. The EIS currently quotes 680,000 m3 and 690,000 m3.</li> </ul>	<ul style="list-style-type: none"> <li>Refer to issue LCC-154 (Volume of clean general fill to be imported as part of the Proposal) for a response to this comment</li> </ul>	LCC-144
LCC-164	Recommendations	<ul style="list-style-type: none"> <li>The EIS should include a specific definition of "clean fill" that describes what soil types are considered suitable for importation to the site. The definition should include reference to any relevant NSW EPA guidelines.</li> </ul>	<ul style="list-style-type: none"> <li>Refer to issue LCC-155 (Clean general fill definition) for a response to this comment</li> </ul>	LCC-145
LCC-165	Recommendations	<ul style="list-style-type: none"> <li>To address contamination risk associated with importation of fill, the EIS should contain a section describing a suitable fill management protocol that would ensure appropriate quality assurance / quality control (QA/QC) measures that satisfy the</li> </ul>	<ul style="list-style-type: none"> <li>Refer to issue LCC-155 (Clean general fill definition) for a response to this comment</li> </ul>	LCC-145

ID	Aspect	Comment	Response	Reference
		expectations of the NSW EPA, Council and Australian Standards.		
LCC-166	Recommendations	<ul style="list-style-type: none"> <li>Due to the potential for airborne asbestos fibres during demolition of structures known to contain ACM there should be a more detailed discussion of the associated contamination risk in Section 13 of the EIS.</li> </ul>	<ul style="list-style-type: none"> <li>Refer to issue LCC-157 (Asbestos management during construction) for a response to this comment</li> </ul>	LCC-147
<b>Hazard and Risk</b>				
LCC-167	Construction	<p>Section 14.4 identifies potential impacts associated with the construction phase of the development which include:</p> <p>Potential impacts on human health and/or the environment resulting from the accidental release or improper transport, handling and storage of hazardous substances relating to the Proposal.</p> <p>The potential for asbestos fibres to become airborne during demolition and excavation activities.</p> <p>Additional hazardous materials that may be transported to and used on the Proposal site to facilitate construction may include, but not be limited to:</p> <ul style="list-style-type: none"> <li>Diesel fuels</li> <li>Oil, grease and lubricants</li> <li>Gases (oxy-Acetylene) (Class 2.1)</li> <li>Bitumen (Class 3 PGIII)</li> <li>Paints and epoxies (Class 3 PGII and Class 3 PGIII)</li> <li>Herbicides (Class 6.1 PGII).</li> </ul> <p>The EIS states that the majority of these compounds would be stored within the Main</p>	<p>The submission provides a summary of the information provided in the EIS. It is considered that this does not require a response.</p>	Section 14 of the EIS.

ID	Aspect	Comment	Response	Reference
		Warehousing Compound (refer to Figure 4-6 for location). The storage, handling and use of these materials would be undertaken in accordance with the Work Health and Safety Regulation 2011 and the 'Storage and Handling of Dangerous Goods Code of Practice' (WorkCover NSW, 2005).		
LCC-168	Operations	<p>As outlined in Hazardous and Offensive Development Application Guidelines - Applying SEPP 33, the first step to determine if a PHA is required is to undertake screening tests, such as dangerous goods quantity or distance thresholds. Hazardous materials are defined as substances which fall within the classification of the ADG Code.</p> <p>As detailed in Table 14-4 of the EIS, there is the potential for six classes of dangerous goods to be transported to or from, and stored within, warehouses on the MPE Stage 2 site. Notwithstanding this, in accordance with the MPE Concept Plan Approval an operational decision has been made by SIMTA as the Proponent that the Proposal would not receive or store the six classes of dangerous goods identified in Table 14-4 in quantities greater than the screening thresholds identified in Applying SEPP 33. On this basis, a PHA is not required for the Proposal at this stage.</p> <p>Should an increase in quantities of any Hazardous Materials be required over and above the quantities assessed to date, then a PHA will need to be prepared and issued to relevant authorities for endorsement prior to allowing these materials on site.</p> <p>The Proposal involves the operation of warehouses and distribution facilities, namely infrastructure to support container freight</p>	<p>As noted in the submission, in accordance with the MPE Concept Plan Approval, an operational decision has been made by SIMTA as the Proponent that the Proposal would not receive or store the six classes of dangerous goods identified in Table 14-4 of the EIS in quantities greater than the screening thresholds identified in Applying SEPP 33.</p> <p>Should an increase in quantities of any Hazardous Materials be required over and above the quantities assessed to date further assessment would be undertaken as required.</p> <p>On this basis, deferred approval, as suggested by LCC is not considered suitable or necessary in that detailed information relating to hazards and risks has been satisfactorily assessed for the Proposal. As a result it is requested that this is not included as a condition of approval for the Proposal.</p>	Section 14 of the EIS.



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ID	Aspect	Comment	Response	Reference
		<p>transport to and from the MPE site. As such, there is the potential for the Proposal to require the transport of dangerous goods:</p> <ul style="list-style-type: none"> <li>• To and from the MPE Stage 2 site</li> <li>• Between the MPE Stage 2 site and the IMT facility (i.e. MPE Stage 1)</li> <li>• Temporarily within warehouses on the MPE Stage 2 site prior to distribution</li> </ul>		
LCC-169	Dangerous goods	<p>The EIS notes that as part of the Proposal, full containers would be transferred from the MPE Stage 1 site to the warehouses on the MPE Stage 2 site by trucks, where the contents would be unloaded in the warehouses by means determined by the future tenant. The goods stored within the warehouses would then be transported to market via other heavy vehicles which would enter the site and be packed separately.</p> <p>As the customers and proposed tenancies of warehouses have yet to be confirmed, the quantities and types of goods transported to, and stored temporarily on the site cannot currently be quantified, nor the possibility of transport or storage of dangerous goods at the MPE Stage 2 site be excluded.</p> <p>Depending on their type and quantity, dangerous goods have the potential to pose a risk to the health and safety of employees and contractors on the MPE Stage 2 site, the local community and the environment if not handled correctly, as they may be explosive, flammable, combustible, spontaneously combustible, oxidising, water-reactive, toxic or corrosive.</p>	<p>In accordance with the MPE Concept Plan Approval an operational decision has been made by SIMTA as the Proponent that the Proposal would not receive or store the six classes of dangerous goods identified in Table 14-4 of the EIS in quantities greater than the screening thresholds identified in Applying SEPP 33.</p>	Section 14 of the EIS.
LCC-170	Dangerous goods	<p>The handling of chemicals on the MPE Stage 2 site would constitute the greatest hazard</p>	<p>The types and quantities of good accepted at the site would be determined at the discretion of the Proponent. As previously identified an operational</p>	Section 14 of the EIS.

ID	Aspect	Comment	Response	Reference
		<p>with regards to the transport and storage of dangerous goods. The NSW Ports Trade report 2012 /2013 notes that in 2012 / 2013, Port Botany handles 144,779 TEU of containerised chemicals, an increase of 6.8 % from 2011/2012, and represented 13.6 % of total imported commodities for 2012/2013. Of these chemicals, the most prominent imported commodities were:</p> <ul style="list-style-type: none"> <li>o Plastic materials and artificial resins – 53,896 TEUs</li> <li>o Oils, perfumes and cleaning materials – 33,840 TEUs</li> <li>o Chemical materials and products – 20,738 TEUs.</li> </ul> <p>The EIS notes that within the PHA for the Port Botany Expansion EIS (SPC/URS, 2003), an analysis of dangerous goods trade passing through Port Botany showed that approximately 96 per cent of containers did not carry dangerous goods. On this basis, only four per cent of containers did carry dangerous goods.</p> <p>The more recent NSW Freight and Ports Strategy (Transport for NSW, 2013) notes that rail is used for 14 per cent of the container movement task to and from Port Botany. Cardno notes that this means that approximately 0.56% of all rail movements from Port Botany will contain dangerous goods.</p> <p>The EIS also notes that as SIMTA represents one of several existing and proposed IMTs within the Sydney region, the quantity of containers carrying dangerous goods would be small and would present a low risk to site personnel, the local community and the</p>	<p>decision has been made by SIMTA as the Proponent that the Proposal would not receive or store the six classes of dangerous goods identified in Table 14-4 of the EIS in quantities greater than the screening thresholds identified in Applying SEPP 33.</p> <p>Goods transferred from Port Botany to the Proposal site would only comprise goods that are to be accepted on site (i.e. not dangerous goods). The percentage of dangerous goods that travel by rail from Port Botany generally is therefore considered to be irrelevant.</p>	

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ID	Aspect	Comment	Response	Reference
		environment. Cardno believes that further quantification of the risk associated with dangerous goods being transferred to the MPE Stage 2 site be undertaken. Even though the percentage of dangerous goods being transported may be small the consequences from an incident can be catastrophic to the environment or the community if a transport incident were to occur.		
LCC-171	Consistency with Concept Approval	<p>The MPE Concept Plan EA identified the following key potential hazards and risks as potentially arising during the construction and operation of the MPE Project, including during the Proposal:</p> <ul style="list-style-type: none"> <li>• Potential for soil and groundwater contamination as a result of previous activities on the MPE site including unexploded ordnance</li> <li>• Presence of asbestos in existing structures and soil on the MPE site</li> <li>• Potential transport, storage and handling of dangerous goods and Bushfire.</li> </ul>	The submission provides a summary of the information provided in the EIS. It is considered that this does not require a response.	N/A
LCC-172	Summary of hazards and risk assessment	<p>The Hazards and Risks Assessment provided a number of conclusions and recommendations to be implemented during construction and operation of the MPE Project, including a number of management procedures, and some further investigations to address the potential risks and hazards identified.</p> <p>A Phase 2 ESA and Phase 3 risk assessment (Cardno has assumed this is referring to a Remediation Action Plan / remedial works) would be undertaken where required prior to the commencement of</p>	The submission provides a summary of the information provided in the EIS. It is considered that this does not require a response.	N/A

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ID	Aspect	Comment	Response	Reference
		<p>construction to delineate the presence and/or extent of soil and groundwater contamination present. Where required, approval would be obtained in accordance with SEPP 55 for remedial works (refer to Chapter 13 (Soils, groundwater and contamination) for more information)</p> <p>An asbestos management plan will be developed, containing a risk assessment undertaken in accordance with the Code of Practice for the Safe Removal of Asbestos (NOHSC, 2005), including the development of an asbestos removal control plan and emergency plan (refer to Section 14.5 for more information)</p> <p>A preliminary hazard assessment (PHA) would be undertaken during project application approval stages or by tenants during the operational phase of the development, as required by SEPP 33. Once the level of risk has been identified, the aim would be to reduce the risk to as low as reasonably possible through the application of specific operational management procedures that would form part of a framework for managing risks, captured within the facility's Hazard and Risk Management Plan and Emergency Response Plan. Should unacceptable levels of risk be identified during the PHA, future potential tenants would be required to demonstrate the measures to reduce the risk to an acceptable level prior to acceptance of tenancy (refer to Section 14.4 for more information).</p> <p>SIMTA as the Proponent would be required to disclose the type and quantity of goods entering the MPE site, prior to the commencement of tenancy. Prior to the lease</p>		

ID	Aspect	Comment	Response	Reference
		(of any warehouse) on the MPE site, all tenants that would handle dangerous goods would be required to sign on to SIMTA's Hazard and Risk Management Plan and the Emergency Response Plan for the MPE site. These plans would be reviewed regularly and updated as goods entering the MPE site change with tenancies. As a minimum, the requirements in the Code of Practice for storage and handling of dangerous goods (WorkCover NSW, 2005) would be adopted in these plans (Section 14.5 of the EIS provides more information regarding operational mitigation measures).		
LCC-173	Operational hazards	The Hazards and Risks Assessment has acknowledged that it is not possible to quantify the operational risks relating to the transport, storage and handling of dangerous goods to, from and within the MPE site in the absence of further details regarding future proposed tenancies. Arcadis noted that where information is available, the operational hazards and risks associated with the Proposal were updated and are described in Section 14.4 of the EIS.	The information provided in the submission is a summary of Section 14.1 of the EIS. Section 14.1 provides a summary of the Concept Plan Hazard and Risk Assessment. At the time of the concept plan assessment insufficient information was available to quantify the operational risks relating to the transport, storage and handling of dangerous goods to, from and within the MPE site. As noted where information is available, the operational hazards and risks associated with the Proposal were updated and are described in Section 14.4 of the EIS. This section identifies that an operational decision has been made that the Proposal would not receive or store the six classes of dangerous goods identified in Table 14-4 of the EIS in quantities greater than the screening thresholds identified in Applying SEPP 33.	Section 14 of the EIS.
LCC-174	Recommendations	The recommendations below are identified to address the identified impacts associated with Hazard and Risk to allow a comprehensive assessment of the Project: <ul style="list-style-type: none"> <li>The mitigation measures for construction and operational stages outlined in Section 14.5 should be committed to and should also be included within a risk register for the construction and operational phases of the Project.</li> </ul>	<ul style="list-style-type: none"> <li>Mitigation measures outlined in Section 14.5 of the EIS would form part of the Conditions of Approval for the Proposal if approved by the DPE. A risk register for the construction and operation of the project would be included within the CEMP and OEMP respectively.</li> </ul>	
LCC-175	Recommendations	<ul style="list-style-type: none"> <li>Should an increase in quantities of any Hazardous Materials be required over</li> </ul>	<ul style="list-style-type: none"> <li>As noted within the submission, in accordance with the MPE Concept Plan Approval an operational decision has been made by SIMTA as the</li> </ul>	

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ID	Aspect	Comment	Response	Reference
		<p>and above the screening thresholds identified in Applying SEPP 33, then a PHA will need to be prepared and issued to relevant authorities for endorsement prior to allowing these materials on site.</p> <ul style="list-style-type: none"> <li>The Hazards and Risks Assessment has acknowledged there are limitations to the level of assessment to quantify the operational risks relating to the transport, storage and handling of dangerous goods to, from and within the MPE site. DP&amp;E should therefore require that approval be conditional upon receiving further details fully assessing hazards and risks associated with future operations from any future tenancies on the site, prior to any operational activities commencing in that particular area of the site.</li> </ul>	<p>Proponent that the Proposal would not receive or store the six classes of dangerous goods identified in Table 14-4 of the EIS in quantities greater than the screening thresholds identified in Applying SEPP 33. Should an increase in quantities of any Hazardous Materials be required over and above the quantities assessed to date further assessment would be undertaken as required.</p>	
LCC-176	Recommendations	<ul style="list-style-type: none"> <li>The Pollution Incident Response Management Plan should be prepared in accordance with the Environmental Guidelines: Preparation of Pollution Incident Response Management Plans prepared by the NSW Environment Protection Authority dated 2012.</li> </ul>	<ul style="list-style-type: none"> <li>The Operational Environmental Management Plan (OEMP) would include an Emergency Response Plan (ERP), including a Pollution Incident Response Management Plan (PIRMP), and a refuelling procedure that would specify procedures to follow in the event of a spill and refuelling, to prevent contamination. The Pollution Incident Response Management Plan would be prepared in accordance with the Environmental Guidelines: Preparation of Pollution Incident Response Management Plans (Environment Protection Authority, 2012).</li> </ul>	
LCC-177	Recommendations	<p>Considering the potential risks and hazards to the local community and environment, in the event that the Proposal is approved, Council should be provided with draft copies of all site emergency management plans (including the Pollution Incident Response Management Plan) for review to allow any comments to be provided prior to construction and operations commencing as part of the construction certificate requirements.</p>	<ul style="list-style-type: none"> <li>Preparation of emergency management plans would be undertaken as part of the CEMP (Refer to Section 8 of this RtS)</li> </ul>	

ID	Aspect	Comment	Response	Reference
<b>Heritage</b>				
LCC-178	Isolated Artefacts	<p>A review of the EIS and Appendix S identified a number of inconsistencies between these documents which required clarification prior to determination. The EIS states that Isolated Artefacts 1, 3 and 4 are within the stage 2 area where as Isolated Artefact 2 is outside the proposal site. However, in Appendix S it states that Isolated Artefacts 1, 2 and 3 are within the Stage 2 area with Isolated Artefact 4 outside the proposal site. The definition of the project boundary in relation to these sites should be confirmed in order to ensure that adequate protection is provided for the sites within the area to be approved.</p>	<p>It should be clarified that at the time of writing the MPE Concept Approval Aboriginal Heritage Impact Assessment (Archaeological and Heritage Management Solutions (AHMS), 2012), Isolated Artefact 4 was located outside of the Proposal site.</p> <p>As part of the MPE Concept Approval Modification 2 (Arcadis, 2016), an extension of land to which the MPE Concept Approval applies (for the intermodal site) was included to account for the drainage works to the south of the MPE site, which form part of the Proposal, as amended. Isolated Artefact 4 is located within this portion of land, and is therefore inside the Proposal site.</p> <p>Section 16 of the EIS for the Proposal acknowledged that</p> <p><i>'construction of the Proposal has the potential to result in impacts to three isolated artefacts located within the construction footprint, being Isolated Artefact 1, Isolated Artefact 3 and Isolated Artefact 4',</i></p> <p>and</p> <p><i>'Isolated Artefacts 3 and 4 (previously recorded by AHMS as part of the Aboriginal heritage impact assessment prepared to support the Concept Plan EA) would be located within the construction footprint of the Proposal (refer to Figure 16-2 for location relative to the Proposal site)'.</i></p> <p>To mitigate the potential for impacts to Isolated Artefact 4, which is located within the Proposal site, the following mitigation measure was included within Section 16.5.1 of the EIS and Section 7.2 of the Aboriginal Heritage Impact Assessment at Appendix S of the EIS:</p> <p><i>'An exclusion zone would be provided around previously identified MPE Isolated Artefacts 2, 3 and 4 to avoid potential disturbance of these artefacts during construction of the Proposal .</i></p> <p>As shown in Figure 16-2 of the EIS, Isolated Artefact 2 is located outside of the Proposal area. Isolated Artefact 2 would continue to be located outside of the amended construction and operational area, as shown in Figure 6-2 and Figure 6-3 of this RtS.</p>	
LCC-179	Registration of Isolated Artefacts with AHIMS	<p>In Appendix S, a lack of justification has been provided as to why none of the artefacts within the stage 2 boundary have been registered within AHIMS. AHIMS is an</p>	<p>As identified in Appendix S of the EIS there were three Aboriginal sites recorded in the Stage 2 Proposal study area during the MPE Concept Plan Assessment and one adjacent to it. All four sites were classed as 'isolated</p>	<p>Appendix S of the EIS.</p>

ID	Aspect	Comment	Response	Reference
		important tool of site registration which ensured the registration and documentation of Aboriginal sites and object. Appendix S includes no discussion as to why the use of this best practice system has not been utilised suggesting that a key mitigation measure for the project would be the registration of these sites.	artefacts', were assessed as having low archaeological significance and were not recorded in AHIMS.	
LCC-180	Visual impacts to Glenfield Farm	In reference to potential visual impacts to Glenfield Farm, Appendix T refers to Appendix R of the EIS for an assessment of the associated visual impacts. The only mention of this in Appendix R is a statement which dismisses visual impacts due to "the surrounding conditions and proximity to the Proposal... Glenfield Farm being within proximity only to views that assess the impact of rail". None of the view analysis include or demonstrate this suggesting that further analysis is needed to draw any conclusions regarding the visual impacts to Glenfield House.	A discussion of potential impacts to Glenfield farm is included in Section 17 of the EIS.  The assessment concludes that direct visual impacts of the Proposal on Glenfield Farm would be limited by the approved redevelopment of the adjoining MPW site as this development is situated between the MPE site and Glenfield Farm. Although the recommended conservation management for Glenfield Farm emphasises the need to retain views to the east over the railway line, these vistas have already been considerably modified by the prior Defence National Supply and Distribution Centre (DNSDC) and associated structures, the creation of the Glenfield Waste Disposal facility, the construction of the Southern railway line and the erection of a concrete flyover to carry vehicles over the Southern railway line. Based on this, the Proposal would not impact further on the existing setting of Glenfield Farm.	Section 17 of the EIS.
LCC-181	Indigenous Heritage	In addition to this, Appendix S recommends that consultation be maintained with the RAPs during the finalisation of the Aboriginal Heritage Impact Assessment report for the Proposal, however this is not included within the EIS. Ongoing consultation with RAPs is important to ensure adequate respect of the heritage context of the land is maintained during the development	Appendix S includes the following within its recommendations "Consultation would be maintained with RAPs during the finalisation of the Aboriginal Heritage Impact Assessment report for the Proposal". The Aboriginal Heritage Impact Assessment report for the Proposal was finalised prior to lodgement of the EIS. As noted within Appendix S, the RAPs were provided with a draft version of Appendix S for their comments with a response period of seven days. As there were no proposed impacts to Aboriginal sites, and all RAPs had been involved in extensive consultation during previous project stages, this approach is considered appropriate and adequate.	Appendix S of the EIS
LCC-182	Fencing	The use of fencing as a mitigation measure also seems to be inconsistent within the EIS as the duration of the erection of the exclusion fence in EIS Section 16.4.1 is defined as being maintained during construction and operation, where as in EIS	The fencing of PAD 2, 3 and 4 is not recommended for operation of the Proposal. Permanent fencing around items of Aboriginal heritage significance is not common practice as this often draws unwanted attention. In addition, given the low Aboriginal significance of these items, and low volume of disturbance anticipated during operation of the Proposal at this location.	Section 7.10 and 8 of this RtS.



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ID	Aspect	Comment	Response	Reference
		Section 16.5.2 it is stated that no mitigation measures are proposed during operations. To ensure adequate protection exclusion fencing should be maintained throughout operations to ensure that the artefacts are not damaged or destroyed.		
LCC-183	Non-Aboriginal heritage	The EIS non-Aboriginal heritage chapter and Appendix T are not consistent in approach to the mitigation of the site. Appendix T recommends the archival recording of the entire former DNSDC site including the relationship between the structures and landscaping, which should be completed as part of the Stage 1 works. The EIS makes no mention as to whether this work has been undertaken or if it will be undertaken	<p>It is acknowledged that in Appendix T of the EIS, the recommended mitigation measures include the following recommendation:</p> <p><i>'Archival recording of the entire former DNSDC site including relationships between structures and landscape has been recommended as part of MPE Stage 1. This should be completed prior to any impacts occurring within MPE Stage 2'.</i></p> <p>As part of Stage 1 of the MPE Project, archival recording of the entire MPE site has been undertaken. This is documented in the Moorebank Precinct Photographic Archival Recording Report (Artefact Heritage, 2017). As such, this mitigation measure does not need to be transferred into the mitigation measures for the Proposal.</p>	Appendix T of the MPE Stage 2 EIS
LCC-184	Reoccurring themes	The Aboriginal and non-Aboriginal heritage specialist studies recommend mitigation measures that have not been carried across to the project EIS. These mitigation measures include the use of ongoing consultation with Registered Aboriginal Parties (RAPs) and the use of extensive archival recording, which are in accordance with best practice methods and therefore require inclusion in the Project commitments. In addition to this, the registration of the identified Isolated Artefacts within the Aboriginal Heritage Management System (AHIMS) has not been considered in the Project documentation. Registration in the AHIMS database provides a best practice management approach to ensure adequate records for future generations	<p>With regards to non-indigenous heritage, all mitigation measures recommended in Appendix T of the EIS were included in Section 17 of the EIS, with the exception of the mitigation measure relating to archival recording. As stated above, as part of Stage 1 of the MPE Project, archival recording of the entire MPE site has been undertaken. This is documented in the Moorebank Precinct Photographic Archival Recording Report (Artefact Heritage, 2017). As such, this mitigation measure does not need to be transferred into the mitigation measures for the Proposal.</p> <p>The Indigenous heritage mitigation measures included in Appendix S of the EIS were included in Section 16 of the EIS, with the exception of the following mitigation measure:</p> <p><i>'Consultation would be maintained with RAPs during the finalisation of the Aboriginal Heritage Impact Assessment report for the Proposal'.</i></p>	<p>Section 17 of the MPE Stage 2 EIS</p> <p>Appendix T of the MPE Stage 2 EIS</p>

ID	Aspect	Comment	Response	Reference
LCC-185	Recurring themes	In addition to this, the original SIMTA Concept Plan EIS identified the concept of the Moorebank Cultural Heritage Landscape, which considered the historic relevance of the site in its entirety and as a culmination of both Aboriginal and European history. The identification of this landscape alludes to the fact the impacts to heritage on site would not occur in isolation, but would actually result in a cumulative heritage impact to the landscape in its entirety, as a result of the other projects in the area. The EIS and associated specialists reports for Stage 2 do not mention the landscape values as a whole and as such do not quantify the level of heritage impacts at a cumulative scale. It is recommended the cumulative approach be considered as part of this assessment prior to the approval of this or subsequent stages.	<p>As detailed in the MPE Concept EIS, the Moorebank Cultural Landscape significance relates to the numerous phases of land use and occupation spanning from pre-European settlement (Aboriginal occupation) to today relating to the Moorebank area, which includes the Proposal site. The various site toponyms, buildings, spatial organisation, memorials, archaeological deposits and landforms have tangible associations with Thomas Moore, the Australian Army and the Indigenous community.</p> <p>The Moorebank Cultural Landscape has been assessed to be of local and Commonwealth significance in terms of historical associations, research potential, technological characteristics, uniqueness, and Indigenous cultural values (albeit not listed on the Commonwealth Heritage register).</p> <p>The net impact generated by the Proposal would be likely to result in disturbance to archaeological deposits, removal of landscape elements, partial loss of the existing landscape setting, historical associations and the landscape's research potential. The retention of portions of bushland vegetation and some cultural heritage values would assist in preserving the existing cultural values of the Moorebank landscape, along with the archival recording of archaeological items disturbed as a result of the Proposal construction.</p> <p>Additional mitigation measures have been proposed in section 8 of this RtS to mitigate impacts of the Proposal, in a cumulative context, on the Moorebank Cultural Landscape, including:</p> <ul style="list-style-type: none"> <li>• Naming of roads would consider previous DSND street names.</li> <li>• Naming of buildings and roads (in addition to above) would consider commemoration of significant events and individuals related to the Moorebank Cultural Landscape</li> </ul>	<p>Section 17 of the MPE Stage 2 EIS</p> <p>Section 8 of this RtS</p>
<b>Visual Amenity, Urban Design and Landscape</b>				
LCC-186	Methodology	The methodology utilised for the VIA conducted for this EIS favours the Project and downplays the significance of the changes to the Visual Amenity associated with the Proposal. The methodology was centred on the maintenance of previously used viewpoints established within the Concept Plan approval stage of the MPE Project. Whilst this may have been	The methodology for the visual impact assessment of the Proposal (refer to Appendix R of the EIS) is consistent with the previous methods used to assess the visual impacts associated with Stage 1 of the MPE Project and the MPE Concept Plan environmental assessment. The viewpoints for the assessment of visual impacts used in the MPE Concept Plan assessment, and the MPE Stage 1 Project, have been used to provide a consistent assessment of the visual impacts of each stage of the MPE Project.	Appendix R of the EIS

ID	Aspect	Comment	Response	Reference
		appropriate for that stage of the process it doesn't allow for changes in the urban environment that have occurred since the first VIA was conducted in June 2011. Viewpoints 09 and 13 are reflective of this issue and can be better located to address public concern for the scale of the development.	<p>Potential changes in urban environment are accounted for as each assessment is conducted by undertaking a desktop review and site inspection. Each original viewpoint location is examined for significant changes to the urban environment and to identify items that may warrant a new viewpoint to be established. Examples of warranting changes may include new buildings or significant changes to vegetation in the direct corridor that affect capacity to see the development. All changes do not warrant new photographs and only those view corridors that have changed significantly require such.</p> <p>In response to the concerns raised regarding the above (particularly view 09 and 13), Reid Campbell conducted an additional site inspection to review the relevance of the images used to inform the EIS assessment. The additional site inspection determined the views shown on the images in the EIS visual impact assessment (refer to Appendix R of the EIS) were still accurate depictions of view corridors towards the subject site.</p>	
LCC-187	Viewpoint 09	Viewpoint 09 is located to the north of the site and was located adjacent to residential land. Since this viewpoint was initially identified Defence has developed the DJLU to the north the MPE site. The development of the DJLU site saw the removal of a significant amount of vegetation directly to the north of the MPE site improving sight lines. The positioning of viewpoint 09 is on the Corner of ANZAC Road and the Greenhills Road reserve, a dirt track servicing the rear of industrial sites. This viewpoint would be better placed 85 metres further east on the corner of ANZAC Road and Delfin Drive as this is a major entry point of the residential subdivision to the north of the DJLU site.	<p>Viewpoint 09, as shown in Figure 8 of Appendix R of the EIS, is consistent with the Concept Plan assessment. The assessment of visual impacts of the Proposal at this location was undertaken consistent with the approach detailed in LCC-176 above, and has taken into account the development of the DJLU site. The DJLU site provides shielding of the Proposal at viewpoint 09, and the Proposal would have a minimal visual impact at this location.</p> <p>The positioning of viewpoint 09 at a location consistent with the Concept EIS Visual Impact Assessment (Reid Campbell, 2013) allows for a direct comparison of the impacts assessed and approved in the Concept EIS with impacts assessed through the staged development of the Project.</p> <p>Further, the movement of this viewpoint further east to the corner of Anzac Road and Delfin Drive would not result in the visual impacts of the Proposal changes from the assessment included in the EIS, as the development of the DJLU and existing vegetation at that location would provide shielding of the Proposal, thereby having a minimal impact to visual amenity at this location.</p>	Appendix R of the EIS.
LCC-188	Viewpoint 13	Viewpoint 13 was established as the only new viewpoint for this EIS. This was undertaken due to the opening of a linear parkland surrounding ANZAC creek to the East of the DJLU site and adjacent to the residential development of Wattle Grove.	<p>It should be acknowledged that viewpoint 13 was considered as part of the VIA for the MPE Stage 1 Project (Reid Campbell, 2015) and is not a new viewpoint, as noted in the LCC submission.</p> <p>A visual impact assessment memorandum (VIA memo) (Reid Campbell, 2017) has been prepared as part of this RtS, and is included at Appendix F. As part of the VIA memo, to respond to submissions raised, a supplementary</p>	Appendix F of this RtS.

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		Viewpoint 13 was positioned to the west of viewpoint 12 from in the new parkland. The selection of this viewpoint was in appropriate as the photographer was positioned directly behind some foreground vegetation where there was scope to move further west to the main pathway through the park that lies adjacent to the western fencing. This position provides uninterrupted views to the MPE site and the Stage 2 works would be clearly visible to all the public users of the walking path.	<p>viewpoint (herein referred to as viewpoint 14a) has been included, an assessment of the visual impacts of the Proposal at this location has been undertaken. Viewpoint 14a is located approximately 200m north of viewpoint 14 and provides a more open view to the Proposal site from the East, and is therefore considered to be more representative of the view along the linear park. The location of supplementary viewpoint 14a is shown on Figure 1 and a simulated view of the Proposal from this location is provided in Figure 3 of the VIA memo (Reid Campbell, 2017). An assessment of the visual impacts of the Proposal at this location has also been included at Appendix F of this RtS, which notes that:</p> <p><i>'The existing urban context is that of an established industrial precinct and as such any addition of further industrial development, such as the Proposal would not detract from the visual amenity of this viewpoint. As a result, the visual impact is considered to be low/ moderate.'</i></p> <p>The visual impact of the Proposal at viewpoint 14a is considered consistent with the impacts of viewpoint 13, as included in the EIS VIA, provided at Appendix R of the EIS.</p>	
LCC-189	Viewpoint 04, 05 and 06	<p>The perspectives created by viewpoints 04, 05 and 06 are misleading as they do not directly look at the works undertaken as part of MPE Stage 2. Viewpoints 04 and 05 are looking at the southern end of the MPE site and show the Stage 1 works but do not show the full extent of the development and therefore the full impact to the public from these two vantage points. Viewpoints 04 and 05 are located in Casula Park and locations where a wide segment of the public would be exposed to the development. Viewpoint 06 is not even directed towards the MPE site and therefore misleads the public as the extent that the development will affect residents within this area of Casula. These three viewpoints should be directed towards the development site and it is anticipated that the Visual Impact would be increased negatively.</p>	<p><u>Visual impact assessment at viewpoint 04 and viewpoint 05</u></p> <p>Viewpoints 04 and 05; located in Casula, as shown on Figure 8 of the EIS Visual Impact Assessment (VIA, Reid Campbell, 2016) and are located west of the Proposal site and MPW site, in Casula. In response to the above issue raised by LCC, a revised assessment of the visual impacts of the Proposal at viewpoints 04 and 05 has been undertaken which show the extent of development across the Moorebank Precinct, inclusive of the Proposal, the MPE Stage 1 Project and the MPW Stage 2 Proposal and is provided in the VIA memo at Appendix F of this RtS.</p> <p><u>Direction of viewpoint 06</u></p> <p>A revised assessment has not been undertaken as part of this response to submissions report in response to the above issue raise by LCC regarding the visual impact assessment at viewpoint 06. The existing view at viewpoint 06 when the viewpoint is rotated to directly face the Proposal site is included in the VIA memo at Appendix F of this RtS. As evident in the simulated view in Appendix F, the existing residential development obstructs the view corridor towards the Proposal at this location. In addition, the distance from the Proposal site (850m) and the natural topography at this location, and the</p>	Appendix F of this RtS.

ID	Aspect	Comment	Response	Reference
			<p>natural topography at this location further detracts from the potential for view corridors towards the site.</p> <p>It should be noted that when selecting the viewpoints for undertaking the visual assessment of the MPE Project as part of the Concept EIS, viewpoints 04 and 05 were identified as appropriate as they not only provided viewpoints at public locations with views towards the MPE site, but also provided supplementary views for the residents in Buckland Road, where viewpoint 06 is located. Viewpoints 04 and 05 are therefore likely to depict the closest publicly available locations for which a representative visual impact can be inferred for viewpoint 06.</p>	
LCC-190	Viewpoint 04, 05 and 06	<p>Viewpoints 04 and 05 are inconsistent in their assessment of Visual Sensitivity. This criteria focused on the likely duration of views and number of observers from a given viewpoint. This criteria is independent of the 'prominence' of the Proposal. Viewpoints 04 and 05 are both located with Casula park but receive very different weightings for Visual sensitivity, with assessments of Moderate/High and Low respectively. If the viewpoint 05 assessment was amended to match viewpoint 04 for both the construction and operation stages of the project then Visual Impacts would change from Low to Moderate/High.</p>	<p>It is acknowledged that in the EIS VIA, there was an inconsistency in the visual sensitivity between during construction of the Proposal at viewpoints 04 and 05, which are located in close proximity to each other and in a similar setting (i.e. both located within Carroll Park). As a result, to ensure accuracy and consistency in the assessment of visual impacts at these viewpoints, their visual sensitivity has been reassessed, with the findings for both viewpoints 04 and 05 as follows:</p> <p><i>Being a residential area the visual sensitivity at viewpoint 05 is considered to be high, with several houses within the area and users of the adjacent parkland being able to see the development. However, as the existing views at this location include industrial development on the MPW site and MPE site from historical land uses, included the School of Military Engineering and the DSND, the visual sensitivity at this viewpoint is considered to be moderate.</i></p> <p>As a result of this revised visual sensitivity, the construction visual sensitivity of viewpoint 04 would change from moderate/ high, as reported in the EIS, to low/ moderate, and viewpoint 05 would change from low, as reported in the EIS, to low/moderate. The revised assessment of visual sensitivity at these locations results in a more consistent and accurate visual impact assessment at these locations. The revised visual impact assessment at these viewpoints has been undertaken in consideration of this revised visual sensitivity rating at these locations.</p>	
LCC-191	Cumulative visual impact of the Moorebank Precinct.	<p>The interrelationship of the MPE and MPW IMT facilities is inconsistently applied. Viewpoints 04 and 05 show the MPW site as a green shaded plane whilst showing the MPW development extent in viewpoints 19,</p>	<p>The photomontages of the Proposal from viewpoints 04 and 05 have been revised to take into consideration the cumulative development of the Proposal with the MPW Stage 2 Proposal, consistent with viewpoints 19, 20, 21, 22 and 23 as shown in the EIS Visual Impact Assessment (Appendix R of the EIS).</p>	Section 15 and Appendix R of the EIS.

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		20, 21, 22 and 23. As the MPW Concept Plan has been approved the extent of this development should be included in all photomontages, including viewpoints 04 and 05 in Casula Public Park, to enable the public to be able to fully appreciate the effect of both developments.	A revised assessment of the visual impact of the Proposal has been undertaken for viewpoints 04 and 05, which included consideration of the supplementary photomontages showing the MPW Stage 2 Project and the Proposal. The revised assessment is provided in in Appendix F of this RtS. The assessment noted that the Proposal would be prominent at this location but largely screened by Stage 2 of the MPW Project. As such the compatibility of the urban context would mean that any introduction of additional industrial development would not detract from the visual amenity of the area, resulting in a low/moderate visual impact. The revised location of this viewpoint would not change the visual impact of the Proposal, as described in Section 15 and Appendix R of the EIS, and no additional mitigation measures are considered necessary.	Appendix F of this RtS.
LCC-192	Vegetation modelling	The vegetation modelling in the photomontages shows mature tree plantings. Consequently, the image of the proposal site, is as it would be once the plantings within the Landscape plan have reached maturity. It is expected that this process will occur over a 20 to 30 year time frame. The VIA should take this timeframe for vegetation maturation into account and provide Visual Impact assessments for the short and medium term.	The vegetation in the photomontages is consistent with the vegetation shown in the visual impact assessment of the MPE Stage 1 Project and the Concept Plan environmental assessment.  Vegetation modelling which shows trees at maturity is common practice, and the inclusion of photomontages showing short and medium-term representation of vegetation is considered unreasonable. It is acknowledged that the maturation of vegetation takes time. In consideration of this, and as detailed in the revised landscape design statement at Appendix B of this RtS, where possible, plantings have used fast-growing species. This would provide landscaping representative of that which is shown in the visual impact assessment in Appendix R of the EIS, and the VIA memo at Appendix F of this RtS.	Appendix R of the EIS.  Appendix F of this RtS
LCC-193	Rendering and colour choices	The rendering and colour choices used in the construction of the photomontages for the extent of the development is misleading. Overly the MPE development is constructed in a muted colour pallet with the intention of downplaying the extent of the overall development at the EIS stage. This is particularly evident in the rendering of the IMT facility with containers not stacked to their full height or coloured in standard shipping container colours. There are further inconsistencies in the rendering of the numerous warehouses as part of Stage 2 of the MPE project. The architectural drawings	The development of both the VIA and the Architectural drawings are subject to design development. As such the anomaly identified has not been fabricated with intention to mislead or misinform, but is rather a representation of the design at one point during the process. Other techniques such as 'muting' the colours of the containers in the Stage 1 area are not to downplay, but rather maintain focus on the subject being assessed, being the MPE Stage 2 Proposal.	N/A

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		detail a specific green colour pallet for the external surfaces of the warehouses. The rendering used in the production of the photomontages use a muted red colour pallet which has the effect of disguising the development buildings behind the vegetation buffer, further misleading the public view on the extent of the proposal.		
LCC-194	Consistency with Concept Approval	The assessment conducted for this EIS has varying consistency with the assessment conducted for the MPE Concept Approval, with the visual impacts downgraded for a number of the assessed viewpoints for this EIS submission.	The level of impact relating to visual amenity included in the MPE Concept Approval was in consideration of the entire MPE Project. The visual impacts included in the EIS relate to stage 2 of the MPE Project only, resulting in a different level of impact, as the Proposal does not include the entire development.	N/A
LCC-195	Consistency with Concept Approval	<p>The Concept Approval found that the operational visual impacts ranged from Negligible to Moderate/High, however the highest operational visual impact in the Stage 2 EIS is Moderate, which demonstrates a reduction in visual impact between assessments.</p> <p>Moderate/High impacts were assessed for two significant viewpoints adjacent to residential development in Wattle Grove in the Concept Approval due to the development being relatively prominent at this location. The EIS assessment does not have any viewpoints rated Moderate/High for visual impact, with the two Moderate/High assessments downgraded to Low/Moderate. This downgrade was assessed as a linear parkland along ANZAC creek has been established since the initial Concept Plan approval was sought, introducing a vegetation corridor between the residential area of Wattle Grove and the proposal site. The VIA undertaken for this EIS failed to take into account what the effect of this</p>	<p>The MPE Concept Approval assessed the visual impacts of the 'full build' design, while the Proposal visually assesses Stage 2 of the MPE Project (i.e. a smaller development than that proposed in the full build).</p> <p>Supplementary viewpoint 14a was established and assessed as part of this RtS, in response to the LCC submission received on the Proposal. Viewpoint 14a is located approximately 200m north of viewpoint 14 included in the EIS and provides a more open view to the Proposal site from the East, and is therefore considered to be more representative of the view along the linear park. The location of supplementary viewpoint 14a and a simulated view of the Proposal from this location is provided in the Visual Impact Assessment memo (Reid Campbell, 2017), provided at Appendix F of this RtS. An assessment of the visual impacts of the Proposal at this location has also been included at Appendix F of this RtS, which notes that:</p> <p><i>'The existing urban context is that of an established industrial precinct and as such any addition of further industrial development, such as the Proposal would not detract from the visual amenity of this viewpoint. As a result, the visual impact is considered to be low/ moderate.'</i></p> <p>The visual impact of the Proposal at viewpoint 14a is considered consistent with the impacts of viewpoint 13, as included in the EIS VIA, provided at Appendix R of the EIS.</p>	Appendix R of the EIS.



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		development would be on the users of the new linear park. This parkland increases the number of residents that would be able to observe the development from this site and should be taken into account as part of any VIA undertaken.		
LCC-196	Recommendations	<p>The recommendations below are identified to address the identified impacts associated with visual assessment to allow a comprehensive assessment of the Project:</p> <ul style="list-style-type: none"> <li>The selection and utilisation of Viewpoints for inclusion with the VIA needs to be conducted on an individual stage basis. The utilisation of previous viewpoints, whilst being consistent, does not account for the change in land uses surrounding the site. A comprehensive assessment must be undertaken for each stage, using previous iterations as a starting point, to determine a range of assessment locations to adequately assess the impact of the proposed development on all sensitive receivers. A review of all viewpoints utilised should be conducted to determine adequacy in utilisation for this proposal</li> </ul>	Refer to issue LCC-186 (Methodology) for a response to this comment	LCC-186
LCC-197	Recommendations	<ul style="list-style-type: none"> <li>The VIA conducted in the linear park located between Wattle Grove and the DJLU site along ANZAC Creek was incomplete and requires further assessment as direct views to the proposal site exist from this location and were not assessed.</li> </ul>	Refer to issue LCC-186 (Viewpoint 13) for a response to this comment	LCC-186
LCC-198	Recommendations	<ul style="list-style-type: none"> <li>Inconsistency exists in the rendering of the approved components of the MPW project within the photomontages for the</li> </ul>	Refer to issue LCC-191 (Cumulative visual impact of the Moorebank Precinct) for a response to this comment	LCC-191



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		MPE proposal. This exclusion downplays the full extent of development within the Moorebank Precinct that residents will be exposed to. All photomontages should include the extent of existing and approved projects so that all sensitive receivers can appreciate the full impact of development on appropriate locations selected for VIA.		
LCC-199	Recommendations	<ul style="list-style-type: none"> <li>Rendering of construction is inconsistent with colour pallets identified within architectural drawings. All photomontages should be updated to reflect the proposal colour pallet detailed, with all ancillary infrastructure and freight (containers) depicted in a manner that reflects actual IMT facilities.</li> </ul>	Refer to issue LCC-193 (Rendering and colour choices) for a response to this comment	LCC-193
LCC-200	Recommendations	<ul style="list-style-type: none"> <li>Modelling of vegetation should be depict the growth at various stages of maturity. This should include short and medium term photomontages in addition to full maturity which would only be reached after 30 years of operation of the facility.</li> </ul>	Refer to issue LCC-192 (Vegetation modelling) for a response to this comment	LCC-192
LCC-201	Recommendations	<ul style="list-style-type: none"> <li>Impacts of cranes required for construction should be assessed to capture their visual impact during construction.</li> </ul>	As detailed in Section 15.4.1 of the EIS, During construction, the most visible elements would likely to be equipment, such as cranes and piling rights. These would be likely visible from areas such as Moorebank Avenue, the nearby passenger rail lines and potentially nearby residential areas of Casula and Wattle Grove. However, given the low rise nature of construction works, it is unlikely that these works would be more intrusive than the terminal operating equipment. Furthermore, any visual impacts would be localised and temporary in nature.	Section 15.4.1 of the EIS.
LCC-202	Reoccurring Themes	The Visual Impact Assessment undertaken as part of the MPE Stage 2 proposal is considered to not comprehensively assess the impact on surrounding residents and other sensitive receivers. The methodology	Refer to issue LCC-186 (Methodology) for a response to this comment	LCC-186

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		employed for this proposal (and all other iterations of both the MPE and MPW projects) employs the same viewpoints as were utilised for the initial concept Approval. Whilst this ensures consistency across stages there is little analysis of the changing environment around the Project site and whether Visual Impacts of the Project are intensifying in different locations with no assessment.		
LCC-203	Recurring themes	Of particular concern is the recently constructed DJLU adjacent to the MPE project to the north. This has seen a significant intensification of land use on this site and the addition of a linear parkland between the DJLU and the neighbouring Wattle Grove residential suburb. The Visual Impact Assessment does not adequately assess how the MPE Stage 2 Proposal will affect this parkland or the residents of Wattle Grove who use this space, which is essential given the construction of Warehouses would be undertaken approximately 200m away.	Refer to issue LCC-187 (Viewpoint 09) and LCC-188 (Viewpoint 13) for a response to this comment	LCC-187 and LCC-188
LCC-204	Recurring themes	<p>The assessment of Visual Impact of the future state of the proposal relies upon the creation of photomontages that depict the future development form. There are inconsistencies and inaccuracies within the approach followed.</p> <p>These relate firstly to the rendering of the buildings within Stage 2, with the colour pallet used within the photomontages not matching those found in the colour pallet described in the architectural drawings. The colour pallet used in the photomontages uses a range of muted tones that are designed to blend in with the existing environment with the intention of downplaying the effect that the</p>	Refer to issue LCC-191 (Cumulative visual impact of the Moorebank Precinct) and LCC-193 (Rendering and colour choices) for a response to this comment.	LCC-191 and LCC-193

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ID	Aspect	Comment	Response	Reference
		<p>proposal will have on its surrounds. Secondly, the photomontages inconsistently display the cumulative effect that the MPW project will have on MPE, with MPW shown in some images but not others. It is expected that approved projects also be represented within photomontages so that the public understand the total affect that these projects will have on their day to day lives. It is noted that the images that show the MPW are those where the cumulative impact is only minor with those that could be perceived to show major impacts downplaying the extent of combined development.</p> <p>These two issues have significant increased impacts on the residents of both Casula and Wattle Grove and warrant further studies to accurately assess the impact of the MPE project (with the associated MPW impact) on these sensitive receivers</p>		
<b>Cumulative effects</b>				
LCC-205	Reoccurring Themes	<p>The MPE and MPW sites are located adjacent to one another on the eastern and western sides of Moorebank Avenue respectively. Agreement has been reached between MIC and SIMTA for an integrated precinct wide IMT, as identified by the Commonwealth Government press release of 4 June 2015. However, the Projects remain as two separate entities, with no interaction or pooling of resources and infrastructure</p> <p>Council previously requested that a master planned approach to the development of the IMT's be considered that looks to quantify resource use and infrastructure provision, along with environmental impacts, prior to examining strategies to minimise these</p>	<p>As discussed in Section 1.6 of the EIS, SIMTA and MIC have reached an agreement to develop their respective IMT sites (MPE and MPW) as a whole precinct (herein referred to as the Moorebank Precinct). Notwithstanding this, as approvals have previously been provided separately it is intended that the MPE and MPW statutory planning approvals remain separate, and for the sites to be constructed and operated via progressive individual approvals that are consistent with the Concept Plans granted for each of the respective sites.</p> <p>To assess the precinct as a whole, each statutory planning approval contains a cumulative assessment for key issues including traffic, noise and vibration, air quality, human health, hazard and risk, biodiversity and visual amenity (refer to Section 19 of the EIS), that have considered the potential impacts of the MPE Stage 2 Proposal as a standalone as well as in conjunction with the adjacent MPW development.</p> <p>Detailed cumulative impact assessments have also been undertaken previously as part of the MPE Project (MPE Concept Plan Approval, MPE Stage 1 Approval (SSD 14-6766) and MPW Project (MPW Concept Approval).</p>	Section 1.6 and 3 of the EIS.
LCC-206	Reoccurring themes			

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ID	Aspect	Comment	Response	Reference
		<p>impacts. A consolidated approach would provide more confidence in the level of assessment both for the MPE site as a single entity and the IMT precinct as a whole, as well as confidence for the community in the assessment process.</p> <p>The EIS does not address the request to combine the two sites through a master planned approach, or acknowledge that the Project should be developed and assessed to establish whether an IMT of this scale at Moorebank is reasonable. Conversely the EIS (Arcadis, 2016) states that it is SIMTA and MICs intention for the sites to be constructed and operated via progressive individual approvals, with no discussion of an integrated approach. Consequently, the cumulative impacts of the SIMTA site are not clearly articulated and an assessment of whether the significant environmental impacts can be mitigated preferably on land under the proponents control. Based on the information contained within the EIS, it does not appear that this is currently the case.</p>	<p>In all instances, mitigation measures have been prepared to mitigate environmental issues associated with the two projects.</p>	
<b>Concept Approval Modification 2</b>				
LCC-207	Reoccurring Themes	<p>A modification to Concept Approval MP10_0193 under Section 75W (repealed), relying on the transitional provisions within Schedule 6A of the EP&amp;A Act has been lodged by SIMTA with DP&amp;E. The modification has a number of aspects including importation of 600,000m<sup>3</sup> of fill, expansion of the site and revisions to the internal layout.</p>	<p>A second Concept Plan modification application, prepared under Section 75W of the EP&amp;A Act was submitted concurrently with the MPE Stage 2 EIS. The potential impacts of the Proposal that relate to the Concept Plan modification have been assessed as part of the EIS. Approval of the Concept Plan modification will be required in advance of approval of the MPE Stage 2 Proposal.</p>	MPE Concept Plan Modification 2 (Arcadis, 2016)
LCC-208	Reoccurring Themes	<p>The site preparation works and internal layout revisions are critical to the subsequent development of Stage 2. The reliance of</p>	<p>There is no regulatory basis prohibiting the undertaking of an assessment in advance of the Concept Plan modification being approved. There are some efficiencies in the assessment process, notably for the regulatory agency (in this case DP&amp;E) when the two are presented concurrently.</p>	

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ID	Aspect	Comment	Response	Reference
		Stage 2 on the modifications proposed by the Concept Approval Modification 2 should prevent the Stage 2 assessment from being undertaken before Modification 2 is determined. This is particularly important given the modification does not have a strong legal basis, as it does not satisfy the 'limited environmental consequences' test as identified by the NSW Court of Appeal.	The justification for the Concept Plan modification has been assessed and provided in the Concept Plan Modification report and is outside of the scope of this RtS.	
LCC-209	Reoccurring Themes	The concurrent Council Submission prepared by Cardno dated February 2017 identifies significant issues with the modification due to the extent of environmental impacts and the associated step change in the scale of the construction works. Furthermore, it is questionable whether these impacts can be mitigated without the identification and preparation of supporting infrastructure, management plans, operating procedures and compensation schemes, which the current scheme and associated assessment fails to do.	The approval pathway and justification for the Concept Plan modification has been provided in the Concept Plan Modification report and is outside of the scope of this RtS.	MPE Concept Plan Modification 2 (Arcadis, 2016)
LCC-210	Reoccurring Themes	<p>The review has identified that the environmental consequences of the proposed modification are not 'limited', comparative to the existing Concept Approved environmental impacts, as required by the Court of Appeal. Consequently, it is not considered that the proposed modification satisfies the legal test for a Section 75W modification, with this pathway being inappropriate.</p> <p>A formal request for SEARs should be lodged, with a subsequent EIS prepared to fully consider the extent of impact.</p>		MPE Concept Plan Modification 2 (Arcadis, 2016)

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ID	Aspect	Comment	Response	Reference
LCC-211	Reoccurring Themes	Furthermore, it is recommended that a precinct wide, master planned approach to earthworks should be considered. This approach reflects previous comments from the Planning and Assessment Commission and Council, which would allow more orderly development and aid the understanding of the full extent of environmental impacts.	As discussed in Section 1.6 of the EIS, SIMTA and MIC have reached an agreement to develop their respective IMT sites (MPE and MPW) as a whole precinct (herein referred to as the Moorebank Precinct). Notwithstanding this, as approvals have previously been provided separately it is intended that the MPE and MPW statutory planning approvals remain separate, and therefore for the sites to be constructed (including earthworks) and operated via progressive individual approvals which are consistent with the Concept Plans granted for each of the respective sites.	Section 1.6 of the EIS
<b>Local Infrastructure Contributions</b>				
LCC-212	Reoccurring Themes	A major gap identified in the MPE Stage 2 EIS is a lack of commitment to providing Local Infrastructure Contributions. Consideration was required to be given to the relevant Council's Developer Contributions Plan or equivalent by the SEARs (51 and 52), which highlights specifically that the Prestons Industrial Area development must be considered. The EIS notes that "Liverpool City Council does not currently have a Section 94 Contributions Plan which relates to industrial development on the Proposal site." The EIS has also noted that "there are considerable differences between the Preston's Industrial Release Area and its location to surrounding development, drainage infrastructure, need for transport infrastructure and ownership agreements, which form, amongst other aspects, the basis for developer contributions." This statement suggests that SMITA believe there are significant differences and that as a result monetary contributions are not required.	<p>The submitter's comment regarding Local Infrastructure Contributions is not accurate. Evidence to support this is demonstrated by Condition of Approval Schedule 3, Section 2, condition 2.1 "Section 94 Contributions" for the MPE Concept Approval (10_0193) which identifies:</p> <ol style="list-style-type: none"> <li><i>an assessment of the impacts of the project on local infrastructure, having regard to any relevant Council's Developer Contributions Plan (or equivalent document requiring developer contributions)</i></li> <li><i>Subject to the terms of any applicable Voluntary Planning Agreement, a commitment to pay developer contributions to the relevant consent authority or undertake works-in-kind towards the provision or improvement of public amenities and services. Note: This requirement may be satisfied subject to the terms of any applicable Voluntary Planning Agreement; and</i></li> <li><i>a commitment to undertake vehicle monitoring on Cambridge Avenue in accordance with Traffic and Transport requirement</i></li> <li><i>Should any monitoring reveal the need for improvement works within the Campbelltown LGA as a result of the proposal, the Proponent may be required to contribute towards local road maintenance or upgrades.</i></li> </ol> <p>The above requirements are addressed within Section 20.3.4 of the EIS specifically referencing Liverpool City Council's principles of establishing developer contributions under the Liverpool Contributions Plan 2009.</p>	Section 20.3.4 of the EIS.
LCC-213	Reoccurring Themes	It is noted that SMITA has mentioned that developer contributions will be considered once the Precinct Model has been finalised, with a timeline for this being towards the end of 2016 (Footnote 20, page 20-38 EIS). SIMTA and MIC would discuss the	<p>It is SIMTA's intention to pay developer contributions as prescribed in the existing CoA and identified within the EIS.</p> <p>The staged nature of this Proposal requires that development contributions are considered progressively as part of development applications and are</p>	

ID	Aspect	Comment	Response	Reference
		apportionment of developer contributions further, and as necessary an agreement would be determined, with both Roads and Maritime and Council once the Precinct Model is finalised. This deferral of commitment suggests that the developer has no intention of paying developer contributions to Council in a timely manner, which Council require to forward fund assets and gaps in infrastructure created by the Project. The lack of commitment to consider entering into an agreement with Council regarding the developer contributions requirements could set an unwelcome precedent for similar size developments in NSW.	attributable to the impact associated with those stages under the MPE Concept Approval	
LCC-214	Reoccurring themes	<p>It is recommended that one of two suggested options be chosen by SIMTA to address the current shortcomings, as previously suggested by Council:</p> <ul style="list-style-type: none"> <li>• A Voluntary Planning Agreement (VPA) between SIMTA and Council be prepared to ensure a fair and equitable outcome regarding local infrastructure contributions is achieved. This may involve the payment of a monetary contribution using Council's recent resolution as a basis, the provision of works in kind, or a combination of both. Council has identified that monetary contributions could cater for the long term maintenance or short term upgrades to the transport network, with road infrastructure management examples including the need to preclude heavy vehicle traffic on</li> </ul>	<p>Section 7.6 of the EIS provides a summary of the potential traffic impacts of the operation of the Proposal and concludes that developer contribution discussions to address these impacts would be undertaken with Roads and Maritime subsequent to the finalisation of the Precinct Model<sup>5</sup>. The apportionment of developer contributions would be subject to the outcomes of the Precinct Model and would be discussed further, and as necessary an agreement determined, between MIC, SIMTA and the relevant government agencies (Roads and Maritime and Liverpool City Council, as relevant).</p> <p>Liverpool City Council does not currently have a Section 94 Contributions Plan which relates to industrial development on the Proposal site. In the absence of a relevant contributions plan for the Proposal site and the Proposal, SIMTA has considered the principles of the Liverpool Contributions Plan 2009, in particular in relation to the Preston's Industrial Release Area (Section 1.1 of the plan). It is noted that there are considerable differences between the Preston's Industrial Release Area and its location to surrounding development, drainage infrastructure, need for transport infrastructure and ownership arrangements, which form, amongst other aspects, the basis for developer contributions. Notwithstanding, Table 20-19 of the EIS provides a</p>	Section 20.3 of the EIS.

<sup>5</sup> Currently under preparation by MIC to highlight all potential traffic impacts of the Proposal (as a part of the Moorebank Precinct), the need for upgrades to the road network, and the timing and triggers for those upgrades. This Precinct Model is envisaged to be available towards the end of 2016.

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ID	Aspect	Comment	Response	Reference
		<p>Nuwarra Road and Governor Macquarie Drive.</p> <ul style="list-style-type: none"> <li>The determination include a condition under Section 94A of the EP&amp;A Act, in accordance with the provisions listed at Clause 94B (2) of the EP&amp;A Act. This condition may result in a 2% levy being enforced in accordance with Council's recent resolution for the proposed Section 94A Plan.</li> </ul>	<p>summary of the general considerations of the Preston's Industrial Release Area contributions and the benefits proposed by the Proposal.</p> <p>Developer contributions and the method of agreeing and implementing these will be subject to future consultation with Liverpool City Council.</p>	
<b>Legislative Review</b>				
LCC-215	Strategic Justification	<p>The Strategic support is consistent with that of Commonwealth Government through their Government Business Enterprise body the MIC. However, it is noted that the strategic documentation identifies a single IMT at Moorebank, rather than the two separate IMT's currently proposed. The support for a single IMT indicates that a consolidated IMT, achieved through a master planned approach would result in an outcome more aligned with both the Australian Infrastructure Plan, 2016 and the National Land Freight Strategy. A master planned approach would reduce resource use and result in more efficient operations, which is likely to reduce the associated environmental impacts on the surrounds, such as congestion, reduced air quality and increased noise.</p>	<p>As discussed in Section 1.6 of the EIS, SIMTA and MIC have reached an agreement to develop their respective IMT sites (MPE and MPW) as a whole precinct (herein referred to as the Moorebank Precinct). Notwithstanding this, as approvals have previously been provided separately it is intended that the MPE and MPW statutory planning approvals remain separate, and for the sites to be constructed and operated via progressive individual approvals which are consistent with the Concept Plan's granted for each of the respective sites.</p> <p>To assess the precinct as a whole, each statutory planning approval contains a cumulative assessment for key issues including traffic, noise and vibration, air quality, human health, hazard and risk, biodiversity and visual amenity (refer to Section 19 of the EIS), that have considered the potential impacts of the MPE Stage 2 Proposal as a standalone as well as in conjunction with the adjacent MPW development.</p> <p>Detailed cumulative impact assessments have also been undertaken previously as part of the MPE Project (MPE Concept Plan Approval, MPE Stage 1 Approval (SSD 14-6766) and MPW Project (MPW Concept Approval). In all instances, mitigation measures have been prepared to mitigate environmental issues associated with the two projects.</p>	Section 1.6 of the EIS.
LCC-216		<p>The State and Local Government strategic justification is less clear. The <i>NSW State Priorities</i> (2016), which replaced the initiatives within <i>NSW 2021: A Plan To Make NSW Number One</i> (2011), has been prepared to identify quantifiable objectives to</p>	<p>The MPE Concept Approval (10_0193) was granted approval by the PAC on 29 September 2014. This approval affirms that the NSW State Government supports, subject to satisfying conditions of approval, the operation of the MPE Project.</p>	Section 3 of the EIS



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ID	Aspect	Comment	Response	Reference
		reform the economy. Job creation and building infrastructure are incorporated as priorities. Both of these priorities could be considered to be addressed by the MPE Project. However, it is not clear and the Stage 2 EIS does not build a case that an IMT at Moorebank is the highest and best use for the land in relation to job creation and the associated economic growth, as well as infrastructure delivery.	Further, as described within both the MPE Concept Approval documentation and Section 3 of the EIS, the location of the MPE Project and Proposal has been identified and supported by planning and freight strategy documents prepared by a number of government agencies.  Further discussion on alternative uses for the site, job creation and alternate locations is therefore not considered relevant to this stage of development/approval.	
LCC-217		As discussed at Sections 3.14 and 3.16 jobs created by a large IMT once operational are limited comparative to alternative uses that could feasibly be accommodated by the site, such as high tech manufacturing, along with mixed use residential and commercial space. These uses would bring a much higher and more diverse economic return to the area, than the limited number of employees associated with an IMT.		Section 3 of the EIS
LCC-218		The MPE Project would lead to investment in infrastructure. However, much of this investment would be associated with retrofitting existing corridors that are highly constrained, resulting in high cost and inefficiencies. The life cycle benefit of these infrastructure investments should be considered when discussing investment, rather than simply the financial input.		Section 3 of the EIS
LCC-219		A number of previous State freight and logistics plans have supported an IMT at Moorebank. However, while <i>A Plan for Growing Sydney (2014)</i> (The Plan) does mention an IMT at Moorebank, the proposed Badgerys Creek IMT is given a significantly more prominent role. Rail freight infrastructure to connect the Badgerys Creek IMT to the rest of the rail network is		Section 3 of the EIS

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ID	Aspect	Comment	Response	Reference
		proposed, with the Badgerys Creek IMT mentioned on numerous occasions, with this location having the potential to be a more suitable location that has not been considered by the EIS. The Moorebank Intermodal is not given great prominence or priority by The Plan. The Liverpool City Centre is also identified as a Regional City Centre by the Plan, which will experience significant growth in population and employment. As this is the most recent policy document released on the subject by the NSW government, it is considered to reflect current priorities and strategy.		
LCC-220		The MPE development provides some direct economic benefits to the LGA in the form of employment. However, the impacts on the surrounding amenity and transport networks, will create indirect impacts on the economy and social fabric of the LGA		Section 3 of the EIS
LCC-221		The development does not encourage or allow for the manufacture of advanced technology products and will impact on the amenity of the immediate surrounds, as well as land adjacent to the associated transport corridors. The loss of land due to the scale of the proposal creates a one dimensional development that limits opportunities for a wider range of employment generating activities, while impacting on the amenity of the area. Furthermore, the proposed scheme does not encourage a high standard of urban design, as discussed at <b>Section 3.11</b> . Consequently, the MPE scheme is counter to the requirements of the Liverpool DCP Part 2.4. A statement should be prepared identifying how the development satisfies the provisions of the DCP, with this Statement	As the Proposal is declared SSD (refer to Section 5.2.1 for more information), the provisions of the Liverpool DCP do not apply to the Proposal. Notwithstanding, an assessment of the consistency of the Proposal with the provisions of the relevant parts of the Liverpool DCP has been undertaken and is provided in Appendix K of the RtS.	Appendix K of this RtS

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ID	Aspect	Comment	Response	Reference
		provided to Council for discussion to ensure that it meets the intent of the DCP		
LCC-222		<p>In addition to the DCP there are a number of strategic plans of relevance to the MPE site due to their proximity:</p> <ul style="list-style-type: none"> <li>• Council's Vision for the Riverfront Lands, which relates to land along the Georges River foreshore to the north of the M5.</li> <li>• Council's Georges River Casula Parklands Draft Master Plan, which relates to land on the western side of the Georges River, directly across from the MPW site.</li> </ul> <p>The strategic direction identified by these plans focuses on increasing the public use and amenity of the foreshore to facilitate residential and commercial development, while retaining and enhancing the visual and ecological quality of the Georges River and foreshore environment. The development of a rail link across the Georges River to service the MPE IMT would create a visual and physical barrier across the Georges River, impacting on the amenity of the area through increased noise, reduced air quality and visual amenity, resulting</p>	<p>The MPE Stage 2 Proposal does not include provisions on a rail link across the Georges River. The development of the Rail Link across the Georges River has been included and assessed within the MPE Stage 1 Proposal.</p> <p>The <i>Liverpool Local Environmental Plan 2008</i>, was recently amended to include development standards for the MPE site (in accordance with the Planning Proposal (PP_2012_LPOOL_004_00)). Therefore, specific controls have been identified for the MPW site by Council.</p> <p>The Georges River Master Plan, prepared in August 2016, refers to a 350 ha site located to the north of the Moorebank Precinct, bounded by the M5 Motorway to the south and the Georges River to the west. The Proposal would not preclude development under the Georges River Master Plan. The plan aims to preserve the environmental values connected to the Georges River and Foreshore, improve public access to these areas, and provide a framework for driving urban growth to 2050, while not changing existing planning rules. The Moorebank Intermodal Terminal is mentioned within this plan (page 6) as being a key driver for the precinct establishment, through the generation of local employment.</p> <p>The Proposal is located on land occupied by the Department of Defence for the Defence National Storage and Distribution Centre, and not accessible to the public.</p> <p>The Georges River Casula Parklands Draft Master Plan relates to land to the west of the Proposal site, on the opposite side of the Georges River. The construction and operation of the Proposal would not impede the design objectives associated with this plan.</p> <p>The Environmental Assessment of the Proposal, as detailed within the EIS (Section 23 of the EIS) concluded that no significant environmental impacts to air, noise or public health would result from the construction or operation of the Proposal, in the presence of defined mitigation measures. It is, therefore, considered that the Proposal development is not in conflict with the strategic direction outlined through the plans provided.</p>	Section 23 of the EIS.
LCC-223	Concept Approval Modification	The MPE Concept Plan Approval MP10_0193 was issued on 29 September 2014 under the now repealed Section 75O of	It is acknowledged that Liverpool City Council have provided a response to the public display of the MPE Concept Plan Modification 2. The issues raised in Liverpool City Council's submission on the Concept Plan Modification have	MPE Concept Modification 2 Response to

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ID	Aspect	Comment	Response	Reference
		<p>the EP&amp;A Act. The Project is a Transitional Part 3A Project, with the provisions of Section 75W of the EP&amp;A Act applicable. A modification is now proposed subject to Section 75W of the EP&amp;A Act (Modification 2).</p> <p>Council have prepared a concurrent submission to the proposed Modification 2, which identifies significant issues with the modification due to the extent of environmental impacts and the associated step change in the scale of the construction works.</p> <p>Additionally, the submission questions whether the modification satisfies the legal tests established in the case of <i>Barrick Australia Ltd v Williams (2009) 168 LGERA 43</i>, specifically : The proposed modification must have 'limited environmental consequences beyond those which had been the subject of assessment' (the original project assessment).</p>	<p>been responded to in the MPE Concept Modification 2 Response to Submissions Report (Arcadis, 2017)</p>	<p>Submissions Report (Arcadis, 2017)</p>
LCC-224		<p>The import of substantial amounts of fill, as opposed to the originally approved scheme, which comprised a cut/fill balance for the site would result in an order of magnitude change in the development. The magnitude change is due to the associated truck movements and impacts on amenity and human health. Consequently, the environmental consequences of the proposed modification are not 'limited', comparative to the existing environmental impacts, as required by the Court of Appeal. The environmental assessments undertaken within the Council submission to Modification 2 reinforce the extent of environmental impacts. Consequently, it is not considered that the proposed modification satisfies requirement 2</p>	<p>It is acknowledged that Liverpool City Council have provided a response to the public display of the MPE Concept Plan Modification 2. The issues raised In Liverpool City Council's submission on the Concept Plan Modification have been responded to in the MPE Concept Modification 2 Response to Submissions Report (Arcadis, 2017)</p>	<p>MPE Concept Modification 2 Response to Submissions Report (Arcadis, 2017)</p>

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ID	Aspect	Comment	Response	Reference
		for a Section 75W modification, as identified by the Court of Appeal.		
LCC-225		<p>The import of fill as proposed by Modification 2 to the Concept Approval is essential to the subsequent development of Stage 2. The reliance of Stage 2 on the modification, should prevent the Stage 2 assessment from being undertaken before the modification is determined. This is particularly important given the modification does not have a strong legal basis, as it does not satisfy the criteria of having "<i>limited environmental consequences beyond those which had been the subject of assessment</i>".</p>	<p>It is acknowledged that Liverpool City Council have provided a response to the public display of the MPE Concept Plan Modification 2. The issues raised in Liverpool City Council's submission on the Concept Plan Modification have been responded to in the MPE Concept Modification 2 Response to Submissions Report (Arcadis, 2017)</p>	<p>MPE Concept Modification 2 Response to Submissions Report (Arcadis, 2017)</p>
LCC-226	Section 79C Review	<p>Development under Part 4 of the EP&amp;A Act is required to consider the provisions of Section 79C of the EP&amp;A Act.</p> <p>Key matters identified within Section 79C include:</p> <p><i>(b) the likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality,</i></p> <p>The EIS states that '<i>The assessment of environmental impact presented in this EIS has not identified any significant environmental impacts</i>'. (Arcadis, 2016a). The extent of the vehicle movements associated with the construction and operational phases of the Project, along with the associated impacts on human health and amenity from noise, air quality and congestion are substantial. Consequently, the Project is considered to significantly impact on the natural and built environment, as well as the social and economic fabric of</p>	<p>The EIS prepared for the Proposal considers key outcomes from environmental issues associated with the Proposal (refer to Sections 7-20 of the EIS). The statement that no significant environmental impacts have been identified for the Proposal is justified on the basis of the investigations that were undertaken, specifically those related to Traffic (Section 7 of the EIS), Air Quality (Section 9 of the EIS) and Health (Section 10 of the EIS), and mitigation measures identified to further reduce impacts.</p> <p>The Modification Proposal is subject to separate approval under section 75W of the EP&amp;A Act. The Modification Report prepared in accordance with the Section 75W identifies, measures and assesses the additional environmental impacts generated by changes to the MPE Concept Approval (10_0193).</p> <p>The impact assessment undertaken for the Proposal considers the additional traffic movements and associated noise, air and health implications arising as a result of this additional activity, in the context of surrounding development (cumulative impacts – refer to Section 19 of the EIS).</p> <p>As outlined above, the impacts generated can be adequately managed through the implementation of mitigation measures.</p>	<p>Section 7, 9 and 10 of the EIS.</p>

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ID	Aspect	Comment	Response	Reference
		<p>the locality (refer to the subsections within Section 3 for further discussion).</p> <p><i>(c) the suitability of the site for the development,</i></p> <p>The EIS identifies the Concept Approval as providing recognition that the site is suitable for the Project. However, subsequent to the Concept Approval Section 75W modifications have been proposed that would result in substantially greater impacts during the construction phase of the Project, as a result of the magnitude change in fill requirements. The impacts resulting from the large scale vehicle movements associated with the importation of material would result in a further reduction in the amenity of the surrounds, beyond that initially considered by the Concept Plan assessment. Refer to Section 3.3 for further discussion.</p>		
LCC-227	Recommendations	<p>The recommendations below are proposed to address the identified impacts associated with the legislative review to allow a comprehensive assessment of the Project:</p> <ul style="list-style-type: none"> <li>While it is noted that DCPs are not required to be addressed by SSD, the applicant should consider redesign to allow compliance with Council's strategic planning, as illustrated through the controls within Part 2.4 of the DCP to allow the proposal to integrate with the surrounds and future vision for the area.</li> </ul>	<ul style="list-style-type: none"> <li>A detailed assessment of the compliance of the Proposal with the relevant sections of the Liverpool DCP has been undertaken and is provided at Appendix K of this RtS. The compliance table at Appendix K demonstrates that the Proposal is generally compliant with the Liverpool DCP. Based on the results of this assessment, the Proposal is considered to be generally compliant in its current form and no redesign is considered necessary.</li> </ul>	<p>Section 23.2.3 of the EIS.</p> <p>Appendix K of this RtS.</p>
LCC-228	Recommendations	<ul style="list-style-type: none"> <li>The Stage 2 application should be placed on hold pending the outcome of Modification 2.</li> </ul>	<ul style="list-style-type: none"> <li>The assessment and determination of the Proposal by NSW DP&amp;E is expected to be undertaken concurrently with the Department's assessment of the Concept Modification 2. As such, the application does not need to be placed on hold.</li> </ul>	

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ID	Aspect	Comment	Response	Reference
LCC-229	Recommendations	<ul style="list-style-type: none"> <li>DP&amp;E should consider the consistency of the Project with the Matters for Consideration within Section 79C of the EP&amp;A Act</li> </ul>	<ul style="list-style-type: none"> <li>An assessment of the Proposal's consistency with Section 79C of the EP&amp;A Act was included in Section 23.2.3 of the EIS for NSW DP&amp;E's consideration in their assessment and determination of the Proposal</li> </ul>	

## 5 RESPONSE TO COMMUNITY AND SPECIAL INTEREST GROUP SUBMISSIONS

### 5.1 Community submissions

This section provides a summary of the submissions raised by the community and special interest groups. Submissions received from the community have been grouped and responded to by environmental aspect, within Table 5-1. A summary of the key issues raised is provided in Section 3 of this RtS. Table 5-1 should be read in conjunction with the source table provided in Appendix A.

Table 5-1 Response to community submissions

Aspect	Issue	Summary	Comments	Reference
Traffic and transport	Congestion/Capacity	Concerned that Moorebank and Moorebank Avenue in particular is inadequate for large container trucks and is already congested	The Operational Traffic and Transport Impact Assessment (OTTIA - Section 7 and Appendix K of the EIS) concluded that the Proposal (and cumulative scenario including the Proposal) would result in increases in traffic volumes on Moorebank Avenue (south of Anzac Road) by 23% in 2019 and 19% in 2029. This is followed by Moorebank Avenue (north of Anzac Road) with an increase of 18% in 2019 and 15% in 2029. The analysis suggests increases due to the Proposal on the remaining road sections are expected to be low with increases of below 4% in the opening year and 10-year horizon for the surrounding road network.	Section 7 and Appendix K of the EIS
		Concern that the Proposal would add to existing traffic congestion on roads in the vicinity of the project. Specifically, M5, M7, Newbridge Road, Heathcote Road and the Hume Highway, especially heavy vehicles. Concerned also by fill increasing the impact of previously mentioned issues	By transporting freight from Port Botany to Moorebank by rail, the number of heavy vehicles required to process freight from Port Botany would be reduced. This would result in regional traffic improvements with a mode shift from truck to rail transportation (refer to Section 5.3 of the OTTIA).	
		Concerns that support vehicles and trucks from the Proposal would create congestion on the surrounding road network	The Proposal would not generate any increases to heavy vehicles that would not otherwise be on the road (without the Proposal). The key function of the Proposal to transport freight from Port Botany to Moorebank by rail, instead of by road, would allow heavy trucks to have their source and destination at Moorebank, reduce the distances heavy	
		Concerns that the Proposal would result in congestion in nearby suburbs including Moorebank, Chipping Norton, Casula, Liverpool and the Prestons.		



Aspect	Issue	Summary	Comments	Reference
		Extra traffic congestion will cause strain on local recourses including shops and travel times	vehicles would be required to travel and would provide effective management control.	
		The Local community cannot handle the increased number of trucks and congestion	The OTTIA highlighted that there are several other regional intersections requiring upgrade over time in order to cater for the projected background traffic growth of the local road network, independent of the proposal. The OTTIA identifies that intersection upgrades would be required to cater for background growth projections at the following locations in order to improve the operation of the local road network:	
		New suburbs have been established nearby and already the traffic is horrendous	<ul style="list-style-type: none"> <li>• M5 Motorway / Moorebank Avenue intersection</li> <li>• M5 Motorway / Hume Highway intersection</li> </ul>	
		The road system cannot cope with the extra 2,500 trucks per day and 104 per hour on Moorebank Avenue plus current local congestion	<ul style="list-style-type: none"> <li>• Moorebank Avenue / Anzac Road</li> <li>• Moorebank Avenue / Newbridge Road intersection</li> <li>• Moorebank Avenue / Heathcote Road intersection</li> <li>• M5 Motorway / Heathcote Road intersection</li> </ul>	
		Proposal would add to increasing road congestion created by upcoming apartment developments and from general population growth in the area	<p>Performance of the road network, including intersections will continue to be monitored and modelled in accordance with the existing conditions of the MPE Concept Approval.</p> <p>Table 7-14 in the EIS summarises traffic movements to and from the Proposal site during the AM and PM peak hours. During the peak construction period, being an overlap in construction works periods D, E and F, it is expected that approximately 67 vehicles (all of which are heavy vehicles) would be travelling to and from the Proposal site during the AM peak hour and approximately 169 vehicles (67 trucks and 102 cars) would be travelling to and from the Proposal site during PM peak hour.</p> <p>This represents the predicted peak construction traffic generation for the Proposal and is considered to represent a worst-case construction traffic scenario.</p> <p>Impacts to intersection performance during the peak construction period are detailed in Tables 7-15 and Table 7-16 of the EIS. Analysis has determined that intersection</p>	

Aspect	Issue	Summary	Comments	Reference
			performance at key locations near the Proposal during the peak construction period for the AM and PM peak periods of intersections near the Proposal are expected to generally operate at a level of service similar to the operation of these intersections without construction in 2018. All modelled intersections near the Proposal would operate at an acceptable level of service during the AM and PM peak during the peak construction period.	
		Congestion from the movement of fill to site, which would potentially put children in schools at risk due to increased traffic	<p>Traffic impacts and intersection upgrades for the construction works associated with the physical importation of clean general fill have been discussed in Section 7 of the EIS with an assessment of associated traffic impacts. The assessment indicates that any potential congestion impacts associated with increased truck movements to facilitate the importation of clean general fill would be largely confined to Moorebank Avenue. Appropriate mitigation measures and management plans would be applied to mitigate this impact resulting in an overall minor impact.</p> <p>While it is anticipated that additional truck movements to facilitate the movement of clean general fill on the wider road would carry a perception of increased safety risks, it is not anticipated that this activity would increase road safety risks in school zones. The nearest schools from the development site (within a 2 km radius) include Casula Public School, Prestons Public School, Casula High School, St Francis Xavier Primary School, Liverpool West Public and Wattlegrove Public School. Access to schools within the local area are not directly accessible from major arterial roads, such as the M5 Motorway, and trucks associated with the Proposal construction would not travel directly past these schools.</p> <p>Furthermore, a Preliminary Construction Traffic Management Plan (PCTMP) has been prepared to outline traffic management measures that would be adopted, and further considered as part of the preparation and implementation of the Construction Environmental Management Plan (CEMP)</p>	Section 7 and Appendix K of the EIS

Aspect	Issue	Summary	Comments	Reference
			and CTMP for construction of the Proposal. The CTMP would be prepared detailing the management controls to be implemented to reduce or avoid impacts to traffic, pedestrian and cyclist access as well as the amenity of the surrounding environment. Specific components to be included within the CEMP and CTMP are outlined within the REMMs (refer to Section 8 of this RtS).	
		What impact will stormwater and road works have on traffic in the local area	<p>Bulk earthworks and drainage infrastructure would commence during Works Periods D and E, which is expected to last for approximately 9 months and would include up to 966 truck movements and 260 car movements per day (worst-case).</p> <p>A section of Moorebank Avenue may require short term closures periodically during the Moorebank Avenue upgrade, for diversionary works. These diversionary works would be subject to a separate traffic management plan and would include signage and diversion plans to ensure the safe continued operation of the road during construction for the Moorebank Avenue through traffic.</p> <p>The results of the construction impact assessment for the Proposal (Refer to Section 7.4 of the EIS) indicated that in peak morning and afternoon periods during construction key intersections would maintain an acceptable Level of Service (LoS) of C or better when compared to impacts modelled without the Proposal.</p> <p>Furthermore, short-term impacts to traffic would be managed through preparation of CTMP for construction of the Proposal. The CTMP would be prepared detailing the management controls to be implemented to reduce or avoid impacts to traffic, pedestrian and cyclist access, as well as, the amenity of the surrounding environment.</p>	Sections 4, 7 and Appendix K of the EIS.
		No adequate attempt has been made to deal with the 10,000 trucks per day the site will generate	The proposal would result in the generation of 564 two-way heavy vehicle movements and 3,993 two-way light vehicle movements each weekday (Monday to Friday). Heavy vehicle trips to and from the Proposal would be made by B-doubles,	Section 7 and Appendix K of the EIS.

Aspect	Issue	Summary	Comments	Reference
			<p>semi-trailers and rigid trucks. The majority of heavy vehicle movements during operation of the Proposal are anticipated to take place outside of the AM and PM peak periods.</p> <p>Overall, it is concluded that the Proposal (and cumulative scenario including the Proposal) would result in only marginal traffic impacts to the surrounding road network in the presence of mitigation and management measures.</p> <p>Network improvements have been identified to mitigate the impacts of the cumulative operational scenario at key intersections within the study area, and these are either directly as a result of the cumulative development scenario, or to cater for background traffic growth.</p> <p>The OTTIA recommends that Roads and Maritime Services (Roads and Maritime) undertake intersection upgrades at the following locations in order to improve the operation of the local road network:</p> <ul style="list-style-type: none"> <li>• M5 Motorway / Moorebank Avenue intersection</li> <li>• M5 Motorway / Hume Highway intersection</li> <li>• Moorebank Avenue / Anzac Road</li> <li>• Moorebank Avenue / Newbridge Road intersection</li> <li>• Moorebank Avenue / Heathcote Road intersection</li> <li>• M5 Motorway / Heathcote Road intersection</li> </ul> <p>A Preliminary Operational Traffic Management Plan (POTMP) has been prepared to identify the management strategies to minimise traffic impacts associated with operation of the facility and would be finalised prior to operation of the Proposal.</p>	
		Road reconfiguration will not remove the problems associated with increased traffic	Road works related to the Proposal are focused on the Moorebank Avenue upgrade (refer to figure 7-7 of the EIS). Additional network improvements are required to mitigate the impacts of the cumulative operational scenario at key intersections within the study area, and these are either	Section 7 and Appendix K of the EIS.

Aspect	Issue	Summary	Comments	Reference
			<p>directly as a result of the cumulative development scenario, or to cater for background traffic growth.</p> <p>The OTTIA recommends that Roads and Maritime undertake intersection upgrades at the following locations in order to improve the operation of the local road network. In particular, the following intersections require upgrades without the addition of the traffic generated by the Proposal:</p> <ul style="list-style-type: none"> <li>• Moorebank Avenue / Anzac Road by 2029</li> <li>• M5 Motorway / Moorebank Avenue by 2029</li> <li>• M5 Motorway / Hume Highway in both 2019 and 2029</li> <li>• Moorebank Avenue / Newbridge Road and Moorebank Avenue / Heathcote Road / M5 Motorway / Heathcote Road in both 2019 and 2029.</li> </ul> <p>These network improvements along with the improvements along Moorebank Avenue are considered sufficient to address future increased traffic flows.</p>	
	Assessment	450,000 additional truck movements for fill has not been studied nor "considered for mitigation" and will worsen traffic congestion	Clean general fill haulage would involve up to 734 two-way truck movements per day during the peak construction period. As demonstrated in Section 7 of this EIS, the level of service at key intersections near the Proposal would be reduced during the peak construction period; however, these impacts would be short-term and managed through a CTMP developed for the Proposal and implemented as part of the CEMP.	Section 7 and Appendix K of the EIS
		The DP&E should start again with the precinct plan and EIS in light of these new applications	A precinct plan is not considered relevant as the MPE Concept Approval establishes development principles that meet the intent for the MPE Project.	
		Up to date traffic modelling needs to be completed before application should progress	The Traffic Impact Assessment provided in Section 7 and Appendix K of the EIS has been undertaken in accordance with the SEARs (SSD 16-7628) issued for the Proposal. Further, the modelling has been undertaken based on the following:	Section 7 and Appendix K of the EIS.

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Aspect	Issue	Summary	Comments	Reference
			<ul style="list-style-type: none"> <li>Previous modelling and reporting undertaken for the Moorebank Precinct including for the MPW Concept Approval (SSD 5066), MPE Concept Approval (MP 10_0193) and MPE Stage 1 Approval (SSD 14-6766) all of which have been previously reviewed and approved by the Department of Planning &amp; Environment (DP&amp;E).</li> <li>The Roads and Maritime Services LMARI model (June, 2016) which has been prepared for the Liverpool Local Government Area. Numerous meetings, emails and telephone conversations with Roads and Maritime have been undertaken to ensure that the modelling undertaken for the Proposal utilises the appropriate AIMSUN (LMARI) model and assessment approach.</li> </ul> <p>The basis for the modelling is therefore considered current and appropriate for the assessment of the potential traffic impacts associated with the Proposal.</p>	
	Safety	Any traffic increase in this area will "overwhelm" residents and normal users of the road	<p>Trucks would not use local roads for inbound or outbound movements. The hierarchy and characteristics of the key roads forming the road network surrounding the Proposal are shown in Table 7-5 and Figure 7-2 of the EIS.</p> <p>The Proposal would not generate any increases to heavy vehicles that would not otherwise be on the road (without the Proposal). The key function of the Proposal to transport freight from Port Botany to Moorebank by rail, instead of by road, would allow heavy trucks to have their source and destination at Moorebank, reduce the distances heavy vehicles would be required to travel and would provide effective management control.</p> <p>Table 7-14 in the EIS summarises traffic movements to and from the Proposal site during the AM and PM peak hours. During the peak construction period, being an overlap in construction works periods D, E and F, it is expected that approximately 67 vehicles (all of which are heavy vehicles) would be travelling to and from the Proposal site during the AM peak hour and approximately 169 vehicles (67 trucks and</p>	Section 7 and Appendix K of this EIS

Aspect	Issue	Summary	Comments	Reference
			<p>102 cars) would be travelling to and from the Proposal site during PM peak hour.</p> <p>This represents the predicted peak construction traffic generation for the Proposal and is considered to represent a worst-case construction traffic scenario.</p> <p>Impacts to intersection performance during the peak construction period are detailed in Tables 7-15 and Table 7-16 of the EIS. Analysis has determined that intersection performance at key locations near the Proposal during the peak construction period for the AM and PM peak periods of intersections near the Proposal are expected to generally operate at a level of service similar to the operation of these intersections without construction in 2018. All modelled intersections near the Proposal would operate at an acceptable level of service during the AM and PM peak during the peak construction period.</p>	
		Concerns around the safety of vehicles merging on to the M5 Motorway (M5 weave)	<p>The functionality and safety of the M5 interchange is not within the scope of the MPE Project.</p> <p>The operation of the Proposal would result in a future reduction of road traffic, locally and regionally, by facilitating an increase in freight movement by rail between the Proposal site and Port Botany that would otherwise be transported by road to meet the demand for future growth.</p> <p>The AIMSUN modelling (refer to Section 7.2.5 of the EIS for a summary of traffic modelling) conducted for the Proposal considered the potential vehicular conflict and delays associated with weaving and merging of traffic at the M5 interchange. In assessing weaving impacts the AIMSUN model examines driver behaviour, vehicle acceleration and deceleration characteristics and the road geometry. The resulting impacts are reported in terms of the level of service (LoS) at these intersections.</p> <p>The OTTIA recommends that Roads and Maritime undertake an intersection upgrade at M5 Motorway and Moorebank</p>	Appendix K of the EIS

Aspect	Issue	Summary	Comments	Reference
			<p>Avenue in order to improve the operation and safety of the local road network.</p> <p>Performance of the road network, including intersections will continue to be monitored and modelled in accordance with the SEARs issued for the Proposal and the conditions of the Concept Approval.</p>	
	Road Infrastructure	Damage to roads from increases in heavy vehicle numbers	<p>The increase in heavy vehicles numbers from the Proposal has the potential to result in increased asset degradation (i.e. damage to the road surface and curbing). However, it is expected that the majority of truck movements would be on either privately owned roads and Roads and Maritime roads which are designed to cater for truck movements.</p> <p>Notwithstanding this, as discussed in Section 7 of the EIS, consideration would be given by SIMTA to the relevant infrastructure contributions based on the proposed traffic generation.</p>	MPE Concept Plan Approval
		Existing road infrastructure is not adequate to support the project	<p>A Traffic Impact Assessment is provided within Section 7 and Appendix K of the EIS. This assessment concludes that the Proposal (and cumulative scenario including the Proposal) would result in only marginal traffic impacts to the surrounding road network in the presence of mitigation and management measures.</p> <p>The OTTIA highlighted that there are several other regional intersections requiring upgrade in order to cater for the projected background traffic growth of the local road network. The timing of these road network improvements being undertaken is subject to discussions with Roads and Maritime.</p> <p>Performance, traffic capacity of the road network including intersections and its ability to cater for predicted future growth will continue to be monitored and modelled in accordance with the conditions of the Concept Approval (refer to Appendix A of the EIS).</p>	Section 7 and Appendix K of this EIS



Aspect	Issue	Summary	Comments	Reference
		Widening of Moorebank Avenue and Anzac Parade will cause significant disruption to the community	Moorebank Avenue is not currently built to Roads and Maritime standards, and therefore, although the road would remain in private ownership, would be upgraded to meet the relevant standards which would improve the usability and safety of this infrastructure. The upgrade includes a four-lane road at the northern extent which transitions into a two-lane road. Although it is not necessary, based on existing and proposed traffic levels, for the entire extent of this upgrade to be four lanes, the two-lane part would be built to allow for an increase in width of the carriage way to accommodate a future road widening as required. In addition to this.	Section 4 and 7 of the EIS
		Construction of a temporary diversion road to allow diversion along Moorebank Avenue will cause traffic chaos	<p>The construction of a temporary diversion road, as discussed in Section 4.3 of the EIS, would be designed to divert and maintain traffic movements along Moorebank Avenue. These works would be subject to a separate traffic management plan and would include signage and diversion plans to maintain traffic flows and the safe continued operation of Moorebank Avenue during construction. The existing local accesses along Moorebank Avenue would be maintained during construction with mitigation measures implemented as necessary and as detailed in section 22 of this EIS. .</p>	
		Moorebank avenue would need to be widened to at least 3 lanes each way for project to be feasible	The Moorebank Avenue upgrade, as discussed in detail within Section 6.8 and 7.4 of the EIS, has been designed to consider the surrounding site constraints, existing and proposed traffic to service both the Moorebank Precinct and the surrounding area, and is considered sufficient to address current and future traffic movements.	Section 6 and 7 of the EIS
		Transport links are already struggling with current numbers	The construction and operational traffic assessments undertaken for the Proposal (refer to Section 7) included consideration of existing and future background traffic numbers. Assessment findings indicate that marginal traffic impacts to the surrounding road network would occur as a	Section 7 and Appendix K of this EIS

Aspect	Issue	Summary	Comments	Reference
			<p>direct result of the Proposal in the presence of mitigation and management measures.</p> <p>Network improvements are required to mitigate the impacts of the cumulative operational scenario at key intersections within the study area, and these are either directly as a result of the cumulative development scenario, or to cater for background traffic growth. A number of road network improvements have been identified. The timing of these road network improvements being undertaken is subject to discussions with Roads and Maritime.</p>	
		Public road upgrades should be completed before the internal road connection is complete. Constant staged development was agreed such that it does not exceed the capacity of the current transport network	<p>As described within Table 4-7 of the EIS which outlines the indicative construction works program (refer to Section 4 of the EIS), the construction of Moorebank Avenue diversion road (works period C) and pavement and intersection works along Moorebank Avenue (works period D) would be undertaken before the construction of the internal road network (works period G). In addition to these intersection upgrades, a number of road network improvements have been identified. The timing of these road network improvements being undertaken is subject to discussions with Roads and Maritime.</p> <p>The OTTIA provides further discussion on the impacts of the Proposal, and the potential road upgrades and surrounding road network improvements (refer to Appendix K of the EIS), relevant to the Proposal.</p>	Appendix K of the EIS.
		Plans do not consider Cambridge Avenue not its redevelopment, it is a major arterial road. The plan is therefore flawed for not considering it.	As outlined in Section 7 of the EIS, Cambridge Avenue would not be used for road haulage of construction materials associated with the Proposal, with the exception of a small number that may be required to transport unsuitable materials from the Proposal site to the Glenfield Waste Facility if required. Further discussion of construction traffic distribution and route haulage is provided in Section 6.2 of the Construction Traffic Impact Assessment (CTIA) for the Proposal (refer to Appendix K).	Section 7 and Appendix K of the EIS.

Aspect	Issue	Summary	Comments	Reference
			<p>The results of the OTTIA indicate that the Proposal will result in minor increases in peak hour traffic volumes (from employee light vehicle traffic) on Cambridge Avenue with an estimated increase of less than 1.0 % in 2019 and 2029. Heavy vehicles will head north as they are restricted from using Cambridge Avenue. Only a relatively low volume of Proposal traffic (i.e. 120 vehicles per day) would use Cambridge Avenue comprising of light vehicles (employees).</p> <p>Due to the relatively low traffic volumes, both roundabouts at Cambridge Avenue / Glenfield Road and Cambridge Avenue / Canterbury Road are forecast to operate at LoS between A and B with the Proposal in 2019 and 2029.</p>	
	Use of local roads	Commuter vehicles utilising back roads to avoid congestion	<p>A Traffic Impact Assessment is provided within Section 7 and Appendix K of the EIS. This assessment concludes that the Proposal (and cumulative scenario including the Proposal) would result in only marginal traffic impacts, during both construction and operation, to the surrounding road network in the presence of mitigation and management measures. It is therefore concluded that congestion levels would not be exacerbated by the Proposal, negating the perceived need for passenger vehicles from utilising local roads to avoid congestion. directly resulting in commuter vehicles utilising backroads</p>	Section 7 and Appendix K of the EIS.
		Increase in traffic on surrounding local roads		
Noise	Operational Noise	Concerned warehouses built will be insufficient to block operational noise from the community	<p>An assessment of noise and vibration impacts associated with the Proposal is included in Section 8 and Appendix N of the EIS.</p> <p>The assessment determined that the operational levels from the Proposal would comply with the relevant criteria, including relevant sleep disturbance goals, except at the most affected receivers in Wattle Grove where exceedances of the established screening criterion for sleep disturbance by 1 dB are anticipated, under adverse meteorological conditions only. However, a 1 dB exceedance is considered negligible</p>	Section 8 and Appendix N of the EIS.
		Insufficient mitigation is provided for noise generation and receivers		
		Additional noise walls should be constructed around the perimeter of the site to better mitigate noise emissions.		

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Aspect	Issue	Summary	Comments	Reference
		Noise from the construction and operation of 300,000 m <sup>2</sup> of warehousing and distribution facilities of the proposal will negatively affect residents	and therefore does not require mitigation. Additionally, cumulative noise levels due to the concurrent operation of the Proposal and the MPE Stage 1 and MPW Stage 2 Projects are predicted to comply with the established criteria.	
		The continuous transfer of containers between the MPE stage 1 IMT and the proposal's warehousing and distribution facilities will require heavy vehicles capable of being loaded with containers and used on MPE stage 2 site will cause 24/7 noise.	An assessment of road noise was undertaken in accordance with the RNP criteria and using the Calculation of Road Traffic Noise (CORTN) algorithm. The assessment concluded that increases in road traffic noise as a result of construction and operation of the Proposal are considerably less than 2 dBA and are therefore compliant with the RNP.  An Operational Noise Management Plan (ONMP) would be prepared which includes a framework for regular monitoring of operational noise. Monitoring would begin at the commencement of the operation of the Proposal and would be conducted on an annual basis for up to 2 years (after commencement of operations of the Proposal).	
		Location of where trucks will load and unload is too close to residents	In the event of any noise or vibration related complaint or adverse comment from the community, noise and ground vibration levels (as relevant) would be investigated. If warranted by the investigation, remedial action would be implemented where feasible and reasonable. The procedures for managing complaints would be provided within the Community Information and Awareness Strategy, which would be prepared as part of the Operational Environmental Management Plan (OEMP) prepared for the Proposal.	
	General	The proposal will increase noise pollution, specifically 24 hour operations, impacting the health of residents	Exposure to noise can be associated with direct auditory and non-auditory health effects, including cardiovascular disease, cognitive impairment, sleep disturbance, tinnitus, annoyance and hearing impairment (WHO, 2011). Sleep disturbance is one of the most common complaints raised by noise exposed communities and can have a significant impact on health and quality of life.	Section 8 and Appendix N of the EIS.

Aspect	Issue	Summary	Comments	Reference
			<p>An assessment of noise generated by the Proposal, including 24-hour operation of the IMT, is included in Section 10 and Appendix N of the EIS.</p> <p>The assessment findings, presented in Table 10-13 of the EIS, indicate that the existing noise levels are higher than those predicted for the operation of the Proposal, and that all hazard quotients for operational noise from the Proposal are less than or equal to 1 at all receivers, indicating that the operational noise from the Proposal does not pose an unacceptable risk to the health of these communities.</p>	
		General comment around noise generated by plant and operational machinery including trucks, container terminal, loading docks etc.	<p>An assessment of noise and vibration impacts associated with the Proposal is included in Section 8 and Appendix N of the EIS.</p> <p>The assessment determined that the operational levels from the Proposal would comply with the relevant criteria, including relevant sleep disturbance goals, except at the most affected receivers in Wattle Grove where exceedances of the established screening criterion for sleep disturbance by 1 dB are anticipated, under adverse meteorological conditions only. However, a 1 dB exceedance is considered negligible and therefore does not require mitigation. Additionally, cumulative noise levels due to the concurrent operation of the Proposal and the MPE Stage 1 and MPW Stage 2 Projects are predicted to comply with the established criteria.</p> <p>An assessment of road noise was undertaken in accordance with the RNP criteria and using the Calculation of Road Traffic Noise (CORTN) algorithm. The assessment concluded that increases in road traffic noise as a result of construction and operation of the Proposal are considerably less than 2 dBA and are therefore compliant with the RNP.</p> <p>A Construction Noise and Vibration Management Plan (CNVMP) would be developed for the Proposal, considering all reasonable and feasible measures to reduce noise levels at sensitive receivers.</p>	Section 8 and Appendix N of the EIS.
		Concerned for the noise impacts on residential homes		

Aspect	Issue	Summary	Comments	Reference
			<p>An Operational Noise Management Plan (ONMP) would be prepared which includes a framework for regular monitoring of operational noise. Monitoring would begin at the commencement of the operation of the Proposal and would be conducted on an annual basis for up to 2 years (after commencement of operations of the Proposal).</p> <p>In the event of any noise or vibration related complaint or adverse comment from the community, noise and ground vibration levels (as relevant) would be investigated. If warranted by the investigation, remedial action would be implemented where feasible and reasonable. The procedures for managing complaints would be provided within the Community Information and Awareness Strategy, which would be prepared as part of the Operational Environmental Management Plan (OEMP) prepared for the Proposal.</p>	
		Concerned importation of fill will negatively impact community and will cause dust and noise pollution	<p>The importation of clean general fill is anticipated to generate the largest amount of heavy vehicle movements of all construction activities, occurring during works period D of the Proposal (Refer to Section 4.3 of the EIS). The noise and air (dust) emissions associated with this activity have been assessed as part of the noise and air assessment sections of the EIS (refer to Sections 8 and 9 of the EIS, respectively).</p> <p>The findings of the noise assessment indicate that this works period would have the greatest impact of all works periods (mainly due to excavators and dozers to spread the clean general fill once delivered), however the results indicate that predicted <math>L_{Aeq, 15min}</math> construction noise levels for the Proposal at all sites meet the NML for all construction works, except at the most affected receivers in Wattle Grove where exceedances of the NMLs of 1 dB are anticipated. However, a 1 dB exceedance is considered imperceptible, does not require mitigation and would not pose any recognisable impact to the community.</p> <p>The Air Quality Assessment findings indicate that, although particulate matter and fugitive dust emissions are anticipated to generate the greatest impact with regard to air quality of</p>	Sections 4, 8, 9 and Appendix N of the EIS.

Aspect	Issue	Summary	Comments	Reference
			the Proposal site and surrounds (refer to Table 9-2 of the EIS) during the bulk earthworks (i.e. importation of clean general fill) phase, the assessment findings indicate that the predicted construction phase emissions comply with all relevant impact assessment criteria, and would therefore not negatively impact the community.	
		The increase in site level from greater quantities of fill will result in greater impacts from generation, transmissions and reception of construction and operational noise	<p>The noise model developed to assess the impacts associated with the Proposal includes details of noise source and receiver locations, details of warehouse buildings and topography (including final site elevation).</p> <p>The increase in site elevation (compared to the existing level) has the potential to increase noise impacts, however, based on the modelling the noise impacts from the proposal would generally meet the criteria (with the exception of Wattle Grove in adverse metrological conditions, which result in a imperceptible increase). These noise impacts would be managed through the implementation of a number of mitigation measures, including a Construction Noise and Vibration Management Plan (refer to Section 22 of the EIS).</p>	<p>Section 22 and Appendix N of the EIS.</p> <p>Section 8 and Appendix N of the EIS.</p>
		Objects to the noise that will be generated by the extra traffic on Moorebank avenue	An assessment of road noise was undertaken in accordance with the RNP criteria and using the CORTN algorithm. The assessment concluded that increases in road traffic noise as a result of construction and operation of the Proposal are considerably less than 2 dBA and are, therefore, compliant with the RNP.	Section 8 and Appendix N of the EIS.
		The redirection of Moorebank Avenue will further increase noise impacts on Wattle Grove	The diversionary works included within the Proposal would divert traffic using Moorebank Avenue further west, within the MPW site. The Wattle Grove suburb is located east of the Proposal site and thus would not be subject to any additional road noise as a result of these works.	
	Assessment	The estimated noise levels noted in the assessment as being acceptable are contradicted by Transport for NSW and	The Proposal does not include changes to rail infrastructure associated with the MPW precinct. A discussion of rail noise	

Aspect	Issue	Summary	Comments	Reference
		Sydney trains noise logging reports of 2015	along the rail link and Southern Sydney Freight Line is not within the scope of the present Proposal.	
		Sydney trains conducted noise levelling tests in 2010 and 2015 and the report are different to those supplied in the submissions		
	Mitigation	Table 20-18 Page 146. The noise modelling has predicted that operation of the warehousing and freight village and road traffic associated with the Proposal would not exceed the relevant noise assessment criteria, hence additional measures to mitigate noise impacts associated with these components of the Proposal are not proposed. Again I object to the wording "additional measures to mitigates noise are not proposed"	<p>Noted. An assessment of noise and vibration impacts from operation of the Proposal is included in Section 8 and Appendix N of the EIS.</p> <p>The mitigation measures proposed in the EIS are considered appropriate to mitigate the construction noise and vibration impacts of the Proposal.</p>	Sections 8, 22 and Appendix N of the EIS.
		What noise mitigation is proposed for residents in Casula and Wattle Grove	<p>An assessment of noise and vibration impacts from operation of the Proposal is included in Section 8 and Appendix N of the EIS.</p> <p>The assessment determined that the operational levels from the Proposal would comply with the relevant criteria, including relevant sleep disturbance goals, except at the most affected receivers in Wattle Grove where exceedances of the established screening criterion for sleep disturbance by 1 dB are anticipated, under adverse meteorological conditions only. A 1 dB exceedance is considered negligible and therefore does not require mitigation. As such, nearby sensitive receivers are not anticipated to be significantly impacted by noise from 24 hour IMT operations. Additionally, cumulative noise levels due to the concurrent operation of the Proposal and the MPE Stage 1 and MPW Stage 2 Projects are predicted to comply with the established criteria.</p>	Section 8 and Appendix N of the EIS.



Aspect	Issue	Summary	Comments	Reference
			<p>An assessment of road noise was undertaken in accordance with the RNP criteria and using the CORTN algorithm. The assessment concluded that increases in road traffic noise as a result of construction and operation of the Proposal are considerably less than 2 dBA and are therefore compliant with the RNP.</p> <p>A Construction Noise and Vibration Management Plan (CNVMP) would be developed for the Proposal, considering all reasonable and feasible measures to reduce noise levels at sensitive receivers.</p> <p>An Operational Noise Management Plan (ONMP) would be prepared which includes a framework for regular monitoring of operational noise. Monitoring would begin at the commencement of the operation of the Proposal and would be conducted on an annual basis for up to 2 years (after commencement of operations of the Proposal).</p> <p>In the event of any noise or vibration related complaint or adverse comment from the community, noise and ground vibration levels (as relevant) would be investigated. Remedial action would be implemented where feasible and reasonable. The procedures for managing complaints would be provided within the Community Information and Awareness Strategy.</p>	
Air	Air Quality / Pollution	Increase in pollution generated by increased congestion and heavy vehicle movements	<p>Section 9 of the EIS assesses the impacts associated with air emissions generated by the Proposal. For construction, it is recognized that particulate matter and fugitive dust emissions would generate the greatest impact with regard to air quality of the Proposal site and surrounds during bulk earthworks activities, thus TSP, PM<sub>10</sub> and PM<sub>2.5</sub> are assessed as key pollutants. Diesel exhaust emissions associated with on-road trucks are included within this assessment.</p> <p>Key pollutants assessed for the operational phase of the Proposal considered to have the greatest potential impacts are associated with diesel and fossil fuel combustion. Pollutants assessed include PM<sub>10</sub>, PM<sub>2.5</sub>, Oxides of nitrogen</p>	<p>Section 9 of the EIS</p> <p>Appendix M of the EIS</p>
		Concerns that additional heavy vehicles and trains from the Proposal will result in increasing air pollution (in particular diesel emissions) impacting on nearby residents and the environment		
		The increase in diesel trucks will worsen air quality in an area close to schools, nursing homes, retail and a large residential population in an area		

Aspect	Issue	Summary	Comments	Reference
		that is already over polluted and over populated	(NO <sub>x</sub> ), Sulphur dioxide (SO <sub>2</sub> ), Carbon monoxide (CO) and speciated HC / VOCs – benzene, 1-3-butadiene and PAHs.	
		Decrease in the local and regional air quality from dust, diesel and air pollution	Dispersion modelling results for construction indicate no relevant criteria exceedances, and no additional days over the criteria. During operation, the modelling predictions indicate that the risk of adverse air quality impacts generated by the Proposal are low, and that incremental increases in key pollutants at surrounding residential receivers would be largely indistinguishable from the existing background and the Proposal, and all VOCs are below the relevant assessment criteria. It is also important to note that the Proposal does not seek to increase the throughput limit of freight from that already Approved as part of Stage 1 of the MPE Project (SSD 14-6766), thereby not increasing the amount of trains accessing the IMT.	
		The area and community cannot handle the pollution	<p>Additional measures to mitigate air quality impacts would be implemented as per the Air Quality Management Plan, included in the AQIA, and would be integrated into the OEMP. The following key measures would include:</p> <ul style="list-style-type: none"> <li>• Implementation and communication of anti-idling policy for trucks</li> <li>• Complaints line for the community to report on excessive idling and smoky vehicles</li> <li>• Procedures to reject excessively smoky trucks visiting the site based on visual inspection.</li> </ul>	
		Please explain in further detail the "very low impacts on the surrounding environment from air pollutants", Table 5 & 6 of the PB EIS dated 20/04/2016 has an annualised emissions quantification and qualification which does not appear to be "very low"	<p>It is unclear what EIS the submission is referring to. The EIS was finalised for public exhibition on 2/12/2016.</p> <p>Section 9 of the EIS assesses the impacts associated with air emissions generated by the Proposal. For construction, it is recognized that particulate matter and fugitive dust emissions would generate the greatest impact with regard to air quality of the Proposal site and surrounds during bulk earthworks activities, thus TSP, PM<sub>10</sub> and PM<sub>2.5</sub> are assessed as key</p>	<p>Sections 9 and 10 of the EIS</p> <p>Appendix M of the EIS</p>
		How will the point source diesel emissions impact the health of		

Aspect	Issue	Summary	Comments	Reference
		populations residing adjacent to the Proposal?	pollutants. Diesel exhaust emissions associated with on-road trucks are included within this assessment.	
		Diesel Fumes will be increased as a result of the proposal	Key pollutants assessed for the operational phase of the Proposal considered to have the greatest potential impacts are associated with diesel and fossil fuel combustion.	
		Children and schools nearby will be impacted by increased pollution	Pollutants assessed include PM <sub>10</sub> , PM <sub>2.5</sub> , Oxides of nitrogen (NO <sub>x</sub> ), Sulphur dioxide (SO <sub>2</sub> ), Carbon monoxide (CO) and speciated HC / VOCs – benzene, 1-3-butadiene and PAHs.	
	Particulate Matter	Carcinogenic Diesel particulate emissions pose a grave threat to the health of the local community	<p>Dispersion modelling results for construction indicate no relevant criteria exceedances, and no additional days over the criteria. During operation, the modelling predictions indicate that the risk of adverse air quality impacts generated by the Proposal are low, and that incremental increases in key pollutants at surrounding residential receivers would be largely indistinguishable from the existing background and the Proposal, and all VOCs are below the relevant assessment criteria.</p> <p>Health impacts from the Proposal have been assessed in Section 10 of the EIS. The results of the Health Risk Assessment found that the increase in risk to nearby sensitive receivers including schools and residences, due to air pollution from the operation of the Proposal are low or negligible. The cancer risk from the air toxins are well below acceptable risk levels set by international agencies. The implementation of best practice measures as outlined in the Air Quality Best Practice Review (Appendix M of this EIS) would lead to further reductions in air pollution levels and the associated health risks.</p>	
Health	Pollution / air quality	Increased pollution will affect people's health particularly young children	The screening Health Risk Assessment (HRA) – refer to Section 10 and Appendix N of the EIS) concluded that emissions from the Proposal would be unlikely to have acute or chronic health impacts on the community.	Section 10 and Appendix N of the EIS
		Impacts to air quality from the project would result in health impacts to nearby schools, childcare centres and homes		
		Concerns around air pollution and particulates (including diesel particulate		

Aspect	Issue	Summary	Comments	Reference
		matter) from the project resulting in various impacts to health including: Shortened life expectancy, increases outbreaks of asthma, cancer in newborns, lung cancer in children, autoimmune diseases, bronchitis, coronary disease, cardiovascular disease	Increased annual incidences for health endpoints relating to PM <sub>10</sub> and PM <sub>2.5</sub> emissions for the Proposal is shown in Table 10-7 and Table 10-8 respectively of the EIS.  The increased annual incidences for the health endpoints due to Proposal related PM <sub>10</sub> and PM <sub>2.5</sub> exposures were all well below one case per year. For the most sensitive health endpoint of PM <sub>10</sub> , the highest incidence is an additional 0.01 asthma related emergency department visit per year among 1 to 14-year-olds in Wattle Grove (equivalent to one additional emergency department visits per 100 years).  For the most sensitive health endpoints of PM <sub>2.5</sub> , there would be an additional 0.02 hospital admission per year associated with cardiac disease among 65+ year-olds in Moorebank (equivalent to two additional hospital admissions per 100 years), which may be attributed to daily exposure to emissions of PM <sub>2.5</sub> from the operation of the Proposal.  Based on the estimated increased annual incidence for multiple health endpoints contributing to mortality and morbidity for the Proposal, there are no significant adverse health effects expected in relation to short-term and long-term exposure to PM <sub>10</sub> and PM <sub>2.5</sub> in the surrounding local area.	Section 10 and Appendix N of the EIS
		Concerned the proposal will increase pollution in the local area and affect the community	As outlined in Section 9 and Appendix M of the EIS the Proposal will have negligible impacts on air quality for both the construction and operational phases of the Proposal.	Section 9 and Appendix M of the EIS
		Area cannot handle increase in pollution	Whilst the impacts from the Proposal are predicted to be minimal, an Air Quality Management Plan (Ramboll, 2016 – refer to Appendix M of this EIS) would be incorporated into the CEMP for the construction phase of the Proposal. The key aspects addressed in the CEMP would be:	
		Concerns to residents from increased pollution	<ul style="list-style-type: none"> <li>• Procedures for controlling/managing dust</li> <li>• Roles, responsibilities and reporting requirements</li> </ul>	

Aspect	Issue	Summary	Comments	Reference
			<ul style="list-style-type: none"> <li>Contingency measures for dust control where standard measures are deemed ineffective.</li> </ul> <p>The AQMP would also be incorporated into the OEMP, and would address the key aspects:</p> <ul style="list-style-type: none"> <li>Implementation and communication of anti-idling policy for trucks</li> <li>Complaints line for the community to report excessive idling and smoky vehicles</li> <li>Procedures to reject excessively smoky trucks visiting the site based on visual inspection</li> </ul>	
	Sleep Disturbance	At Port Botany, people living within three-kilometre radius of the terminal are suffering sleep disturbance. In the case of Moorebank, we have many people living as close as 390 metres from the MPE site. What has happened at Botany must not in any circumstances be repeated at Moorebank, and to allow it to happen would be a dereliction of duty by NSW Planning and PAC	<p>Direct comparisons with other project impacts with regard to impact mitigation cannot be made given the difference in activity type, scale and other contextual factors that shape the degree of impact and how they are received. An assessment of noise and vibration impacts of the Proposal, including potential impacts to sleep disturbance, is included in Section 8 and Appendix N of the EIS.</p> <p>The assessment determined that the operational levels from the Proposal would comply with the relevant criteria, including relevant sleep disturbance goals, except at the most affected receivers in Wattle Grove where exceedances of the established screening criterion for sleep disturbance by 1 dB are anticipated, under adverse meteorological conditions only. A 1 dB exceedance is considered negligible and therefore does not require mitigation. As such, nearby sensitive receivers are not anticipated to be significantly impacted by noise from 24 hour IMT operations. Additionally, cumulative noise levels due to the concurrent operation of the Proposal and the MPE Stage 1 and MPW Stage 2 Projects are predicted to comply with the established criteria.</p>	Section 8 and Appendix N of the EIS
		Allowing sleep disturbance at Moorebank when challenges at botany are known would be a dereliction of duty by NSW planning and PAC		
	General	General impacts to health and wellbeing of nearby residents not considered in this proposal	The screening Health Risk Assessment (HRA) – refer to Section 10 and Appendix N of the EIS) concluded that emissions from the Proposal would be unlikely to have acute	Section 10 and Appendix N of the EIS

Aspect	Issue	Summary	Comments	Reference
		Concerned about the detrimental health effects of the project on a community predominantly made up of young families	<p>or chronic health impacts on the community. The approach to this HRA was in accordance with approved Australian guidance for performing risk assessments, in particular:</p> <ul style="list-style-type: none"> <li>• Environmental Health Risk Assessment: Guidelines for Assessing Human Health Risks from Environmental Hazards (enHealth. 2012a)</li> <li>• Exposure Factors Guide (enHealth. 2012b.)</li> <li>• Approach to Hazard Assessment for Air Quality (National Health and Medical Research Council (NHMRC), 2006)</li> <li>• Methodology for Setting Air Quality Standards in Australia (National Environment Protection Council (NEPC), 2011).</li> </ul> <p>The HRA focussed on the health impacts to key residential and sensitive locations within the vicinity of the Proposal (refer to Section 9.3.1 of this EIS) incurred from emissions generated by the operational phase of the Proposal.</p> <p>The overall results of the HRA identified that the increase in risk due to air and noise pollution from the operation of the Proposal are low or negligible.</p>	
		This project is causing stress for their family worrying about their home and the area they live in		
		Please consider the health of our children in an already polluted environment		
		Fire incidents on the site could result in toxic emissions impacting nearby residences	<p>A Hazard and Risk Assessment, which included a preliminary risk screening, was prepared in accordance with the requirements of SEPP33 and SEARs for the Proposal and summarised in Section 14 of the EIS. The Assessment concluded that there is the potential for fire and explosions as a result of bushfires or fires initiated onsite from a vehicle accident or equipment. The Proposal would involve the transportation and carrying of hazardous materials on site as identified in the ADG code.</p> <p>As the customers and proposed tenancies of warehouses have yet to be confirmed, the quantities and types of dangerous goods transported to, and stored temporarily on the Proposal site cannot currently be quantified, nor the possibility of transport or storage of dangerous goods at the Proposal site be excluded. As a result, it is unknown whether</p>	Section 14 of the EIS

Aspect	Issue	Summary	Comments	Reference
			<p>the substances will be handled within the Proposal site in quantities that exceed the screening threshold.</p> <p>Regardless, a Dangerous Goods Management Plan would be developed prior to operation of the Proposal. Site personnel and contractors would be informed of the management of dangerous goods and their identification and separation requirements as part of a site induction, in accordance with the relevant Australian standards and NSW WorkCover guidelines.</p> <p>Further mitigation measures are listed in Section 14.5.2 of the EIS to safeguard against fire incidents generated onsite, relating to storage of flammable/combustible liquids, dangerous goods handling and the design, installation and maintenance of gas reticulation infrastructure.</p>	
Natural Environment	General Environment	The proposal would significantly impact the environment and cause environmental destruction	The Proposal was deemed likely to have a significant impact on the environment, and hence an Environment Impact Statement (EIS) has been undertaken to inform the decision as to the acceptability of the predicted impacts, including those associated with vegetation loss, bulk earthworks, utilities and implementation of drainage infrastructure, taking into consideration the mitigation measures and strategies identified for implementation.	Section 11 of the EIS Appendix O of the EIS
		The environmental impact from the removal of vegetation, remediation works, earthworks and levelling of the site, drainage and utilities installation, construction of the hardstand.		
		Adverse impacts to local wildlife	Separate assessments for noise and vibration, air quality, human health and biodiversity impacts associated with the Proposal have been undertaken and summarised in Sections 8, 9, 10 and 11 of the EIS respectively. All assessment findings indicate general compliance with relevant criteria, with additional mitigation measures prescribed to mitigate any residual environmental impacts. The Proposal is not considered to result in any irreparable environmental damage.	
		Damage to the environment would be irreparable	The Biodiversity Assessment Report (BAR) provided in Appendix O and summarised in Section 11 of the EIS includes an assessment of the impacts of the Proposal on flora and fauna, including threatened and endangered	

Aspect	Issue	Summary	Comments	Reference
			<p>species and habitat. The findings from this assessment concludes that the impacts to local wildlife from the Proposal would be minor, particularly given the disturbed nature of the existing site and existing site fencing. The assessment specifically identified the following biodiversity impacts as a result of the Proposal:</p> <ul style="list-style-type: none"> <li>• Minor Impacts to two threatened ecological communities (0.15 ha).</li> <li>• Loss of specific fauna habitat components, including live trees, tree hollows, foraging resources, ground layer habitats such as ground timber and well-developed leaf litter.</li> <li>• Potential weed spread.</li> </ul> <p>The EIS proposes a number of mitigation measures which are considered to be sufficient to appropriately manage the impacts to biodiversity resulting from the Proposal. Furthermore, a comprehensive Biodiversity Offset Strategy (BOS) for the MPE Project is required to be prepared and implemented under the MPE Stage 1 Proposal.</p>	
		Environmental efforts are the legislative minimum and no effort is being made to strive for higher or even world class standards	Technical assessment has been undertaken for all key issues causing environmental impact as a direct or indirect result of the Proposal, as directed by the Secretary's Environmental Assessment Requirements (SEARs) for State Significant Development, within the scope of the <i>Environmental Planning and Assessment Act 1979</i> and the <i>Environmental Planning and Assessment Regulation 2000</i> . SEARs are issued by the Department of Planning and Assessment in consultation with various relevant Government agencies and stakeholders, to provide the desired performance outcomes, requirements and current guidelines for which the Proposal must achieve in order to be approved.	Section 1 of the EIS
	Impacts on local river systems	Concerned the project will negatively impact South-West river systems	The Proposal is situated along the upper Georges River. As discussed in Section 12.2 of the EIS, the Proposal is bisected in a north-south direction by a catchment boundary with the	Section 12 of the EIS



Aspect	Issue	Summary	Comments	Reference
			<p>eastern portion discharging to Anzac Creek (approximately 50 m to the southeast of the Proposal site) and the western portion discharging to the Georges River (approximately 450 m to the west of the Proposal site).</p> <p>Development of the Proposal would result in changes to the catchment boundaries within the MPE site and the Proposal site. The Proposal would increase the impervious surfaces on the site potentially resulting in an increase in surface water runoff and changes to the flood regime within the Proposal site and surrounding area. Modelling was undertaken for the Proposal site including the Climate Change Scenario for the 100 year ARI event. The modelling demonstrated that sufficient capacity can be provided within the stormwater structures proposed to effectively drain the site in a 100 year ARI event and the Climate Change scenario, and would not have any flooding impact to surrounding river systems. Further modelling also indicates that the discharge of surface water from the Proposal site would not alter the environmental availability of water to Anzac Creek and the Georges River.</p> <p>Water quality performance modelling, provided in Section 12.3 of the EIS indicates that with the implementation of mitigation on the Proposal site, including rain gardens and gross pollutant traps, the Proposal would result in an improvement in water quality being discharged to Anzac Creek, the Georges River and hence surrounding river systems.</p>	
		Concerned the project will cause major degradation/damage to the Georges river	<p>An assessment of the potential stormwater and flooding impacts associated with construction and operation of the Proposal is provided in Section 12 and Appendix P of the EIS.</p> <p>Construction of the Proposal would require vegetation clearing and bulk earthworks, which have the potential to lead to erosion and generate sediment laden runoff into the Georges River or Anzac Creek, thereby impacting water quality. A Soil and Water Management Plan (SWMP) and</p>	<p>Section 12 of the EIS</p> <p>Appendix P of the EIS</p>

Aspect	Issue	Summary	Comments	Reference
			<p>Erosion and Sediment Control Plan (ESCP) would be prepared in accordance with the principles and requirements of the Blue Book. The SWMP and ESCP would be implemented during construction, and would include sediment basins positioned generally along the northern, southern and western boundaries of the Proposal site, enabling the discharge of surface runoff that meets the water quality targets specified in Table 12-6 of the EIS (i.e. water discharged would have a neutral or beneficial effect on surrounding water courses).</p> <p>In addition, the Proposal would result in an increase in surface water generation and pollutant loads as a result of the increase in impervious surfaces on the site. Onsite detention (OSD) in the form of sediment basins, outlet channels and water sensitive urban design (WSUD) elements have been sized to provide adequate system capacities and mitigate potential adverse flood impacts and increases in stormwater discharge from the site that may otherwise result from the Proposal. WSUD measures, including gross pollutant traps and rain gardens, have been included and designed to ensure the quality of stormwater leaving the Proposal site would be of equivalent quality to the existing conditions, or provide an improvement to stormwater quality leaving the site. Maintenance of OSD and WSUD structures, as well as water quality monitoring would be included in the OEMP for the Proposal. A Flood Emergency Response Plan (FERP) would be developed for the Proposal site. The FERP would take into consideration, site flooding and broader flood emergency response plans for the Georges River and Anzac Creek floodplains and Moorebank area.</p>	
		Objects to use of prime public riverfront for an industrial project and its alienation from public use	The Proposal site is the former Defence National Storage Distribution Centre (DSNDC), which has been used for private Defence purposes since the early 1900's. The site is zoned IN1 General Industrial under the Liverpool LEP for use as industrial warehousing, and is located approximately 450 m to the east of the Georges River. The Proposal is therefore	N/A
		Project should not be situated so close to an environmentally sensitive area such as the Georges River		

Aspect	Issue	Summary	Comments	Reference
		Area should be used to beautify Georges River rather than for industrial uses	<p>not considered to be prime waterfront land, nor could the area be used to beautify the Georges River given the distance between the River and the Proposal site.</p> <p>The MPE Concept Plan EIS (Urbis, 2012) included consideration of the merits of Concept Approval development, including the Proposal, at the current location. An assessment of alternatives to the Proposal is not considered to be within the scope of this assessment.</p>	
		Concerned the proposal will cause pollution to the local river systems	<p>The environmental risks of the Proposal associated with pollution of local river systems include erosion and sedimentation of waterways and spills waste and chemicals impacts entering river systems.</p> <p>A Stormwater and Flooding Assessment is provided in Section 12 and Appendix R of the EIS, which considers control of surface runoff into the Georges River. Construction of the Proposal would require vegetation clearing and bulk earthworks, which have the potential to lead to erosion and generate sediment laden runoff into the Georges River or Anzac Creek, thereby impacting water quality. A Soil and Water Management Plan (SWMP) and Erosion and Sediment Control Plan (ESCP) would be prepared in accordance with the principles and requirements of the Blue Book. The SWMP and ESCP would be implemented during construction, and would include controls for stockpile management and control of surface flows. Sediment basins would be positioned generally along the northern, southern and western boundaries of the Proposal site, enabling the discharge of surface runoff that meets the water quality targets specified in Table 12-6 of the EIS (i.e. water discharged would have a neutral or beneficial effect on surrounding water courses). Further information detailing how surface flows would be managed during operation is provided in Section 12.3 of the EIS.</p> <p>A Hazard and Risk Assessment is also provided in Section 14 of the EIS, which assesses the risk presented by the</p>	Sections 12, 14 and Appendices R and P of the EIS

Aspect	Issue	Summary	Comments	Reference
			<p>Proposal in relation to spills waste and chemicals impacts to the site and local river systems. During construction, small volumes of fuels and chemicals would be stored on the Proposal site for use by machinery and equipment which may spill in the absence of appropriate mitigation. The operation of the Proposal would require the storage of numerous potentially hazardous materials onsite (refer to Table 14-5 of the EIS). Spills and loss of containment of flammable/combustible or corrosive liquids (including toxic and hazardous substances) is considered a key hazard to be considered in formulating management controls. Potential on-site methods of release are shown in Section 12.3 of the EIS.</p> <p>All dangerous goods would be stored in locations and quantities below the risk levels under State Environmental Planning Policy No. 33 – Hazardous and Offensive Development and Applying SEPP 33 (DoP 2011). Mitigation measures to minimise the risk of accidental spillage of materials hazardous or toxic to the environment (including the nearby Georges River) would combine both Erosion and Sediment Control measures (which would be in accordance with Blue Book Guidelines), and hazard risk mitigation. Mitigation measures for both Stormwater and Flooding, and Hazards and Risk are presented in Sections 12.5 and 14.5 of the EIS. In addition to these measures, the Operational Environmental Management Plan (OEMP) would include an Emergency Response Plan (ERP), including a Pollution Incident Response Management Plan (PIRMP), and a refuelling procedure that would specify procedures to follow in the event of a spill and refuelling, to prevent contamination.</p>	
		Redirection of waterways will cause Anzac and Harris creeks to dry up	Redirection of waterways, including Anzac and Harris creeks, does not form part of the Proposal. A detailed description of the Proposal is included in Section 4 of the EIS.	Section 4 of the EIS
		Aerosol pesticides will be used to fumigate containers; this will pose a	The Proposal does not include provision of a container de-gassing / fumigation facility.	N/A

Aspect	Issue	Summary	Comments	Reference
		threat to aquatic life downstream when it enters the river as run off.		
	Aboriginal/European Heritage	Excessive noise from the spur-line will ruin Glenfield Farm, and blight important historical views with heavy industry	The Proposal does not included assessment of the Rail Link. Impacts associated with the Rail Link have been assessed in the MPE Stage 1 EIS and are being managed under the subsequent Project Approval (SSD 6766).	N/A
	Bushfire	The southern aspect of the site will present a bushfire threat as it has sloped indexed land which under the right temperature and wind direction could pose problems to residents who have to evacuate through one main entry/exit point on Wattle Grove Road	An assessment of the Proposal's impact on bushfire risk is summarised in Section 19 and Appendix U of the EIS.  The bushfire risk assessment identified that the operation of the Proposal is consistent with the objectives of <i>Planning for Bushfire Protection 2006</i> and provides safe operational access and egress for emergency services personnel and residents.	Section 19 of the EIS Appendix U of the EIS
	Pollution	Increase in site level from the fill will result in great distribution of lighting impacts to local residents	An assessment of the impacts of lighting from the Proposal is included in Section 15 and Appendix T of the EIS.	Section 8 and 15 of the EIS
		Increase in building heights will increase noise and light pollution to local residents	Lighting would be required during construction of the Proposal to illuminate within ancillary facilities, and on plant and equipment. The impacts of light spill to sensitive residential receivers during construction are expected to be minor as it would be localised, temporary and designed and located to minimise the effects of light spill on surrounding sensitive receivers. The considerable separation of residential dwellings from the Proposal site would also further reduce the impact of this lighting during the construction of the Proposal.  Lighting during operation was assessed according to AS4282-1198 as a 'commercial area', with lighting aspects including luminous intensities and threshold increments assessed according to the standard's 'post curfew hours'. The assessment findings, presented in Figure 15-30 of the EIS, concluded that the light spill to residential properties, from the MPE Project, would be well within the required	Appendices L, U and T of the EIS

Aspect	Issue	Summary	Comments	Reference
			<p>criteria as specified in Australian Standard <i>AS4282-1997 'Control of Obtrusive Effect of Outdoor Lighting'</i>.</p> <p>The noise model developed to assess the impacts associated with the Proposal includes details of noise source and receiver locations, details of warehouse buildings and topography (including the final site elevation accounting for revised building formantion levels).</p> <p>The increase in site elevation (compared to the existing level) has the potential to increase noise impacts, however, based on the modelling provided, the noise impacts from the proposal would generally meet the criteria (with the exception of Wattle Grove in adverse metrological conditions which result in an imperceptible increase). These noise impacts would be managed through the implementation of a number of mitigation measures, including a Construction Noise and Vibration Management Plan (refer to Section 22 of the EIS).</p>	
	Flooding	Uncaptured flows from the eastern side of the site will negatively impact Anzac Creek	An assessment of the potential stormwater and flooding impacts associated with construction and operation of the Proposal is provided in Section 12 and Appendix P of the EIS.	Section 12 and Appendix P of the EIS
		Increasing site level will increase flooding impacts to surrounding areas	Development of the Proposal would result in changes to the catchment boundaries within the MPE site and the Proposal site. The Proposal would increase the impervious surfaces on the site potentially resulting in an increase in surface water runoff and changes to the flood regime within the Proposal site and surrounding area. Modelling was undertaken for the Proposal site including the Climate Change Scenario for the 100 year ARI event. The modelling demonstrated that sufficient capacity can be provided within the stormwater structures proposed to effectively drain the site in a 100 year ARI event and the Climate Change scenario, and would not have any flooding impact to surrounding river systems. Further modelling also indicates that the discharge of surface water from the Proposal site would not alter the	
		New concrete yards and large shed and general increase in sealed areas will displace rainwater and increase flood danger for surrounding residents and areas		
		Proposal will change the whole nature of the flood zone and Georges river catchment, resulting in more flooding and spreading pollution further		
		If the site were flooded, contamination would run off and potentially harm and kill previous thought extinct <i>Hibbertia fumana</i>		

Aspect	Issue	Summary	Comments	Reference
		Importation of 2 million tons of fill will change the entire water flow and flood diversion profile of the flood plain area	environmental availability of water to Anzac Creek and the Georges River.	
		No plans to create a site for the backed up flood waters to retreat to		
		The proposal area is a designated flood area, raising the site by 2m will impact the surrounding area ability to deal with the impacts of excessive rain		
	Fill	Fill is only being added in an effort to avoid site remediation, due to contamination and dangerous materials left behind	<p>As outlined in Section 13 of the EIS, there are no specific areas requiring direct remediation within the Proposal site. However, various contamination aspects of potential concern could impact on the Proposal site and would be managed appropriately during construction through implementation of measures outlined within Section 13.3 and 22 of the EIS.</p> <p>As states in Section 4.3 of the EIS, the importation of clean general fill is required to facilitate the adjustment of building formation levels and Moorebank Avenue and maintain existing drainage patterns.</p>	Section 4, 13 and 22 and Appendix P of the EIS
		2.2 million cubic meters of landfill is untested, land should be remediated instead	<p>As denoted in Table 4-9 of the EIS, it is proposed to import approximately 631,900 m<sup>3</sup> of clean general fill to achieve desired final building formation levels and to maintain existing drainage patterns. Clean general fill is defined as material meeting the NSW Environment Protection Authority's (EPA) resource recovery orders and exemptions including Virgin Excavated Natural Material (VENM) and Excavated Natural Material (ENM) as defined below:</p> <ul style="list-style-type: none"> <li>• VENM is natural material (such as clay, gravel, sand, soil or rock fines): <ul style="list-style-type: none"> <li>– that has been excavated or quarried from areas that are not contaminated with manufactured chemicals, or with process residues, as a result of industrial, commercial, mining or agricultural activities,</li> </ul> </li> </ul>	Section 13 and Appendix Q of the EIS

Aspect	Issue	Summary	Comments	Reference
			<ul style="list-style-type: none"> <li>- that does not contain sulfidic ores or soils, or any other waste,</li> <li>- and includes Excavated Natural Material (ENM) that meets such criteria for VENM as may be approved from time to time by a notice published in the NSW Government Gazette.</li> <li>• ENM, refers to naturally occurring rock and soil (including but not limited to materials such as sandstone, shale, clay and soil) that: <ul style="list-style-type: none"> <li>- has been excavated from the ground</li> <li>- contains at least 98% (by weight) natural material</li> <li>- does not meet the definition of VENM</li> <li>- does not include material located in a hotspot; that has been processed, contains acid sulphate soils or potential acid sulphate soils.</li> </ul> </li> </ul> <p>The clean general fill to be imported to the Proposal site will come with relevant waste classification certificates verifying that it is VENM/ENM and suitable for use as clean fill.</p>	
		The fill will likely cover rare botanical specimens, aboriginal sites and cause un-remediated contamination	<p>As outlined in the response above, clean general fill would be provided with relevant waste classification certificates verifying that it is VENM/ENM and suitable for use as clean fill.</p> <p>Impacts related to biodiversity and Aboriginal heritage are detailed in Sections 11 and 16 of the EIS. The EIS proposes a number of mitigation measures which are considered to be sufficient to appropriately manage the impacts to biodiversity and Aboriginal heritage resulting from the Proposal. The placement of clean general fill would be managed to avoid impacts to these items, by applying management strategies early in the construction process to salvage or preserve items of significance.</p>	Sections 11 and 16 of the EIS



Aspect	Issue	Summary	Comments	Reference
		If 600,000 tonnes of fill is required then the site is not suitable and the original application ....???	As denoted in Table 4-9 of the EIS, it is proposed to import approximately 631,900 m <sup>3</sup> of clean general fill to achieve desired final building formation levels and to maintain existing drainage patterns.	Section 3 of the EIS
		Objects to the modification of 600,000 cubic metres of fill	The MPE Concept Plan EIS (Urbis, 2012) included consideration of the merits of Concept Approval development, including the suitability of the site at the current location. Further justification for the Proposal and the sites suitability is provided in Section 3 of the EIS.	
		Proposed dirt may contain bio hazards and foreign matter	Construction of the Proposal would involve the importation of clean general fill only, sourced from an appropriately licensed supplier. Importation of clean general fill would be accompanied with relevant waste classification certificates verifying that it is VENM/ENM and suitable for use as clean general fill.	Section 4 of the EIS
	Visual	Concerned there will be a reduction in visual amenity for elevated receivers in Casula	An assessment of the visual impacts associated with construction and operation of the Proposal is provided in Section 12 and Appendix P of the EIS.	Sections 8, 12 15 and Appendices L, P and U of the EIS
		Freight village will be an eyesore	<p>The assessment found that the Proposal would generally be in keeping with the existing character of the area. Some relatively high and/or bulky structures/equipment may however increase the visibility of the Proposal site beyond its current levels, with some limited and highly localised visual impacts. Potential views would occur along viewing corridors created by Moorebank Avenue and where topography provides some elevation above potential obstructions to views, such as from Casula to the west.</p> <p>Overall, the Proposal is in keeping with the surrounding land uses and any impacts would be effectively minimised through the use of landscaping and urban design, the maximum anticipated visual impact at any view point would be Moderate. The proposed landscape and built form treatments would result in an improvement in the visual amenity of the entire site and would increase the current level of screening</p>	

Aspect	Issue	Summary	Comments	Reference
			<p>of the site. Urban design and planning principles would assist with the breakdown of the bulk and scale of the development.</p> <p>In addition, the Proposal would result in minimal effect on adjacent properties and on the environment through the appropriate selection of light source, luminaire, luminaire mounting height and luminaire aiming for operational lighting, as identified in Sections 8, 15 and Appendices L and U of the EIS</p>	
Planning Process	Approvals/applications	The approvals process has not been undertaken correctly and is not transparent, lodging 3 proposal applications 3 days prior to Christmas is underhanded.	<p>The approvals process for EIS has been undertaken in accordance with Part 4, Division 4.1 of the <i>Environmental Planning and Assessment Act 1979</i> and Schedule 2, Clause 6 and 7 of the <i>Environmental Planning and Assessment Regulation 2000</i>.</p> <p>The lodgement and exhibition timeframes for these documents is considered transparent and above standard requirements for public exhibition. An extended exhibition period of over 10 weeks (December 14<sup>th</sup> 2016 to 24<sup>th</sup> February 2017) was provided by DP&amp;E to account for the Christmas period and on account of there being concurrent documentation. The usual exhibition period for such documentation under regular circumstances is four weeks (30 days).</p>	Section 1 of the EIS
		Objects to all aspects of the proposal being approved	An EIS has been prepared to assess the impacts on the Proposal on the surrounding environment in accordance with Part 4, Division 4.1 of EP&A Act and the SEARs for the Proposal. The findings in the EIS are supported by specialist reports specific to each of the key issues identified within the SEARs.	Section 23 of the EIS
		This proposal and the entire project should be stopped completely	<p>The EIS concludes that the development proposed is in the public interest, and that the identified environmental impacts identified would be able to be mitigated through the implementation of measures for the construction and operation of the Proposal, included in Section 22 of this EIS.</p>	

Aspect	Issue	Summary	Comments	Reference
			The EIS identifies that the Proposal meets all the appropriate requirements of the amended SEARs and is consistent with the MPE Concept Approval and EPBC Approval. Approval is therefore recommended.	
		3 new modification applications invalidates any previous EIS findings and results, a new EIS needs to be produced to include these modifications	<p>The EIS is not a modification to an application. The three Proposal applications lodged concurrently include:</p> <ul style="list-style-type: none"> <li>• EIS</li> <li>• MPE Concept Plan Modification Report</li> <li>• MPW Concept Modification RtS (not relevant to this RtS)</li> </ul> <p>The modifications to the Concept Approval as described within the MPE Concept Plan Modification were included for consideration during the development of the EIS.</p> <p>The approvals process for EIS has been undertaken in accordance with Part 4, Division 4.1 of the <i>Environmental Planning and Assessment Act 1979</i> and Schedule 2, Clause 6 and 7 of the <i>Environmental Planning and Assessment Regulation 2000</i>.</p>	Section 1 of the EIS
		The application is a major modification to the concept and should be rejected	The Proposal is not a modification. As outlined in the MPE Concept Approval (approved by the Planning and Assessment Commission on 29 September 2014) (SSD 10_0193), the MPE Project is to be undertaken in 3 stages. Delivery of the MPE Project in a staged manner is considered to be consistent with that approval.	Section 1.4 and 23.2 of the EIS
		The greens proposal to place intermodal terminals on the periphery of the cities and use both port Kembla and Newcastle ports along with port botany to distribute freight fairly and with less environmental destruction	<p>The MPE Concept Plan EIS (Urbis, 2012) included consideration of the choice of the current site and potential alternative sites. An assessment of alternatives to the Proposal is not considered to be within the scope of this assessment.</p> <p>There has been strong and consistent support at State and Commonwealth Government levels for the development of an IMT at Moorebank. The Proposal site has been earmarked as a highly suitable location for an IMT in both freight and</p>	Sections 3 and 22 of the EIS

MPE Stage 2 RtS

Aspect	Issue	Summary	Comments	Reference
			<p>distribution strategy and there is demonstrable demand for an IMT within the area (refer to Section 3 of the EIS). Development of the land is therefore considered most suitable and the highest and best use for the land. The Commonwealth and State Governments have further endorsed the development of an IMT on the MPE site through the granting of approvals including the MPE EPBC Approval (No. 2011/6229) and the MPE Concept Approval (SSD 10_0193).</p> <p>Mitigation measures are included Section 22 of the EIS to minimise the impact of the Proposal on the surrounding environment and community.</p>	
		The planning department should reject all applications and a new fully costed precinct master plan should be developed, one that includes late additions and factors in the RMS traffic impact study, PAC etc. due to the new modifications	Detailed impact assessments have been undertaken for the Proposal, the MPE Concept Approval and MPE Concept Modification 1 and Modification 2. These assessments have considered the impacts of traffic at both a project level and as part of a cumulative impact assessment. The information provided is consistent with the level of detail required for each stage of development in accordance with the EP&A Act.	Section 7 of the EIS
		Opposed to operational movements between MPE and MPW	An assessment of the operational movements between the MPE and MPW sites is outlined in the MPW Concept Modification Response to Submissions Report. The EIS is not seeking approval for the operational movement between MPE and MPW.	N/A
		An independent investigation needs to be completed to confirm the findings of the Submissions	The Planning Assessment Commission (PAC) has been delegated the role of consent authority for the EIS (as permissible under Section 23 of the EP&A Act). As the consent and certifying authority, the PAC undertakes its own independent investigation of the Proposal when deciding upon a determination. This investigation is ordinarily produced in the form of a determination report that is displayed on the PAC and DPE websites.	N/A

Aspect	Issue	Summary	Comments	Reference
		The proposal is being rushed through at a rate that residents can't handle	<p>The approvals process for EIS has been undertaken in accordance with Part 4, Division 4.1 of the <i>Environmental Planning and Assessment Act 1979</i> and Schedule 2, Clause 6 and 7 of the <i>Environmental Planning and Assessment Regulation 2000</i>.</p> <p>The lodgement and exhibition timeframes for these documents is considered transparent and above standard requirements for public exhibition. An extended exhibition period of over 10 weeks (December 14<sup>th</sup> 2016 to 24<sup>th</sup> February 2017) was provided by DP&amp;E to account for the Christmas period and concurrent documentation. The usual exhibition period for such documentation under regular circumstances is four weeks (30 days).</p>	Section 1.4 of the EIS
		Proposal should be thrown out until a responsible master plan has been produced	<p>The purpose of the MPE Concept Approval is to establish a clear framework that will guide the future delivery of the IMT facility in a staged manner. The Proposal is the second stage of the MPE Concept Approval. As the MPE Project has evolved, updates to the MPE Concept Approval (master plan) have occurred in the form of Modifications.</p> <p>The strategic need and justification of the Proposal has been considered in Section 3 of the EIS.</p>	Section 3 of the EIS
		The distance of Wattle Grove to the MPE Project site as stated in the Project Application, is incorrect. It should be 370 metres and not 640 metres	Table 2-1 of the EIS indicates that Wattle Grove is 360 m north-east of the Proposal Site.	Section 2.1 of the EIS.
	Combined project / Modifications	Concerned that if this large a modification is required then the original proposal is flawed and should be thrown out	The Proposal is not a modification. As outlined in the MPE Concept Approval (approved by the Planning and Assessment Commission on 29 September 2014), the MPE Project is to be undertaken in 3 stages. Delivery of the MPE Project in a staged manner is considered to be consistent with that approval.	Sections 7 to 21, and 23.2 of the EIS
		This is not a modification but a whole new development		

Aspect	Issue	Summary	Comments	Reference
		This modification proposal now makes all previous studies and proposals irrelevant as the plans have changed, planning and testing should be done again and the new data presented to the public for consultation	The EIS provides a thorough description and cumulative assessment of the impacts that the Proposal will have on the surrounding environment in accordance with the requirements of the EP&A Act 1979 and Schedule 2, Clause 6 and 7 of the <i>Environmental Planning and Assessment Regulation 2000</i> .	
		Reading and understanding 81 documents at the same time to understand and make considered objections to the proposal is unfair and constitutes inadequate consultation	<p>The approvals process for EIS has been undertaken in accordance with Part 4, Division 4.1 of the <i>Environmental Planning and Assessment Act 1979</i> and Schedule 2, Clause 6 and 7 of the <i>Environmental Planning and Assessment Regulation 2000</i>.</p> <p>The lodgement and exhibition timeframes for these documents is considered transparent and above standard requirements for public exhibition. An extended exhibition period of over 10 weeks (December 14<sup>th</sup> 2016 to 24<sup>th</sup> February 2017) was provided by DP&amp;E to account for the Christmas period and concurrent documentation. The usual exhibition period for such documentation under regular circumstances is four weeks (30 days).</p>	N/A
		Opposed to the change of function of the intermodal terminal to allow interstate, intrastate and port shuttle freight rail	<p>The Proposal does not include provision of, or modifications to, an intermodal terminal and does not seek approval to allow interstate, intrastate and port shuttle freight rail movements.</p> <p>A detailed project description has been provided in Section 4 of the EIS.</p>	Section 4 of the EIS
		Residents have not been consulted in this three in one exhibition	All stakeholder and community consultation undertaken to date has been consistent with the Commonwealth Department of Environment and Energy (DoEE's) EIS Guidelines and the Secretary for the NSW Department of Planning and Environment (DP&E) Environmental Assessment Requirements (SEARs) set out for the MPE Concept Approval (SSD 10_0193) (refer to Appendix B of the MPE Concept EIS).	Section 6 of the EIS

Aspect	Issue	Summary	Comments	Reference
			<p>Community consultation for the MPE Project began in July 2010 and has been ongoing since. The key consultation activities undertaken to date have included:</p> <ul style="list-style-type: none"> <li>• Establishment and ongoing updates to the MPE (<a href="http://www.simta.com.au">www.simta.com.au</a>), providing information relating to the progress of the Project, details relating to the environmental assessment and consultation information</li> <li>• Community update newsletters sent to residential households (approximately 10,000 households) within suburbs adjacent to the MPE site (including households in Wattle Grove, Holsworthy, Moorebank and Hammondville). Newsletters were distributed in November 2016 and March 2017 and contained information on forthcoming newsletters.</li> </ul> <p>Establishment of a free-call project information line to enable all stakeholders to provide feedback and ask questions, 24 hours a day.</p> <p>Personal briefing sessions with residents who have contacted SIMTA through the Project website.</p> <p>Community information sessions to allow dissemination of information relating to the MPE Project, as well as to provide the community with the opportunity to ask questions, discuss any issues with members of the technical team and to take away fact sheets on some of the technical studies.</p> <p>Stakeholder meetings were held with local community members to address particular concerns raised relating to the MPE Project.</p>	
		3 applications at once have been made to try and sneak them through the approvals process	The approvals process for EIS has been undertaken in accordance with Part 4, Division 4.1 of the <i>Environmental Planning and Assessment Act 1979</i> and Schedule 2, Clause 6 and 7 of the <i>Environmental Planning and Assessment Regulation 2000</i> .	N/A

Aspect	Issue	Summary	Comments	Reference
			The lodgement and exhibition timeframes for these documents is considered transparent and above standard requirements for public exhibition. An extended exhibition period of over 10 weeks (December 14 <sup>th</sup> 2016 to 24 <sup>th</sup> February 2017) was provided by DP&E to account for the Christmas period and concurrent documentation. The usual exhibition period for such documentation under regular circumstances is four weeks (30 days).	
	Environmental Management Documents	The original EIS did not allow for the amount of fill required for retail, commercial or light industrial uses and therefore should be reassessed	<p>The development of the stormwater and drainage detailed design since exhibition of the EIS has resulted in changes to the proposed final building formation levels, as shown in the EIS. These changes are to ensure sufficient cover is allowed for stormwater and drainage infrastructure. As a consequence, the surface levels of the Proposal site would increase by up to 700 mm. This would require the importation of approximately 691,00 m<sup>3</sup> of clean general fill. And has been assessed as part of the Proposal.</p> <p>The importation of clean general fill as part of the Proposal remains compliant with the IN1 zoning General Industrial under the <i>Liverpool Local Environmental Plan 2008</i> (Liverpool LEP).</p>	Section 1.7 and 4 of the EIS
		Amendments introduce significant environmental impacts and should be addressed separately in their own EIS not included as an amendment	<p>The EIS is not an amendment but an SSD Proposal as part of the MPE Project.</p> <p>An EIS has been prepared to assess the impacts on the Proposal on the surrounding environment in accordance with Part 4, Division 4.1 of EP&amp;A Act and the SEARs for the Proposal.</p>	N/A
		Who will police the implementation of the OEMP?	The Department of Planning and Environment, as the consent authority of the Proposal, would have the jurisdiction to ensure that the Proposal complies with the measures outlined in the Operational Environmental Management Plan.	N/A
	Tech Studies	Visual Impact Assessment and Light spill studies show that significant	A Visual Impact Assessment and Light Spill Study was prepared by Reid and Campbell and is included in Section 15	Section 15 of the EIS



Aspect	Issue	Summary	Comments	Reference
		landscaping, screening and architectural elements will be needed in order to shield site operations	and Appendix R of the EIS. The findings of this assessment indicate that the greatest visual impact of the full build development would be on the public park and residential receptors on the elevated areas west of the Georges River and residential properties backing onto the SSFL. A range of native shrubs and screening vegetation would be planted along Moorebank Avenue, as well as local plant species planted where reasonable and feasible, to mitigate the visual impact of the Proposal on the surrounding area.	Appendix R of the EIS
		The Impact of light spill to residential properties will affect residents 24/7. The light spill study show this.	A Visual Impact Assessment and Light Spill Study was prepared by Reid and Campbell and is included in Section 15 and Appendix R of the EIS. The findings of the Light Spill Study indicate that lighting will have a minimal impact on surrounding residential properties and it would be within the acceptable criteria as specified in Australian Standard AS4282-1997 Control of Obtrusive Effects of Outdoor Lighting.	Section 15 of the EIS Appendix R of the EIS
		Thorough research needs to be done to substantiate the project to the local people	The detailed strategic justification for the construction and operation of the MPE Project was considered as part of the MPE Concept Approval. This justification was re-iterated in Section 3 of the EIS.  There has been strong and consistent support at State and Commonwealth Government levels for the development of an IMT at Moorebank. The Proposal site has been earmarked as a highly suitable location for an IMT in both freight and distribution strategy and there is demonstrable demand for an IMT within the area (refer to Section 3 of the EIS). Development of the land is therefore considered most suitable and the highest and best use for the land. The Commonwealth and State Governments have further endorsed the development of an IMT on the MPE site through the granting of approvals including the MPE EPBC Approval (No. 2011/6229) and the MPE Concept Approval (SSD 10_0193).	Section 3 of the EIS

Aspect	Issue	Summary	Comments	Reference
	General	Since project was conceived the surrounding areas have been rezoned to medium and high density, greatly increasing strain on traffic, resources etc.	Detailed impact assessments have been undertaken progressively for the MPE Project and Proposal. In particular, these assessments have considered the zoning of the surrounding area and the impacts of traffic in relation to traffic growth from background traffic and the MPE Project. The information provided is consistent with the level of detail required for each stage of development in accordance with the EP&A Act.	Sections 7 to 21 of the EIS
		Proposed raising of vertical alignment of Moorebank Avenue for 1.5kms by 2m from the northern boundary of MPE to 120 meters south of the MPE site will require more space for the proposed site	The project boundaries for the Proposal are shown in Figure 1-2 of the EIS. These boundaries have been based on the construction and operational footprints for the works as described in Section 4 of the EIS and include any works required for raising Moorebank Avenue.  Proposal amendments which impact on construction and operational boundaries have been described and assessed in Section 6 of this RtS.	Section 4 of the EIS
		Raising of Moorebank Avenue needs to be investigated	The MPE Concept Plan Approval indicates that Moorebank Avenue would be required to be upgraded within 24 months of operating an IMT terminal with a throughput of 300,000 TEU per annum. SIMTA has considered the overall works program for the Moorebank Precinct and identified that positive outcomes can be achieved through undertaking, in part, the Moorebank Avenue upgrade as part of the Proposal.  In designing the upgrade, consideration was given to the constraints of the Moorebank Precinct, in particular those posed by surface water drainage from the MPE site and Moorebank Avenue across the MPW site. It was determined that the optimal design was to adjust the vertical alignment of Moorebank Avenue to improve drainage across the Moorebank Precinct and as best retain existing flow patterns in the surrounding area.  Upgrades to Moorebank Avenue including the modifications to vertical alignment have been assessed for environmental impacts as part of the EIS in Sections 7 to 20. Mitigation and	Section 3 of the EIS

MPE Stage 2 RtS

Aspect	Issue	Summary	Comments	Reference
			management measures provided in Section 22 of the EIS are to be implemented to manage residual impacts identified within these assessments regarding this aspect of the Proposal.	
	MPE Stage 2 Application	SIMTA shouldn't be able to apply for Stage 2 when they haven't finished modifying their concept plan	It is intended that the MPE Modification Proposal would be determined prior to the determination of the Proposal. This approach is in accordance with requirements of the EP&A Act.	N/A
		Stage 2 should not be approved when concept plan and layout is not finalised		
		Where is the detailed study showing how/what 'minor indirect visual impacts' there will be on Glenfield Farm	<p>Potential visual impacts to Glenfield Farm as a result of the Proposal are identified and assessed within the Non-Indigenous Heritage Impact Assessment (refer to Section 17 and Appendix T of the EIS) and the Visual Impact Assessment (refer to Section 15 and Appendix R of the EIS).</p> <p>Glenfield Farm is identified as being listed on the State Heritage Register (SHR) and one of several sensitive visual receptors associated with the Proposal. However, given the distance of the Proposal from Glenfield Farm is approximately 1.7 kilometres, and the visual screening provided by the MPW Project and riparian vegetation, visual impacts imposed by the Proposal are considered to be minor.</p>	Section 15 and 17 and appendices T and R of the EIS
		Section 5.1 pg.22 of the Non-Indigenous heritage assessment in the section historical background - early settlement at Liverpool. The proponents do not mention Glenfield farm at all, they do not mention that the intermodal spur-line site is part of Charles Throsby's land grant of 1810 and an important visual curtilage of Glenfield Farm which was to be returned to the public as recreational use	Section 5.1 of the Non-Indigenous Heritage Assessment (refer to Appendix T of the EIS) outlines the historical significance of agriculture to the Liverpool area and is intended to be a broad summary and not to provide specific references to places. While Glenfield Farm is not specifically referenced in this background section of the assessment, a description of the heritage values of Glenfield Farm is included in Section 7.3 of the assessment (Appendix T of the EIS).	Section 17 of the EIS Appendix T of the EIS
		Concept plan clearly stated that warehousing would be located on the	Warehousing for the Proposal would be located predominately on the eastern side of the MPE Project site.	Section 4 of the EIS

MPE Stage 2 RtS

Aspect	Issue	Summary	Comments	Reference
		eastern side of MPE site to act as noise mitigation for Wattle Grove residents, the new site plan layout shows a large percentage of warehousing facing the western side of Wattle Grove.	<p>The IMT (to be developed as part of the MPE Stage 1 Approval) would be located on the western side of the MPE Project site, adjacent to Moorebank Avenue. This is consistent with the MPE Concept Approval.</p> <p>A detailed Proposal Description for the Proposal is provided in Section 4 of the EIS.</p>	
		Subdivision is an alarming term. Does this mean there is the potential further sale of subdivided plots for alternative uses which may not be bound by this application or time frame. Will subdivided plot be bound by the same regulation?	The intent of the subdivision is to segregate the IMT and warehouse and distribution facilities, and to facilitate long-term leases on land associated with warehousing, the freight village and general infrastructure. This will not impact on how the Proposal Site is assessed by DPE as part of future applications.	Section 4 of the EIS
		Could subdivided plot apply for various usage? E.g. heavy industrial, commercial. Which could then bypass requirements for PAC development approval?		
		The residents have never had a vote on the proposal or the approval	<p>All stakeholder and community consultation undertaken to date has been consistent with the Commonwealth Department of Environment and Energy (DoEE's) EIS Guidelines and the Secretary for the NSW Department of Planning and Environment (DP&amp;E) Environmental Assessment Requirements (SEARs) set out for the MPE Concept Approval (SSD 10_0193) (refer to Appendix B of the MPE Concept EIS).</p> <p>Community consultation for the MPE Project began in July 2010 and has been ongoing since. The key consultation activities undertaken to date have included:</p> <ul style="list-style-type: none"> <li>Establishment and ongoing updates to the MPE (<a href="http://www.simta.com.au">www.simta.com.au</a>), providing information relating to the progress of the Project, details relating to the environmental assessment and consultation information</li> </ul>	Section 6 of the EIS

Aspect	Issue	Summary	Comments	Reference
			<ul style="list-style-type: none"> <li>Community update newsletters sent to residential households (approximately 10,000 households) within suburbs adjacent to the MPE site (including households in Wattle Grove, Holsworthy, Moorebank and Hammondville). Newsletters were distributed in November 2016 and March 2017 and contained information on forthcoming newsletters.</li> </ul> <p>Establishment of a free-call project information line to enable all stakeholders to provide feedback and ask questions, 24 hours a day.</p> <p>Personal briefing sessions with residents who have contacted SIMTA through the Project website.</p> <p>Community information sessions to allow dissemination of information relating to the MPE Project, as well as to provide the community with the opportunity to ask questions, discuss any issues with members of the technical team and to take away fact sheets on some of the technical studies.</p> <p>Stakeholder meetings were held with local community members to address particular concerns raised relating to the MPE Project.</p>	
Economics	General	Objects to the use of public funds for this privately owned project	The Proposal is to be funded by both SIMTA and MIC. The Capital Investment Value for the MPE Project is provided in the section 1 of the EIS. The MPE Project would result in benefits to the wider community on a regional scale through a shift in container freight from road to rail, facilitating improved freight movements from Port Botany to Moorebank.	Section 1 of the EIS
		This will benefit multinational companies who will not pay their fair share of taxes	The justification and strategic need of the Proposal has been considered in Section 3 of the EIS.	Section 3 of the EIS
		Forwarding freight on from its original port destination in Port Botany will increase freight and shipping costs while unnecessarily clogging roads		

Aspect	Issue	Summary	Comments	Reference
	Reduction in property prices and compensation	Project would cause a decrease in property and land value	The Proposal has not changed the land use zoning IN1 – General Industrial warehousing use by LCC in the Liverpool LEP 2008, and is not anticipated to result in a decrease to surrounding land prices, given the findings of the technical environmental impact assessments and implementation of mitigation measures outlined in Section 22 of the EIS.	Sections 7, 8, 9, 10, 20, of the EIS
		Impacts to nearby residents economic wellbeing		Appendices M, L, K, N of the EIS
		Request for reimbursement of property capital loss	<p>More specifically, a socio-economic impact assessment , provided in Section 20.5 of the EIS, considers economic impacts generated as a result of the Proposal both during construction and operation.</p> <p>Socio-economic impacts have been considered with regard to the results of technical specialist assessments for air, noise, traffic and health (refer to Appendices M, L, K and N respectively), which show that impacts would be effectively managed (in accordance with relevant amenity criteria) through the application of management and mitigation measures.</p> <p>These mitigation measures have also been updated to address the potential environmental impacts from the Proposal Amendments (refer to Sections 6,7 and 8 of this RtS). In consideration of the significance of the impacts of the Proposal, no compensation is considered necessary or suitable.</p>	
		The intermodal project will drive new residents and investment away from the region	<p>A socio-economic impact assessment was undertaken in preparation of the EIS (refer to Section 20.5 of the EIS). Section 20.5.3 of the EIS considers economic impacts generated as a result of the Proposal both during construction and operation.</p> <p>There is potential for positive and negative socio-economic impacts associated with the operation of the Proposal. Positive impacts are likely to be felt more at a regional level while both positive and negative impacts associated with the development would possibly be experienced at the local level. Positive impacts of the Proposal include provision of approximately 1,408 employment positions and increasing</p>	Section 20 of the EIS

Aspect	Issue	Summary	Comments	Reference
			the demand for local goods and services, Assessments of traffic, air quality, visual amenity, noise and vibration and health impacts associated with operation of the Proposal found that any socio-economic impacts would be minor, particularly with proposed mitigation measures minimising any negative impacts.	
	Employment	Dispute employment numbers stated in the EIS. The use of automated machinery would reduce these numbers significantly	An assessment of the socio-economic impacts associated with the Proposal was provided in Section 20.5 of the EIS. It is estimated that the Proposal would generate approximately 1,408 positions associated with the operation and maintenance of the warehouse and distribution facilities that require both skilled and unskilled workers. The warehousing function of the Proposal would not be subject to automation in the foreseeable future and therefore the employment numbers provided are considered valid	Section 20 of the EIS
		Inconsistent employment numbers have been provided, first it was 7000 jobs and now it's only 1600 jobs	It is unclear following a review of previous approval documentation relating to the MPE Concept Approval and the Proposal where the figure of 7,000 jobs was extrapolated from.  As stated in Section 20.5 of the EIS, it is estimated the Proposal will result in the generation of approximately 1,408 employment full-time equivalent positions, associated with the operation and maintenance of the warehouse and distribution facilities that require both skilled and unskilled workers.	Section 20 of the EIS
	Cost of the project	Raising the ground works by 2m is a waste of tax payers money	The Proposal is to be funded by both SIMTA and MIC. The MPE Project would result in benefits to the wider community on a regional scale through a shift from road to rail and improved freight movements from Port Botany to Moorebank (refer to Section 3 of the EIS).	N/A
		Waste of tax payers funds		
		Government has not allocated the required funds for the required infrastructure to establish the site		
Community	Consultation	Consultation to date has been insufficient/non existent	All stakeholder and community consultation undertaken to date has been consistent with the Commonwealth	

Aspect	Issue	Summary	Comments	Reference
		Huge swathes of the broader community, who will also be affected, have been left out of the consultation process such as Bayside council area, Sutherland shire, Georges river, Canterbury, and Bankstown	<p>Department of Energy and Environment (DoEE's) EIS Guidelines and the Secretary for the NSW Department of Planning and Environment (DP&amp;E) Environmental Assessment Requirements (SEARs) set out for the MPE Concept Approval (SSD 10_0193) (refer to Appendix B of the MPE Concept EIS).</p> <p>Community consultation for the MPE Project began in 2010 and has been ongoing. The key consultation activities undertaken to date have included:</p> <ul style="list-style-type: none"> <li>Establishment and ongoing updates to the MPE Project website (<a href="http://www.simta.com.au">www.simta.com.au</a>), providing information relating to the progress of the Project, details relating to the environmental assessment and consultation information</li> <li>Community update newsletters sent to residential households (approximately 10,000 households) within suburbs adjacent to the MPE site (including households in Wattle Grove, Holsworthy, Moorebank and Hammondville). Newsletters were distributed in November 2016 and March 2017 and contained information on forthcoming newsletters.</li> </ul> <p>Establishment of a free-call project information line to enable all stakeholders to provide feedback and ask questions, 24 hours a day.</p> <p>Personal briefing sessions with residents who have contacted SIMTA through the Project website. Community information sessions to allow dissemination of information relating to the MPE Project, as well as to provide the community with the opportunity to ask questions, discuss any issues with members of the technical team and to take away fact sheets on some of the technical studies.</p> <p>Stakeholder meetings were held with local community members to address particular concerns raised relating to the MPE Project.</p>	<p>Section 17 of the MPE Concept EIS (Urbis, 2012)</p> <p>Section 6 of the EIS</p>



Aspect	Issue	Summary	Comments	Reference
		Multistorey high-rise apartment buildings are being constructed within 1km of the proposed site, these new owners have not been consulted with and their views will be obstructed with the proposal	<p>As outlined above, SIMTA has implemented ongoing community consultation methods since 2010. This has included multiple newsletters distributed to approximately 10,000 households within the nearby suburbs, including those within a 1km radius of the MPE site.</p> <p>A cumulative assessment of the of the environmental impacts was undertaken for the MPE Concept Approval, where all possible efforts have been made to include other planned developments (refer to Section 3.3.3 of the MPE Concept Approval).</p> <p>It is not the responsibility of SIMTA to identify and account for all future residential development in nearby suburbs when assessing operational impacts of the MPE Project. All efforts have been made to consult with members of the public through the various mediums outlined above. Furthermore, as indicated in Section 15 of the EIS, the Proposal is not anticipated to result in any significant visual impacts that weren't considered under the approved Concept Approval (SSD 10_0193).</p>	<p>Section 3.3.3 of the MPE Concept EIS</p> <p>Section 15 of the EIS</p>
	Impacts to community lifestyle	The Proposal would impact on community, families and lifestyle. Impacting general health, traffic and environment through noise and pollution for years to come	<p>Impacts to community, families, health, lifestyle and character were identified and assessed in the EIS through assessments for traffic, noise, air and human health (Refer to Sections 7, 8, 9 and 10 respectively of the EIS). These assessments were undertaken and assessed against criteria, standards and guidelines issued through the SEARs to preserve amenity of humans and the surrounding environment. The general findings of each assessment indicate that the Proposal would have a minimal impact to the community, through the implementation of management and mitigation measures listed in Section 22 of the EIS.</p>	<p>Sections 7, 8, 9, 10 of the EIS.</p> <p>Section 22 of the EIS</p>
		The proposal would change the character of the area		
		The proposal would impact young families who have settled in the area		
		The Proposal will decrease the quality of life for the community		
		Extensive construction works and operation will impact the surrounding		

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Aspect	Issue	Summary	Comments	Reference
		community in regards to noise, emissions, dust, breaking, lighting and shunting		
		It is unrealistic to assume that this development in such a small community will have no impact		
		Facility will stifle growth in an important business growth centre		
		Adverse impacts on the standard of living for local residents		
		Industrial area not appropriate in the middle of a residential community	The merits of this type of land use at this location were assessed as part of the MPE Concept Approval (MP 10_0193). The land upon which the MPE site is located is zoned IN1 General Industrial and SP2 Infrastructure (Defence). The proposal is considered to be generally consistent with these land use zonings as outlined in the Liverpool LEP 2008.  It is also significant to note that the nearest residential areas to the Proposal site are located to the east of site in Wattle Grove, over 350 m away, which is buffered by a large area of vegetation (the Bootlands). A number of similar industrial land uses are also located directly the north and west of the Proposal site.	N/A
		Densely populated family-orientated residential area not suitable for such a development		
		The proposal will risk destroying the unique, young family orientated community, specifically one that is surrounded by the bush		
		The proposal is located too close to residential areas		
		Raising site 2m will put the terminal in full view of surrounding residents making their life unbearable	An assessment of Visual Amenity, Urban Design and Landscape impacts including light spill has been undertaken for the Proposal and is included in Section 15 and Appendix R of the EIS. The assessment included consideration of modifications to site levels from the importation of clean general fill.  The extensive native bushland areas, neighbouring Department of Defence , the MPW site and the general pattern of industrial and commercial development	Section 15 of the EIS.

Aspect	Issue	Summary	Comments	Reference
			<p>surrounding provide significant visual screening of the Proposal site for surrounding sensitive residential receivers.</p> <p>The construction phase of the Proposal includes a number of temporary structures, including ancillary facilities, offices and equipment etc, which would have short term and temporary impacts on the surrounding streetscape. These temporary structures are likely to be visible from areas such as Moorebank Avenue, the nearby passenger rail lines and potentially nearby residential areas of Casula and Wattle Grove. Any visual impacts would be localised and temporary in nature. Notwithstanding this, a number of actions would be considered during the construction of the Proposal to further reduce the visual impacts on the surrounding area such as early implementation of landscape planting, use of artwork or project information on hoardings, progressive re-vegetation/landscaping and the use of cut-off/ directed lighting.</p> <p>The operation of the Proposal would be in keeping with the surrounding land uses. Residual visual impacts would be effectively minimised through the use of landscaping and urban design. The maximum anticipated visual impact at any view point would be moderate. With the implementation of appropriate landscaping and urban design, the Proposal would increase the current level of screening of the site and improve the overall visual amenity of the Proposal site.</p> <p>Operational lighting for the Proposal would result in minimal light spill impacts on adjacent properties and on the environment through the appropriate selection of light source, luminaire, luminaire mounting height and luminaire aiming.</p>	
		Diesel particle pollution and traffic will have a negative impact on residents and has not been looked at properly	Section 9 of the EIS assesses the impacts associated with air emissions generated by the Proposal. For construction, it is recognized that particulate matter and fugitive dust emissions would generate the greatest impact with regard to air quality of the Proposal site and surrounds during bulk earthworks activities, thus TSP, PM <sub>10</sub> and PM <sub>2.5</sub> are assessed as key	Section 10 of the EIS

Aspect	Issue	Summary	Comments	Reference
			<p>pollutants. Diesel exhaust emissions associated with on-road trucks are included within this assessment.</p> <p>Key pollutants assessed for the operational phase of the Proposal considered to have the greatest potential impacts are associated with diesel and fossil fuel combustion. Pollutants assessed include PM<sub>10</sub>, PM<sub>2.5</sub>, Oxides of nitrogen (NO<sub>x</sub>), Sulphur dioxide (SO<sub>2</sub>), Carbon monoxide (CO) and speciated HC / VOCs – benzene, 1-3-butadiene and PAHs.</p> <p>Dispersion modelling results for construction indicate no relevant criteria exceedances, and no additional days over the criteria. During operation, the modelling predictions indicate that the risk of adverse air quality impacts generated by the Proposal are low, and that incremental increases in key pollutants at surrounding residential receivers would be largely indistinguishable from the existing background and the Proposal, and all VOCs are below the relevant assessment criteria.</p> <p>An assessment of Traffic and Transport Impacts is provided in Section 7 of the EIS. For construction, the results indicate that in peak morning and afternoon periods, key intersections would maintain an acceptable Level of Service (LoS C or better) when compared to impacts modelled without the Proposal.</p> <p>For operation, the findings indicate that during the AM and PM peak periods, key intersections would operate at a similar level of service with and without the Proposal in both the 2019 and 2029 scenarios (refer to Table 7-23 of the EIS).</p>	
		Many residents have illnesses and the current peaceful and green environment minimise symptoms and aid recovery	<p>A Health Risk Assessment (HRA) was prepared by Ramboll Environ (2016) for the EIS (refer to Appendix N and Section 10 of the EIS) to address the SEARs. The assessment evaluated both direct and indirect impacts of the Proposal on the health and wellbeing of the community, both regionally and for local sensitive receivers, such as schools, care centres, residential areas and retirement homes during operation. Overall, the assessment concluded that the</p>	Section 10 of the EIS

Aspect	Issue	Summary	Comments	Reference
			Proposal does not pose an unacceptable risk to the health of nearby communities and that any impacts would be managed through the implementation of management and mitigation measures prescribed in EIS.	
	Social	It's morally wrong to do this to residents in the area	The merits of this type of land use at this location were assessed as part of the MPE Concept Approval (MP 10_0193). The EIS does not seek to alter the MPE project as presented in the Concept Approval.	N/A
	Safety	Erecting noise barriers in close proximity to noise sources is unsafe and impractical, especially when sources are not static	The Proposal does not include the provision of noise walls.  A Noise and Vibration Impact Assessment (NVIA) was prepared by Wilkinson Murray for the Proposal and is included in Section 8 and Appendix L of the EIS. The assessment included a detailed noise model, which included proposed operations on both the MPE and MPW sites. Based on the model predictions it was determined that a noise wall would not be required on the MPE site	Section 8 of the EIS.
		Traffic caused by the proposal will be dangerous and compromise the safety of residents	The Traffic Impact Assessment in Section 7.4 and Appendix M of the EIS assessed existing and potential traffic accidents on surrounding roads.	Section 7 of the EIS Appendix K of the EIS.
		Concerned that SIMTA's official report states at this point that there is a 20-fold higher crash rate than the RMS threshold for blackspots on Moorebank and Cambridge avenue, 2 fatalities over 5 years and MICL's EIS which states a 40 fold higher crash rate than the RMS threshold on the M5 between Heathcoat Road and the Hume highway, while the report states that between 75-85% of intermodal trucks will use these blackspots and 100% will use Moorebank Avenue. With 25% using Sydney's worst blackspot. Concerned that this will result in more deaths	The Proposal would increase daily traffic volumes on Moorebank Avenue and Cambridge Avenue. The net impact of the additional traffic generated by the Proposal, as well as the proposed access points and improvements associated with the Proposal would result in an increase in crashes on both roads.  The crash rate on Moorebank Avenue is forecast to increase from 10.2 crashes per year to 12.1 crashes per year. The crash rate on Cambridge Avenue is forecast to increase from 5 to approximately 5.3 crashes per year. Traffic increase along Moorebank Avenue and Cambridge Avenue from operation of the Proposal constitutes around 15 - 18% and 0.8% respectively of overall traffic. Increases in the crash rate are generally attributable to the forecast increase in	Section 7 of the EIS Appendix K of the EIS.

Aspect	Issue	Summary	Comments	Reference
			<p>background traffic growth and would not be directly related to the introduction of operational traffic from the Proposal. With the implementation of the mitigation measures included in Section 7 and the Operational Traffic Management Plan (OTMP), the Proposal is not anticipated to significantly impact on road safety on nearby roads.</p> <p>Road safety for the Proposal would be managed through design of the site access points, road network improvements (undertaken by Roads and Maritime) and with the implementation of the procedures outlined in the Preliminary Construction Traffic Management Plan (PCTMP) and POTMP (Appendix K of the EIS).</p>	
Flora & Fauna	General	Concerned project would impact endangered flora and fauna thought to be extinct, specifically <i>Hibbertia Fumana</i>	<p>Additional targeted threatened flora surveys have been undertaken within 30 m of the eastern boundary of the MPE Site where it adjoins the Boot land, and within 30 m of the portion of the Boot land south of the MPE Site that adjoins the fenceline south of the MPE Stage 2 amended construction area (refer to Figure 6-2 of this RtS).</p> <p>Threatened flora species targeted as part of the additional surveys included:</p> <ul style="list-style-type: none"> <li>• <i>Acacia bynoeana</i> (Bynoe's Wattle)</li> <li>• <i>Acacia pubescens</i> (Downy Wattle)</li> <li>• <i>Grevillea parviflora subsp. Parviflora</i> (Small-flowered Grevillea)</li> <li>• <i>Hibbertia fumana</i></li> <li>• <i>Hibbertia puberula subsp. Puberula</i></li> <li>• <i>Persoonia nutans</i> (Nodding Geebung).</li> </ul> <p>The results and extent of the survey area and locations of threatened species recorded within this area is included in Section 7.5 of this RtS. The Amended Proposal would result in construction phase biodiversity impacts consistent with those already identified and assessed as part of the EIS (refer to Section 11.4 and Appendix O of the EIS). The</p>	Section 7.5 of this RtS

Aspect	Issue	Summary	Comments	Reference
			modifications to the stormwater and drainage design would not change the type or extent of potential stormwater and flooding impacts assessed in the MPE Stage 2 EIS (refer to Section 12 and Appendix O). Accordingly, these potential impacts would be managed and mitigated in accordance with Section 12.4.1 and Appendix O of the EIS.	
		Concerned project is reducing vegetation in the riparian corridor, how is this going to be offset	<p>The Proposal would not require the removal vegetation within the riparian zone. Vegetation clearance is described in Section 4.2.5 of the EIS.</p> <p>The riparian corridor along the western boundary of the MPW site / Georges River would form a permanent conservation area. This area is to be offset as part of the MPW Concept Approval.</p> <p>A Biodiversity Offset Strategy is currently under preparation to offset the impacts of the MPE and MPW Projects and it will be prepared in accordance with the Conditions of Approval for the MPW Project (SSD 5066) and also Conditions of Approval for the MPE Stage 1 Approval (SSD 14-6766).</p>	Section 11 of the EIS
		Concerned general Flora and Fauna will be negatively impacted	<p>An assessment of the Flora and Fauna impacts of the Proposal was undertaken and has been included in Section 11 and attached as Appendix O of the EIS.</p> <p>Overall, the Biodiversity Assessment indicated that the Proposal will have negligible impacts on flora and fauna. Furthermore, a Flora and Fauna Management Plan would be implemented into the CEMP and OEMP and it would provide management and mitigation measures to further minimise the impacts on flora and fauna for both the construction and operational phases of the Proposal.</p>	Section 11 of the EIS
		This modification shows that key information was withheld until after the approvals process relating to previous thought extinct species	Detailed surveys and biodiversity impact assessments have been undertaken progressively for both the MPE Project, and the Proposal. The information provided is consistent with the level of detail required for each stage of development in accordance with the EP&A Act.	Section 11 of the EIS Appendix O of the EIS

Aspect	Issue	Summary	Comments	Reference
	Vegetation management	What is the conservation and management plan for <i>Hibbertia fumana</i> , which department will be delegated authority to ensure the plan is produced by the applicant	<p>A biodiversity assessment was undertaken for the Proposal and is included Section 11 and Appendix O of the EIS. During surveying for the assessment <i>Hibbertia puberula</i> subsp. <i>puberula</i>, was recorded in the Boot Land to the south and east of the Proposal site. Given the marginal habitat present and following targeted surveys, it is considered unlikely that this threatened flora species occurs on the Proposal site.</p> <p>A Biodiversity Offset Strategy (BOS) is currently under preparation to offset the impacts of the MPE Project and MPW Projects. This BOS is to be submitted in accordance with the Conditions of Approval for the MPW Project (SSD 5066) and also Draft Conditions of Approval for the MPE Stage 1 Proposal (SSD 14-6766).</p>	Section 11 of the EIS Appendix O of the EIS
	Impacts to native species	Non reporting of extinct flora until 4 days after the report points to dishonesty and shows no community consultation	Detailed surveys and biodiversity impact assessments have been undertaken and documented progressively for both the MPE Project and the Proposal. The information provided is consistent with the level of detail required for each stage of development in accordance with the EP&A Act.	MPE Concept EIS EIS
		No clearing whatsoever must be done to protect the recently discovered <i>Hibbertia Fumana</i> and an OEH section 91 licence should be applied for.	<p>Additional targeted threatened flora surveys have been undertaken within 30 m of the eastern boundary of the MPE Site where it adjoins the Boot land, and within 30 m of the portion of the Boot land south of the MPE Site that adjoins the fenceline south of the MPE Stage 2 amended construction area (refer to Figure 6-2 of this RtS).</p> <p>Threatened flora species targeted as part of the additional surveys included:</p> <ul style="list-style-type: none"> <li>• <i>Acacia bynoeana</i> (Bynoe's Wattle)</li> <li>• <i>Acacia pubescens</i> (Downy Wattle)</li> <li>• <i>Grevillea parviflora</i> subsp. <i>Parviflora</i> (Small-flowered Grevillea)</li> <li>• <i>Hibbertia fumana</i></li> </ul>	Section 7.5 of this RtS



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Aspect	Issue	Summary	Comments	Reference
			<ul style="list-style-type: none"> <li>• <i>Hibbertia puberula</i> subsp. <i>Puberula</i></li> <li>• <i>Persoonia nutans</i> (Nodding Geebung).</li> </ul> <p>The results and extent of the survey area and locations of threatened species recorded within this area is included in Section 7.5 of this RtS. The Amended Proposal would result in construction phase biodiversity impacts consistent with those already identified and assessed as part of the EIS (refer to Section 11.4 and Appendix O of the EIS). The modifications to the stormwater and drainage design would not change the type or extent of potential stormwater and flooding impacts assessed in the MPE Stage 2 EIS (refer to Section 12 and Appendix O). Accordingly, these potential impacts would be managed and mitigated in accordance with Section 12.4.1 and Appendix O of the EIS.</p>	

## 5.2 Special interest groups

Three submissions were received from special interest groups and immediately surrounding land owners including the following:

- East Liverpool Progress Association
- Moorebank Residents Action Group
- ABB

Response to the issues raised in these submissions are included in Table 5-2 (East Liverpool Progress Association), Table 5-3 (Moorebank Residents Action Group) and Table 5-4 (ABB) respectively.

### 5.2.1 East Liverpool Progress Association

The East Liverpool Progress Association (ELPA) Moorebank Submission received for the MPE Stage 2 Proposal is expressed to be in relation to the MPW Concept Modification Proposal, MPE Concept Plan Modification Proposal and the MPE Stage 2 EIS. A significant proportion of the information provided with the ELPA Moorebank submission was considered to be background and contextual information and has therefore not been reproduced in this RtS. Comments as relevant to the MPE Stage 2 Proposal have been summarised in Table 5-2 below.

Table 5-2 Response to special interest group submission – East Liverpool Progress Association

Aspect	Comment	Response	Reference
Approval Process	Comment that the Planning Assessment Commission (PAC) should withhold consent and the decision should be made by the Minister for Planning.	Under Section 23 of the EP&A Act the Minister may delegate functions under the Act, such as assessment of an SSD Application, to the PAC. The MPE Stage 2 application has been referred to the PAC under Ministerial delegation dated 14 September 2011 as more than 25 objections were received and both Liverpool City Council and Campbelltown City Council object to the Proposal. As such, the PAC is the consent authority for the Proposal.	N/A

Aspect	Comment	Response	Reference
<b>Traffic</b>			
Traffic modelling	<p>Roads and Maritime Services (Roads and Maritime) and TfNSW previously agreed to the development of a mesoscopic and microsimulation transport model for the combined MPE and MPW sites. The intended scope of this model should be communicated publicly. It is not clear that the requirements of condition 12 of the MPW Concept Approval have been satisfied.</p> <p>The latest traffic modelling should be publicly exhibited.</p>	<p>Condition 12 of the MPW Concept Approval does not apply to the Proposal.</p> <p>A precinct model has been prepared by SIMTA to highlight potential traffic impacts of the Proposal at a range of scales (as a part of the Moorebank Precinct), the need for upgrades to the road network, and the timing and triggers for those upgrades. Ongoing consultation with TfNSW is being undertaken regarding the outcomes of the precinct model.</p> <p>The Traffic Impact Assessment provided in Section 7 and Appendix K of the EIS provides details of the traffic modelling including assumptions and methodology and outcomes for the Proposal.</p>	Section 7 and Appendix K of the RtS
M5 Weave	Further review and comment should be made in relation to the dangerous M5 Georges River Bridge merge / weave operation.	The AIMSUN modelling conducted for the Proposal considered the potential vehicular conflict and delays associated with weaving and merging of traffic at the M5 interchange. In assessing weaving impacts the AIMSUN model examines driver behaviour, vehicle acceleration and deceleration characteristics and the road geometry. The issue of weaving on the M5 is not something that is directly related to the presence of the project and is a broader existing road network issue affected by background traffic growth.	Section 7 and Appendix K of the RtS
Independent Traffic and Transport review of the MPW Staged SSD	The Aurecon Moorebank Intermodal Terminal Independent Traffic and Transport review of the MPW Staged SSD (prepared for the NSW Department of Planning and Environment - 8 October 2015) (MPW Concept Approval) should be further considered.	The Independent Traffic and Transport review of the MPW Staged SSD is not directly relevant to the Proposal. It is however noted that the review was considered by the PAC prior to the decision to grant development consent for the MPW Project on 3 June 2016.	N/A

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Aspect	Comment	Response	Reference
Traffic congestion	The largest component of the identified benefit is the removal of traffic congestion from around and beyond Port Botany. The IMT is merely relocating this traffic congestion.	<p>The Operational Traffic and Transport Impact Assessment (OTTIA - Section 7 and Appendix K of the EIS) concluded that the Proposal (and cumulative scenario including the Proposal) would result in increases in traffic volumes on Moorebank Avenue (south of Anzac Road) by 23% in 2019 and 19% in 2029. This is followed by Moorebank Avenue (north of Anzac Road) with an increase of 18% in 2019 and 15% in 2029. The analysis suggests increases due to the Proposal on the remaining road sections are expected to be low with increases of below 4% in the opening year and 10-year horizon for the surrounding road network.</p> <p>By transporting freight from Port Botany to Moorebank by rail, the number of heavy vehicles required to process freight from Port Botany would be reduced, resulting in regional traffic improvements with a mode shift from truck to rail transportation (refer to Section 5.3 of the OTTIA). This aligns with the NSW Freight and Ports Strategy which identifies that there is an opportunity to shift more freight to rail.</p> <p>The Proposal would not generate any increases in heavy vehicles that would not otherwise be on the Sydney metro road network (without the Proposal). The key function of the Proposal to transport freight from Port Botany to Moorebank by rail, instead of by road, would allow heavy trucks to have their source and destination at Moorebank, reduce the distances heavy vehicles would be required to travel and would provide effective management control.</p>	Section 7 and Appendix K of the EIS.
Site operations	There is a lack of integration across Moorebank Avenue from rail to warehouse. Concern about the costs and amenity impacts associated with the rerouting of Moorebank Avenue to the eastern boundary of the MPE site.	<p>The transfer of operational vehicles between the MPW and MPE sites for the purposes of container handling between the IMT's and warehouses on each site has been included as part of the Amended Modification Proposal for the MPW Concept Approval.</p> <p>A portion of freight would be transferred from the IMT facility to the warehousing area within the MPE site, or from the IMEX terminal on the MPE site to the warehousing on the MPW site, without accessing the broader road network. Site transfer trucks moving between the MPW and MPE sites would turn right on Moorebank Avenue, and use the signalised MPE site access to enter/exit the MPE site.</p> <p>Stage 2 of the MPW Project includes only the upgrades to the intersection of Moorebank Avenue and Anzac Road, and does not include any rerouting of Moorebank Avenue.</p>	N/A

Aspect	Comment	Response	Reference
<b>Air Quality and Noise emissions</b>			
Air quality and noise	The IMT is an industrial use involving diesel emissions and noise during operation. The site is located near residential neighbourhoods and is not suitable for this use.	The land use zoning for the site is for industrial use, and has been zoned for industrial use under the Liverpool CC LEP for many years, predating the IMT proposal. Noise and air quality issues associated with the operation of Stage 2 of the MPW Project are detailed in sections 8 and 9 respectively of the MPE Stage 2 EIS. The assessment identified that the impacts to nearby sensitive receivers (including residences) from both construction and operational phases of the Proposal could be managed within acceptable limits with the implementation of the mitigation measures outlined in sections 8 and 9 and summarised in Section 22 of the EIS.	Section 8, 9 and 22 of the EIS.
<b>Strategic justification</b>			
Site suitability and alternatives	The IMT site (Moorebank Precinct, which includes the MPW site) is in a geographical corner that is reliant upon bridges and is surrounded by existing traffic congestion. Alternative sites at Badgerys Creek and Eastern Creek are expansive green field developments suitable for good planning.	<p>The comments regarding site suitability and alternatives are not directly related to the Proposal.</p> <p>The MPE Concept Plan Approval (10_0193) was granted approval by the PAC on 29 September 2014. This approval identifies that the NSW state government supports, subject to satisfying conditions of approval, the operation of the MPE Project on the eastern side of Moorebank Avenue, Moorebank.</p> <p>Further, as described within both the MPE Concept Plan Approval documentation and Section 3 of the EIS, the location of the MPE Project site and the Proposal has been identified and supported by planning and freight strategy documents prepared by a number of government agencies.</p> <p>Therefore, the location and use of the MPE Project site and Proposal site in Moorebank is considered to have been addressed in the MPE Concept Plan Approval and supported by government agencies. A change to the location of the site is therefore not considered suitable at this stage of development.</p>	

Aspect	Comment	Response	Reference
Business case and port freight transport demand	Business case studies used to provide the economic case, and financial support for the development should be made public. Demand for port freight transport is below the lower projections previously provided and the IMT is therefore no longer urgent.	<p>The comments regarding the business case and port freight transport demand are not directly related to the Proposal. It is, however, noted that business case assessment was approved by the Infrastructure Australia board in February 2015 and is publicly available. The business case assessment identifies that:</p> <ul style="list-style-type: none"> <li>• An intermodal terminal could be economically viable, particularly given the growth potential of Port Botany, the long timeframes for alternative road transport improvements such as WestConnex, and the likely continued congestion in the immediate Port Botany area.</li> <li>• The use of alternative ports to Port Botany is not commercially viable because of the greater distances to the Sydney metropolitan destinations and economies of scale of stevedoring.</li> <li>• An IMT at Moorebank was chosen as there is no other potential terminal site in the Sydney basin that has the same locational advantages, size, short-term availability, existing road and rail connections and ability to meet long-term industry needs at the time of the assessment.</li> </ul> <p>With reference to the comments about port freight transport demand it is noted that while compound annual container growth through Port Botany has been over seven per cent for a ten year period to 2012, current forecasts are slightly more conservative with a forecast average annual growth rate of 6.2 % over the period 2014-2019.</p> <p>At the projected TEU throughput growth of 6.2 % per annum (Port Authority of NSW forecasts) throughput is expected to reach 3.2 million TEU in 2020. Over the longer term, the NSW Freight and Port Strategy predicts that total throughput at Port Botany is forecast to reach seven million TEU by 2030.</p>	

## 5.2.2 Moorebank Residents Action Group

A formal submission comprising a letter (dated 23 January 2017) was received from the NSW Heritage Council. A summary of, and response to this submission is provided below.

Table 5-3 Response to special interest group submission – Moorebank Residents Action Group

Aspect	Comment	Response	Reference
<b>Traffic and Transport</b>			
Traffic volumes and road infrastructure	<p>As a Group, we oppose this stage of proposal.</p> <p>Traffic modelling is known to be inadequate for this project, with further studies due for publication. How then can the proponent seek approval to upgrade Moorebank Ave, and provide additional infrastructure, when the traffic volumes have not been adequately assessed?</p>	<p>The Traffic Impact Assessment provided in Section 7 and Appendix K of the MPE Stage 2 EIS has been undertaken in accordance with the SEAR's (SSD 16-7628) issued for the Proposal. Further, the modelling has been undertaken based on the following:</p> <ul style="list-style-type: none"> <li>• Previous modelling and reporting undertaken for the Moorebank Precinct including for the MPE Concept Plan Approval (SSD 5066), MPE Concept Approval and MPE Stage 1 Approval (MP 10_0193) all of which have been previously reviewed and approved by the Department of Planning &amp; Environment (DP&amp;E).</li> <li>• The Roads and Maritime Liverpool Moorebank Arterial Road Investigations (LMARI) model which has been prepared for the Liverpool Local Government Area. Numerous meetings, emails and telephone conversations with Roads and Maritime have been undertaken to ensure that the modelling undertaken for the Proposal utilises the appropriate AIMSUN (LMARI) model and assessment approach.</li> </ul> <p>The traffic modelling for the Proposal has also been prepared in consideration of the Precinct Model, which provides an assessment of the potential traffic impacts of the Moorebank Precinct (MPE and MPW Projects) on the local road network. The traffic modelling considered the operation of the Proposal combined with Stage 1 of the MPE Project and Stage 2 of the MPW Project operating at 250,000 TEU and 500,000 TEU throughput respectively, incorporating a total of 750,000 TEU throughput for the two sites running concurrently.</p> <p>This cumulative consideration ensures that, although the Precinct Model is part of a separate process, both models are consistently prepared for the assessment of impacts thereby enhancing their accuracy and validity.</p> <p>The basis for the modelling is, therefore, considered adequate and appropriate or the assessment of the potential traffic impacts associated with the Proposal.</p>	Section 7 and Appendix K of the EIS

Aspect	Comment	Response	Reference
<b>Biodiversity</b>			
Threatened fauna	Recently discovered fauna species should also halt all works until a thorough reassessment of the entire site can be undertaken to ensure there are no other species at risk as a result of this project.	<p>There have been no recently discovered fauna species identified on the Proposal site.</p> <p>The Biodiversity Assessment Report (BAR) provided in Appendix O and summarised in Section 11 of the EIS includes an assessment of the impacts of the Proposal on flora and fauna, including threatened and endangered species and habitat. The BAR found that the Proposal would result in the following biodiversity impacts:</p> <ul style="list-style-type: none"> <li>• Impacts to two threatened ecological communities (TECs)</li> <li>• Loss of specific fauna habitat components, including live trees, tree hollows, foraging resources, groundlayer habitats such as ground timber and well-developed leaf litter.</li> <li>• Removal of seven hollow-bearing trees</li> </ul> <p>The EIS proposes mitigation measures which are considered to be sufficient to appropriately manage the impacts to biodiversity resulting from the Proposal.</p> <p>A Biodiversity Offset Strategy/Package is to be prepared to offset the loss of Threatened Endangered Communities, threatened flora and threatened fauna habitat in accordance with the NSW Framework for Biodiversity Assessment and NSW Biodiversity Offsets Policy for Major Projects (OEH, 2014). The Biodiversity Offset Strategy is to be submitted in accordance with the Conditions of Approval for the MPW Project (SSD 5066) and also Draft Conditions of Approval for the Stage 1 of the MPE Project (SSD 14-6766) and would be subject to DPE approval.</p>	Section 11 and Appendix O of the EIS



### 5.2.3 ABB

The ABB submission received is expressed to be in relation to the MPW Concept Modification Proposal, the MPE Concept Plan Modification Proposal and the MPE Stage 2 EIS. It is noted that several of the issues raised in the submission relate to the MPW Stage 2 Proposal and are not directly relevant to the MPE Stage 2 Proposal. Section 2 of the MPW Stage 2 RtS provides a response to these comments, with design changes, particularly drainage, undertaken for the MPW Stage 2 Proposal (known as the Amended Proposal) to address ABB's concerns. A summary of the ABB submission and a response relating to the Proposal is included in Table 5-3.

Table 5-4 Response to special interest group submission – ABB

Aspect	Comment	Response	Reference
Public exhibition and consultation	Given the length of the approval documentation and the potential for impacts on the ABB site and operations, the consultation period was insufficient for ABB to properly understand the impacts and respond. Ongoing consultation with SIMTA is requested.	<p>Consultation has been undertaken progressively, with both ABB and other surrounding landowners, with issues raised during previous phases of consultation used to shape the assessment approach during this stage of approval. The MPE Stage 2 EIS was on public exhibition from 13 December 2016 to 24 February 2017, a period that exceeds the statutory public exhibition requirements set out in the <i>Environmental Planning and Assessment Regulation Act 1979</i>. Consultation undertaken as part of the Proposal is included in Section 6 of the EIS.</p> <p>Due to proximity of the ABB site with regard to the MPW site, the focus of consultation with ABB has been in relation to MPW Concept Modification and the MPW Stage 2 Proposal including letters circulated to ABB on 16 August 2016 (which responded to issues raised in an earlier meeting) and 22 November 2016 (which responded to further issues raised by ABB in September 2016). Additionally, a meeting was held with ABB on 23 February 2017, during the exhibition period, to consider concerns raised by ABB. Ongoing consultation with ABB would be undertaken throughout construction and operation of the MPE project as appropriate.</p>	Section 6 of the EIS.
Drainage	Query regarding the completeness, accuracy and adequacy of the stormwater modelling undertaken, the proposed use of the ABB site to drain the development, and the effects on PCB contamination on the ABB site.	<p>The stormwater modelling referred to in the ABB submissions is for the MPW Stage 2 Proposal and is not relevant to the Proposal.</p> <p>The concerns raised by ABB have been considered at a concept level in the MPW Concept Modification Report and RtS, and refinements have been made to the drainage design previously proposed in the MPW Stage 2 EIS. No drainage works would be undertaken on the ABB site.</p>	N/A

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Aspect	Comment	Response	Reference
Traffic	Concern expressed regarding the changes to access arrangements into and in the vicinity of the ABB site.	<p>The design of the Moorebank Avenue / Anzac Road intersection referred to in the ABB submissions is for the MPW Stage 2 Proposal and is not directly relevant to the Proposal.</p> <p>Traffic modelling and impact assessment for this intersection and the surrounding road networks is provided in the MPW Stage 2 RtS. Access to the ABB site would be maintained throughout construction and operation of the MPW Stage 2 Proposal.</p>	N/A
Noise and dust	Concern with the filling of the site and the assessment of noise and dust impacts at the ABB site.	The Noise and Vibration Impact Assessment (NVIA) and Air Quality Impact Assessment (AQIA) referred to in the ABB submission relate to the MPW Stage 2 Proposal and is not relevant to the Proposal.	N/A

## 6 AMENDMENTS TO THE PROPOSAL

The MPE Stage 2 Proposal (the Proposal) involves the construction and operation of warehousing and distribution facilities on the MPE site and upgrades to approximately 1.4 kilometres of Moorebank Avenue.

Amendments are now proposed to the Proposal based on submissions provided by government agencies and the community, as part of design progression, and to provide additional clarity where relevant.

Further detail on the amendments to the Proposal has been provided to supplement the Proposal description previously provided in Section 4 of the EIS. These amendments represent an addendum to that Proposal description and together form the Amended Proposal. Approval is sought for the Amended Proposal (as described in Appendix I, in accordance with Part 4, Division 4.1 of the EP&A Act.

These amendments to the Proposal result in a minor change from the Proposal as originally included within the EIS and remain consistent with the objectives of the Proposal provided within Section 1.3 of the EIS.

This section of the RtS provides a description of the amendments to the Proposal and associated changes to the built form, construction and operation of the Proposal. This section should be read as an addendum to Section 4 of the EIS.

A consolidated description of the Amended Proposal, describing the built form, construction and operation and taking into account the amendments to the Proposal as described in this section of the RtS is provided in Appendix I.

Where no amendment has been made to the Proposal there has been no further discussion within this RtS.

Section 6.6 of this RtS describes clarifications to the EIS and refinements to project components that have been made to reflect further design progression since preparation and exhibition of the EIS. In all cases these are minor refinements that do not alter the outcomes of the assessments as presented in the EIS and do not constitute an amendment to the Proposal.

An assessment of the potential environmental impacts of the Amended Proposal based on the detail provided below, is included within Section 7 of this RtS.

### 6.1 Overview of amendments to the Proposal

Amendments to the Proposal, for which approval is sought as part of the Amended Proposal include:

- Realignment of the OSD Basin 1 and inclusion of a spillway
- Changes to the length of the Moorebank Avenue Upgrade
- Changes to warehouse layout
- Alterations to the drainage design to the south of the MPE site
- Amendments to the Construction Area and Operational Area as a result of the above amendments

Further environmental assessment of the abovementioned amendments to the Proposal is provided in Section 7 of this RtS.

## 6.2 Justification

Section 3 of the EIS presented a proposal justification as was required by the Secretary's Environmental Assessment Requirements (SEARs) issued on 27 May 2016. This section provides an update to that analysis in the context of the amendments to the Proposal.

The amendments to the Proposal described and assessed in this RtS:

- Are in response to the submissions received and consultation undertaken regarding the Proposal, and/or
- Are a result of design progression which recognises opportunities to optimise the operation of the IMT facility and warehousing area,

The specific need for each of the amendments to the Proposal is discussed in Table 6-1 below.

Table 6-1 Justification for the amendments to the Proposal

Amendment to the Proposal	Amendment driver		Justification
	Response to a submission	Design progression	
Realignment of the OSD (basin 1)	✓		<p>The drainage design for the Proposal, as presented in Appendix P of the EIS included the provision of an OSD (Basin 1) in the north-western corner of the Proposal site, parallel to the northern Proposal boundary to the north of Warehouse 2.</p> <p>As part of the submissions received on the Proposal during the public exhibition period, it was requested that, as the Stage 2 development will represent essentially full-development of the MPE site, flood impacts on adjoining sites should be quantified using TUFLOW modelling to determine whether flood mitigation measures are necessary.</p> <p>Further survey within the DJLU site has been undertaken since the preparation of the EIS to inform design development of the stormwater and drainage design within the Proposal site.</p> <p>Based on the new information available from the additional survey, alterations have been made to the design of OSD (basin 1) and associated drainage infrastructure in the north-east of the Proposal site to manage stormwater impacts from the Proposal on the adjacent DJLU site, including:</p> <ul style="list-style-type: none"> <li>• Extension of the OSD (basin 1) to the south, along the eastern side of Warehouse 2.</li> <li>• Inclusion of a spillway along the eastern boundary of the Proposal site south of the existing drainage outlet to manage flows during a PMF event.</li> </ul> <p>The Amended Proposal provides an opportunity to mitigate impacts to the DJLU site through amendments to the stormwater and drainage design.</p> <p>Modifications to the project boundary (construction and operational footprint) would be required to accommodate the abovementioned changes.</p>

MPE Stage 2 RtS

Amendment to the Proposal	Amendment driver		Justification
	Response to a submission	Design progression	
Changes to the length of the Moorebank Avenue Upgrade		✓	<p>The length of the Moorebank Avenue upgrade works would be extended as part of the Proposal as follows:</p> <ul style="list-style-type: none"> <li>Northwards by approximately 60 m to accommodate alterations to the stormwater and drainage design and the upgrade of the Moorebank Avenue drainage culvert. The condition of the existing Moorebank Avenue culvert is deteriorated and prone to blockage and would require enlargement to improve drainage outcomes. The vertical road alignment requires adjustments to accommodate the enlarged culvert and as a result Moorebank Avenue upgrades have been extended to facilitate this.</li> <li>Southwards by approximately 65 m to allow for the tie-in works with the existing Moorebank Avenue south of the Proposal site. To meet Austroads standards, the Moorebank Avenue upgrade would need to be extended to accommodate a reduced road gradient within tie-in works.</li> </ul> <p>Modifications to the project boundary (construction and operational footprint) would be required to accommodate the abovementioned changes.</p>
Changes to warehouse layout	✓	✓	<p>An indicative warehouse layout was shown in Figure 4-2 of the EIS and as part of Architectural drawings provided at Appendix D of the EIS.</p> <p>Since the preparation of the EIS has resulted in alterations to the layout/ configuration of following warehouses:</p> <ul style="list-style-type: none"> <li>Warehouse 1 – As part of design development, alterations have been made to Warehouse 1 to suit tenancy requirements, including a reduction in size from 36,700 m<sup>2</sup> GFA to 35,700 m<sup>2</sup> GFA and alterations to supporting infrastructure</li> <li>Warehouse 2 – to accommodate the revised layout of OSD 1, required to respond to submissions, changes were required to the sizing and configuration of warehouse 2. The changes include a reduction in size from 61,500 m<sup>2</sup> GFA to 57,800m<sup>2</sup> GFA and alterations to supporting infrastructure such as car parking and loading docks.</li> <li>Warehouse 4 and 6: as a result of design progression, the drainage design surrounding warehouse 4 and 6 was optimised to provide improved drainage outcomes; however, this required changes to the layout of warehouse 4 and 6. The result of the changes is that the warehouse layout has been revised from one building divided by an intertenancy wall, into two separate warehouse buildings.</li> </ul>

MPE Stage 2 RtS

Amendment to the Proposal	Amendment driver		Justification
	Response to a submission	Design progression	
Alterations to drainage design to the south of the MPE site	✓	✓	<p>As part of the EIS, the stormwater runoff to the south of the Proposal site was intended to be managed through the provision of a drainage swale to direct stormwater flows away from the site through a channel, discharging to Anzac Creek.</p> <p>To respond to issues raised by NSW DPI on the EIS and as part of design development, the stormwater and drainage design has been modified as follows:</p> <ul style="list-style-type: none"> <li>• Conversion of the southern drainage swale presented in the EIS to an earthen mound that would direct surface flows away from the MPE site.</li> <li>• Removal of the southern drainage channel and outlet to Anzac Creek.</li> <li>• Provision of an earthen batter along the southern boundary of the MPE site.</li> <li>• Inclusion of a spillway along the eastern boundary of the MPE site immediately south of the south-eastern drainage outlet to manage flows during a PMF event.</li> </ul> <p>Modifications to the project boundary (construction and operational footprint) would be required to accommodate the above changes.</p>
Amendments to the Construction Area and Operational Area as a result of the above amendments	✓	✓	<p>Modifications to the project boundary would be required to accommodate the abovementioned Proposal amendments including:</p> <ul style="list-style-type: none"> <li>• Realignment to the OSD basin 1.</li> <li>• Changes to the length of the Moorebank Avenue upgrade.</li> <li>• Alterations to drainage design to the south of the MPE site.</li> </ul> <p>The amended construction and operational areas reflecting the whole Amended Proposal, taking into consideration the extent of the amendments to the Proposal as described above and those components of the Proposal from the EIS that have not been amended are shown in Figure 6-2 and Figure 6-3.</p>

## 6.3 Amendments to the Proposal

The amendments to the Proposal are detailed in Section 6.3.1 to Section 6.3.4 below and shown in Figure 6-1.

### 6.3.1 Realignment of OSD Basin 1

A stormwater and flooding assessment, including drainage design for the Proposal was presented in Appendix P of the EIS. The drainage design presented in the EIS stormwater and flooding assessment included the provision of an OSD (Basin 1) in the north eastern corner of the Proposal site, parallel to the northern boundary of the Proposal site and on the northern side of Warehouse 2.

The submission received from NSW DP&E on the EIS noted that there may be local flood level increases on the neighbouring DJLU property, to the north and north-east of the Proposal site. As described in the submission from NSW DP&E, further assessment is required as part of the Proposal to quantify flood impacts on adjoining sites, specifically the DJLU site.

Since the preparation of the EIS, further survey within the DJLU site has been undertaken to inform design development of the Proposal site, specifically in relation to the management of stormwater runoff and drainage design.

Based on the new information available from the results of the further survey, alterations have been made to the north eastern OSD design to manage stormwater impacts from the Proposal on the adjacent DJLU site, including:

- Extension of, and changes to location and configuration of OSD basin 1 along the eastern side of Warehouse 2.
- Inclusion of a spillway along the eastern boundary of the Proposal site south of the existing drainage outlet to manage flows during a PMF event.

Assessment of the stormwater and flooding impacts of the realigned OSD included an investigation of the impacts on adjacent properties. The outcomes of this assessment have been included in Section 7 of this Rts and Appendix E.

Modifications to the project boundary (construction and operational areas) would be required to accommodate the above changes. The Amended construction and operational areas and realigned OSD and spillway are shown in Figure 6-1.

### 6.3.2 Changes to the length of the Moorebank Avenue Upgrade

Section 4.2.4 of the EIS Proposal description included the following description of the Moorebank Avenue Upgrade:

*"Moorebank Avenue would be upgraded for about 1.4 kilometres. The Moorebank Avenue upgrade commences from approximately 95 metres south of the northern boundary of the MPE site to approximately 120 metres south of the southern MPE site boundary. The Moorebank avenue upgrade is located within the existing Moorebank Avenue road corridor and along the eastern boundary of the MPW site (refer to Figure 4-1 (included as Figure 1 below) for extent of works).*

*The Moorebank Avenue upgrade would be comprised of the following key components:*

- *Modifications to the existing lane configuration, including some widening*
- *Signalling and intersection works.*

*Adjusting the vertical alignment by about two metres from the existing levels, including kerbs, gutters and a sealed shoulder"*

The Amended Proposal includes the following changes to the length of the Moorebank Avenue upgrade:



- Increase to the length by approximately 60 m northwards to accommodate alterations to the stormwater and drainage design for the MPE Stage 2 site as well as the upgrade of the Moorebank Avenue drainage culvert.
- Increase to the length by approximately 65m southwards to allow for the tie-in works with the existing Moorebank Avenue south of the Proposal site.

*With the inclusion of the amendments to the Proposal, Moorebank Avenue would be upgraded for about 1.5 kilometres. The Amended Moorebank Avenue upgrade commences from approximately 35 metres south of the northern boundary of the MPE site to approximately 185 metres south of the southern MPE site boundary.*

The amended construction and operational areas reflecting the whole Amended Proposal, taking into consideration the extent of the amendments to the Proposal as described above and those components of the Proposal from the EIS that have not been amended are shown in Figure 6-2 and Figure 6-3.

### 6.3.3 Changes to warehouse layout

Figure 4-2 of the EIS provided an indicative warehousing layout for the Proposal, including the location and configuration of the following warehouses:

- Warehouse 1: 36,700 m<sup>2</sup> - In the north-western corner of the MPE Stage 2 site. Warehouse 1 is bounded by a car park and the ancillary freight village in the north, service road 1 in the east, internal road 1 in the south and the MPE Stage 2 site access and Moorebank Avenue in the west.
- Warehouse 2: 61,500 m<sup>2</sup> - In the north-eastern corner of the Proposal site. Warehouse 2 is bounded by the northern OSD in the north, internal road 2 in the east, internal road 1 in the south and the central OSD to the west.
- Warehouse 4: 20,350 m<sup>2</sup> - South of Warehouse 3. It is bounded by service road 2 in the north, internal road 2 in the east, warehouse 6 in the south and an internal transfer road, central OSD and car parking in the west. Warehouse 4 is separated from Warehouse 6 via an inter-tenancy wall.
- Warehouse 6: 20,350 m<sup>2</sup> - Immediately south of Warehouse 4. Bounded by Warehouse 4 in the north, internal road 2 in the east, service road 3 in the south and an internal transfer road, central OSD and car parking in the west.

Since the preparation of the EIS, alterations have been made to the layout/configuration of these warehouses as follows:

- Warehouse 1 – As part of design development, alterations have been made to Warehouse 1 to suit tenancy requirements, including a reduction in size from 36,700 m<sup>2</sup> GFA to 35,700 m<sup>2</sup> GFA and alterations to supporting infrastructure
- Warehouse 2 – to accommodate the revised layout of OSD 1, required to respond to submissions, changes were required to the sizing and configuration of warehouse 2. The changes include a reduction in size from 61,500 m<sup>2</sup> GFA to 57,800m<sup>2</sup> GFA and alterations to supporting infrastructure such as car parking and loading docks.

Warehouse 4 and 6: as a result of design progression, the drainage design surrounding warehouse 4 and 6 was optimised to provide greater flood protection during high flow events, however this required modifications to the layout of warehouse 4 and 6.

The result of the changes is that the building has been revised from one building divided by an intertenancy. The amended construction and operational areas reflecting the whole Amended Proposal, taking into consideration the extent of the amendments to the Proposal as described above and those components of the Proposal from the EIS that have not been amended are shown in Figure 6-2 and Figure 6-3.

### **6.3.4 Alterations to drainage design to the south of the MPE site**

As part of the EIS, the stormwater runoff to the south of the Proposal site was intended to be managed through the provision of a drainage swale to direct stormwater flows away from the site through a channel, discharging to Anzac Creek.

The stormwater and drainage design has been amended at the southern end of the MPE site as a result of design development and the submission received from DPI during the public exhibition of the Proposal relating to impacts from the drainage outlet to Anzac Creek.

To respond to issues raised by NSW DPI on the EIS and as part of design development, the stormwater and drainage design has been modified as follows:

- Conversion of the southern drainage swale presented in the EIS to a fill mound that would direct surface flows away from the MPE site.
- Removal of the southern drainage channel and outlet to Anzac Creek.
- Provision of a fill batter along the southern boundary of the MPE site.
- Inclusion of a spillway along the eastern boundary of the MPE site immediately south of the south-eastern drainage outlet to manage flows during a PMF event.

The amended construction and operational areas reflecting the whole Amended Proposal, taking into consideration the extent of the amendments to the Proposal as described above and those components of the Proposal from the EIS that have not been amended are shown in Figure 6-2 and Figure 6-3 Amendments to the Construction Area and Operational Area

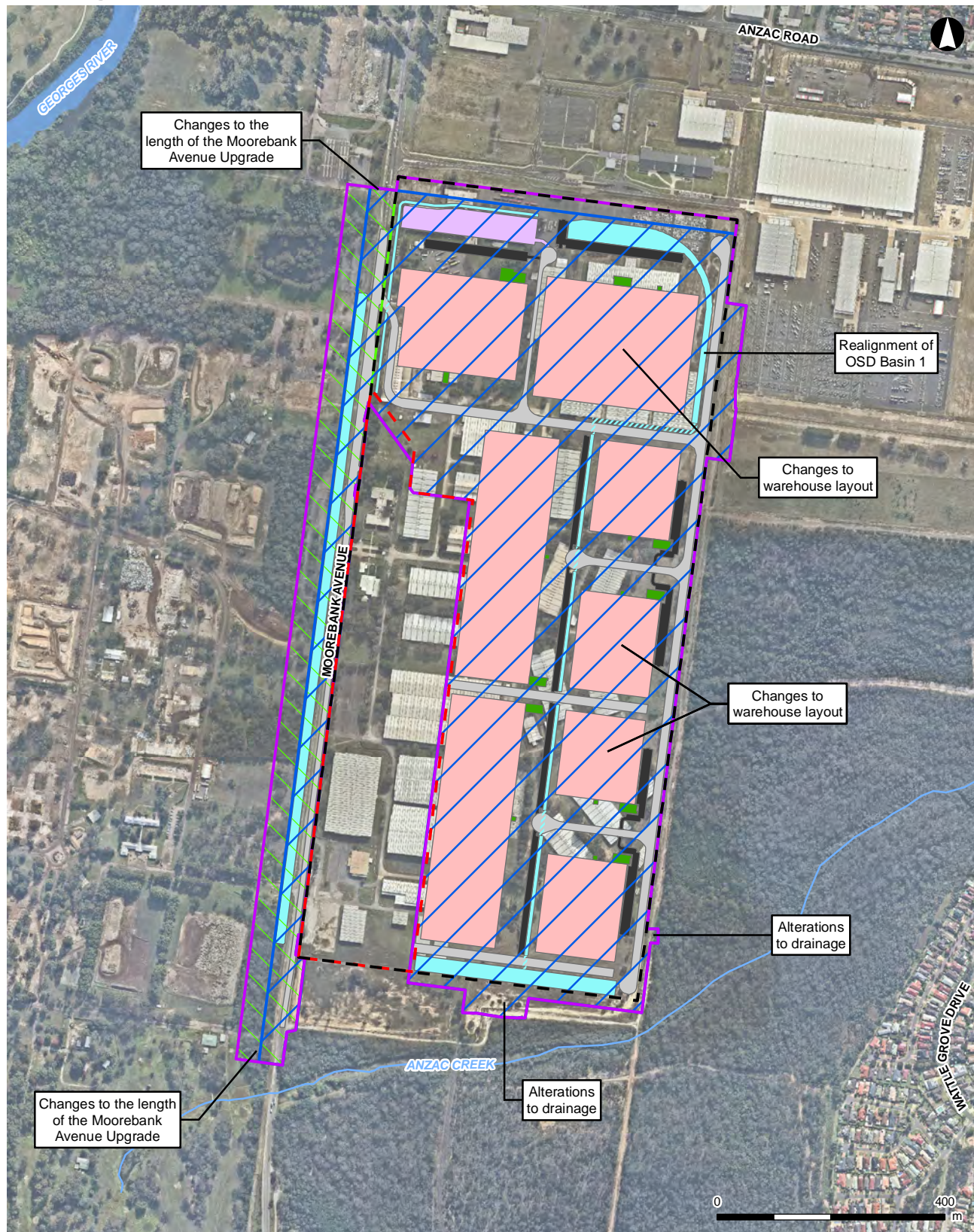
Modifications to the project area would be required to accommodate the abovementioned amendments to the Proposal including:

- Realignment to the OSD basin 1.
- Changes to the length of the Moorebank Avenue upgrade.
- Alterations to drainage design to the south of the MPE site.

The amended construction and operational areas reflecting the whole Amended Proposal, taking into consideration the extent of the amendments to the Proposal as described above and those components of the Proposal from the EIS that have not been amended are shown in Figure 6-2 and Figure 6-3.



## MPE Stage 2 Response to Submissions



### LEGEND

- |                           |                              |           |
|---------------------------|------------------------------|-----------|
| MPE Site                  | MPE Stage 1 operational area | OSD       |
| Amended construction area | Watercourse                  | Office    |
| Amended operational area  | Carpark                      | Road      |
| Moorebank Avenue upgrade  | Freight Village              | Warehouse |

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 Date issued: June 29, 2017  
 Aerial imagery supplied by nearmap (May, 2017)

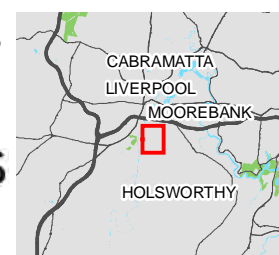


Figure 6-1: Amendments to the Proposal

## 6.4 Construction

A summary of the potential changes to the construction aspects of the Proposal to accommodate the amendments to the Proposal are included in Table 6-2, and a revised construction program is provided in Table 6-3. A comparison of the construction area as included in the EIS and the Amended Proposal construction area is shown on Figure 6-2.

The construction aspects considered below are consistent with those included in the Proposal Description (Section 4) of the EIS. Remediation has not been included as a construction aspect as the EIS identified that there are no specific areas within the Proposal site that require direct remediation. The Proposal site is considered to be suitable for the desired commercial / industrial land use and there are no specific areas requiring direct remediation prior to operation of the Proposal.

Where changes to the construction aspects of the Proposal are anticipated as a result of the amendments to the Proposal, further environmental assessment has been undertaken, as detailed in Section 7 of this RtS.

Table 6-2 Amendments to the Proposal – changes to construction aspects

Amendment to the Proposal	Construction Aspect						
	Construction methodology and program	Earthworks	Soil and Water Management	Workforce and Hours	Plant and Equipment	Traffic Movement and Access	Construction compounds
Realignment of OSD Basin 1	Construction of this amendment to the Proposal would not result in changes to the construction works methods. Alterations to the construction area for construction of the amendments to the Proposal; would result in minor changes to the construction program as presented in the EIS. An updated construction	Construction of this amendment to the Proposal would not result in changes to the earthworks required for the MPE Stage 2 site. No further assessment is provided.	Construction of this amendment to the Proposal would not result in a change to the construction soil and water management measures and principles associated with the MPE Stage 2 Proposal. No further assessment is provided.	Construction of this amendment to the Proposal would not result in a change to the maximum construction personnel working on or entering the site. No further assessment is provided. Working hours included in the MPE Stage 2 Proposal would not change. No further assessment is provided.	The number and types of plant and equipment would remain the same for the construction of this amendment to the Proposal. No further assessment is provided.	This amendment to the Proposal would not alter access to the MPE Stage 2 site during construction. This amendment to the Proposal would not result in changes to the construction traffic numbers or construction hours. No further assessment is provided.	Construction of this amendment to the Proposal would not result in a change to the number, location or use of construction compounds under the MPE Stage 2 Proposal. No further assessment is provided.

Amendment to the Proposal	Construction Aspect						
	Construction methodology and program	Earthworks	Soil and Water Management	Workforce and Hours	Plant and Equipment	Traffic Movement and Access	Construction compounds
	program for the Amended Proposal, including consideration of the expected construction commencement date is included as Table 6-3 below. No further assessment is provided.						
Changes to Moorebank Avenue Upgrade	As above	As above	As above	As above	As above	As above	As above
Changes to warehouse layout	As above	As above	As above	As above	As above	As above	As above
Alterations to drainage design to the south of the MPE site	As above	As above	As above	As above	As above	As above	As above



## MPE Stage 2 RtS

An updated indicative construction program for the Amended Proposal has been included as **Table 6-3** below. In addition to changes resulting from the addition of the amendments to the Proposal, the indicative construction program has also been adjusted to reflect a change in the anticipated construction commencement date, from Q4 2017 to Q1 2018.

Table 6-3 Indicative construction program for MPE Stage 2, showing proposed program changes resulting from the Amended Proposal (identified in orange)

Construction Phase	2017				2018				2019			
	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
Works period A – Pre-construction activities												
Works period B - Site Preparation activities												
Works Period C - Construction of the Moorebank Avenue diversion road												
Works period D - Pavement and intersection works along Moorebank Avenue												
Works period E – Bulk earthworks, drainage and utilities												
Works period F - Construction and internal fit-out of warehousing												
Works period G – Miscellaneous construction and finishing works												

\*Orange highlighted cell indicates a change in the duration of construction for a construction phase, compared to the construction program included in Table 4-7 of the EIS.

## MPE Stage 2 Response to Submissions



### LEGEND

- Amended construction area
- Previous construction area
- Watercourse

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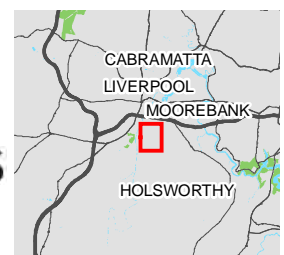


Figure 6-2:  
Comparison of the EIS and Amended Proposal Construction Area

## 6.5 Operation

A summary of the potential changes to the operational aspects of the Proposal to accommodate the amendments to the Proposal are included in Table 6-4. The operational aspects considered below are consistent with those included in the Project Description (Section 4) of the EIS. A comparison of the operational area as included in the EIS and the Amended operational area included as part of the Amended Proposal is shown on Figure 6-2.

The operational aspects considered below are consistent with those included in the Proposal Description (Section 4) of the EIS. Where changes to the operational aspects of the Proposal are anticipated as a result of the amendments to the Proposal, further environmental assessment has been undertaken, as detailed in Section 7 of this RtS.

Table 6-4 Amendments to the Proposal – changes to operational aspects

Amendment to the Proposal	Operational Aspect			
	Warehousing	Freight village	Workforce and Hours	Built form
Realignment of the OSD in the north eastern corner of the Proposal site	Realignment of the OSD in the north eastern corner of the Proposal site would require changes to the layout of warehouse 2. Impacts have been discussed as part of the changes to the amended warehouse layout below.	This amendment to the Proposal would not result in changes to the freight village design or operation as presented in the MPE Stage 2 EIS. No further assessment is provided.	This amendment to the Proposal would not result in changes to the operational workforce, hours, traffic movements or access arrangements as presented in the MPE Stage 2 EIS. No further assessment is provided.	The stormwater and drainage design and assessment included in the MPE Stage 2 EIS would change as a result of this amendment to the Proposal. Changes to the built form would result in a decrease in operational flood impacts to adjacent properties (DJLU). Further assessment is required and has been provided in section 7.
Changes to Moorebank Avenue upgrade	This amendment to the Proposal would not result in changes to warehousing as presented in the MPE Stage 2 EIS. No further assessment is provided.	As above	As above	This amendment to the Proposal would result in changes to the extent of the operational area as presented in the MPE Stage EIS. Further assessment has been provided in Section 7.








Amendment to the Proposal	Operational Aspect			
	Warehousing	Freight village	Workforce and Hours	Built form
Changes to warehouse layout	This amendment to the Proposal would result in changes to the warehouse layout (warehouses 2, 4 and 6) as presented in the MPE Stage 2 EIS. Further assessment of the impacts associated with this change has been provided in Section 7.	As above	As above	This amendment to the Proposal would result in changes to the layout of warehouses 1, 2, 4 and 6. Further assessment of the impacts associated with this change has been provided in Section 7.
Alterations to drainage design to the south of the MPE site	This amendment to the Proposal would not result in changes to warehousing as presented in the MPE Stage 2 EIS. No further assessment is provided.	As above	As above	This amendment to the Proposal would result in changes to the extent of the operational area as presented in the MPE Stage EIS. Further assessment has been provided in Section 7.

## MPE Stage 2 Response to Submissions



### LEGEND

-  MPE Site
-  Amended operational area
-  Previous operational area
-  MPE Stage 1 operational area
-  Watercourse

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 Date issued: June 29, 2017  
 Aerial imagery supplied by nearmap (May, 2017)

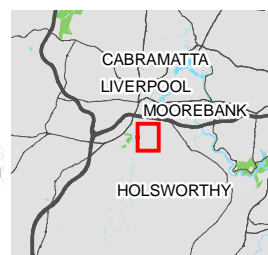


Figure 6-3:  
Comparison of the EIS and Amended Proposal Operational Area

## 6.6 EIS Clarifications

Since the preparation of the EIS, a number of clarifications relating to the description of the Proposal (included in Section 4 of the EIS) have been identified as detailed in Table 6-5 below. The clarifications in Table 6-5 below have been incorporated into, and addressed in, Section 6 of this RtS, along with other clarifications raised within submissions received by the community and stakeholders during public exhibition of the EIS.

The clarifications that have been identified are minor in nature and not considered to form a Proposal Amendment, given the associated negligible or minor environmental impacts.

Table 6-5 Clarifications in the description of the Proposal

Clarifications/ Corrections/ Consistency	Description included in the EIS	EIS Reference	Clarification/ revised description
<b>Site Access</b>	In Section 4.2.3 of the EIS, it notes that ' <i>The MPE Stage 2 site access point is shown on</i> ' and no reference is provided at the end of the sentence.	Section 4.2.3 (Vehicle movement and access – internal roads)	This is an editorial error and should have read ' <i>The MPE Stage 2 site access point is shown on Figure 4-1</i> '. Appendix I of this RtS includes a consolidated description of the Proposal, including the built form, and description of the construction and operation of the Proposal, incorporating the amendments to the Proposal. Appendix F of this RtS shows the MPE Stage 2 site access point.
<b>OSDs</b>	Table 4-4 of the EIS provides a summary of on-site detention to be provided across the Proposal site. The catchment areas included in this table are denoted as being in m <sup>2</sup> .	Table 4-4 of Section 4.2.5 (Ancillary works)	The catchment areas described in Table 4-4 of Section 4.2.5 should have been described as being in hectares, rather than m <sup>2</sup> . Appendix I of this RtS includes a consolidated description of the Proposal, including the built form, and description of the construction and operation of the Proposal, incorporating this amendment to the Proposal. The catchment areas described in Appendix P have been revised so that they are described as being in hectares. The OSDs are shown in Appendix E of this RtS.



Clarifications/ Corrections/ Consistency	Description included in the EIS	EIS Reference	Clarification/ revised description
<b>Construction hours</b>	<p>Section 4.3.6 of the EIS provided a description of the construction hours for the construction of the Proposal, noting that construction works would generally be undertaken during standard daytime construction working hours; however, bulk earthworks activities and construction works to facilitate the Moorebank Avenue upgrade during peak construction periods may be undertaken outside of standard construction hours, but not during the night-time.</p> <p>The proposed construction hours for activities associated with bulk earthworks and the Moorebank Avenue upgrade are detailed in Table 4-10 of the EIS.</p>	4.3.6 (Construction workforce and hours)	<p>Approval is sought for construction of the Proposal within the hours specified in Section 4.3.6 of the EIS. Any works outside of the hours described in Section 4.3.6 are classified as Out of Hours (OOH) works.</p> <p>Construction activities associated with bulk earthworks and the Moorebank Avenue upgrade as detailed in Table 4-10 of the EIS are for the delivery, placement and stockpiling of imported clean general fill material only.</p> <p>An assessment of the construction noise impacts associated with these works are included in Section 8.4.1 of the EIS. Any other works undertaken outside of standard daytime construction hours would be managed via an OOH works protocol.</p> <p>A cumulative construction noise assessment was undertaken as part of the EIS (refer to Section 19.4.2 and Appendix L of the EIS) for concurrent construction of the Proposal with the MPE Stage 1 Project and the MPW Stage 2 Proposal during standard daytime construction hours.</p> <p>As part of this RtS, further assessment of cumulative construction noise impacts have been undertaken for construction works during extended construction hours (as described in Table 4-10 of Section 4.3.6). The noise and vibration assessment of the Amended Proposal, including the additional cumulative construction assessment is provided in Section 7.2 and Appendix D of this RtS.</p>
<b>Road Traffic</b>	<p>Table 4-2 in Section 4.2.1 of the EIS includes a summary of the car parking spaces to be provided for each warehouse. Section 4.2.2 of the EIS details the number of car parking spaces to be provided to support the operation of the ancillary freight village.</p> <p>Section 4.4.3 of the EIS states that: <i>'Car parking would also be provided for each warehouse at a ratio of 1:300 per GFA of warehousing and 1:40 per GFA for offices. Car parking spaces would be calculated based on projected staffing numbers for warehouses, and would take into account overlap for change of shift'.</i></p>	4.4.3 (Operational workforce and hours)	<p>The number of car parking spaces to be provided within the Proposal site was determined by undertaking an analysis of the car parking requirements for staff and terminal operations. This analysis considered the current guidelines for parking provisions, namely the <i>Liverpool City Council Development Control Plan 2008</i> (Liverpool DCP) and the <i>Guide to Traffic generating Development</i> (RTA, 2002).</p> <p>A prediction of staff-generated parking demand was undertaken using a 'first principles' approach, whereby the operational staff breakdown was used to determine the likely parking and traffic generation, which was then compared to the requirements for car parking on the Proposal site under the two abovementioned guidelines.</p> <p>The first principles approach, which included the development of a parking accumulation model, determined that car parking requirements for the Moorebank Precinct, including the Proposal should be based on the Guide to Traffic Generating Development, rather than the Liverpool DCP.</p>

Clarifications/ Corrections/ Consistency	Description included in the EIS	EIS Reference	Clarification/ revised description
			<p>The parking analysis recommended that the RMS parking rates be adopted for the warehouse and office components of the intermodal terminal facility as follows:</p> <ul style="list-style-type: none"> <li>• 1 car space per 300 m<sup>2</sup> Gross Floor Area (GFA) for warehouses</li> <li>• 1 car space per 40 m<sup>2</sup> GFA for offices</li> </ul> <p>The determination of car parking provisions has been applied consistently within the MPE site.</p> <p>The Proposal, as amended by this RtS, includes an amended warehouse layout and the car parking allocation for the amended layout continues to adopt the above car parking rates. The car parking spaces associated with the warehouses has been included in the consolidated description of the Proposal, included at Appendix I of this RtS.</p>
<b>Operational truck and car movements</b>	<p>Table 4-12 of the EIS included a breakdown of the operational car and truck movements for the operation of the Proposal.</p> <p>Within this table, the number of light vehicle movements internally within the MPE Stage 2 site is denoted as 'N/A'.</p>	Table 4-12 of Section 4.4.3 (Operational workforce and hours)	<p>Table 4-12 of the EIS notes that 3,872 operational car movements per day (2-way round trip) would be made. It is expected that these vehicles would also travel within the Proposal site.</p> <p>The following daily traffic volumes (2-way round trip) have been forecast in 2019 (i.e. year of opening) at the following locations along internal road 1:</p> <ul style="list-style-type: none"> <li>• Next to warehouse 1 (this location would service both external and internal movements): 3,992.</li> <li>• Next to warehouse 3: 2,685.</li> <li>• Next to warehouse 6: 1,354.</li> </ul>
<b>Construction methodology</b>	The construction methodology for the Proposal was included in Section 4.3.1 of the EIS.	Section 4.3.1 (construction methodology) and Section 4.3.2 (Construction program).	It is acknowledged that the construction methodology and construction program and activities as included in Section 4.3.1 and Section 4.3.2 of the EIS did not include the construction of the ancillary freight village, although this aspect of the Proposal was included in the environmental assessment of the Proposal included in the EIS.

Clarifications/ Corrections/ Consistency	Description included in the EIS	EIS Reference	Clarification/ revised description
<b>Construction noise impacts</b>	<p>Table 6-9 of the Noise and Vibration Impact Assessment (Appendix L of the EIS) noted that construction noise levels at Wattle Grove are predicted to exceed the noise management level during OOH period 2 (6.00pm – 10.00pm weekdays) by 1dB.</p> <p>In Section 8.4.1 of the EIS, it is stated that <i>'Construction noise levels in Wattle Grove, Wattle Grove North and Casula are not predicted to exceed applicable NML at sensitive receivers during out of hours periods 2, 3 or 4. Predicted construction noise levels during out of hours periods 2, 3 &amp; 4 are predicted to exceed the NML in Wattle Grove by up to 1 dBA'.</i></p>	Table 6-9 of Appendix L and Section 8 (Noise and Vibration) of the EIS.	<p>There is an error in the wording included in Section 8.4.1 of the EIS. For clarification, Section 8.4.1 should have stated:</p> <p><i>'Construction noise levels in Wattle Grove North, Casula and Glenfield are not predicted to exceed applicable NML at sensitive receivers during out of hours periods 2, 3 or 4. Predicted construction noise levels during out of hours periods 2, 3 &amp; 4 are predicted to exceed the NML in Wattle Grove by up to 1 dBA'.</i></p> <p>As detailed in Section 8.4.1 of the EIS, This exceedance is considered imperceptible, and does not warrant mitigation given the conservative nature of the assessment which assumes that all plant would be operating simultaneously.</p>
<b>Fill Importation</b>	<p>The EIS summary provided at the front of the document stated:</p> <p><i>'Construction of the Proposal would also involve the importation of approximately 680,000 cubic metres of clean fill to the site to achieve the finished surface levels'.</i></p> <p>Section 13.1.3 of the EIS stated that:</p> <p><i>'Overall, approximately 690,000 cubic metres of clean general fill would need to be imported to the site to achieve the finished surface levels'.</i></p>	EIS Summary and Section 13 (Stormwater and flooding) of this EIS.	<p>It should be clarified that the volume of clean general fill to be imported for construction of the Proposal is as detailed in Table 4-9 in Section 4.3.4 (Earthworks) of the Proposal Description, being 695,100m<sup>3</sup> (631,900m<sup>3</sup> for the MPE Stage 2 site and 63,200m<sup>3</sup> for the Moorebank Avenue site).</p> <p>Therefore, the EIS summary should have stated:</p> <p><i>'Construction of the Proposal would also involve the importation of approximately 695,000 cubic metres of clean fill to the site to achieve the finished surface levels'.</i></p> <p>Section 13.1.3 should have stated:</p> <p><i>'Overall, approximately 695,000 cubic metres of clean general fill would need to be imported to the site to achieve the finished surface levels'.</i></p> <p>Although the volume of clean general fill to be imported was inconsistently stated across the EIS Summary and Section 13.4.1, the impacts of this construction activity have been assessed consistent with the volumes presented in Section 4.3.4 of the EIS, therefore no further environmental assessment of this aspect of the Proposal is considered necessary.</p>

Clarifications/ Corrections/ Consistency	Description included in the EIS	EIS Reference	Clarification/ revised description
<b>Aboriginal heritage</b>	<p>The summary of the MPE Concept Approval Aboriginal Heritage Impact Assessment included in Section 4.3 (Previous studies) of the Aboriginal Heritage Impact Assessment (refer to Appendix S of the EIS) stated that:</p> <p><i>'MPE Isolated Find 4, a chert core were recorded on a vehicle track along the southern boundary of the former DNSDC site. They were also assessed as having a low archaeological significance and were not recorded on AHIMS... MPE Isolated Artefact 4 is outside the Proposal site'</i></p> <p>Section 16.4.1 of the EIS states that:</p> <p><i>'Construction of the Proposal has the potential to result in impacts to three isolated artefacts located within the construction footprint, being Isolated Artefact 1, Isolated Artefact 3 and Isolated Artefact 4'.</i></p>	Section 16 (Aboriginal heritage) and Appendix S	<p>It should be clarified that at the time of writing the MPE Concept Approval Aboriginal Heritage Impact Assessment (Archaeological and Heritage Management Solutions (AHMS), 2012), Isolated Artefact 4 was located outside of the Proposal site.</p> <p>As part of the MPE Concept Approval Modification 2 (Arcadis, 2016), an extension of land to which the MPE Concept Approval applies (for the intermodal site) was included to account for the drainage works to the south of the MPE site, which form part of the Proposal, as amended. Isolated Artefact 4 is located within this portion of land, and is therefore inside the Proposal site.</p> <p>Section 16 of the EIS for the Proposal acknowledged that</p> <p><i>'construction of the Proposal has the potential to result in impacts to three isolated artefacts located within the construction footprint, being Isolated Artefact 1, Isolated Artefact 3 and Isolated Artefact 4',</i></p> <p>and</p> <p><i>'Isolated Artefacts 3 and 4 (previously recorded by AHMS as part of the Aboriginal heritage impact assessment prepared to support the Concept Plan EA) would be located within the construction footprint of the Proposal (refer to Figure 16-2 for location relative to the Proposal site)'.</i></p> <p>To mitigate the potential for impacts to Isolated Artefact 4, which is located within the Proposal site, the following mitigation measure was included within Section 16.5.1 of the EIS and Section 7.2 of the Aboriginal Heritage Impact Assessment at Appendix S of the EIS:</p> <p><i>'An exclusion zone would be provided around previously identified MPE Isolated Artefacts 2, 3 and 4 to avoid potential disturbance of these artefacts during construction of the Proposal'.</i></p>
<b>Stormwater and Flooding Report</b>	<p>Section 4.3 of the Stormwater and Flooding Report states:</p> <p><i>'Smaller detention storages that provide adequate rainfall runoff mitigation during partial construction/site development. If proposed, all such alternative/temporary detention storages will require analysis (as per Section 4.2.7) to determine the adequacy of their flood mitigation performance.'</i></p>	Appendix P of the EIS (Stormwater and Flooding Assessment)	<p>It should be clarified that the reference to section 4.2.7 is incorrect, and should have instead referred to Section 4.2.3.</p>

## 7 FURTHER ASSESSMENT

This section of the report assesses the potential environmental impacts associated with items included in the Amended Proposal, which were not originally assessed as part of the Proposal in the MPE Stage 2 EIS. This section is based on the description of amendments included in Section 6 (Proposal Amendments) of this RtS.

This assessment has been prepared based on the key issues and other issues identified in the SEARs (SSD 16-7628) for the MPE Stage 2 Proposal (the Proposal) (dated 27 May 2016).

For each environmental aspect, outcomes arising from the environmental assessment undertaken to support the MPE Stage 2 EIS have been described to identify a baseline against which the amendments to the Proposal can be assessed.

Overall, it is considered that the Amended Proposal would result in no substantial additional environmental impacts in addition to those identified within the MPE Stage 2 EIS, subject to the modification of Ministers Conditions of Approval (refer to Section 4 of this RtS) and the implementation of updated mitigation measures/Statement of Commitments (refer to Section 8 of this RtS).

### 7.1 Traffic and Transport

#### 7.1.1 EIS Assessment

An assessment of potential construction and operational traffic impacts generated by the Proposal was undertaken by Arcadis (Section 7 and Appendix K of this EIS).

The construction traffic assessment was based on a peak construction period; being the overlap in construction works period D, E and F, which is considered to be representative of a worst case construction traffic generating scenario. During the peak construction period, there would be 1,022 two way truck movements and 428 two way light vehicle movements per day. Fill haulage would generate the largest amount of heavy vehicle movements of all construction activities. During the peak construction period, it is expected that approximately 67 vehicles (all of which are heavy vehicles) would be travelling to and from the Proposal site during the AM peak hour and approximately 169 vehicles (67 trucks and 102 cars) would be travelling to and from the Proposal site during PM peak hour.

During construction of the Proposal, the performance of intersections near the Proposal are expected to generally operate at a level of service similar to the operation of these intersections without construction in 2018. All modelled intersections near the Proposal would operate at an acceptable level of service during the AM and PM peak during peak construction.

A Preliminary Construction Traffic Management Plan (PCTMP) was prepared to outline traffic management measures that would be adopted, and further considered as part of the preparation and implementation of the Construction Environmental Management Plan (CEMP) and CTMP for construction of the Proposal.

Operation of the Proposal would result in the generation of 564 two-way heavy vehicle movements and 3,993 two-way light vehicle movements each weekday (Monday to Friday). Heavy vehicle trips to and from the Proposal would be made by B-doubles, semi-trailers and rigid trucks. The majority of heavy vehicle movements during operation of the Proposal are anticipated to take place outside of the AM and PM peak periods.

About 56% of heavy vehicle movements generated by the Proposal would travel to the Proposal site via the M5 Motorway from the west. The remainder of traffic travelling to the Proposal site would be via the Hume Highway and Moorebank



Avenue from the north of the M5 Motorway. Traffic travelling along Moorebank Avenue would originate from Newbridge Road. In general, all heavy vehicles would travel to and from the Proposal site via Moorebank Avenue. No container trucks would travel to the Proposal site via Anzac Road (east of Yulong Close) or Cambridge Avenue.

The Proposal would result in an increase in traffic volumes along all analysed roads near the Proposal site in 2019. The greatest proportional increase in traffic volumes would be along Moorebank Avenue south of Anzac Road (23%). Approximately 2.5% of heavy vehicle traffic to the north of Anzac Road, and approximately 2.4% of heavy vehicle traffic to along Moorebank Avenue to the south of Anzac Road is attributable to the operation of the Proposal.

Ten years after opening (2029), the Proposal would continue to result in an increase in traffic volumes along all analysed roads near the Proposal site. The greatest proportional increase in traffic volumes would be along Moorebank Avenue south of Anzac Road (19%). Approximately 1.7% of heavy vehicle traffic to the north of Anzac Road, and approximately 2% of heavy vehicle traffic to along Moorebank Avenue to the south of Anzac Road is attributable to the operation of the Proposal.

The proportion of heavy vehicle traffic along key roads attributable to the Proposal in 2029 is lower than what is predicted in 2019 due to increased background traffic growth over the ten year period.

The performance of eight key intersections have been assessed for the operation of the Proposal in 2019 and 2029 during the AM and PM peak, using the SIDRA modelling tool (V.7).

Network improvements are required to mitigate the impacts of the cumulative operational scenario at key intersections within the study area, and these are either directly as a result of the cumulative development scenario, or to cater for background traffic growth.

As these upgrades are not directly a result of the Proposal, they have been nominated as assumed network upgrades and adopted to complete the modelling for the operational traffic and transport impact assessment

- Moorebank Avenue/Anzac Road
- M5 Motorway / Moorebank Avenue
- M5 Motorway / Hume Highway
- Moorebank Avenue / Newbridge Road
- Moorebank Avenue / Heathcote Road
- M5 Motorway / Heathcote Road.

In 2019 during the AM and PM peak, the intersection performance of key intersections in the study area would operate at a similar level of service, with and without the operation of the Proposal. As the LoS at all key intersections is similar in both with and without the Proposal scenarios, during the AM and PM peak in 2019, it was concluded that no intersection improvements are required to accommodate increases in traffic volumes at these key intersections at the opening year of the Proposal (2019).

In 2029 during the AM peak, the intersection performance of key intersections in the study area would operate at a similar level of service, both with and without the operation of the Proposal.

With the implementation of assumed network upgrades, intersection performance at all key intersections near the Proposal modelled as part of this assessment in 2029 during the PM peak would operate at an acceptable LoS, with the exception of the M5 Motorway / Heathcote Road intersection, which would continue to operate at a LoS F, although the average delay would be reduced. Although this intersection would operate

at a LoS F, its performance is no worse than the performance expected in 2029 without the operation of the Proposal in the AM Peak, and is therefore considered acceptable in the context of impacts as a result of the Proposal.

Overall, it is concluded that the Proposal (and cumulative scenario including the Proposal) would result in only marginal traffic impacts to the surrounding road network in the presence of mitigation and management measures.

A Preliminary Operational Traffic Management Plan (POTMP) has been prepared to identify the management strategies to minimise traffic impacts associated with operation of the facility and would be finalised prior to operation of the Proposal.

## 7.1.2 Amended Proposal Assessment Methodology

### Construction

#### Amendments to the Proposal

As identified in Table 6-2 of this RtS, amendments to the Proposal would not alter access to the MPE Stage 2 site during construction and would not result in changes to the construction traffic numbers or construction hours. As such, the amendments to the Proposal would not impact on the local road network during construction, nor would they alter the construction traffic movements required for construction of the Proposal.

As a result, the amendments to the Proposal have not been assessed any further in this RtS with regards to construction traffic impacts.

#### Refinements to the EIS Assessment methodology

The assessment of construction traffic impacts of the Proposal included in Section 7 and Appendix K of the EIS was undertaken using SIDRA Intersection software (Version 7.0.5.6563) (SIDRA).

Consistent with the EIS (refer to Section 7.2.4), the following construction traffic modelling scenarios were revised as part of this RtS:

- Scenario 1, being the background traffic and the Proposal construction traffic during the peak construction period (i.e. concurrent construction of works periods D, E and F in 2018).
- Scenario 2, being the background traffic and cumulative construction traffic (i.e. the peak construction period of the Proposal would occur concurrently with construction of the MPE Stage 1 Project, MPW Stage 1/ Early Works construction and MPW Stage 2 construction in 2018.).

SIDRA was used to determine the performance of the following intersections during construction of the Proposal only (scenario 1) and cumulative construction traffic (scenario 2):

- Moorebank Avenue/ Anzac Road.
- M5 Motorway/ Moorebank Avenue.
- Moorebank Avenue/ DJLU Access.

Since the preparation of the EIS, it has been necessary to make two refinements to the MPE Stage 2 construction traffic impact assessment methodology:

- Adjustments to background traffic growth data used to undertake the SIDRA analysis, in response to issues raised by Liverpool City Council as part of their

submission to the MPW Concept Modification Response to Submissions (RtS) Report

- Consideration of the amendments to the MPW Stage 2 Proposal, namely the Moorebank Avenue/ Anzac Road intersection and the associated construction staging of this MPW Stage 2 amendment.

A detailed description of the refinements made to the EIS construction traffic impact assessment methodology is provided below.

#### Adjustments to background traffic growth data

The submission from Liverpool City Council on the MPW Concept Modification RtS Report included the following with regards to background traffic volumes used in the MPW Concept Modification construction traffic impact assessment:

*'Background information should be provided to justify these growth factors [used to estimate current traffic volumes] and the forecast traffic volumes, particularly the negative growth forecast on the Moorebank Avenue south of Anzac Road during the AM peak period.'*

On further investigation, a minor referencing error in the growth forecast calculation model used to undertake the MPW Modification Proposal SIDRA modelling was identified, which resulted in the background traffic used for the CTIA including negative growth in background traffic to the south of the Anzac Road/ Moorebank Avenue intersection. As part of the revised CTIA prepared and included at Appendix C of the MPW Stage 2 (SSD-7709) RtS Report (Arcadis, 2017), revised SIDRA analysis was undertaken to correct the referencing error.

As the same calculation was used for the preparation of the EIS CTIA for the Proposal (refer to Appendix K of the EIS), the EIS SIDRA analysis was revised to also correct this referencing error. The SIDRA analysis has been revised to determine whether the intersection performance of key intersections assessed in the CTIA as part of the EIS are still representative of the potential impacts on traffic during construction of the Proposal (see Section 7.1.3 of this RtS).

#### Consideration of amendments to the MPW Stage 2 Proposal

Since the preparation of the EIS for the Proposal, the MPW Stage 2 Proposal has been amended to include, amongst other things, a further upgraded layout of the Moorebank Avenue/ Anzac Road intersection which would provide additional capacity for the operation of the Moorebank Intermodal Precinct. The upgraded layout replaces the interim intersection layout included as part of the MPW Stage 2 EIS, and provides greater intersection capacity and improved road safety along a portion of Moorebank Avenue.

Design development of the Moorebank Avenue/ Anzac Road intersection as part of the MPW Stage 2 Proposal has provided more understanding about the potential staging of construction of this intersection. Construction of the Moorebank Avenue/ Anzac Road intersection as part of the MPW Stage 2 Proposal would be undertaken concurrently with construction of the Proposal. During the staged construction of the Anzac Road/ Moorebank Avenue intersection, construction traffic and other background traffic would also continue to travel along Moorebank Avenue.

Separate construction sensitivity testing was undertaken as part of the revised CTIA included at Appendix C of the MPW Stage 2 Response to Submissions Report. This sensitivity testing was undertaken to determine the proportion of the predicted MPW Stage 2 Proposal construction traffic that could access and egress the MPW Stage 2 Proposal site via the Moorebank Avenue/ Anzac Road and/ or Moorebank Avenue/ Chatham Avenue intersections, while still performing at an acceptable Level of Service (LoS) during each stage of construction of the Anzac Road/ Moorebank Avenue intersection upgrade. The Construction Traffic Sensitivity Testing is provided

in full in Appendix B of the MPW Stage 2 RtS revised CTIA (at Appendix C of the MPW Stage 2 Response to Submissions Report).

The worst case construction traffic scenario that was identified as part of the sensitivity testing was used to form the basis of the MPW Stage 2 RtS revised CTIA. This scenario, being the concurrent undertaking of the MPW Stage 2 Proposal Construction Works Periods C, D, E and F during stage 2 of the construction of the Anzac Road/ Moorebank Avenue intersection upgrade has been included in the updated SIDRA modelling for the Proposal to provide a consistent assessment of cumulative construction traffic impacts on key intersections near the Proposal.

Consistent with the EIS (refer to Section 7.2.4), the following construction traffic modelling scenarios were revised as part of this RtS:

- Scenario 1, being the background traffic and the Proposal construction traffic during the peak construction period (i.e. concurrent construction of works periods D, E and F in 2018).
- Scenario 2, being the background traffic and cumulative construction traffic (i.e. the peak construction period of the Proposal would occur concurrently with construction of the MPE Stage 1 Project, MPW Stage 1/ Early Works construction and MPW Stage 2 construction in 2018.).

The updated SIDRA modelling results, taking into account the adjustments to background traffic growth data and the upgraded Moorebank Avenue/ Anzac Road intersection as part of the MPW Stage 2 Amended Proposal are included in Section 7.1.3 of this RtS. The accompanying SIDRA flow diagrams have been included at Appendix C of this report.

## Operation

### Amendments to the Proposal

As identified in Table 6-4 of this RtS, amendments to the Proposal would result in changes to operational traffic movements. As such, amendments to the Proposal as detailed in Section 6 of this RtS would not change the operational trip generation of the Proposal as presented in Section 7.4.2 and Appendix K of the EIS, and as such are not expected to change the operational traffic impacts of the Proposal.

As a result, the amendments to the Proposal have not been assessed any further in this RtS with regards to operational traffic impacts.

### Refinements to the EIS Assessment Methodology

Since the preparation of the EIS for the Proposal, the MPW Stage 2 Proposal has been amended to include, amongst other things, a further upgraded layout of the Moorebank Avenue/ Anzac Road intersection which would provide additional capacity for the operation of the Moorebank Intermodal Precinct and background traffic. The upgraded layout replaces the interim intersection layout included as part of the MPW Stage 2 EIS, and provides greater intersection capacity and improved road safety along a portion of Moorebank Avenue.

Under the cumulative operational scenario included in the EIS, it was assumed that the Moorebank Avenue/ Anzac Road intersection would be upgraded to the interim intersection layout included in the MPW Stage 2 EIS. To account for changes to the layout of the Moorebank Avenue/ Anzac Road intersection as an amendment to the MPW Stage 2 Proposal, the AIMSUN traffic model used to assess cumulative operational traffic impacts as part of the Proposal has been revised

Consistent with the EIS (refer to Section 7.2.4), the following two cumulative operational traffic modelling scenarios was revised as part of this RtS:

- Cumulative operation of the Proposal at the year of opening (2019), with the operation of the MPE Stage 1 Project and the MPW Stage 2 Proposal.
- Cumulative operation of the Proposal 10 years after the opening of the Proposal (2029), with the operation of the MPE Stage 1 Project and the MPW Stage 2 Proposal.

For the purpose of this assessment, the updated AIMSUN modelling results are referred to as the 'revised cumulative development scenario'.

### 7.1.3 Impact Assessment

#### Construction

The amendments to the Proposal would not alter construction traffic numbers or distribution, and therefore would not change the findings of the construction traffic impact assessment included in Appendix K of the EIS. As a result, no further assessment of the amendments to the Proposal are required with regards to construction traffic impacts.

A comparison of the predicted average delays and LoS at key intersections near the Proposal presented in the EIS with the revised SIDRA results during the peak construction period under Scenario 1 is summarised in Table 7-1.

The results of the SIDRA analysis using the refined assessment methodology indicate that under Scenario 1, key intersections near the Proposal would operate at an acceptable LoS during the AM and PM peak periods. Under Scenario 1, with the refined assessment methodology:

- The Moorebank Avenue/ MPE Stage 2 Site Access and the M5 Motorway/ Moorebank Avenue intersections would continue to operate at the same LoS of A and C, respectively, in the AM and PM peak as presented in the EIS. Although the LoS would remain the same at these intersections, the average delay would increase, with the exception of the Moorebank Avenue/ MPE Stage 2 Site Access intersection in the AM Peak, where the average delay would be the same as what was presented in the EIS. These intersections would continue to operate at an acceptable LoS
- The LoS of the Moorebank Avenue/ DJLU Access would reduce from the LoS A as presented in the EIS to a LoS B in the AM and PM peak. This would be accompanied by an increase in the average delay at this intersection in the AM and PM peak; although, the intersection would continue to operate at an acceptable LoS.
- The average delay at the Moorebank Avenue/ Anzac Road intersection would improve in the AM and PM peak. During the AM peak, the LoS would improve from a LoS C to a LoS B, and the LoS in the PM peak would remain the same.

A comparison of the predicted average delays and LoS at key intersections near the Proposal presented in the EIS with the revised SIDRA results during the peak construction period under Scenario 2 is summarised in Table 7-2.

The results of the SIDRA analysis using the refined assessment methodology indicate that under Scenario 2, key intersections near the Proposal would operate at an acceptable LoS during the AM and PM peak periods. Under Scenario 2, with the refined assessment methodology:

- The M5 Motorway/ Moorebank Avenue interchange would continue to operate at the same LoS in the AM and PM peak as presented in the EIS. The average delay

would improve and these intersections would continue to operate at an acceptable LoS

- The Moorebank Avenue/ MPE Stage 2 Site Access would continue to operate at the same LoS in the AM peak; however, would reduce from a LoS A in the PM peak to a LoS B in the PM peak. The average delay would increase by six seconds; however, would continue to operate at an acceptable LoS.
- The LoS of the Moorebank Avenue/ DJLU Access would reduce from the LoS A as presented in the EIS to a LoS B in the AM and PM peak. This would be accompanied by an increase in the average delay at this intersection in the AM and PM peak; although, the intersection would continue to operate at an acceptable LoS.
- The average delay at the Moorebank Avenue/ Anzac Road intersection would improve in the AM and PM peak. During the AM peak, the LoS would improve from a LoS C to a LoS B in the AM Peak, and from a LoS D to a LoS C in the PM peak.

Table 7-1 Comparison of EIS intersection performance under scenario 1 with the revised SIDRA analysis (2018)

Intersections	Intersection control	AM Peak						PM Peak					
		Without construction		With Construction (EIS assessment results)		With construction – revised SIDRA results		Without construction		With Construction (EIS assessment results)		With construction – revised SIDRA results	
		Average Delay (seconds)	LoS	Average Delay (seconds)	LoS	Average Delay (seconds)	LoS	Average Delay (seconds)	LoS	Average Delay (seconds)	LoS	Average Delay (seconds)	LoS
Moorebank Avenue/ MPE Stage 2 Site Access	Existing signal	7	A	12	A	12	A	6	A	10	A	14	A
Moorebank Avenue/ DJLU Access	Existing signal	N/A <sup>^</sup>	N/A <sup>^</sup>	4	A	16	B	N/A <sup>^</sup>	N/A <sup>^</sup>	5	A	17	B
Moorebank Avenue/ Anzac Road	Existing signal	18	B	31	C	21	B	17	B	23	B	19	B
M5 Motorway/ Moorebank Avenue	Existing signal	24	B	31	C	36	C	30	C	31	C	34	C

Note:

\*Assessed against the peak construction period.

<sup>^</sup>The existing conditions of the Moorebank Avenue / MPE Stage 2 Site Access intersection has not been modelled as the intersection is not currently operational.

Table 7-2 Comparison of EIS intersection performance under scenario 2 with the revised SIDRA analysis (2018)

Intersections	Intersection control	AM Peak						PM Peak					
		Without construction		With Construction (EIS assessment results)		With construction – revised SIDRA results		Without construction		With Construction (EIS assessment results)		With construction – revised SIDRA results	
		Average Delay (seconds)	LoS	Average Delay (seconds)	LoS	Average Delay (seconds)	LoS	Average Delay (seconds)	LoS	Average Delay (seconds)	LoS	Average Delay (seconds)	LoS
Moorebank Avenue/ MPE Stage 2 Site Access	Existing signal	7	A	12	A	12	A	6	A	10	A	18	B
Moorebank Avenue/ DJLU Access	Existing signal	N/A^	N/A^	4	A	17	B	N/A^	N/A^	5	A	16	B
Moorebank Avenue/ Anzac Road	Existing signal	18	B	39	C	25	B	17	B	44	D	32	C
M5 Motorway/ Moorebank Avenue	Existing signal	24	B	34	C	36	C	30	C	39	C	34	C

Note:

\*Assessed against the peak construction period.

^The existing conditions of the Moorebank Avenue / MPE Stage 2 Site Access intersection has not been modelled as the intersection is not currently operational



## Operation

### Amendments to the Proposal

The amendments to the Proposal would not alter operational traffic numbers or distribution, and therefore would not change the findings of the operational traffic and transport assessment included in Appendix K of the EIS. As a result, no further assessment of the amendments to the Proposal are required with regards to operational traffic impacts.

### Revised cumulative traffic impacts as a result of refinements to the EIS Assessment Methodology

Table 7-3 provides a comparison of the performance of key intersections without the Proposal in 2019, with the Proposal under the cumulative development as presented in the EIS and the Proposal under the revised cumulative development for which additional AIMSUN modelling was undertaken as part of this RtS.

Table 7-4 provides a comparison of the performance of key intersections without the Proposal in 2019, with the Proposal under the cumulative development as presented in the EIS and the Proposal under the revised cumulative development for which additional AIMSUN modelling was undertaken as part of this RtS.

A summary of the changes to the cumulative operational traffic impacts presented in the EIS as a result of the revised cumulative development scenario for the year of opening (2019) and the horizon year (2029, ten years after opening) is provided below.

#### 2019 cumulative development under the do-minimum scenario

In 2019 under the do-minimum scenario (which includes committed / planned road network upgrades by the State government on the wider road network) during the AM peak, intersection performance at key intersections near the Proposal would continue to operate at the same LoS as presented in the EIS under the revised cumulative development.

Consistent with the EIS, in 2019 under the do-minimum scenario during the AM peak, intersection performance at key intersections near the Proposal would continue to operate at an acceptable LoS without the cumulative development, and with the revised cumulative development, with the exception of:

- The M5 Motorway / Hume Highway intersection, which would operate at a LoS F
- Moorebank Avenue / Heathcote Road, which would operate at a LoS E, indicating that it is near capacity in this scenario.

In 2019 under the do-minimum scenario during the PM peak, intersection performance at key intersections near the Proposal would continue to operate at the same LoS as presented in the EIS under the revised cumulative development, with the exception of:

- The Moorebank Avenue/ Anzac Road intersection, which would improve from a LoS D to a LoS C. This improvement is a result of the upgraded layout of the Moorebank Avenue/ Anzac Road intersection, proposed as part of the Amended Proposal in the MPW Stage 2 RtS Report (Arcadis, 2017). The upgraded layout of this intersection would provide additional capacity and as a result, would improve intersection performance at this location.
- The Moorebank Avenue/ Newbridge Road intersection, which would reduce from a LoS C to a LoS D. As shown in Table 1-3, the delay of 40 seconds at this intersection is at the threshold point between LoS C and LoS D; therefore, any

minor increase in delay, such as that resulting from the refined assessment methodology, would result in the LoS at this intersection reducing to a LoS D. As the only amendment to the operational traffic model was the inclusion of the upgraded Moorebank Avenue/ Anzac Road intersection layout, a decrease in the LoS at this intersection is a result of variability in the operational traffic model. Variability in the traffic modelling analysis is indicative of a heavily congested road network and insufficient network-wide capacity, where there is any capacity changes in one part of the network, re-distribution occurs across the network resulting in inconsistent results at intersections that would otherwise not experience any actual changes in performance, as described in the EIS.

Consistent with the EIS, in 2019 under the do-minimum scenario during the PM peak, intersection performance at key intersections near the Proposal would continue to operate at an acceptable LoS without the cumulative development, and with the revised cumulative development, with the exception of the M5 Motorway/ Moorebank Avenue. The M5 Motorway/ Moorebank Avenue would operate at a LoS E under the cumulative development as presented in the EIS and under the revised cumulative development.

#### 2019 cumulative development with assumed network upgrades

In 2019 during the AM and PM peak, intersection performance at key intersections near the Proposal would continue to operate at the same, acceptable LoS as presented in the EIS under the revised cumulative development, with the exception of the Moorebank Avenue/ Anzac Road intersection, which would operate at an improved LoS C under the revised cumulative development in the AM and PM peak, compared to LoS D as reported in Section 19.4.1 of the EIS. The upgraded layout of this intersection as included in the revised cumulative development would provide additional capacity and as a result, would improve intersection performance at this location.

Table 7-3 Comparison of EIS intersection performance with and without the Cumulative Development – 2019

ID	Intersection	2019 without the Cumulative Development (Do-Minimum Scenario)					2019 with the Cumulative Development (Do-Minimum Scenario)								2019 with the Cumulative Development (With assumed network upgrades)							
							EIS Assessment				revised AIMSUN results				EIS Assessment				With revised AIMSUN results			
		Layout	AM Peak (8-9am)		PM Peak (5-6pm)		AM Peak (8-9am)		PM Peak (5-6pm)		AM Peak (8-9am)		PM Peak (5-6pm)		AM Peak (8-9am)		PM Peak (5-6pm)		AM Peak (8-9am)		PM Peak (5-6pm)	
D <sup>1</sup>	L <sup>2</sup>		D <sup>1</sup>	L <sup>2</sup>	D <sup>1</sup>	L <sup>2</sup>	D <sup>1</sup>	L <sup>2</sup>	D <sup>1</sup>	L <sup>2</sup>	D <sup>1</sup>	L <sup>2</sup>	D <sup>1</sup>	L <sup>2</sup>	D <sup>1</sup>	L <sup>2</sup>	D <sup>1</sup>	L <sup>2</sup>	D <sup>1</sup>	L <sup>2</sup>	D <sup>1</sup>	L <sup>2</sup>
I-1	Moorebank Avenue / Anzac Road	Existing	16	B	15	B	41	C	47	D	36	C	36	C	42	D	44	D	38	C	38	C
I-2	M5 Motorway / Moorebank Avenue	Existing	24	B	25	B	25	B	57	E	26	B	58	E	20	B	34	C	20	B	34	C
I-3	M5 Motorway / Hume Highway	Existing	86	F	37	C	107	F	53	D	98	F	55	D	45	D	39	C	49	D	38	C
I-4	Moorebank Avenue / Newbridge Road	Existing	36	C	34	C	37	C	40	C	36	C	43	D	28	C	34	C	31	C	33	C
I-5	Moorebank Avenue / Heathcote Road	Existing	56	E	42	D	63	E	46	D	65	E	50	D	50	D	37	C	51	D	36	C

ID	Intersection	Layout	2019 without the Cumulative Development (Do-Minimum Scenario)				2019 with the Cumulative Development (Do-Minimum Scenario)								2019 with the Cumulative Development (With assumed network upgrades)							
							EIS Assessment				revised AIMSUN results				EIS Assessment				With revised AIMSUN results			
			AM Peak (8-9am)		PM Peak (5-6pm)		AM Peak (8-9am)		PM Peak (5-6pm)		AM Peak (8-9am)		PM Peak (5-6pm)		AM Peak (8-9am)		PM Peak (5-6pm)		AM Peak (8-9am)		PM Peak (5-6pm)	
			D <sup>1</sup>	L <sup>2</sup>	D <sup>1</sup>	L <sup>2</sup>	D <sup>1</sup>	L <sup>2</sup>	D <sup>1</sup>	L <sup>2</sup>	D <sup>1</sup>	L <sup>2</sup>	D <sup>1</sup>	L <sup>2</sup>	D <sup>1</sup>	L <sup>2</sup>	D <sup>1</sup>	L <sup>2</sup>	D <sup>1</sup>	L <sup>2</sup>	D <sup>1</sup>	L <sup>2</sup>
I-6	M5 Motorway / Heathcote Road	Existing	50	D	37	C	49	D	56	D	50	D	53	D	38	C	39	C	38	C	41	C
I-7	Cambridge Avenue / Glenfield Road	Existing	10	A	15	B	9	A	15	B	9	A	14	B	8	A	14	B	8	A	15	B
I-8	Cambridge Avenue / Canterbury Road	Existing	11	A	7	A	9	A	6	A	9	A	6	A	8	A	6	A	8	A	6	A
I-A	Moorebank Avenue / DJLU Access	Existing	9	A	8	A	5	A	6	A	5	A	6	A	5	A	6	A	5	A	6	A
I-B	Moorebank Avenue / MPE Stage 2 Site Access	Existing	Existing signalised intersection is not operational				9	A	13	A	10	A	13	A	9	A	13	A	10	A	13	A

<sup>1</sup> D denotes average delay (seconds), <sup>2</sup> L denotes LoS

### 2029 cumulative development under the do-minimum scenario

In 2029, under the do-minimum scenario during the AM peak, intersection performance at key intersections near the Proposal would continue to operate at the same LoS as presented in the EIS under the revised cumulative development, with the exception of the Moorebank Avenue / Anzac Road, Moorebank Avenue / JLU Access and M5 Motorway/ Moorebank Avenue intersections.

It was reported in section 19.4.1 of the EIS that in 2029 during the AM Peak under the do-minimum scenario, the performance of the Moorebank Avenue / Anzac Road intersection would deteriorate from LoS E without the cumulative development of the Proposal to LoS F with the cumulative development. As a result of the revised cumulative development, the Moorebank Avenue/ Anzac Road intersection would operate at LoS E both without and with the revised cumulative development. The improved LoS with the revised cumulative development is a result of the upgraded layout of this intersection, which would provide additional capacity and as a result, would improve intersection performance at this location. It should be noted that in 2029 during the AM Peak without the Proposal (i.e. only with background traffic growth), the Moorebank Avenue/ Anzac Road intersection would operate at a LoS E, and at a LoS F in the PM Peak.

Similarly, section 19.4.1 of the EIS reported that in the 2029 AM Peak, the cumulative operation of the Proposal under a do-minimum scenario would result in the intersection performance of the Moorebank Avenue / JLU Access and M5 Motorway/ Moorebank Avenue intersections deteriorating from LoS D to LoS F. As a result of the revised cumulative development, these two intersections would operate at LoS D, i.e. these intersections would perform acceptably, and at the same LoS without and with the revised cumulative development, rather than deteriorating in performance. This is a result of the upgraded layout of the Moorebank Avenue/ Anzac Road intersection, which would improve traffic flow through this portion of Moorebank Avenue.

In 2029, under the do-minimum scenario during the PM peak, intersection performance at all key intersections near the Proposal would continue to operate at LoS F under the revised cumulative development, consistent with the results presented in Section 19.4.1 of the EIS under the cumulative development.

### 2029 cumulative development with assumed network upgrades

In 2029, during the AM peak under the revised cumulative development with the assumed network upgrades, intersection performance at key intersections near the Proposal would continue to operate at the same LoS as presented in the EIS under the revised cumulative development, with the exception of the following intersections, where the LoS would improve from LoS B to LoS A:

- Cambridge Avenue / Canterbury Road
- Moorebank Avenue / DJLU Access
- Moorebank Avenue / MPE Stage 2 Site Access

Consistent with the EIS, during the AM peak under the revised cumulative development with the assumed network upgrades, intersection performance at key intersections near the Proposal would continue to operate at an acceptable LoS in 2029 without the cumulative development, and with the revised cumulative development, with the exception of:

- The M5 Motorway / Hume Highway intersection, which would operate at LoS F without and with the cumulative development
- Moorebank Avenue / Heathcote Road, which would operate at LoS F without the cumulative development and LoS E with the revised cumulative development, indicating that it is near capacity in this scenario.

In 2029, during the PM peak under the revised cumulative development with the assumed network upgrades, intersection performance at key intersections near the Proposal would continue to operate at the same LoS as presented in the EIS under the revised cumulative development, with the exception of:

- Moorebank Avenue / Anzac Road, which would improve from LoS D with the cumulative development to LoS C with the revised cumulative development. The improved LoS with the revised cumulative development is a result of the upgraded layout of this intersection, which would provide additional capacity and as a result, would improve intersection performance at this location.
- Moorebank Avenue / Heathcote Road which would improve from LoS E with the cumulative development to LoS D with the revised cumulative development. This is a result of the upgraded layout of the Moorebank Avenue/ Anzac road intersection, which would improve traffic flow through this portion of Moorebank Avenue.

Consistent with the EIS, during the PM peak under the revised cumulative development with the assumed network upgrades, intersection performance at key intersections near the Proposal would continue to operate at an acceptable LoS in 2029 without the cumulative development, and with the revised cumulative development, with the exception of the M5 Motorway / Heathcote Road intersection, which would operate at LoS F without and with the revised cumulative development.

Table 7-4 Comparison of EIS intersection performance with and without the Cumulative Development - 2029

ID	Intersection	2029 without the Cumulative Development (Do-Minimum Scenario)					2029 with the Cumulative Development (Do-Minimum Scenario)								2029 with the Cumulative Development (With assumed network upgrades)							
							EIS Assessment				revised AIMSUN results				EIS Assessment				With revised AIMSUN results			
		Layout	AM Peak (8-9am)		PM Peak (5-6pm)		AM Peak (8-9am)		PM Peak (5-6pm)		AM Peak (8-9am)		PM Peak (5-6pm)		AM Peak (8-9am)		PM Peak (5-6pm)		AM Peak (8-9am)		PM Peak (5-6pm)	
D <sup>1</sup>	L <sup>2</sup>		D <sup>1</sup>	L <sup>2</sup>	D <sup>1</sup>	L <sup>2</sup>	D <sup>1</sup>	L <sup>2</sup>	D <sup>1</sup>	L <sup>2</sup>	D <sup>1</sup>	L <sup>2</sup>	D <sup>1</sup>	L <sup>2</sup>	D <sup>1</sup>	L <sup>2</sup>	D <sup>1</sup>	L <sup>2</sup>	D <sup>1</sup>	L <sup>2</sup>		
I-1	Moorebank Avenue / Anzac Road	Existing Layout	56	E	105	F	74	F	421	F	66	E	261	F	51	D	46	D	51	D	41	C
I-2	M5 Motorway / Moorebank Avenue	Existing Layout	53	D	141	F	58	E	297	F	53	D	275	F	34	C	51	D	37	C	56	D
I-3	M5 Motorway / Hume Highway	Existing Layout	148	F	124	F	156	F	276	F	122	F	251	F	98	F	44	D	88	F	48	D
I-4	Moorebank Avenue / Newbridge Road	Existing Layout	39	C	73	F	40	C	115	F	40	C	127	F	37	C	36	C	34	C	41	C
I-5	Moorebank Avenue / Heathcote Road	Existing Layout	65	E	146	F	59	E	259	F	67	E	284	F	56	D	63	E	54	D	53	D

ID	Intersection	Layout	2029 without the Cumulative Development (Do-Minimum Scenario)				2029 with the Cumulative Development (Do-Minimum Scenario)								2029 with the Cumulative Development (With assumed network upgrades)							
							EIS Assessment				revised AIMSUN results				EIS Assessment				With revised AIMSUN results			
			AM Peak (8-9am)		PM Peak (5-6pm)		AM Peak (8-9am)		PM Peak (5-6pm)		AM Peak (8-9am)		PM Peak (5-6pm)		AM Peak (8-9am)		PM Peak (5-6pm)		AM Peak (8-9am)		PM Peak (5-6pm)	
			D <sup>1</sup>	L <sup>2</sup>	D <sup>1</sup>	L <sup>2</sup>	D <sup>1</sup>	L <sup>2</sup>	D <sup>1</sup>	L <sup>2</sup>	D <sup>1</sup>	L <sup>2</sup>	D <sup>1</sup>	L <sup>2</sup>	D <sup>1</sup>	L <sup>2</sup>	D <sup>1</sup>	L <sup>2</sup>	D <sup>1</sup>	L <sup>2</sup>	D <sup>1</sup>	L <sup>2</sup>
I-6	M5 Motorway / Heathcote Road	Existing Layout	131	F	190	F	140	F	283	F	100	F	265	F	68	E	100	F	60	E	118	F
I-7	Cambridge Avenue / Glenfield Road	Existing Layout	11	A	61	E	8	A	109	F	8	A	153	F	7	A	8	A	7	A	8	A
I-8	Cambridge Avenue / Canterbury Road	Existing Layout	19	B	60	E	15	B	90	F	16	B	175	F	15	B	7	A	13	A	7	A
I-A	Moorebank Avenue / DJLU Access	Existing Layout	53	D	155	F	83	F	455	F	49	D	448	F	25	B	7	A	7	A	8	A
I-B	Moorebank Avenue / MPE Stage 2 Site Access	Existing Layout	Existing signalised intersection is not operational				51	D	307	F	33	C	294	F	20	B	12	A	10	A	13	A

<sup>1</sup> D denotes average delay (seconds)<sup>2</sup> L denotes LoS



## 7.1.4 Mitigation Measures

### Construction

This assessment concludes that the amendments to the Proposal, as well as the revised SIDRA analysis using the refined assessment methodology, would result in construction phase traffic impacts generally consistent with those already identified and assessed as part of the MPE Stage 2 EIS (refer to Section 7.4.1 and Appendix K of the EIS).

The mitigation measures outlined in Section 7.5.1 of the MPE Stage 2 EIS are considered adequate to address impacts associated with the Amended Proposal and additional measures are not proposed. No additional construction traffic-related mitigation measures are proposed as a result of the amendments to the Proposal.

Final mitigation measures are provided in Section 8 of this RtS, and include all mitigation measures to be implemented to avoid, minimise and manage traffic impacts during construction of the Amended Proposal.

### Operation

This assessment concludes that the amendments to the Proposal, as well as the revised cumulative development, would result in operational phase traffic impacts generally consistent with those already identified and assessed as part of the MPE Stage 2 EIS (refer to Section 7.4.2, 19.4.1 and Appendix K of the EIS).

The mitigation measures outlined in Section 7.5.2 and the assumed network upgrades detailed in Section 7.6 of the MPE Stage 2 EIS are considered adequate to address impacts associated with the Amended Proposal. No additional operational traffic-related mitigation measures, including those related to the revised cumulative development are proposed as a result of the amendments to the Proposal.

Final mitigation measures are provided in Section 8 of this RtS, and include all mitigation measures to be implemented to avoid, minimise and manage traffic impacts during construction of the Amended Proposal.

## 7.2 Noise and Vibration

### 7.2.1 EIS Assessment

An assessment of the noise and vibration impacts of the Proposal during construction and operation was prepared by Wilkinson Murray. A Noise and Vibration Impact Assessment report was included at Appendix L of the EIS, and summarised in Section 8 of the EIS. A summary of the EIS noise and vibration assessment and its outcomes is provided below.

Potential noise and vibration impacts were assessed in general accordance with the following NSW Government guidelines and policies:

- *NSW Industrial Noise Policy (INP)* (EPA, 2000)
- *Noise Guide for Local Government (NGLG)* (EPA, 2013)
- *NSW Road Noise Policy (RNP)* (DECCW, 2011)
- *Interim Construction Noise Guideline (ICNG)* (DECC, 2009)
- *Assessing Vibration: a technical guide* (Assessing Vibration) (DEC, 2006).

A construction and operational description of the Proposal, consistent with Section 4 of the EIS, was used to inform noise modelling. The CadnaA acoustic noise prediction model software was used to model construction noise impacts. Sound power levels were then compared against the NMLs derived from the Rating Background Levels (RBLs) and criteria set out under the NSW EPA Interim Construction Noise Guideline (DECC, 2009) (ICNG).

The assessment considered each works period for the construction phase and determined that the construction noise emissions are expected to comply with the established Noise Management Levels (NML) at all sensitive receivers, with the exception of Wattle Grove, where construction noise levels are predicted to exceed the NML by 1 dBA between 6 pm and 10 pm weekdays during bulk earthworks. This exceedance is considered imperceptible and does not warrant mitigation. Construction noise levels during all proposed out of hours works periods are predicted to comply with the NML at all times.

Cumulative construction noise levels due to concurrent activities associated with MPW Early Works, the MPW Stage 2 Proposal, MPE Stage 1 Project and the Proposal were predicted to comply with the NML at all receivers, except for the most sensitive receivers in Casula. At these receiver locations, cumulative construction noise levels may exceed the NML by up to 2 dB. This is considered a minor exceedance.

Due to the large separation distances between vibration intensive equipment and nearby sensitive residential receivers (approximately 500 m), construction vibration impacts are considered unlikely.

A Construction Noise and Vibration Management Plan (CNVMP), or equivalent, would be prepared for the Proposal in accordance with the *Interim Construction Noise Guideline* (DECC, 2009) (or equivalent). A number of preliminary measures to inform the development of the CNVMP were included in Section 22 of the EIS.

An assessment of road noise was undertaken in accordance with the RNP criteria and using the Calculation of Road Traffic Noise (CORTN) algorithm. The assessment concluded that increases in road traffic noise as a result of the Proposal are considerably less than 2 dBA during construction and operation and are, therefore, compliant with the RNP.

The assessment found that concurrent operational noise levels from the Proposal with the operation of the MPE Stage 1 Project, comply with the relevant criteria, including relevant sleep disturbance goals for the MPE site. Further, cumulative operational noise levels due to the concurrent operation of the MPE Stage 1 Project, the Proposal and the MPW Stage 2 Proposal were also predicted to comply with the established criteria.

## 7.2.2 Assessment Methodology - Amended Proposal

### Sensitive receivers

The EIS Assessment identified four residential receivers and five non-residential receivers (two educational and three industrial) as the most potentially affected by noise from the Proposal. These locations are summarised in Table 7-5 and shown in Figure 7-1.

Table 7-5 Sensitive receivers

Receiver / Suburb	Category	Distance to Proposal site (m)		
		Operational Area	Construction Area	Amended Construction Area
Wattle Grove	Residential	390	390	375
Wattle Grove North		375	350	350
Casula		800	760	750
Glenfield		1,580	1,550	1,500
All Saints Senior College (S1)	Educational	1,250	1,220	1,220
Casula Powerhouse (S2)		890	850	850
MPW (I1)	Industrial	Boundary	Boundary	Boundary
DJLU (I2)		Boundary	Boundary	Boundary
ABB Site (I3)		495	475	445



MPE Stage 2 Response to Submissions

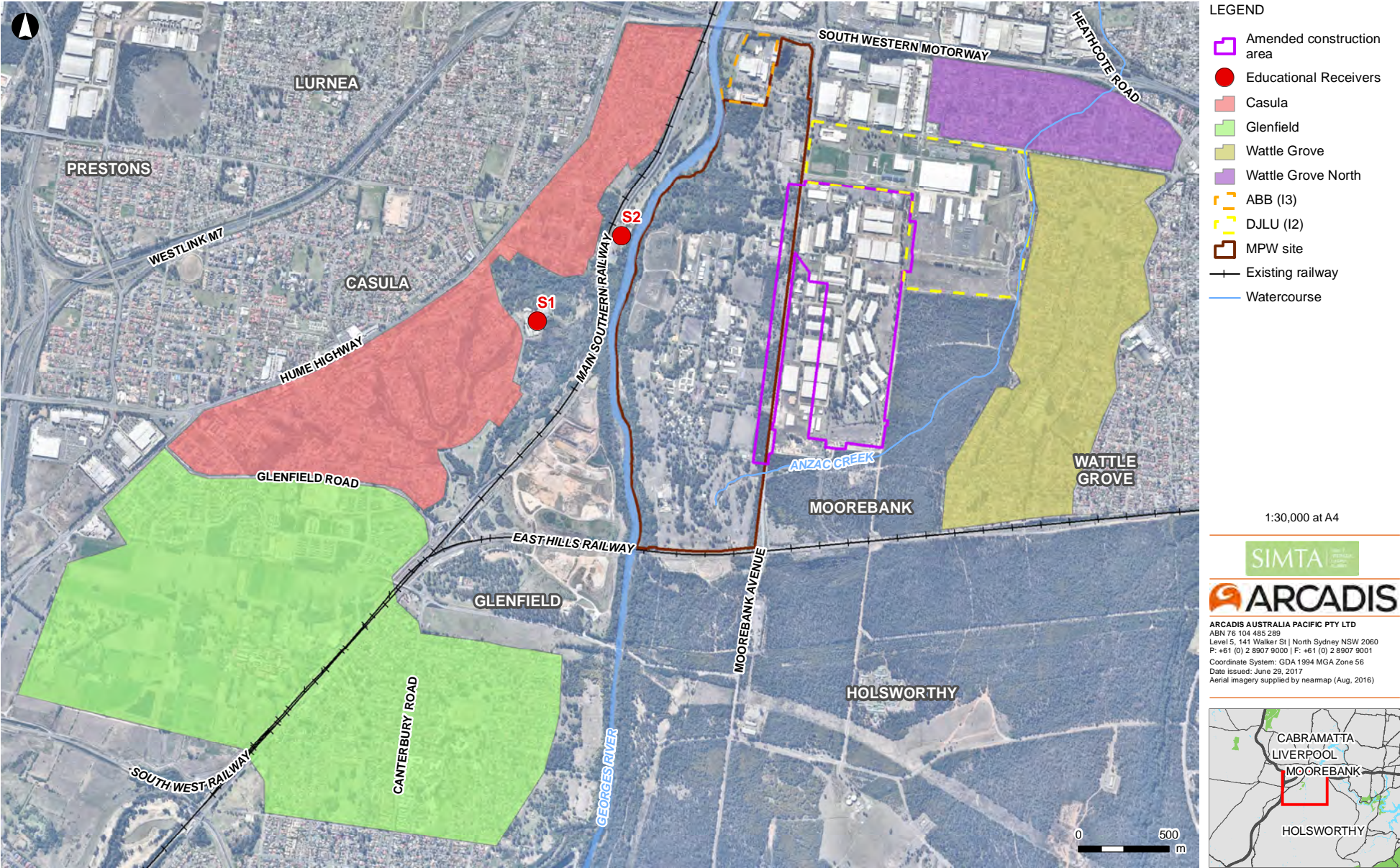


Figure 7-1: Noise sensitive receivers near the Amended Proposal

## Construction

The amendments to the Proposal would not change the intensity of the construction activities or significantly change the duration of the construction program, and would, therefore, not alter the construction stage impacts of the Proposal.

The amended construction area, required to accommodate the following amendments to the Proposal has been included in the noise model for construction works periods B, C, D and E (refer to Section 4 and Appendix I of this RtS for more information about construction works periods):

- Realignment of OSD Basin 1
- Changes to the length of the Moorebank Avenue upgrade
- Changes to the drainage to the south of the MPE site

Consistent with the EIS, the CadnaA acoustic noise prediction model software was used to model construction noise impacts associated with the Amended Proposal. Sound power levels were then compared against the noise management levels (NMLs) derived from the Rating Background Levels (RBLs) and criteria set out under the NSW EPA Interim Construction Noise Guideline (DECC, 2009) (ICNG).

### Construction noise impacts from the Amended Proposal

A review of the amendments to the Proposal was undertaken to assess the potential for construction noise impacts to occur beyond those assessed in the EIS. The amendments to the Proposal were reviewed in combination to identify whether construction of the amendments to the Proposal would result in:

- Construction works being undertaken closer to sensitive receivers than presented in the NVIA;
- Construction works being undertaken over a longer duration; and,
- The use of additional construction plant and equipment.

Of the four amendments to the Proposal, only the changes to the length of the Moorebank Avenue Upgrade and the changes to the drainage design to the south of the MPE site have the potential to result in construction noise impacts on sensitive receivers beyond those assessed in the EIS.

Construction works for the amendments to the Proposal are anticipated to be conducted during standard construction hours, and therefore, the out of hours (OOH) construction noise levels presented in the NVIA for the Proposal do not require any revision as part of this assessment.

$L_{Aeq, 15min}$  construction noise levels for works periods that would change due to the amendments to the Proposal have been modelled, taking into account additional construction plant and changes to the locations of construction activities, relative to sensitive receivers.

In addition to potentially increasing  $L_{Aeq, 15min}$  construction noise levels at sensitive receivers, the Amended Proposal would also result in the duration of construction works period D extending from 9 months to 12 months. This has also been considered in the construction noise modelling of the amendments to the Proposal.

## Operation

The realignment of OSD Basin 1 and changes to the drainage to the south of the MPE site would not change the operational noise impacts of the Proposal and as a result, have not been included in the operational noise assessment presented in this RtS.



As identified in the EIS, there are no sensitive residential receivers adjacent to the section of Moorebank Avenue proposed to be upgraded. This is unchanged by the increase to the length of the proposed upgrade. Therefore, the proposed upgrades to Moorebank Avenue are unlikely to affect road traffic noise level at sensitive receivers and have not been assessed further as part of this RtS.

The warehouse layout can affect operational noise levels from the Proposal as it influences the flow of trucks on the internal road network, and the warehouses themselves provide significant shielding between noise sources and sensitive receivers. The CadnaA V4.6 acoustic noise prediction software and the CONCAWE noise prediction algorithm was updated to model and predict the operational noise impacts of the changes to the warehouse layout as part of the Amended Proposal. The associated noise sources representing traffic on the internal roads and warehousing activities were updated accordingly.

Consistent with the EIS, the computer noise model was used to predict the intrusiveness ( $L_{Aeq, 15min}$ ) and amenity ( $L_{Aeq, period}$ ) impacts of the Proposal, in accordance with the NSW Industrial Noise Policy (INP).

Intrusiveness criteria are only applied to residential receivers. The intrusiveness and amenity criteria established for sensitive receivers near the Amended Proposal are presented in Table 7-6 and Table 7-7 respectively.

Table 7-6 Operational Noise Criteria – Intrusiveness

Receiver	Intrusiveness Criteria ( $L_{Aeq, 15min}$ )		
	Daytime <sup>1</sup>	Evening <sup>1</sup>	Night Time <sup>1</sup>
Wattle Grove	47	42	42
Wattle Grove North	41	41	41
Casula	46	42	39
Glenfield	49	49	42

1. Daytime 7:00am–6:00pm; Evening 6:00pm–10:00pm; Night 10:00pm–7:00am.

The INP amenity criterion for educational facilities is an internal  $L_{Aeq, 1hour}$  noise level of 35 dBA. For the purposes of the assessment of the Amended Proposal, this criterion has been converted to an equivalent external  $L_{Aeq, 1hour}$  noise level. It can be conservatively assumed that the attenuation of noise from outside to inside, via partially open windows, is 10 dB. Therefore, the equivalent external amenity criterion for educational facilities is 45 dBA.

Table 7-7 Operational Noise Criteria – Amenity

Receiver	Indicative Noise Amenity Area	Time Period <sup>1</sup>	Amenity Criteria ( $L_{Aeq, period}$ )
Wattle Grove, Casula, Glenfield	Residential Suburban	Daytime	55
		Evening	45
		Night Time	40
Wattle Grove North	Residential Urban	Daytime	60
		Evening	50
		Night Time	45
S1, S2	School/Classroom	Noisiest 1-hour period (when in use)	35 (internal) (45 external)

Receiver	Indicative Noise Amenity Area	Time Period <sup>1</sup>	Amenity Criteria (L <sub>Aeq</sub> , period)
I1, I2, I3	Industrial	When in use	70
1. Daytime 7:00am–6:00pm; Evening 6:00pm–10:00pm; Night 10:00pm–7:00am.			

Amendments to the Proposal, including changes to warehouse layout would not significantly change the location or nature of operational activities. During operation, the amended operational area would not result in the generation of additional operational noise above that included in the EIS for the Proposal (refer to Section 8 of the EIS). As such, none of the amendments to the Proposal are considered likely to result in noise sources with significant L<sub>Amax</sub> noise levels moving closer, or being more exposed, to the most affected residential receivers. Therefore, the predicted L<sub>Amax</sub> noise levels in the sleep disturbance assessment in the NVIA are representative of the likely L<sub>Amax</sub> noise levels for the Amended Proposal.

## 7.2.3 Impact Assessment – Amended Proposal

### Construction

Table 7-8 below provides a comparison of the predicted L<sub>Aeq, 15min</sub> construction noise levels from the Proposal as presented in the EIS, and the Amended Proposal, as presented in this RtS at noise sensitive receivers during standard daytime construction hours during construction works period B, C, D and E. Table 7-8 also compares these predicted L<sub>Aeq, 15min</sub> construction noise levels with the Noise Management Levels (NMLs) determined for the Proposal as included in Section 8.3 of the EIS.

As shown in Table 7-8, the amendments to the Proposal would result in additional construction noise impacts on the ABB site. Under the Amended Proposal, L<sub>Aeq, 15min</sub> construction noise levels on the ABB site are predicted to increase by 2 dBA, however, consistent with the EIS, construction of the Amended Proposal would not result in exceedances to the established NML at this location.

The duration of construction works period D would increase from 9 months to 12 months as a result of the amendments to the Proposal. The increase in the duration of construction works period D would mean that the construction activities would not intensify as a result of the amendments to the Proposal. Consistent with the EIS, the predicted L<sub>Aeq, 15min</sub> construction noise levels during works period D with the Amended Proposal would comply with the established NML at all receivers.

Table 7-8 Comparison of predicted  $L_{Aeq, 15min}$  construction noise levels during standard construction hours between the EIS and the Amended Proposal

Receiver	Predicted construction noise levels ( $L_{Aeq, 15min}$ ) with the Proposal (EIS Assessment)				Predicted construction noise levels ( $L_{Aeq, 15min}$ ) with the Amended Proposal (EIS Assessment)				NML	Incremental Impact?	Difference between Proposal (EIS Assessment) and Amended Proposal	Exceedance with the Amended Proposal
	Works Period B – Site Preparation Activities	Works Period C – Construction of the Moorebank Avenue Diversion Road	Works Period D – Bulk Earthworks, drainage and Utilities	Works Period E – Road and intersection works to facilitate the raising of Moorebank Avenue	Works Period B – Site Preparation Activities	Works Period C – Construction of the Moorebank Avenue Diversion Road	Works Period D – Bulk Earthworks, drainage and Utilities	Works Period E – Road and intersection works to facilitate the raising of Moorebank Avenue				
Wattle Grove	48	38	49	38	48	38	49	38	52	No	0	Nil
Wattle Grove North	44	35	45	35	44	35	45	35	46	No	0	Nil
Casula	46	41	47	41	46	41	47	41	51	No	0	Nil
Glenfield	34	30	35	30	34	30	35	30	54	No	0	Nil
S1	43	39	44	39	43	39	44	39	55	No	0	Nil
S2	41	37	42	37	41	37	42	37	55	No	0	Nil
I1	71	66	72	66	71	66	72	66	75	No	0	Nil
I2	71	57	72	57	71	57	72	57	75	No	0	Nil
I3	50	41	51	41	<u>52</u>	<u>43</u>	<u>53</u>	<u>43</u>	75	Yes	2 dB	Nil

Changes resulting from Amendments to the Proposal have been highlighted in underline and **bold**.



## Operation

### Intrusiveness

The predicted  $L_{Aeq, 15min}$  noise levels at the most potentially affected sensitive receivers during the operation of the Amended Proposal, are presented in Table 7-9 and Table 7-10. Table 7-9 presents the predicted  $L_{Aeq, 15min}$  operational noise levels from the Amended Proposal only, and Table 7-10 presents the predicted  $L_{Aeq, 15min}$  operational noise levels from the Amended Proposal and the MPE Stage 1 Project.

As shown in Table 7-9, the predicted  $L_{Aeq, 15min}$  operational noise levels increase by 1 dBA at residential receivers in Wattle Grove during the day, evening and night time periods with the inclusion of the amendments to the Proposal. The incremental change in operational noise impacts is attributable to the changed warehouse layouts, and the associated influence on the flow of trucks on the internal road network.

Operational noise at all other receivers would not change as a result of the amendments to the Proposal. Consistent with the EIS, operational noise from the Amended Proposal would not result in exceedances to the NSW Industrial Noise Policy's (INP) intrusiveness criteria during the daytime, evening or night time periods at all receivers.

As shown in Table 7-10, the predicted  $L_{Aeq, 15min}$  noise levels during the operation of the Amended Proposal and the MPE Stage 1 Project would not change as a result of the amendments to the Proposal. Consistent with the EIS, operational noise from the Amended Proposal would not result in exceedances to the NSW Industrial Noise Policy's (INP) intrusiveness criteria during the daytime, evening or night time periods at all receivers.

Contour plots of the predicted  $L_{Aeq, 15min}$  operational noise levels from the Amended Proposal are presented in Appendix D of this report.

Table 7-9 Comparison of predicted LAeq, 15min operational noise levels between the EIS and the Amended Proposal – Amended Proposal Only

Receiver	MPE Stage 2 EIS Assessment				Amended Proposal				Operational noise criteria – intrusiveness* (dBA)			Exceedance (dBA)	
	Predicted LAeq, 15min Noise Level (dBA)				Predicted LAeq, 15min Noise Level (dBA)								
	Day <sup>1</sup>	Evening <sup>1</sup>	Night <sup>1</sup>		Day <sup>1</sup>	Evening <sup>1</sup>	Night <sup>1</sup>		Day <sup>1</sup>	Evening <sup>1</sup>	Night <sup>1</sup>	MPE Stage 2 EIS	Amended Proposal
			Calm <sup>2</sup>	Adverse <sup>3</sup>			Calm <sup>2</sup>	Adverse <sup>3</sup>					
Wattle Grove	26	26	24	28	<u>27</u>	<u>27</u>	<u>25</u>	<u>29</u>	47	42	42	0	0
Wattle Grove North	<20	<20	<20	20	<20	<20	<20	20	41	41	41	0	0
Casula	22	22	20	25	22	22	20	25	46	42	39	0	0
Glenfield	<20	<20	<20	<20	<20	<20	<20	<20	49	49	42	0	0

1. Daytime = 7.00am-6.00pm; Eve. = 6.00pm-10.00pm; Night = 10.00pm-7.00am.

2. CONCAWE Category 4.

3. CONCAWE Category 6.

\*As recommended by the NSW Industrial Noise Policy (INP).

Changes resulting from Amendments to the Proposal have been highlighted in underline and **bold**.

MPE Stage 2 RtS

Table 7-10 Comparison of predicted LAeq, 15min operational noise levels between the EIS and the Amended Proposal – Amended Proposal & MPE Stage 1

Receiver	MPE Stage 2 EIS Assessment				Amended Proposal				Operational noise criteria – intrusiveness*			Exceedance	
	Predicted LAeq, 15min Noise Level (dBA)				Predicted LAeq, 15min Noise Level (dBA)				Predicted LAeq, 15min Noise Level (dBA)			Exceedance	
	Day <sup>1</sup>	Evening <sup>1</sup>	Night <sup>1</sup>		Day <sup>1</sup>	Evening <sup>1</sup>	Night <sup>1</sup>		Day <sup>1</sup>	Evening <sup>1</sup>	Night <sup>1</sup>	MPE Stage 2 EIS	Amended Proposal
			Calm <sup>2</sup>	Adverse <sup>3</sup>			Calm <sup>2</sup>	Adverse <sup>3</sup>					
Wattle Grove	29	29	28	32	29	29	28	32	47	42	42	0	0
Wattle Grove North	20	20	<20	23	20	20	<20	23	41	41	41	0	0
Casula	31	31	31	35	31	31	31	35	46	42	39	0	0
Glenfield	20	20	20	25	20	20	20	25	49	49	42	0	0

1. Daytime = 7.00am-6.00pm; Eve. = 6.00pm-10.00pm; Night = 10.00pm-7.00am.

2. CONCAWE Category 4.

3. CONCAWE Category 6.

\*As recommended by the NSW Industrial Noise Policy (INP).

## Amenity

The predicted  $L_{Aeq, period}$  noise levels from the operation of the Amended Proposal at the most potentially affected sensitive receivers are presented in Table 7-11 and Table 7-12. Table 7-11 presents the predicted  $L_{Aeq, 15min}$  operational noise levels from the Amended Proposal only, and Table 7-12 presents the predicted  $L_{Aeq, period}$  operational noise levels from the Amended Proposal and the MPE Stage 1 Project.

As shown in Table 7-11, the predicted  $L_{Aeq, period}$  operational noise levels increase by 1 dBA at residential receivers in Wattle Grove during the day, evening and night time (during adverse conditions only) periods with the inclusion of the amendments to the Proposal. The incremental change in operational noise impacts is attributable to the changed warehouse layouts, and the associated influence on the flow of trucks on the internal road network. Operational noise at all other receivers would not change as a result of the amendments to the Proposal. Consistent with the EIS, operational noise from the Amended Proposal would not result in exceedances to the NSW Industrial Noise Policy's (INP) amenity criteria during the daytime, evening or night time periods at all receivers.

As shown in Table 7-12, the predicted  $L_{Aeq, period}$  noise levels during the operation of the Amended Proposal and the MPE Stage 1 Project would not change as a result of the amendments to the Proposal. Consistent with the EIS, operational noise from the Amended Proposal would not result in exceedances to the NSW Industrial Noise Policy's (INP) amenity criteria during the daytime, evening or night time periods at all receivers.

Table 7-11 Comparison of predicted  $L_{Aeq, period}$  operational noise levels between the EIS and the Amended Proposal – Amended Proposal Only

Receiver	MPE Stage 2 EIS Assessment				Amended Proposal				Operational noise criteria – amenity* (dBA)			Exceedance (dB)	
	Predicted $L_{Aeq, period}$ Noise Level (dBA)				Predicted $L_{Aeq, period}$ Noise Level (dBA)								
	Day <sup>1</sup>	Evening <sup>1</sup>	Night <sup>1</sup>		Day <sup>1</sup>	Evening <sup>1</sup>	Night <sup>1</sup>		Day <sup>1</sup>	Evening <sup>1</sup>	Night <sup>1</sup>	MPE Stage 2 EIS	Amended Proposal
			Calm <sup>2</sup>	Adverse <sup>3</sup>			Calm <sup>2</sup>	Adverse <sup>3</sup>					
Wattle Grove	25	25	20	23	<b><u>26</u></b>	<b><u>26</u></b>	20	<b><u>24</u></b>	55	45	40	0	0
Wattle Grove North	<20	<20	<20	<20	<20	<20	<20	<20	60	50	45	0	0
Casula	21	21	<20	<20	21	21	<20	<20	55	45	40	0	0
Glenfield	<20	<20	<20	<20	<20	<20	<20	<20	55	45	40	0	0
S1	<20	<20	<20	<20	<20	<20	<20	<20	45 (external, when in use)			0	0
S2	<20	<20	<20	<20	<20	<20	<20	<20	45 (external, when in use)			0	0
I1 (MPE)	49	49	43	43	49	49	43	43	70 (external, when in use)			0	0
I2 (DJLU)	44	44	37	37	44	44	37	37	70 (external, when in use)			0	0
I3 (ABB)	26	26	20	20	26	26	20	20	70 (external, when in use)			0	0

1. Daytime = 7.00am-6.00pm; Eve. = 6.00pm-10.00pm; Night = 10.00pm-7.00am.

2. CONCAWE Category 4.

3. CONCAWE Category 6.

Changes resulting from Amendments to the Proposal have been highlighted in underline and **bold**.

Table 7-12 Comparison of predicted  $L_{Aeq, period}$  operational noise levels between the EIS and the Amended Proposal – Amended Proposal & MPE Stage 1

Receiver	MPE Stage 2 EIS Assessment				Amended Proposal				Operational noise criteria – amenity* (dBA)			Exceedance (dB)	
	Predicted $L_{Aeq, period}$ Noise Level (dBA)				Predicted $L_{Aeq, period}$ Noise Level (dBA)								
	Day <sup>1</sup>	Evening <sup>1</sup>	Night <sup>1</sup>		Day <sup>1</sup>	Evening <sup>1</sup>	Night <sup>1</sup>		Day <sup>1</sup>	Evening <sup>1</sup>	Night <sup>1</sup>	MPE Stage 2 EIS	Amended Proposal
			Calm <sup>2</sup>	Adverse <sup>3</sup>			Calm <sup>2</sup>	Adverse <sup>3</sup>					
Wattle Grove	27	27	23	27	27	27	<b><u>24</u></b>	<b><u>28</u></b>	55	45	40	0	0
Wattle Grove North	<20	<20	<20	<20	<20	<20	<20	<20	60	50	45	0	0
Casula	27	27	27	32	27	27	27	32	55	45	40	0	0
Glenfield	22	22	22	27	22	22	22	27	55	45	40	0	0
S1	29	29	29	33	29	29	29	33	45 (external, when in use)			0	0
S2	<20	<20	<20	<20	<20	<20	<20	<20	45 (external, when in use)			0	0
I1 (MPE)	55	55	55	55	55	55	55	55	70 (external, when in use)			0	0
I2 (DJLU)	44	44	37	38	44	44	37	38	70 (external, when in use)			0	0
I3 (ABB)	30	30	28	33	30	30	28	33	70 (external, when in use)			0	0

1. Daytime = 7.00am-6.00pm; Eve. = 6.00pm-10.00pm; Night = 10.00pm-7.00am.

2. CONCAWE Category 4.

3. CONCAWE Category 6.

Changes resulting from Amendments to the Proposal have been highlighted in underline and **bold**.

## Cumulative

The predicted  $L_{Aeq, period}$  cumulative operational noise levels were calculated and assessed against amenity criteria at various times throughout the day (day, evening and night) at the nearby noise sensitive receivers detailed in Section 1.2.2. The cumulative operational noise assessment considered the noise impacts from the operation of the Proposal concurrently with the MPE Stage 1 Project and the MPW Stage 2 Proposal at the most potentially affected sensitive receivers, under the Amended Proposal, are presented in Table 7-13.

The results presented in Table 7-13 show that the cumulative operational noise levels at sensitive receivers, due to the concurrent operation of the Amended Proposal with the MPE Stage 1 and MPW Stage 2 projects, would comply with the relevant amenity criteria at all times of the day.

The amendments to the Proposal result in the predicted cumulative  $L_{Aeq, period}$  operational noise levels increasing by 1 dBA at residential receivers in Wattle Grove North during all periods (day, evening and night time) compared to the EIS (as a result of incremental increases to the operational noise impacts from the Amended Proposal); however, the cumulative operational noise levels would not exceed the amenity criteria at any time. Analysis of the modelling results shows that the predicted increase in cumulative operational noise levels in Wattle Grove North is due to the MPW Stage 2 Proposal, as amended by the MPW Stage 2 Response to Submissions report (Arcadis, 2017). This is consistent with the *Addendum Impact Assessment – Noise* for the MPW Stage 2 Proposal, prepared by Wilkinson Murray in May 2017.

Table 7-13 Comparison of predicted  $L_{Aeq, period}$  operational noise levels between the EIS and the Amended Proposal – Cumulative (MPE & MPW)

Receiver	MPE Stage 2 EIS Assessment				Amended Proposal				Operational noise criteria – amenity* (dBA)			Exceedance (dB)	
	Predicted $L_{Aeq, period}$ Noise Level (dBA)				Predicted $L_{Aeq, period}$ Noise Level (dBA)								
	Day <sup>1</sup>	Evening <sup>1</sup>	Night <sup>1</sup>		Day <sup>1</sup>	Evening <sup>1</sup>	Night <sup>1</sup>		Day <sup>1</sup>	Evening <sup>1</sup>	Night <sup>1</sup>	MPE Stage 2 EIS	Amended Proposal
			Calm <sup>2</sup>	Adverse <sup>3</sup>			Calm <sup>2</sup>	Adverse <sup>3</sup>					
Wattle Grove	27	27	25	29	27	27	25	29	55	45	40	0	0
Wattle Grove North	30	30	29	33	30	30	29	<b>34</b>	60	50	45	0	0
Casula	33	33	32	36	33	33	32	36	55	45	40	0	0
Glenfield	22	22	22	27	22	22	22	27	55	45	40	0	0
S1	29	29	29	34	29	29	29	34	45 (external, when in use)			0	0
S2	26	26	25	29	26	26	25	29	45 (external, when in use)			0	0
I2 (DJLU)	56	56	56	57	56	56	56	57	70 (external, when in use)			0	0
I3 (ABB)	52	52	48	50	52	52	48	50	70 (external, when in use)			0	0

1. Daytime = 7.00am-6.00pm; Eve. = 6.00pm-10.00pm; Night = 10.00pm-7.00am.

2. CONCAWE Category 4.

3. CONCAWE Category 6.

Changes resulting from Amendments to the Proposal have been highlighted in underline and **bold**.



## 7.2.4 Mitigation measures

### Construction

This assessment concludes that the amendments to the Proposal would result in construction phase noise and vibration impacts generally consistent with those already identified and assessed as part of the MPE Stage 2 EIS (refer to Section 8.4.1 and Appendix L of the EIS).

The mitigation measures outlined in Section 8.5.1 of the MPE Stage 2 EIS are considered adequate to address impacts associated with the Amended Proposal. No additional construction noise and vibration-related mitigation measures are proposed as a result of the amendments to the Proposal.

Final mitigation measures are provided in Section 8 of this RtS and include all mitigation measures to be implemented to avoid, minimise and manage noise and vibration impacts during construction of the Amended Proposal. Operation

This assessment concludes that the amendments to the Proposal would result in operational noise impacts generally consistent with those already identified and assessed as part of the MPE Stage 2 EIS (refer to Section 8.4.2 and Appendix L of the EIS).

The mitigation measures outlined in Section 8.5.2 of the MPE Stage 2 EIS are considered adequate to address impacts associated with the Amended Proposal. No additional operational noise and vibration-related mitigation measures are proposed as a result of the amendments to the Proposal.

Final mitigation measures are provided in Section 8 of this RtS, and include all mitigation measures to be implemented to avoid, minimise and manage noise and vibration impacts during operation of the Amended Proposal.

## 7.3 Air Quality

### 7.3.1 EIS Assessment

The air quality impacts of the Proposal were considered in an *Air Quality Impact Assessment* (AQIA, Ramboll Environ, 2016) which was included at Appendix M and summarised in Section 9 of the EIS. A summary of this assessment and outcomes is provided below.

Localised air quality impacts as a result of the Proposal were assessed using a Level 2 assessment approach in general accordance with the NSW Environment Protection Authority (EPA) *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales* (*“the approved methods”*) (NSW EPA, 2005). An overview of the approach to the assessment is as follows:

- Emissions were estimated for Proposal related activities, using best practice emission estimation techniques
- Dispersion modelling was undertaken using a regulatory dispersion model to predict ground level concentrations for key pollutants as a result of the Proposal at nearby sensitive receivers
- Assessment of cumulative impacts, taking into account the combined effect of existing baseline air quality, other local sources of emissions, reasonably foreseeable future emissions and any indirect or induced effects on air quality.

The modelling results indicated that the emissions generated during construction would comply with all relevant impact assessment criteria. The predicted increase in

annual average PM<sub>10</sub>, PM<sub>2.5</sub>, TSP and dust deposition is considered minor, when compared against existing background conditions. Cumulative predictions were also presented and the results indicated that the construction of the Proposal would result in no additional days over the impact assessment criteria.

For the operational phase of the Proposal the maximum increase in PM<sub>10</sub> and PM<sub>2.5</sub> is minor. When background was added, there were no additional exceedances of the short term impact assessment criteria. The annual average background concentrations of PM<sub>2.5</sub> already exceed the NEPM reporting standard, therefore cumulative predictions were also above the standard at all receptors. However, the Proposal resulted in a minor increase in annual average PM<sub>2.5</sub> (<0.1 µg/m<sup>3</sup> at all sensitive receptors). The predicted NO<sub>2</sub>, CO, SO<sub>2</sub> and VOC concentrations are well below the relevant impact assessment criteria.

In summary, consistent with previous air quality assessments for the Moorebank Precinct East Project, the potential air quality impacts are expected to be low risk.

### 7.3.2 Impact Assessment

#### Construction

The amendments to the Proposal would not alter the construction activities required for the Proposal and would not change the assessment of construction-related air quality impacts included in the MPE Stage 2 EIS.

The realignment of OSD Basin 1 and changes to the length of the Moorebank Avenue upgrade would result in a minor increase in the area of disturbance; however, would not change construction activities. Air quality impacts during construction of the Proposal would be managed in accordance with the mitigation measures included in Section 9.5.1 and Appendix M of the EIS.

On this basis, further assessment of construction-related air quality impacts is not considered necessary for the amendments to the Proposal.

#### Operation

The amendments to the Proposal would not alter the emissions predictions presented in the MPE Stage 2 EIS.

No further assessment of operational-related air quality impacts is considered necessary as a result of the amendments to the Proposal.

### 7.3.3 Mitigation Measures

#### Construction

This assessment concludes that the amendments to the Proposal would result in construction phase air quality impacts generally consistent with those already identified and assessed as part of the MPE Stage 2 EIS (refer to Section 9.4.1 and Appendix M of the EIS). There would be no additional construction emissions attributable to the amendments to the Proposal and therefore the Amended Proposal construction related air quality impacts are consistent with those stated in the MPE Stage 2 EIS.

The mitigation measures outlined in Section 9.5.1 of the MPE Stage 2 EIS are considered adequate to address impacts associated with the Amended Proposal. No additional construction air quality-related mitigation measures are proposed as a result of the amendments to the Proposal.

The revised mitigation measures are provided in Section 8 of this RtS, and include all mitigation measures to be implemented to avoid, minimise and manage air quality impacts during construction of the Amended Proposal.

## Operation

This assessment concludes that the amendments to the Proposal would result in operational air quality impacts generally consistent with those already identified and assessed as part of the MPE Stage 2 EIS (refer to Section 9.4.2 and Appendix M of the EIS). There would be no change to operational emissions attributable to the amendments to the Proposal.

The mitigation measures outlined in Section 9.5.2 of the MPE Stage 2 EIS are considered adequate to address impacts associated with the Amended Proposal. There would be no additional operational emissions attributable to the amendments to the Proposal and therefore the Amended Proposal operational related air quality impacts are consistent with those stated in the MPE Stage 2 EIS.

The revised mitigation measures are provided in Section 8 of this RtS, and include all mitigation measures to be implemented to avoid, minimise and manage air quality impacts during operation of the Amended Proposal.

## 7.4 Human Health

### 7.4.1 EIS Assessment

The human health impacts of the Proposal were considered in a Health Risk Assessment (HRA, Ramboll Environ, 2016) which was included at Appendix N and summarised in Section 10 of the EIS. A summary of this assessment and outcomes is provided below.

The Health Risk Assessment (HRA) used information about pollutants to estimate a theoretical level of risk for people who might be exposed to defined levels of these substances. The objective of the EIS HRA was to assess potential health risk posed by the air emissions and noise on the surrounding community.

The HRA process comprised five components: issues identification, exposure assessment, toxicity assessment, risk characterisation, and uncertainty assessment. The approach to the HRA was in accordance with approved Australian guidance for performing risk assessments, in particular:

- Health Impact Assessment – A Practical Guide - Centre for Health Equity Training, Research and Evaluation (CHETRE, 2007).
- Environmental Health Risk Assessment: Guidelines for Assessing Human Health Risks from Environmental Hazards (enHealth, 2012a).

The EIS HRA included an assessment of the health risks associated with air quality and noise, as detailed below.

### Air Quality HRA

The focus of the air quality HRA was the health impacts of emissions from the operational phase of the Proposal. The key air pollutants evaluated in the local air quality assessment were considered as chemicals of potential concern (COPCs) and inhalation of air was the only exposure pathway evaluated.

The human receptors of concern included commercial/industrial workers, residents, school or day care students and recreational users located in the suburbs of Casula, Wattle Grove, Glenfield, and Moorebank. Annual average ground level concentrations

(GLCs) of COPCs emitted from operation of the Proposal were predicted by air modelling in the local air quality assessment. A cumulative Proposal scenario was also considered for concurrent operation of the Proposal, the MPE Stage 1 Project and the MPW Stage 2 Project.

The air quality HRA evaluated a range of health endpoints associated with the key air pollutants, including increases in mortality and morbidity as well as excess lifetime cancer risks.

The HRA concluded that there are not expected to be any significant adverse health effects expected in relation to short-term and long-term exposure to key air pollutants associated with the operation of the Proposal alone, and also a cumulative assessment scenario.

### Noise HRA

The focus of the noise HRA was the health effects associated with environmental noise. These include cardiovascular disease, cognitive impairment, sleep disturbance, tinnitus, annoyance, and hearing impairment.

The exposure data for the noise HRA were obtained from the EIS *Noise and Vibration Impact Assessment* (Wilkinson-Murray, 2016). The risk characterisation was conducted by comparing the predicted noise levels to the corresponding health-based World Health Organisation guideline values for annoyance, sleep disturbance and cognitive impairment (WHO, 1999).

The noise from both operation of the Proposal and cumulative assessment scenario meets the WHO community noise guidelines at all residential receivers. A HQ greater than 1 was predicted for annoyance and cognitive impairment at the nearest industrial receiver, however, the HQs for existing ambient noise already exceed 1 for annoyance and cognitive impairment. Similarly, although total noise exceed WHO community noise guidelines, the existing ambient noise levels alone are already above these guidelines and on this basis the Proposal related noise is expected to have a minimal impact on the local residential area.

## 7.4.2 Impact Assessment

### Construction

The amendments to the Proposal would not alter the construction activities required for the Proposal and would not change the assessment of construction-related human health risks included in the MPE Stage 2 EIS.

The realignment of OSD Basin 1 and changes to the length of the Moorebank Avenue upgrade would result in a minor increase in the area of disturbance; however, would not change construction activities. Human health risks during construction of the Proposal would be managed in accordance with the mitigation measures included in Section 10.4 and Appendix N of the EIS.

On this basis, further assessment of construction-related human health risks is not considered necessary for the amendments to the Proposal.

### Operation

The amendments to the Proposal would not alter the human health risks associated with the operation of the Proposal as presented in the MPE Stage 2 EIS.

No further assessment of operational-related human health risks is considered necessary as a result of the amendments to the Proposal.

### 7.4.3 Mitigation Measures

#### Construction

This assessment concludes that the amendments to the Proposal would result in construction phase human health risks generally consistent with those already identified and assessed as part of the MPE Stage 2 EIS (refer to Section 10.4 and Appendix N of the EIS). There would be no additional human health risks attributable to the amendments to the Proposal and therefore the Amended Proposal construction related human health risks are consistent with those stated in the MPE Stage 2 EIS. .

The mitigation measures outlined in Section 10.5 of the MPE Stage 2 EIS are considered adequate to address impacts associated with the human health risks of the Amended Proposal. No additional construction human health risk-related mitigation measures are proposed as a result of the amendments to the Proposal.

The revised mitigation measures are provided in Section 8 of this RtS, and include all mitigation measures to be implemented to avoid, minimise and manage human health risks during construction of the Amended Proposal.

#### Operation

This assessment concludes that the amendments to the Proposal would result in operational phase human health risks generally consistent with those already identified and assessed as part of the MPE Stage 2 EIS (refer to Section 10.4 and Appendix N of the EIS). There would be no additional human health risks attributable to the amendments to the Proposal and therefore the Amended Proposal operational related human health risks are consistent with those stated in the MPE Stage 2 EIS. .

The mitigation measures outlined in Section 10.5 of the MPE Stage 2 EIS are considered adequate to address impacts associated with the human health risks of the Amended Proposal. No additional operational human health risk-related mitigation measures are proposed as a result of the amendments to the Proposal.

The revised mitigation measures are provided in Section 8 of this RtS, and include all mitigation measures to be implemented to avoid, minimise and manage human health risks during operation of the Amended Proposal.

### 7.5 Biodiversity

#### 7.5.1 EIS Assessment

A Biodiversity Assessment Report (BAR) was prepared for the Proposal (Appendix O of this EIS), in accordance with OEH's *Framework for Biodiversity Assessment* (FBA) under the *NSW Biodiversity Offsets Policy for Major Projects* (OEH 2014).

Planted and disturbed vegetation occurs across most of the Proposal site, consisting of mature planted trees and expanses of mown grass lawn. In addition, three Plant Community Types (PCTs) occur in the Proposal site. These PCTs are equivalent to threatened ecological communities (TECs) listed under the *Threatened Species Conservation Act 1995* (TSC Act) and *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The area of each TEC to be removed for the Proposal, as assessed by the BAR, is listed in Table 7-15.

It was determined that the Proposal will have minimal impact on threatened flora species listed under the TSC Act and EPBC Act. Targeted surveys did not identify any threatened flora species in the Proposal site.

Populations of several threatened plant species have been identified in the Boot Land, to the east and south of the Proposal site. Potential habitat for these species in the Proposal site is poor quality, and subject to fragmentation and/or edge effects.

The clearing of vegetation for the Proposal will result in the loss of specific fauna habitat components, including live trees, tree hollows, foraging resources, groundlayer habitats such as ground timber and well-developed leaf litter. These resources offer sheltering, foraging, nesting and roosting habitat to a variety of fauna, including threatened fauna, occurring within the locality. The Proposal will require removal of seven hollow-bearing trees, all of which are located in the Moorebank Avenue road reserve.

The assessment of ecosystem credit species associated with PCTs on the development site found that two threatened fauna species have a high likelihood of occurrence and 11 have a moderate likelihood of occurrence. However, given the modified and fragmented nature of potential fauna habitat in the Proposal site, potential impacts on these species are considered likely to be minimal, and mainly comprise removal of marginal foraging, sheltering and roosting habitat.

Impacts to Groundwater Dependent Ecosystems (GDEs), habitat connectivity and riparian land resulting from the Proposal are not anticipated to be significant.

Potential impacts on biodiversity would be managed through a range of mitigation measures (Section 22 of the EIS) including the implementation of a Flora and Fauna Management Plan as part of the CEMP and OEMP.

## 7.5.2 Additional biodiversity surveys

In their submission on the EIS for the Proposal, the NSW OEH recommended that additional flora surveys be undertaken along the eastern and southern boundary of the MPE site, at least 30 m into the Boot land.

Accordingly, targeted threatened flora surveys, for species listed in Table 7-14 were undertaken within 30 m of the eastern boundary of the MPE Site where it adjoins the Boot land, and within 30 m of the portion of the Boot land south of the MPE Site that adjoins the fenceline to the south of the Proposal (Figure 7-2). Targeted surveys were conducted by Arcadis ecologists on 11 and 18 May 2017. The survey was undertaken via walking parallel transects spaced approximately 5 m apart. Where detected, the number of individuals were recorded.

Table 7-14 Threatened flora species targeted in May 2017 surveys

Scientific name	Common name	TSC Act status	EPBC Act status
<i>Acacia bynoeana</i>	Bynoe's Wattle	Endangered	Vulnerable
<i>Acacia pubescens</i>	Downy Wattle	Vulnerable	Vulnerable
<i>Grevillea parviflora</i> subsp. <i>parviflora</i>	Small-flowered Grevillea	Vulnerable	Vulnerable
<i>Hibbertia fumana</i>	-	Critically Endangered (provisional listing)	Not listed
<i>Hibbertia puberula</i> subsp. <i>puberula</i>	-	Endangered	Not listed
<i>Persoonia nutans</i>	Nodding Geebung	Endangered	Endangered

Four threatened flora species were recorded in the survey area:

- *Acacia pubescens* – a stand of this species was recorded near the cleared edge of Broad-leaved Ironbark - Melaleuca decora shrubby open forest to the east of the MPE Site.
- *Grevillea parviflora* subsp. *parviflora* – scattered individuals were recorded in the Hard-leaved Scribbly Gum - Parramatta Red Gum heathy woodland to the east of the MPE Site.
- *Hibbertia puberula* subsp. *puberula* – this species was recorded across all areas to the east and south of the MPE Site mapped as Hard-leaved Scribbly Gum - Parramatta Red Gum heathy woodland, as well as in cleared areas in the western extent of the surveyed area. The species was able to be positively identified as most individuals observed had flowering or fruiting material remaining on the plant. A few individuals were noted to be in flower or bud.
- *Persoonia nutans* – one isolated mature individual was recorded at the edge of Broad-leaved Ironbark - Grey Box - Melaleuca decora grassy open forest to the east of the MPE site, and scattered regenerating plants were recorded in cleared areas adjoining the fenceline to the south of the MPE Site.

The locations of the flora species recorded in this area are illustrated in Figure 7-2.



## MPE Stage 2 Response to Submissions



### LEGEND

Amended construction area

Threatened Flora Species

Acacia pubescens

Grevillea parviflora subsp. parviflora

Hibbertia puberula subsp. puberula; Other

Persoonia nutans

Persoonia nutans (no longer evident as surveyed May 2017)

Vegetation Communities

Castlereagh Scribbly Gum Woodland

Castlereagh Swamp Woodland

Cooks River Castlereagh Ironbark Forest

Shale Gravel Transition

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Coordinate System: GDA 1994 MGA Zone 56  
Date issued: June 29, 2017  
Aerial imagery supplied by nearmap (May, 2017)

1:5,000 at A4

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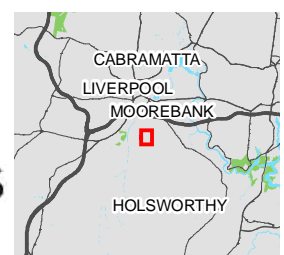


Figure 7-2: Threatened species identified during additional biodiversity surveys



### 7.5.3 Impact Assessment – Amended Proposal

#### Amendments to vegetation clearing

The amendments to the Proposal would not require the removal of any native vegetation or habitat, additional to what was assessed by the BAR (Appendix O of the EIS) and would result in a minor reduction in the area of native vegetation to be cleared (-0.01 ha). For the purposes of this assessment, native vegetation is defined as areas of plant community types mapped by Arcadis and WSP Parsons Brinckerhoff in the Moorebank Precinct (including Moorebank Precinct East and Moorebank Precinct West), being a consolidation of all assessments for the Moorebank Precinct conducted since 2011.

The amendments to the Proposal that have the potential to impact on native vegetation are the amended construction and operational footprints. However, these amendments mostly occur in areas that support planted and disturbed vegetation and no PCTs, TECs, or potential habitat for threatened flora or fauna species will be removed for the Amended Proposal.

As described in Section 6 of this RtS, the stormwater and drainage design has been modified to the south of the MPE site, resulting in the removal of the southern drainage channel and outlet to Anzac Creek. The construction area has subsequently been reduced, and no longer encompasses the area that was to support the southern drainage channel and outlet to Anzac Creek.

This amended construction area in the south of the Proposal site (refer to Figure 6-2 in Section 6 of this RtS) has resulted in a small reduction in the construction footprint to the south of the MPW site. Accordingly, the Amended Proposal will result in a reduction of 0.01 ha of clearing of one TEC that occurs in this area; Freshwater Wetlands on Coastal Floodplains of the NSW North Coast, Sydney Basin and South East Corner bioregions.

A summary of the revised impacts on TECs as a result of the amendments to the Proposal, and a comparison of these impacts to those included as part of the EIS assessment are provided in Table 1-2.

*Table 7-15 Impacts of the Amended Proposal on TECs compared to EIS Proposal*

Plant Community Type	Equivalent TEC	Conservation status	EIS Proposal area of direct impact	Impact of Amended Proposal	Change in area of impact
Hard-leaved Scribbly Gum – Parramatta Red Gum heathy woodland of the Cumberland Plain, Sydney Basin	Castlereagh Scribbly Gum Woodland in the Sydney Basin bioregion	Vulnerable (TSC Act) Endangered (EPBC Act)	0.1 ha	0.1 ha	No change
Broad-leaved Ironbark - Melaleuca decora shrubby open forest on clay soils of the Cumberland Plain, Sydney Basin Bioregion	Cooks River – Castlereagh Ironbark Forest in the Sydney Basin Bioregion	Endangered (TSC Act) Critically Endangered (EPBC Act)	0.05 ha	0.05 ha	No change

Plant Community Type	Equivalent TEC	Conservation status	EIS Proposal area of direct impact	Impact of Amended Proposal	Change in area of impact
Coastal freshwater lagoons of the Sydney Basin and Southeast Corner	Freshwater Wetlands on Coastal Floodplains of the NSW North Coast, Sydney Basin and South East Corner bioregions	Endangered (TSC Act)	0.01 ha	0	<u>-0.01 ha</u>

Changes to the construction and operational footprint as a result of the amendments to the Proposal would not result in the Proposal directly impacting on threatened species identified to the east or south of the MPE site during the additional surveys carried out in May 2017 (refer to Section 7.5.2 for more information). No threatened species recorded during these additional surveys require removal as a result of the amendments to the Proposal.

### Changes to hydrology

The amendments to the Proposal involve modifications to the stormwater and drainage design to the south end of the MPE site, as described in section 6 of this report. These amendments include the removal of the southern drainage channel and outlet to Anzac Creek. Potential impacts of the construction and operation of this outlet on Anzac Creek, as assessed by the BAR, are no longer expected to occur as a result of the amendments to the Proposal.

The modifications to the stormwater and drainage design would not change the type or extent of potential stormwater and flooding impacts assessed in the MPE Stage 2 EIS (refer to Section 12 and Appendix P).

### Other biodiversity-related impacts

Potential impacts of the Amended Proposal on other biodiversity values identified within and in proximity to the Proposal site, compared to impacts of the Proposal assessed in the BAR, have been considered in Table 7-16.

Table 7-16 Potential impacts of the Amended Proposal

Potential Impact	Description of impact as a result of the Amended Proposal compared to the EIS Proposal.
Threatened flora and fauna species and their habitat	There would be no increase in direct impacts on the area of threatened flora and fauna habitat as a result of the Amended Proposal when compared to the proposal considered by the EIS.

Potential Impact	Description of impact as a result of the Amended Proposal compared to the EIS Proposal.
Groundwater dependent ecosystems	<p>The amendments to the Proposal would not change the depth of excavations required during construction as presented in the EIS. As such, the impacts to potential GDEs in the vicinity of the Proposal site would be minimal and are would be consistent with those presented within Section 11.4 of the EIS.</p> <p>The EIS noted that groundwater may also be encountered within excavations undertaken towards the south-eastern corner of the Proposal site (i.e. in proximity to Anzac Creek) for depths greater than approximately 1.5m, and/ or within the depth of bored piles, if used (the requirement for piles would be determined during detailed design). The changes to the drainage design to the south of the MPE site (as an amendment to the Proposal), would continue to be located in proximity to Anzac Creek; however, consistent with the EIS assessment, the potential GDEs in the vicinity of the Proposal site from changes to groundwater would be minimal as groundwater levels and quality are not anticipated to change significantly.</p> <p>Further, consistent with the EIS assessment of biodiversity impacts, the temporary nature of construction works and the limited extent of potential disturbance to groundwater means that prolonged impacts on groundwater are not anticipated as a result of the Amended Proposal. Whilst the proposed redevelopment of the site would make the Proposal site more impervious, recharge to groundwater systems would be minimally impacted. Subsequently, impacts to potential GDEs in the vicinity of the Proposal site from changes to groundwater are anticipated to be minimal as groundwater levels and quality are unlikely to change significantly.</p> <p>There is not expected to be any change in impacts on groundwater dependent ecosystems for the Amended Proposal when compared with the proposal considered in the EIS.</p>
Direct impacts on wildlife and habitat corridors and habitat fragmentation	<p>The Amended Proposal would not alter the existing connectivity values, further sever native vegetation or form a hard barrier within the connecting link above that identified in the EIS.</p>
Riparian Land and aquatic habitats	<p>As part of the EIS, the stormwater runoff to the south of the Proposal site was intended to be managed through the provision of a drainage swale to direct stormwater flows away from the site, discharging to Anzac Creek</p> <p>To respond to issues raised by NSW DPI on the EIS and as part of design development, the stormwater and drainage design has been modified by converting the southern drainage swale presented in the EIS to a fill mound that would direct surface flows away from the MPE site, and removing the drainage outlet from this swale into Anzac Creek.</p> <p>As a result of the Amended Proposal, the removal of 0.01 hectares of Freshwater Wetlands on Coastal Floodplains of the NSW North Coast, Sydney Basin and South East Corner bioregions TEC (refer to Table 7-15 for additional information) would no longer be required, and direct impacts to other areas of associated aquatic habitat would no longer occur.</p>

As described in Section 11 of the EIS, the Proposal was determined to have minimal impacts on the limited existing biodiversity values that were identified in the Proposal site, given that the vegetation within the Proposal site consisted predominantly of planted and disturbed vegetation, and that the Proposal site supports only small, fragmented patches of marginal native flora and fauna habitat.

The Amended Proposal involves only minor changes from the Proposal, and remains consistent with the objectives of the Proposal provided within Section 1.3 of the EIS. Accordingly, the nature and extent of impacts resulting from the amendments to the Proposal are considered to be consistent with those assessed by the BAR prepared for the Proposal (Appendix O of the EIS). No further assessment is required, and an Amended BAR has not been prepared.

## **7.5.4 Mitigation Measures**

### **Construction**

This assessment concludes that the amendments to the Proposal would result in construction phase biodiversity impacts generally consistent with those already identified and assessed as part of the MPE Stage 2 EIS (refer to Section 11.4 and Appendix O of the EIS).

The mitigation measures outlined in Section 11.5.1 of the MPE Stage 2 EIS are considered adequate to address impacts associated with the Amended Proposal. No additional construction biodiversity-related mitigation measures are proposed as a result of the amendments to the Proposal.

Final mitigation measures are provided in Section 8 of this RtS, and include all mitigation measures to be implemented to avoid, minimise and manage biodiversity impacts during construction of the Amended Proposal.

### **Operation**

This assessment concludes that the amendments to the Proposal would result in operational phase biodiversity impacts generally consistent with those already identified and assessed as part of the MPE Stage 2 EIS (refer to Section 11.4 and Appendix O of the EIS).

The mitigation measures outlined in Section 11.5.2 of the MPE Stage 2 EIS are considered adequate to address impacts associated with the Amended Proposal. No additional operational biodiversity-related mitigation measures are proposed as a result of the amendments to the Proposal.

Final mitigation measures are provided in Section 8 of this RtS, and include all mitigation measures to be implemented to avoid, minimise and manage biodiversity impacts during operation of the Amended Proposal.

## **7.6 Stormwater and Flooding**

### **7.6.1 MPE Stage 2 Proposal EIS Assessment**

A Stormwater and Flooding Assessment was prepared by Arcadis for the Proposal and was summarised in Section x of the EIS and provided as Appendix P. The Proposal site is bisected in a north-south direction by a catchment boundary with the eastern portion discharging to Anzac Creek (approximately 50 m to the southeast of the Proposal site) and the western portion discharging to the Georges River (approximately 450 m to the west of the Proposal site).

Construction of the Proposal would require vegetation clearing and bulk earthworks, which have the potential to lead to erosion and generate sediment laden runoff into the Georges River or Anzac Creek, thereby impacting water quality. A Soil and Water Management Plan (SWMP) and Erosion and Sediment Control Plan (ESCP) would be prepared in accordance with the principles and requirements of the Blue Book. The

SWMP and ESCP would be implemented during construction, and would include sediment basins positioned generally along the northern, southern and western boundaries of the Proposal site, enabling discharge of OSDs 1 and 2 to Anzac Creek and OSDs 9 and 10 to the Georges River.

Construction of the Proposal, in particular adjustments to the building formation, would have the potential to cause flooding impacts on surrounding properties during a significant rainfall event, in the absence of flood management measures. Flood risk to nearby properties, and to the site itself, may occur through the failure of existing or temporary water containment measures, or through a rainfall event exceeding that for which the controls for construction activities were designed to protect flood related impacts.

Development of the Proposal would result in changes to the Proposal's catchment boundaries during operations. In addition, the Proposal would result in an increase in surface water generation and pollutant loads as a result of the increase in impervious surfaces on the site. Onsite detention (OSD) in the form of sediment basins, outlet channels and water sensitive urban design (WSUD) elements were sized to provide adequate system capacities and mitigate potential adverse flood impacts and increases in stormwater discharge from the site that may otherwise result from the Proposal. WSUD measures, including gross pollutant traps and rain gardens, have been included and designed to ensure the quality of stormwater leaving the Proposal site would be of equivalent quality to the existing conditions, or provide an improvement to stormwater quality leaving the site. Maintenance of OSD and WSUD structures, as well as water quality monitoring would be included in the OEMP for the Proposal.

A Flood Emergency Response Plan (FERP) would be developed for the Proposal site. The FERP would take into consideration, site flooding and broader flood emergency response plans for the Georges River and Anzac Creek floodplains and Moorebank area.

## **7.6.2 Assessment Methodology – Amended Proposal**

The following amendments to the Proposal would result in flooding regimes of the Amended Proposal site and its surround that are consistent with those presented in the EIS, and therefore no additional stormwater and flooding assessment was considered necessary:

- Changes to the length of the Moorebank Avenue upgrade
- Changes to warehousing layout
- Alterations to drainage design to the south of the MPE site.

Further survey within the DJLU site has been undertaken since the preparation of the EIS. The additional information from the survey with the DJLU site has allowed the development of a more refined TUFLOW flood model to be prepared, which more adequately defines the local area flow regimes during extreme events, to inform design of the stormwater and drainage design within the Proposal site.

Based on the additional survey information available, to manage stormwater impacts from the Proposal on the adjacent DJLU site, alterations have been made to the north eastern OSD design, including:

- Extension of the OSD 1 to the south, along the eastern side of Warehouse 2.
- Inclusion of a spillway along the eastern boundary of the Proposal site south of the existing drainage outlet to manage flows during a PMF event.

To assess the stormwater and flooding impacts of the realignment of OSD Basin 1, the DRAINS modelling carried out for the EIS was refined to generate catchment flow

hydrographs that represent both existing site conditions and post development site conditions, with the inclusion of this amendment to the Proposal.

The DRAINS modelling flow hydrographs were then used as inputs into refined TUFLOW models (initially developed for the EIS). Specific refinements incorporated into the TUFLOW modelling has involved modification to the digital elevation model (DEM) to include the:

- Additional survey information, with improved definition of levels of the Anzac Creek, local drainage and surrounding existing surfaces in the vicinity of the Defence Joint Logistics Unit (DJLU).
- Revised OSD Basin 1 and spillway along the eastern boundary of the Proposal site south of the existing drainage outlet for the post- development site conditions.

These refinements have enabled potential flood impacts in areas downstream (to the east) of OSD Basin 1 (and its associated outlet to the Anzac Creek tributary) to be more adequately quantified.

### 7.6.3 Impact Assessment

#### Construction

The amendments to the Proposal would not alter the construction activities required for the Proposal and would not change the assessment of construction-related stormwater and flooding impacts included in the MPE Stage 2 EIS.

The realignment of OSD Basin 1 and changes to the length of the Moorebank Avenue upgrade would result in a minor increase in the area of disturbance; however, would not change construction activities. The additional area of disturbance would be managed consistent with the construction soil and water management principles and mitigation measures included in Section 12.4.1 and Appendix P of the EIS.

On this basis, further assessment of construction-related stormwater and flooding impacts is not considered necessary for the amendments to the Proposal.

#### Operation

The following amendments to the Proposal would not significantly alter the flooding regimes of the Amended Proposal site and its surrounds, and therefore no additional stormwater and flooding assessment was considered necessary:

- Changes to the length of the Moorebank Avenue upgrade
- Changes to warehousing layout
- Alterations to drainage design to the south of the MPE site.

No further assessment of operational-related stormwater and flooding impacts of these amendments to the Proposal is therefore considered necessary

#### Realignment of OSD Basin 1

A comparison of DRAINS model existing condition and post-development conditions from the EIS Assessment and as part of the Amended Proposal for flows downstream of outlet A is included in Table 7-17, with a more detailed comparison (being for a range of storm durations) provided in Appendix E of this RtS.

Consistent with the EIS, the proposed OSD design and stormwater management system associated with OSD Basin 1 would adequately mitigate the increase in peak

flows leaving the Amended Proposal site as a result of the increase in impervious surfaces.

The discharge of surface water from the **Amended** Proposal site would not alter the environmental availability of water to Anzac Creek and the Georges River. Although the flow at outlets would be at a slower speed than existing, all water captured from within the MPE site would continue to be discharged into Anzac Creek and the Georges River.

A summary of the performance of the OSD Basin 1 storage is provided in Table 7-18. Consistent with the EIS, the low flow outlet configurations, and high level outlet weirs have been sized to control 100 year ARI flows for conditions entering basins with 'extended detention' (~3 month) water levels and low flow raingarden outlets fully blocked at the onset of the storm event.

Table 7-17 Comparison of Existing Conditions and Proposed Development Peak Flows

Discharge Location	Site Condition	Catchment Area	Flow (m <sup>3</sup> /s) <sup>#</sup>		
			5yr ARI	100yr ARI	PMF
Outlet A (Greenhills Road North)	Existing	21.76	3.4	4.1	23
	Proposed – EIS Assessment	29.49	1.4	1.9	32
	Proposed – Amended Proposal	31.79	1.6	2.0	44

<sup>#</sup> The tabulated peak flows do not indicate mitigation adequacy, refer to Appendix E for same storm duration comparisons

Table 7-18 OSD Basin 1 Detention Storage Performance Summary

Storage (water quality extended detention level mAHD)	EIS Assessment		Amended Proposal	
	100 year ARI	PMF	100 year ARI	PMF
Catchment Area (ha)	28.99		31.61	
Peak Inflow (m <sup>3</sup> /s)	14.5	67	11.9	50
Peak Outflow (m <sup>3</sup> /s)	1.8	31	2.0	44
Water Level (mAHD)	15.66	17.8	15.59	17.9
Volume (m <sup>3</sup> ) *	27,400	63,000	22,750	55,000

\* Approximate active storage above water quality extended detention water level

Results of the refined TUFLOW modelling of 100 year ARI and PMF events are included in Appendix E of this RtS.

The provided flood level, flood depth and flood impact figures indicate that the Amended Proposal and its associated works would adequately mitigate potential flood impacts on the neighbouring downstream areas.

## 7.6.4 Mitigation measures

### Construction

This assessment concludes that the amendments to the Proposal would result in construction phase stormwater and flooding impacts generally consistent with those already identified and assessed as part of the MPE Stage 2 EIS (refer to Section 13.3.1 and Appendix P of the EIS). There would be no adverse changes to construction stormwater and flooding impacts attributable to the amendments to the Proposal and therefore, the Amended Proposal construction-related stormwater and flooding impacts are consistent with those stated in the MPE Stage 2 EIS.

The mitigation measures outlined in Section 13.4.1 of the MPE Stage 2 EIS are considered adequate to address impacts associated with the construction of the Amended Proposal. No additional construction stormwater and flooding-related mitigation measures are proposed as a result of the amendments to the Proposal.

The revised mitigation measures are provided in Section 8 of this RtS, and include all mitigation measures to be implemented to avoid, minimise and manage stormwater and flooding impacts during construction of the Amended Proposal.

### Operation

This assessment concludes that the amendments to the Proposal would result in operational phase stormwater and flooding impacts generally consistent with those already identified and assessed as part of the MPE Stage 2 EIS (refer to Section 13.3.2 and Appendix P of the EIS). There would be no adverse changes to operational stormwater and flooding impacts attributable to the amendments to the Proposal and therefore, the Amended Proposal operational-related stormwater and flooding impacts are consistent with those stated in the MPE Stage 2 EIS.

The mitigation measures outlined in Section 13.4.2 of the MPE Stage 2 EIS are considered adequate to address impacts associated with the operation of the



Amended Proposal. No additional operational stormwater and flooding-related mitigation measures are proposed as a result of the amendments to the Proposal.

The revised mitigation measures are provided in Section 8 of this RtS, and include all mitigation measures to be implemented to avoid, minimise and manage stormwater and flooding impacts during operation of the Amended Proposal.

## 7.7 Geology, Soils and Contamination

### 7.7.1 EIS Assessment

Geotechnical investigations and land contamination studies were undertaken as part of the EIS to determine the suitability of the Proposal site for the construction and operation activities, and to address the SEARs relating to geology, soils and contamination.

Appendix Q of the EIS included a Geotechnical Summary Report (JBS&G, 2016) and Geotechnical Interpretive Report (Golder and Associates, 2016). A summary of the outcomes of these reports is detailed below.

#### Geotechnical and soils

It was determined that the greatest risk to soils on the Proposal site would be during the construction phase, when ground disturbance would be required. Construction would involve disturbance to the Proposal site, resulting in exposure of soils and increasing the risk of erosion.

Construction would also involve the importation of approximately 695,000m<sup>3</sup> of clean general fill to adjust the building formation levels. Given the large area of disturbance required during construction, there is a high potential for erosion, even though the Proposal site has low sloping topography and a low erosion hazard risk.

Groundwater was found at approximately 4 to 7 m below the existing ground levels across the majority of the Proposal site and is anticipated to be deeper than the expected depth of ground disturbance for the Proposal. Groundwater may be encountered during excavations in proximity to Anzac Creek (at depths greater than approximately 1.5 m) in the south-eastern corner of the Proposal site.

Once constructed, operation of the Proposal would have minimal impact on soils, as the Proposal site would be stabilised with materials predominantly including hardstand and landscaping, thereby removing the potential for erosion and sedimentation.

#### Contamination

A Section A Site Audit Statement (SAS) and Site Audit Report (SAR) developed by JBS&G in September 2016 certified that the MPE Stage 2 site was suitable for commercial/ industrial use and that further contamination investigations (i.e. a Phase 2 contamination assessment) are not required. The SAR noted that construction works on the Proposal site should be undertaken in accordance with the Environmental Management Plan (EMP) developed for the MPE site (GHD, 2016), including procedures to control exposure to potential human health and environmental receptors from residual contaminated soil, Asbestos Containing Material (ACM) and potential unexploded ordnance (UXO).

Contaminants of potential concern identified on the Proposal site as part of the contamination investigations that have been undertaken include:

- Metals (Arsenic (As), Cadmium (Cd), chromium (Cr), Copper (Cu), Lead (Pb), Mercury (Hg), Nickel (Ni), Zinc (Zn))

- Asbestos
- Total petroleum hydrocarbons (TPH)
- Benzene, toluene, ethylbenzene, xylenes (BTEX)
- Polycyclic aromatic hydrocarbons (PAHs)
- Volatile organic compounds (VOCs)
- Semi-volatile organic compounds (SVOCs)
- Phenols
- Perfluorinated compounds (PFCs)
- UXO and exploded ordnance waste (EOW)
- Explosive residues.

There are no specific areas requiring direct remediation within the Proposal site. However, construction of the Proposal would have the potential to release and/ or expose existing sources of contamination into the surrounding environment through disturbance of soils and groundwater. Construction works on the Proposal site would be undertaken in accordance with the Environmental Management Plan (EMP) developed for the MPE site (GHD, 2016), including procedures to control exposure to potential human health and environmental receptors from residual contaminated soil.

The Proposal site is considered to be suitable for the desired commercial/ industrial land use and there are no specific areas requiring direct remediation prior to operation of the Proposal. The risk to workers and the environment from existing potential contamination once the Proposal is operational is considered to be low.

Oils, fuels, lubricants and other chemical substances would be required for vehicles plant and machinery during operation of the Proposal. Five classes of dangerous goods would also be transported to or from, and stored within warehouses on the Proposal site. Accidental spills and leaks within the Proposal site have the potential to result in contaminants being transported into the surrounding environment and groundwater. As the majority of the Proposal site would be hardstand, the potential for the migration of fuels and chemicals to soil and groundwater is considered to be low.

## 7.7.2 Impact assessment – Amended Proposal

### Construction

The amendments to the Proposal would not alter the construction activities required, and therefore would not change the construction stage impacts of the Proposal relating to geology, soils and contamination identified in Section 13.2.1 and Appendix Q of the EIS.

The following amendments to the Proposal would result in minor increases to the construction footprint of the Proposal:

- Realignment of OSD Basin 1
- Extension to the length of the Moorebank Avenue upgrade

These minor increases to the construction footprint of the Proposal would result in a minor increase in the area of disturbance, however, would not significantly change construction activities. The management of these additional areas of impact during construction of the Proposal would be consistent with the construction management principles and mitigation measures relating to geology, soils and contamination included in Section 13.3.1 and Appendix Q of the EIS.

No further assessment of construction-related geology, soils and contamination impacts are considered necessary in relation to the Amended Proposal.

## Operation

Consistent with the MPE Stage 2 EIS, the operation of the Amended Proposal would have minimal impact on geology and soils as the Proposal site would be stabilised with suitable materials. Stabilisation of the Proposal site would include fill materials, hardstands areas and landscaping which would significantly reduce the risk of on-site erosion.

Once operational, the Proposal site would be remediated to a level which is considered suitable for the operation of the Amended Proposal. As a result, there would be a low risk to workers or the environment from contaminated soil and groundwater.

The use of oils, fuels, lubricants and other chemical substances and hazardous materials during the operation of the Proposal would be in accordance with the procedures in the Operational Environmental Management Plan (OEMP) for the MPE site.

## 7.7.3 Mitigation measures

### Construction

This assessment concludes that the amendments to the Proposal would result in construction phase geology, soils and contamination impacts generally consistent with those already identified and assessed as part of the MPE Stage 2 EIS (refer to Section 13 and Appendix Q of the EIS). There would be no additional construction geology, soils and contamination-related impacts attributable to the amendments to the Proposal and therefore the Amended Proposal construction related geology, soils and contamination impacts are consistent with those stated in the MPE Stage 2 EIS.

The mitigation measures outlined in Section 13.3.1 of the MPE Stage 2 EIS are considered adequate to address impacts associated with the Amended Proposal. No additional construction geology, soils and contamination-related mitigation measures are proposed as a result of the amendments to the Proposal.

The revised mitigation measures are provided in Section 8 of this RtS, and include all mitigation measures to be implemented to avoid, minimise and manage geology, soils and contamination impacts during construction of the Amended Proposal.

### Operation

This assessment concludes that the amendments to the Proposal would result in operational phase geology, soils and contamination impacts generally consistent with those already identified and assessed as part of the MPE Stage 2 EIS (refer to Section 13 and Appendix Q of the EIS). There would be no additional operational geology, soils and contamination-related impacts attributable to the amendments to the Proposal and therefore the Amended Proposal operational related geology, soils and contamination impacts are consistent with those stated in the MPE Stage 2 EIS.

The mitigation measures outlined in Section 13.3.2 of the MPE Stage 2 EIS are considered adequate to address impacts associated with the Amended Proposal. No additional operational geology, soils and contamination-related mitigation measures are proposed as a result of the amendments to the Proposal.

The revised mitigation measures are provided in Section 8 of this RtS, and include all mitigation measures to be implemented to avoid, minimise and manage geology, soils and contamination impacts during operation of the Amended Proposal.

## 7.8 Hazards and Risk

### 7.8.1 EIS Assessment

Section 14 of the EIS included an assessment of the potential hazards and risks associated with the construction and operation of the Proposal. As part of this assessment, a Preliminary Risk Screening was undertaken in accordance with *State Environment Planning Policy No.33 – Hazardous and Offensive Development* (SEPP 33). The assessment identified that hazards and risks associated with the Proposal may arise from a number of activities, including but not limited to demolition, road logistics, storage of hazardous materials, refuelling, waste disposal and equipment maintenance.

Key hazards and risks associated with the Proposal include the presence of contamination on-site (including asbestos), loss of containment of flammable/combustible or corrosive liquids, fire and explosion, vehicle movements and machinery use, dangerous goods storage and transport and gas leaks.

### 7.8.2 Impact assessment – Amended Proposal

#### Construction

Amendments to the Proposal would not significantly alter the construction activities required for the Proposal and, therefore, would not change the assessment of construction stage hazards and risks included in Section 14.4.1 of the EIS.

No further assessment of construction stage hazards and risks is considered necessary in relation to the amendments to the Proposal.

#### Operation

The following amendments to the Proposal would not significantly change operational activities on the Proposal site as detailed in the EIS, and, therefore, would not result in changes to the operational hazards and risks presented in Section 14.4.2 of the EIS:

- Changes to the length of the Moorebank Avenue Upgrade
- Changes to Warehouse Layout
- Changes to the drainage design to the south of the MPE Site.

No further assessment of hazards and risk is considered necessary in relation to these amendments to the Proposal.

To manage stormwater and flooding risks to adjacent landowners, and as a result of further design development, OSD Basin 1 in the north eastern corner of the Proposal site has been realigned to ensure the basin continues to appropriately mitigate flood risk. Further assessment has determined that this basin would adequately manage stormwater flows up to a 100 year ARI event and would not result in any changes to the operational hazards and risks presented in the EIS.

No further assessment of operational stage hazards and risks is considered necessary in relation to the amendments to the Proposal.

## 7.8.3 Mitigation measures

### Construction

This assessment concludes that the amendments to the Proposal would result in construction phase hazards and risks generally consistent with those already identified and assessed as part of the MPE Stage 2 EIS (refer to Section 14.4.1 of the EIS). There would be no additional construction hazards and risks attributable to the amendments to the Proposal and therefore the Amended Proposal construction related hazards and risks are consistent with those stated in the MPE Stage 2 EIS. .

The mitigation measures outlined in Section 14.5.1 of the MPE Stage 2 EIS are considered adequate to address impacts associated with the Amended Proposal. No additional construction hazards and risks-related mitigation measures are proposed as a result of the amendments to the Proposal.

The revised mitigation measures are provided in Section 8 of this RtS, and include all mitigation measures to be implemented to avoid, minimise and manage hazards and risks during construction of the Amended Proposal.

### Operation

This assessment concludes that the amendments to the Proposal would result in operational phase hazards and risks generally consistent with those already identified and assessed as part of the MPE Stage 2 EIS (refer to Section 14.4.2 of the EIS). There would be no additional operational hazards and risks attributable to the amendments to the Proposal and therefore the Amended Proposal operational related hazards and risks are consistent with those stated in the MPE Stage 2 EIS.

The mitigation measures outlined in Section 14.5.2 of the MPE Stage 2 EIS are considered adequate to address impacts associated with the Amended Proposal. No additional operational hazards and risks-related mitigation measures are proposed as a result of the amendments to the Proposal.

The revised mitigation measures are provided in Section 8 of this RtS, and include all mitigation measures to be implemented to avoid, minimise and manage hazards and risks during operation of the Amended Proposal.

## 7.9 Visual Amenity

### 7.9.1 EIS Assessment

An assessment of the visual amenity impacts of the Proposal, including from light spill, was undertaken by Reid Campbell. The Visual Impact Assessment (VIA) (Reid Campbell, 2016) and Light Spill Assessment (Arcadis, 2016) were included at Appendix R of the EIS. In addition, a Landscape Plan was also prepared by GroundInk to identify the landscaping features of the Proposal and was included in Appendix E of the EIS.

The existing environment surrounding the Proposal site provides visual screening for the Proposal. Surrounding land uses include native bushland areas, Department of Defence facilities, the MPW site and industrial developments. Landscape and urban design features would further screen the Proposal as well as integrate the Proposal with surrounding land uses, minimising the visual impact.

The construction phase of the Proposal includes a number of temporary structures, including ancillary facilities, offices and equipment etc, which would have short term and temporary impacts on the surrounding streetscape. These temporary structures are likely to be visible from areas such as Moorebank Avenue, the nearby passenger

rail lines and potentially nearby residential areas of Casula and Wattle Grove. Any visual impacts would be localised and temporary in nature. Notwithstanding, a number of actions would be considered during the construction of the Proposal to further reduce the visual impacts on the surrounding area as outlined in Section 15.5 of the EIS.

Lighting would be required during construction of the Proposal within ancillary facilities, and on plant and equipment. The impacts of light spill during construction are expected to be minor as it would be localised and temporary in nature. In addition, this lighting would be designed and located to minimise the effects of light spill on surrounding sensitive receivers.

The Proposal would generally be in keeping with the existing character of the area. Some relatively high and/or bulky structures/equipment may however increase the visibility of the Proposal site beyond its current levels, with some limited and highly localised visual impacts. Potential views would occur along viewing corridors created by Moorebank Avenue and where topography provides some elevation above potential obstructions to views, such as from Casula to the west.

Overall, the Proposal is in keeping with the surrounding land uses and any impacts would be effectively minimised through the use of landscaping and urban design, the maximum anticipated visual impact at any view point would be Moderate. The proposed landscape and built form treatments detailed in Section 4 of the EIS would result in an improvement in the visual amenity of the entire site and would increase the current level of screening of the site. Urban design and planning principles would assist with the breakdown of the bulk and scale of the development.

In addition, the Proposal would result in minimal light spill impacts on adjacent properties and on the environment through the appropriate selection of light source, luminaire, luminaire mounting height and luminaire aiming for operational lighting.

### **7.9.2 Revised impact assessment**

Further visual assessment of the Proposal, as presented in the EIS, has been undertaken in response to submissions received for the Proposal. A supplementary Visual Assessment Memo that includes a revised assessment of visual impacts is included as Appendix F of this RtS.

### **7.9.3 Impact assessment – Amended Proposal**

#### **Construction**

The amendments to the Proposal would not alter the construction activities required for the Proposal and would not change the assessment of construction-related visual amenity included in the MPE Stage 2 EIS.

The realignment of OSD Basin 1 and changes to the length of the Moorebank Avenue upgrade would result in a minor increase in the area of disturbance; however, would not change construction activities. The management of this additional area of impact during construction would be consistent with the construction mitigation measures relating to visual amenity, included in Section 15.5.1 and Appendix R of the EIS.

On this basis, further assessment of construction-related visual amenity impacts are not considered necessary for the amendments to the Proposal.

#### **Operation**

The amendments to the Proposal would not alter the impacts of the Proposal on visual amenity and landscape character as presented in the MPE Stage 2 EIS.

The urban design and landscape character of the Amended Proposal would be consistent with the landscape features included in Table 15-8 and the materials and finishes included in Table 15-9 of the EIS.

No further assessment of operational-related impacts of the Proposal, with regards to visual amenity, urban design and landscape character is considered necessary as a result of the amendments to the Proposal.

## **7.9.4 Mitigation measures**

### **Construction**

This assessment concludes that the amendments to the Proposal would result in construction phase visual amenity impacts generally consistent with those already identified and assessed as part of the MPE Stage 2 EIS (refer to Section 15.4.1 and Appendix R of the EIS).

The mitigation measures outlined in Section 15.5.1 of the MPE Stage 2 EIS are considered adequate to address impacts associated with the Amended Proposal. No additional construction visual amenity-related mitigation measures are proposed as a result of the amendments to the Proposal.

Final mitigation measures are provided in Section 8 of this RtS, and include all mitigation measures to be implemented to avoid, minimise and manage visual amenity impacts during construction of the Amended Proposal.

### **Operation**

This assessment concludes that the amendments to the Proposal would result in operational phase visual amenity, urban design and landscape character impacts generally consistent with those already identified and assessed as part of the MPE Stage 2 EIS (refer to Section 15.4.2 and Appendix R of the EIS).

The mitigation measures outlined in Section 15.5.2 of the MPE Stage 2 EIS are considered adequate to address impacts associated with the Amended Proposal. No additional operational visual amenity, urban design and landscape character-related mitigation measures are proposed as a result of the amendments to the Proposal.

Final mitigation measures are provided in Section 8 of this RtS, and include all mitigation measures to be implemented to avoid, minimise and manage visual amenity, urban design and landscape character impacts during operation of the Amended Proposal.

## **7.10 Indigenous Heritage**

### **7.10.1 EIS Assessment**

An Aboriginal Heritage Impact Assessment was prepared by Artefact Heritage as part of the EIS to determine the potential impacts of the Proposal on Indigenous heritage. The Aboriginal Heritage Impact Assessment was included at Appendix S of the EIS.

The Proposal site was assessed as being highly disturbed and modified and as such the EIS assessment determined that it is highly unlikely that intact unidentified archaeological deposits will occur, or be unearthed as a result of the construction activities within the Proposal site. No areas of potential archaeological deposits (PAD) were identified within the Proposal site and overall the site was considered to have low to nil potential to contain intact archaeological deposits. The EIS assessment noted that



the Proposal would not impact any areas of archaeological potential or any Aboriginal sites of high, moderate or unknown archaeological and cultural significance.

No impacts to Indigenous heritage were identified for the operational phase of the Proposal.

The EIS assessment noted that there are two indigenous artefacts located within the Proposal site and one artefact is located immediately adjacent to the south of the Proposal site.

## **7.10.2 Impact Assessment – Amended Proposal**

### **Construction**

The amendments to the Proposal would not alter the construction activities required for the Proposal and would not change the assessment of construction-related impacts to heritage included in the MPE Stage 2 EIS.

There are no additional listed Indigenous heritage sites or areas of archaeological potential/sensitivity within the amended construction area (refer to Figure 6-2 of this RtS) which were not assessed as part of the EIS.

On this basis, further assessment of construction-related Indigenous heritage impacts is not considered necessary for the amendments to the Proposal.

### **Operation**

The amendments to the Proposal would not alter the operational impacts of the Proposal on Indigenous heritage as presented in the MPE Stage 2 EIS.

There are no additional listed Indigenous heritage sites or areas of archaeological potential/sensitivity within the amended operational footprint (refer to Figure 6-3) which were not assessed as part of the EIS.

No further assessment of operational-related Indigenous heritage impacts is considered necessary as a result of the amendments to the Proposal.

## **7.10.3 Mitigation Measures**

### **Construction**

This assessment concludes that the amendments to the Proposal would result in construction phase impacts to Indigenous heritage generally consistent with those already identified and assessed as part of the MPE Stage 2 EIS (refer to Section 16.4.1 and Appendix S of the EIS).

The mitigation measures outlined in Section 16.5.1 of the MPE Stage 2 EIS are considered adequate to address impacts associated with the Amended Proposal. No additional construction Indigenous heritage-related mitigation measures are proposed as a result of the amendments to the Proposal.

Final mitigation measures are provided in Section 8 of this RtS, and include all mitigation measures to be implemented to avoid, minimise and manage Indigenous heritage impacts during construction of the Amended Proposal.

### **Operation**

This assessment concludes that the amendments to the Proposal would result in operational phase impacts to Indigenous heritage generally consistent with those



already identified and assessed as part of the MPE Stage 2 EIS (refer to Section 16.4.2 and Appendix S of the EIS).

The mitigation measures outlined in Section 16.5.2 of the MPE Stage 2 EIS are considered adequate to address impacts associated with the Amended Proposal. No additional operational Indigenous heritage-related mitigation measures are proposed as a result of the amendments to the Proposal.

Final mitigation measures are provided in Section 8 of this RtS, and include all mitigation measures to be implemented to avoid, minimise and manage Indigenous heritage impacts during operation of the Amended Proposal.

## 7.11 Non-Indigenous Heritage

### 7.11.1 EIS Assessment

An assessment of the impacts of the Proposal on non-Indigenous heritage was undertaken as part of the environmental assessment of the Proposal included in the EIS. A Non-Indigenous Heritage Impact Assessment (Artefact Heritage, 2016) was included at Appendix S and summarised in Section 17 of the EIS. A summary of this assessment and its outcomes is provided below.

#### Heritage listings

Statutory registers provide legal protection for heritage items and include the Commonwealth and National Heritage Lists, State Heritage Register (SHR), Section 170 Heritage and Conservation Registers and heritage schedules of Local Environment Plans (LEPs).

The former DNSDC site, where the Proposal is located, was previously listed on the Commonwealth Heritage List. However, upon termination of Defence's lease of the site this listing is no longer applicable.

There are no sites included on the National Heritage List which would be impacted by the Proposal. No Section 170 listed items were identified within the Proposal site.

There are no sites on the State Heritage Register (SHR) within the Proposal site. The closest site is Glenfield Farm, which is located south-west of the Proposal site on the western side of the Georges River. Glenfield Farm is also listed on the Liverpool LEP as an item of State significance.

The Liverpool LEP lists the former DNSDC (within the Proposal site) and the School of Military Engineering (SME - to the west of Moorebank Avenue), as being of local heritage significance. The SME is also known as the Australian Army Engineers Group.

#### Construction

##### Defence National Storage and Distribution Centre

The Proposal would involve the demolition of all existing structures within the former DNSDC site as they do not adhere to modern engineering and safety standards, and would not meet the operational requirements of the Proposal. The EIS assessment noted that demolition would include the removal of the remaining 15 WWII store buildings within the Proposal site, which would result in significant impacts to the collective significance of the former DNSDC site.

Construction and landscape modification through the installation of proposed utilities within the Proposal site was determined in the EIS as being likely to have a possible

impact on the heritage significance of the underground water mains and sewerage line which are both likely to date back to the 1940s.

### School of Military Engineering

The SME site is located adjacent to all boundaries of the MPE site. The EIS assessment identified that construction of the Proposal would extend into some areas within the SME, including a road corridor on Moorebank Avenue and the eastern and northern boundaries of the Proposal site. Construction work would have minor impacts (noise and visual) on the heritage significance of the items located on this site. It is noted that as a result of the MPW Project a number of heritage items within the SME would be demolished/removed and subject to salvage in accordance with the non-Indigenous heritage assessment undertaken for the MPW Early Works Project.

A summary of the potential impacts of construction of the Proposal on the SME site, relative to each boundary of the Proposal site is as follows:

- To the north of the Proposal, minor short-term visual impacts would be experienced at the SME site during construction
- To the east and south of the Proposal, there would be some permanent, physical impacts to the SME site to facilitate drainage works and would result in some minor vegetation clearance. Some minor, short-term visual impacts would also be experienced along these sections of the SME site during construction of the Proposal.
- Impacts to the heritage value of the SME site to the west of the Proposal site would be negligible as a result of construction of the Proposal. Impacts to heritage significance within this section of the SME site have been considered as part of the MPW project.

### Glenfield Farm

The Proposal is a notable distance from Glenfield Farm (approximately 1,700m) and construction impacts (visual, noise and air) would therefore be minor and temporary in nature.

## Operation

### Defence National Storage and Distribution Centre

The EIS assessment noted that following construction of the Proposal, all buildings and structures on the Proposal site would have been removed, therefore the operation of the Proposal would have no impact to the collective significance of the former DNSDC.

### School of Military Engineering (SME)

The operation of the Proposal would have minor visual impacts on the remaining SME heritage items. The Proposal would utilise appropriate vegetation buffer zones where it interacts with the SME site to assist in limiting visual impacts from the surrounding environment.

A summary of the potential impacts of the operation of the Proposal on the SME site, relative to each boundary of the Proposal site is as follows:

- To the north, east and south of the Proposal site, some minor, visual impacts to the SME would be experienced during operation of the Proposal.

- Impacts to the heritage value of the SME site to the west of the Proposal site would be negligible as a result of construction of the Proposal. Impacts to heritage significance within this section of the SME site have been considered as part of the MPW project.

### Glenfield Farm

Direct visual impacts of the Proposal on Glenfield Farm would be limited by the approved redevelopment of the adjoining MPW site as this development is situated between the MPE site and Glenfield Farm. Although the recommended conservation management for Glenfield Farm emphasises the need to retain views to the east over the railway line, these vistas have already been considerably compromised by the creation of the Glenfield Waste Disposal facility, the construction of the Southern railway line and the erection of a concrete flyover to carry vehicles over the Southern railway line. Based on this, the Proposal would not impact further on the existing setting of Glenfield Farm.

## 7.11.2 Impact assessment – Amended Proposal

### Construction

Changes to the length of the Moorebank Avenue upgrade as an amendment to the Proposal has the potential to result in additional, minor increase to the extent of impacts of the Proposal on SME site. Impacts to the heritage value of the SME site as a result of changes to the length of the Moorebank Avenue upgrade would be consistent with the impacts described in Section 17.4.1 of the EIS.

Amendments to the Proposal would not significantly alter the construction activities required for the Proposal and, therefore, would not change the assessment of construction stage non-Indigenous heritage impacts included in Section 17.4.1 of the EIS.

No further assessment of construction stage non-Indigenous heritage impacts is considered necessary in relation to the amendments to the Proposal.

### Operation

Changes to the operational warehouse layout have the potential to result in impacts to the visual curtilage of listed heritage items in the area, notably, Glenfield Farm. However, given the significant distance of the Proposal from Glenfield Farm (over 1.7 kilometres), the visual shielding provided by MPW Project on the adjoining MPW site and the minor nature of changes to warehouse layout, changes to the operational impact of the Proposal on the heritage values of Glenfield Farm is considered unlikely. Further discussion of the visual impacts to surrounding sensitive receivers associated with amendments to the Proposal is included in Section 7.9 of this report.

The amendments to the Proposal would not alter the non-Indigenous heritage impacts associated with the operation of the Proposal as presented in the MPE Stage 2 EIS.

No further assessment of operational-related human health risks is considered necessary as a result of the amendments to the Proposal.

## 7.11.3 Mitigation measures

## Construction

This assessment concludes that the amendments to the Proposal would result in construction phase non-Indigenous heritage impacts generally consistent with those already identified and assessed as part of the MPE Stage 2 EIS (refer to Section 17.4.1 and Appendix T of the EIS). There would be no additional construction non-Indigenous heritage impacts attributable to the amendments to the Proposal and therefore the Amended Proposal construction related non-Indigenous heritage impacts are consistent with those stated in the MPE Stage 2 EIS. .

The mitigation measures outlined in Section 17.5.1 of the MPE Stage 2 EIS are considered adequate to address impacts associated with the Amended Proposal. No additional construction non-Indigenous heritage-related mitigation measures are proposed as a result of the amendments to the Proposal.

The revised mitigation measures are provided in Section 8 of this RtS, and include all mitigation measures to be implemented to avoid, minimise and manage non-Indigenous heritage impacts during construction of the Amended Proposal.

## Operation

This assessment concludes that the amendments to the Proposal would result in operational phase non-Indigenous heritage impacts generally consistent with those already identified and assessed as part of the MPE Stage 2 EIS (refer to Section 17.4.2 and Appendix T of the EIS). There would be no additional operational non-Indigenous heritage impacts attributable to the amendments to the Proposal and therefore the Amended Proposal operational related non-Indigenous heritage impacts are consistent with those stated in the MPE Stage 2 EIS. .

The mitigation measures outlined in Section 17.5.2 of the MPE Stage 2 EIS are considered adequate to address impacts associated with the Amended Proposal. No additional operational non-Indigenous heritage-related mitigation measures are proposed as a result of the amendments to the Proposal.

The revised mitigation measures are provided in Section 8 of this RtS, and include all mitigation measures to be implemented to avoid, minimise and manage non-Indigenous heritage impacts during operation of the Amended Proposal.

## 7.12 Greenhouse Gas

### 7.12.1 EIS Assessment

A greenhouse gas (GHG) and climate change risk assessment was undertaken as part of the environmental assessment of the Proposal included in Section 18 and Appendix V of the EIS. This assessed the impacts on greenhouse gas emissions from the construction and operation of the Proposal and the generation of GHG emissions.

The total GHG emissions associated with the construction of the Proposal were assessed to be 8,884 tonnes of carbon dioxide equivalents (tCO<sub>2</sub>-e) during the 24 month construction period. Scope 1 emissions would generate 73% of total emissions, with Works Period D (Bulk earthworks) generating the greatest proportion of emissions (24%)

The total GHG emissions associated with the operation of the Proposal include 118,733 tCO<sub>2</sub>-e per year, including 16,202 tCO<sub>2</sub>-e per year Scope 1 emissions, 72,799 tCO<sub>2</sub>-e per year Scope 2 emissions, and 29,733 tCO<sub>2</sub>-e per year Scope 3 emissions.

The total annual emissions of the Proposal were assessed as amounting to approximately 0.02% of Australia's total annual GHG emissions and 0.13% of

Australia's total transport emissions. Accordingly, the contribution of the Proposal to Australia's GHG emissions is not considered to be significant, in terms of both the construction and operational phases of the Proposal.

Mitigation strategies were identified (see Section 18.4 of the EIS) to reduce the emissions associated with the construction and operational phases of the Proposal. The implementation of these mitigation measures would further reduce GHG emissions for the Proposal.

A climate change risk and adaptation assessment was undertaken for the Proposal to assess the risk posed by climate change and to identify adaptation strategies to mitigate these risks. Under the worst case scenario (high emissions scenario) for the long-term time period (2090) the assessment identified a total of 13 key climate change risks for the Proposal, associated with the following changes in climate variables:

- Temperature increases
- Increased rainfall intensity
- Reduced annual rainfall
- Storms, hail and wind events
- Increased frequency of bushfire.

A range of adaptive responses for treatment of the climate change risks identified would be incorporated into the design and operation of the Proposal to promote resilience to projected future climate change. Once implemented the engineering design and procedural responses for treatment of priority climate change risks would result in lower residual risk levels. For the year 2090, following the implementation of adaptation measures the Proposal would not be subject to any high climate change risks, whereby six moderate risks and seven low risks remain. These are considered to be within the threshold of acceptable risk levels.

## **7.12.2 Impact assessment – Amended Proposal**

### **Construction**

The amendments to the Proposal would not alter the construction activities required for the Proposal. Changes to OSD 1 and the extension of the Moorebank Avenue Upgrade would result in a minor increase in the volume of construction related materials required and associated embodied emissions. However, given the relatively small contribution of OSD and road materials to total embodied energy (less than 10% each) and the minor contribution embodied energy contributes to overall emissions (less than 17%), minor increases in material volumes would not result in an appreciable change to total emissions. As such, these amendments to the Proposal would not change the assessment of construction-related GHG and climate change impacts included in the MPE Stage 2 EIS.

On this basis, further assessment of construction-related GHG and climate change impacts are not considered necessary for the amendments to the Proposal.

### **Operation**

Amendments to the Proposal would not result in significant changes to the operational traffic movements or other emissions sources assessed in the EIS. No changes to the operational GHG as reported in the EIS are expected and no further assessment is considered necessary.

Amendments to the Proposal would not result in considerable changes to OSD storage capacities as presented within the EIS. The EIS demonstrated that sufficient capacity can be provided within the Proposal to effectively drain the Proposal site in a 100 year ARI event, including during the Climate Change Scenario. Climate change risks to the Amended Proposal are considered to be consistent with those identified and assessed in the EIS.

On this basis, further assessment of operational-related GHG and climate change impacts are not considered necessary for the amendments to the Proposal.

### **7.12.3 Mitigation measures**

#### **Construction**

This assessment concludes that the amendments to the Proposal would result in construction phase GHG and climate impacts generally consistent with those already identified and assessed as part of the EIS (refer to Section 18.3.1 and Appendix V of the EIS).

The mitigation measures outlined in Section 18.4.1 of the EIS are considered adequate to address impacts associated with the Amended Proposal. No additional construction GHG and climate change-related mitigation measures are proposed as a result of the amendments to the Proposal.

Final mitigation measures are provided in Section 8 of this RtS, and include all mitigation measures to be implemented to avoid, minimise and manage GHG and climate change impacts during construction of the Amended Proposal.

#### **Operation**

This assessment concludes that the amendments to the Proposal would result in operational phase GHG and climate impacts generally consistent with those already identified and assessed as part of the EIS (refer to Section 18.3.2 and Appendix V of the EIS).

The mitigation measures outlined in Section 18.4.2 of the EIS are considered adequate to address impacts associated with the Amended Proposal. No additional operational GHG and climate change-related mitigation measures are proposed as a result of the amendments to the Proposal.

Final mitigation measures are provided in Section 8 of this RtS, and include all mitigation measures to be implemented to avoid, minimise and manage GHG and climate change impacts during construction of the Amended Proposal.

### **7.13 Other Issues**

#### **7.13.1 EIS Assessment**

Section 20 of the EIS included an assessment of the construction and operational impacts of the Proposal relating to other environmental issues as identified in the SEARs, along with environmental issues that were not specifically mentioned in the SEARS but considered relevant to the construction and operation of the Proposal. A summary of the assessment of other environmental issues is included below.

## Waste

An assessment of waste to be generated and disposed of during construction and operation for the Proposal was undertaken by Arcadis and included in Section 20.1 the EIS. The assessment determined that the waste impacts associated with the construction and operation of the Proposal would be minor and impacts could be managed and reduced through the implementation of mitigation measures included in Section 20.1.4 of the EIS.

The construction phase of the Proposal would involve clearing, demolition, earthworks, drainage works and the construction of infrastructure, which would generate waste in the form of Virgin Excavated Natural Material and Excavated Natural Material (VENM and ENM), surplus building and packaging materials, concrete, asphalt, contaminated soil and vegetation.

During operation, waste would be generated through offices, amenities, lunchrooms, and de-stuffing and packing containers, which would generate waste in the form of cardboard, plastics, pallets, sewerage, trade waste, recyclables and used spill kit consumables.

## Bushfire

As part of the EIS, an assessment of the Proposal against *Planning for Bushfire 2006* (Rural Fire Service) was undertaken in accordance with the SEARs for the Proposal. A bushfire protection assessment was prepared by Australian Bushfire Protections Planners (ABPP, 2016), and was included as Appendix O and summarised in Section 20.2 of the EIS.

The bushfire protection assessment noted that the Dry Sclerophyll Low Open Forest on the vacant land to the east and south of the Proposal site and the vegetation beyond the Moorebank Avenue road corridor, to the west of the Proposal site, presents a potential bushfire threat to the Proposal.

The proposed construction compounds, site office locations and construction parking areas would be located at suitable distances from vegetated and bushfire prone areas. Consequently, the bushfire threat to the fixed assets (construction compounds) during construction is considered to be low.

The operation of the Proposal is consistent with the objectives of *Planning for Bushfire Protection 2006*, in that it provides the following:

- Separation distances between fixed assets and bushfire prone vegetation exceed the required defendable space widths
- Safe operational access and egress for emergency services personnel and residents is available
- Ongoing management and maintenance measures for bushfire protection
- Utility services that meet the needs of firefighters.

A bushfire management strategy, or equivalent, would be prepared as part of the CEMP and the OEMP for the Proposal, which would also include emergency response plans and procedures relating to bushfire.

## Property and Infrastructure

An assessment of property and infrastructure-related impacts of the Proposal was provided in Section 20.3 the MPE Stage 2 EIS, based on the technical specialist studies prepared for the Proposal, in particular, the Utilities Strategy Report provided at Appendix F of the EIS.



The Proposal site would require connection to potable water, sewer, electricity and communications, all of which are in close proximity to the site. The EIS assessment concluded that the existing infrastructure on the Proposal site would be suitable to service the estimated demands of the Proposal.

It was also noted in the EIS that further assessment of services demand, infrastructure requirements and augmentation works, in consultation with relevant infrastructure and service providers would be undertaken during the progression of the design for the Proposal, prior to and during construction.

Overall, the EIS noted that the Proposal would have the potential to result in a number of impacts on the land uses located on affected properties (within the Proposal site) and the surrounding area relating to traffic, air quality, noise and vibration, visual amenity and social and economic impacts. The mitigation measures included in other sections of the EIS to minimise and mitigate these impacts are considered suitable to mitigate these issues with regards to land use. The Proposal generally supports existing conditions and facilitates the future land uses on these affected sites and within the surrounding area.

### Ecologically Sustainable Development

An assessment of the Proposals' consistency with the four principles of Ecologically Sustainable Development (ESD) was been undertaken as part of the EIS. Key findings in relation to the four main elements of ESD were as follows:

- *Precautionary principle* - The technical specialist studies provided a detailed analysis of both the construction and operational phases of the Proposal, to consider the environmental impacts, having regard to the precautionary principle. Subject to the implementation of mitigation measures, these specialist studies did not identify any issues that may cause serious and irreversible environmental damage due to the Proposal.
- *Intergenerational equity* - The design of the Proposal has incorporated the principle of intergenerational equity by ensuring that the Proposal, comprising warehouse and distribution facilities can be constructed and operated without significant on-going impacts on the surrounding community and future generations.
- *Conservation of biological diversity and ecological integrity* - Habitat values on the Proposal site are limited to scattered patches of planted vegetation, including some mature eucalypts and scattered native and exotic shrubs and trees associated with the formalised drainage channels throughout the Proposal site. The Proposal would result in clearing of planted vegetation throughout the Proposal site. Given the location and nature of the Proposal and its context with regard to existing road infrastructure, there is limited scope for using alternative locations to entirely avoid impacts on biodiversity. The Proposal has generally minimised impacts to sensitive areas adjacent to the Proposal site, including the Boot Land to the south and the east of the MPE site, where reasonable and feasible.
- *Improved valuation, pricing and incentive mechanisms* – The implementation of mitigation measures and biodiversity offsets represents a capital and or operational cost for the Proposal, acting as a valuation in economic terms of environmental resources.

### Socio-economic

Section 20.5 of the EIS included an assessment of the socio-economic impacts associated with construction and operation of the Proposal. The assessment noted that the demographics of the community in proximity to the Proposal site show that the population does not generally differ from that of the rest of NSW. The population



has a high level of employment and generally has a higher level of social advantage than the NSW average.

Construction impacts and benefits that would affect the socio-economic environment near the Proposal would be temporary and include the employment of a construction workforce, changes to noise, visual amenity, air quality and traffic, transport and access arrangements. In general, it is anticipated that the majority of socio-economic impacts associated with the Proposal would be minor and temporary, and would generally be within localities closest to the Proposal site.

There is potential for beneficial and adverse socio-economic impacts to arise as a result of the operation of the Proposal. Positive impacts are likely to be more apparent at a regional level, while both beneficial and adverse impacts associated with the Proposal would be experienced at a more localised scale.

Assessments of traffic and transport, air quality, visual amenity, noise and vibration and health impacts associated with operation of the Proposal found that any socio-economic impacts would be minor, particularly with implementation of mitigation measures included in section 22 of the EIS.

It is anticipated that 600 construction personnel would be required across the duration of the construction program and 1,408 personnel during operation. These jobs, where practicable, would be filled locally.

### 7.13.2 Impact Assessment – Amended Proposal

An assessment of the potential environmental impacts of the amendments to the Proposal relating to other environmental issues considered in section 20 of the EIS has been undertaken and is detailed below for construction and operation of the Proposal.

#### Construction

Table 7-19 provides an assessment of the impacts of the amendments to the Proposal on the other environmental issues during construction, specifically with regards to waste, bushfire, property and infrastructure, ESD and socio-economic impacts.

*Table 7-19 Summary of the other issues for the Amended Proposal - Construction*

Issue	Environmental assessment of Amended Proposal
Waste	<p>The amendments to the Proposal would not alter the construction activities required for the Proposal and would not change the estimated waste quantities as identified in Section 20.1 of the EIS.</p> <p>On this basis, further assessment of construction-related waste impacts is not considered necessary for the amendments to the Proposal.</p>
Bushfire	<p>The amendments to the Proposal would not alter the construction activities required for the Proposal and would not change the assessment of construction-related bushfire risks included in the MPE Stage 2 EIS.</p> <p>On this basis, further assessment of construction-related bushfire risks is not considered necessary for the amendments to the Proposal.</p>
Property and Infrastructure	<p>Consistent with the EIS, the construction of Amended Proposal would facilitate a change in land use of the MPE site from Defence uses to warehousing and distribution facility.</p> <p>Impacts on surrounding land uses relating to traffic and transport, noise and vibration, air quality and visual amenity are considered throughout Section 7 of this RtS.</p>

Issue	Environmental assessment of Amended Proposal
	<p>The amendments to the Proposal would not alter the construction activities required for the Proposal and would not change the assessment of construction-related property and infrastructure impacts included in the MPE Stage 2 EIS.</p> <p>On this basis, further assessment of construction-related property and infrastructure impacts is not considered necessary for the amendments to the Proposal.</p>
Ecologically Sustainable Development	<p>The amendments to the Proposal can be constructed without serious and irreversible environmental damage and without significant on-going impacts on the surrounding community and future generations.</p> <p>Consistent with the EIS, the implementation of mitigation measures included in Section 22 of the EIS and Section 8 of this report represents a capital and/or operational cost for the Amended Proposal, acting as a valuation in economic terms of environmental resources.</p>
Socio-economic	<p>The amendments to the Proposal would not alter the construction activities required for the Proposal and would not change the assessment of construction-related socio-economic impacts included in the MPE Stage 2 EIS.</p> <p>On this basis, further assessment of construction-related socio-economic impacts is not considered necessary for the amendments to the Proposal.</p>

## Operation

Table 7-20 provides an assessment of the impacts of the amendments to the Proposal on the other environmental issues during operation, specifically with regards to waste, bushfire, property and infrastructure, ESD and socio-economic impacts.

*Table 7-20 Summary of the other issues for the Amended Proposal - Operation*

Issue	Environmental assessment of Amended Proposal
Waste	<p>The amendments to the Proposal would not alter the operational waste impacts presented in the MPE Stage 2 EIS.</p> <p>No further assessment of operational-related waste impacts is considered necessary as a result of the amendments to the Proposal.</p>
Bushfire	<p>The Amended Proposal would comply with the objectives of <i>Planning for Bushfire Protection 2006</i> (NSW Rural Fire Service), specifically:</p> <ul style="list-style-type: none"> <li>• Separation between the fixed assets and the bushfire prone vegetation would remain the same and, would exceed required defendable space widths and would address the risk of flame contact, high levels of radiant heat and ember attack.</li> <li>• The internal road network and Moorebank Avenue would continue to provide safe operational access/egress for emergency service personnel and occupants of the facility.</li> <li>• Landscaping would be maintained to reduce the combustible ground fuels (leaf litter, bark and twigs).</li> </ul> <p>The amendments to the Proposal would not alter the operational bushfire risks presented in the MPE Stage 2 EIS.</p> <p>No further assessment of operational-related bushfire risks is considered necessary as a result of the amendments to the Proposal.</p>

Issue	Environmental assessment of Amended Proposal
Property and Infrastructure	<p>Consistent with EIS, the Amended Proposal would result in a permanent land use change to most the MPE site, from a Defence site to a warehousing and distribution facility.</p> <p>Impacts on surrounding lands have been considered in terms of traffic and transport, air quality, noise and vibration, human health and visual amenity and are generally consistent with those identified by the EIS.</p> <p>The amendments to the Proposal would not significantly alter demand for utilities/ services and existing infrastructure is considered to be suitable to service the Amended Proposal, either with augmentation or in its current condition.</p> <p>The amendments to the Proposal would not alter the operational property and infrastructure impacts presented in the MPE Stage 2 EIS.</p> <p>No further assessment of operational-related property and infrastructure impacts is considered necessary as a result of the amendments to the Proposal.</p>
Ecologically Sustainable Development	<p>The Amended Proposal can be constructed without serious and irreversible environmental damage and without significant on-going impacts on the surrounding community and future generations.</p> <p>Consistent with the EIS, the implementation of mitigation measures represents a capital and or operational cost for the Amended Proposal, acting as a valuation in economic terms of environmental resources</p>
Socio-economic	<p>The amendments to the Proposal would not alter the operational socio-economic impacts presented in the MPE Stage 2 EIS.</p> <p>No further assessment of operational-related socio-economic impacts is considered necessary as a result of the amendments to the Proposal.</p>

### 7.13.3 Mitigation measures

#### Construction

This assessment concludes that the amendments to the Proposal would result in construction phase impacts relating to waste, bushfire, property and infrastructure, ESD and socio-economic generally consistent with those already identified and assessed as part of the MPE Stage 2 EIS (refer to Section 20 and Appendix U of the EIS). There would be no additional construction waste, bushfire, property and infrastructure, ESD and/ or socio-economic impacts attributable to the amendments to the Proposal and therefore the Amended Proposal construction related waste, bushfire, property and infrastructure, ESD and socio-economic impacts are consistent with those stated in the MPE Stage 2 EIS.

The mitigation measures outlined in Section 20.1.4, 20.2.4, 20.3.5, 20.4.4 and 20.5.4. of the MPE Stage 2 EIS are considered adequate to address impacts associated with the Amended Proposal. No additional construction waste, bushfire, property and infrastructure, ESD and/or socio-economic -related mitigation measures are proposed as a result of the amendments to the Proposal.

The revised mitigation measures are provided in Section 8 of this RtS, and include all mitigation measures to be implemented to avoid, minimise and manage waste, bushfire, property and infrastructure, ESD and socio-economic impacts during construction of the Amended Proposal.

## Operation

This assessment concludes that the amendments to the Proposal would result in operational phase impacts relating to waste, bushfire, property and infrastructure, ESD and socio-economic generally consistent with those already identified and assessed as part of the MPE Stage 2 EIS (refer to Section 20 and Appendix U of the EIS). There would be no additional operational waste, bushfire, property and infrastructure, ESD and/ or socio-economic impacts attributable to the amendments to the Proposal and therefore the Amended Proposal operational related waste, bushfire, property and infrastructure, ESD and socio-economic impacts are consistent with those stated in the MPE Stage 2 EIS.

The mitigation measures outlined in Section 20.1.4, 20.2.4, 20.3.5, 20.4.4 and 20.5.4 of the MPE Stage 2 EIS are considered adequate to address impacts associated with the Amended Proposal. No additional operational waste, bushfire, property and infrastructure, ESD and/or socio-economic -related mitigation measures are proposed as a result of the amendments to the Proposal.

The revised mitigation measures are provided in Section 8 of this RtS, and include all mitigation measures to be implemented to avoid, minimise and manage waste, bushfire, property and infrastructure, ESD and socio-economic impacts during operation of the Amended Proposal.

## 8 REVISED MITIGATION MEASURES

The EIS for the Amended Proposal identified a range of environmental impacts and recommended management and mitigation measures to avoid, remedy or mitigate the identified impacts (refer to Section 22 of the EIS).

These mitigation measures have been revised in response to the following:

- Submissions received during the public exhibition period
- To address the impacts of the amendments to the Proposal (the Amended Proposal)
- To incorporate additional mitigation measures from the MPE Concept Modification 2 RtS where necessary.

For ease of reference, words proposed to be deleted are shown in ~~**bold italic strike through**~~ and words to be inserted are shown in **underlined bold italics**. These revised mitigation measures represent the final Compilation of Mitigation Measures for the Amended Proposal and are provided in Table 8-1.

Pre-construction activities for the Amended Proposal would be undertaken in the areas shown in Figure 8-1 and is relevant to mitigation measure No. 0A only (refer to Table 8-1). A full list of the pre-construction activities, which would be undertaken within the Amended construction area are provided in mitigation measure No. 0A and Appendix I of this RtS.

The construction and operational activities included within the Amended Proposal have been separated into components based on their functional relationship and include the following:

- Warehousing – including, but not limited to, warehousing and attached offices, container storage areas, car parking, truck loading/unloading areas and vehicle manoeuvring and access roads.
- Freight village – including, but not limited to, freight village buildings, car parking, truck loading/unloading areas and vehicle manoeuvring and access roads
- Moorebank Avenue intersection - including, but not limited to, Moorebank Avenue Upgrade and associated intersection works.
- Site infrastructure – including but not limited to, construction works such as earthworks, construction and operation of internal roads, OSDs and utilities.

Figure 8-2 and Figure 8-3, outlines these components of the Amended Proposal provided in Table 8-1.

The 'implementation stage' column of Table 8-1 indicates the timing as to when the specific mitigation measures would be implemented. For example, a CEMP might be prepared prior to construction, but would not be 'implemented' until the construction phase.

For this Compilation of Mitigations Measures, the following definitions apply to the terms used in the implementation phase column:

- Detailed design - works and design progression prior to construction of the associated permanent physical works for the Amended Proposal
- Pre-construction phase – initial stage of physical works for the Amended Proposal, which are not included within the definition of construction and within Works period A (refer to list in mitigation measure No. 0A and Appendix I of this RtS)
- Construction phase – during construction of all physical works (not included in pre-construction) for the Amended Proposal (Works periods B - G)
- Operation phase - either prior to, or during, operation of the Amended Proposal.



## MPE Stage 2 Response to Submissions



### LEGEND

- Amended construction area
- ▲ Site access
- MPE Stage 2 construction compounds
- Watercourse

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 ABN 76 104 485 289  
 Level 5, 141 Walker St | North Sydney NSW 2060  
 P: +61 (0) 2 8907 9000 | F: +61 (0) 2 8907 9001  
 Coordinate System: GDA 1994 MGA Zone 56  
 Date issued: July 12, 2017  
 Aerial imagery supplied by nearmap (May, 2017)

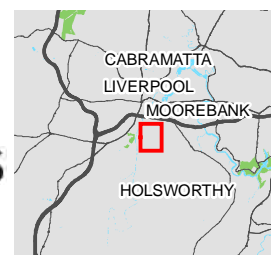




Figure 8-1: Pre-construction area



## MPE Stage 2 Response to Submissions



### LEGEND

-  Site infrastructure
-  Watercourse

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 Coordinate System: GDA 1994 MGA Zone 56  
 Date issued: July 6, 2017  
 Aerial imagery supplied by nearmap (May, 2017)

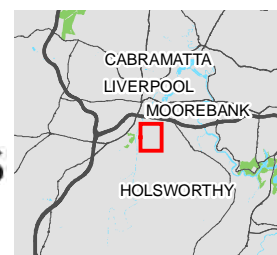
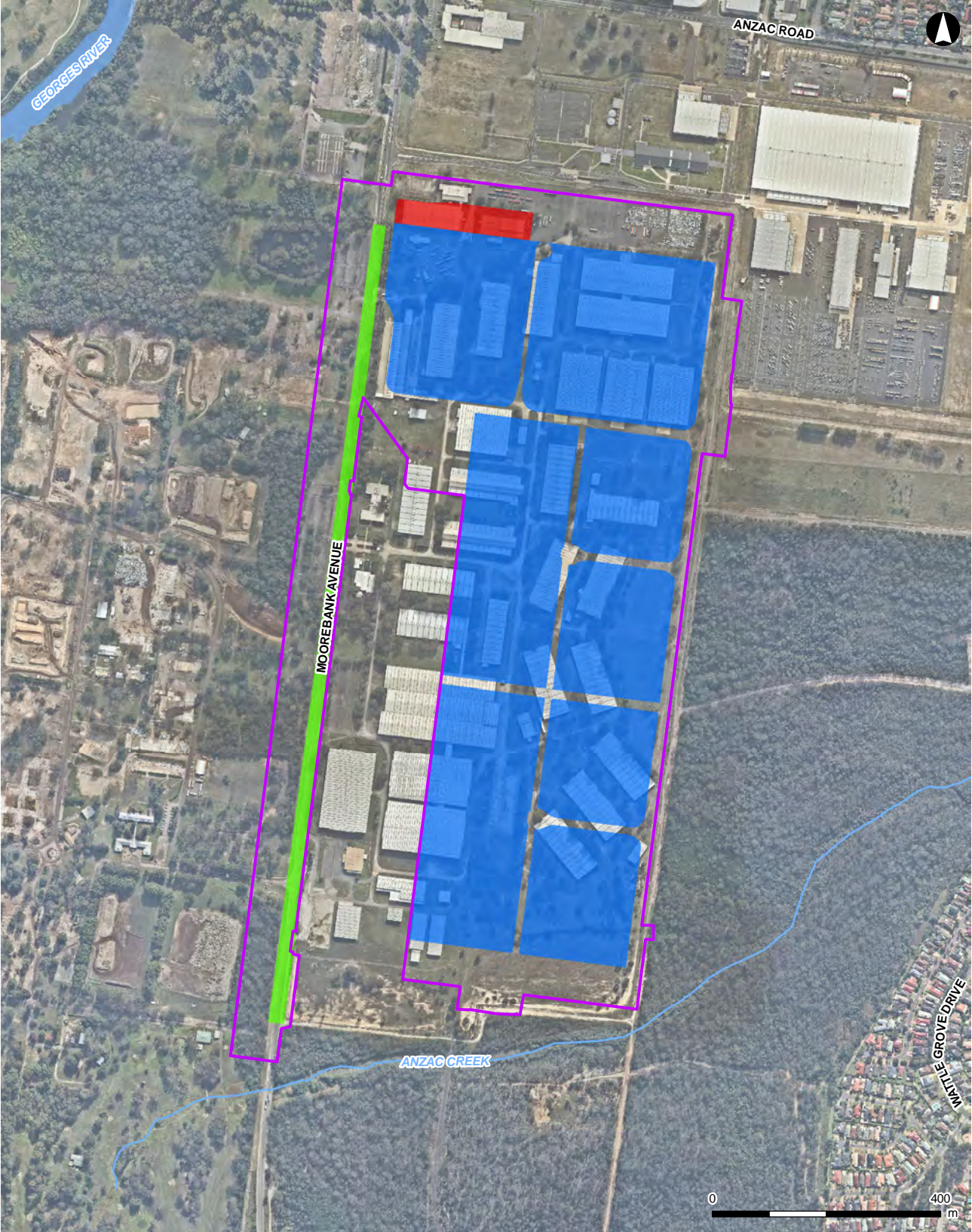


Figure 8-2: Site infrastructure



MPE Stage 2 Response to Submissions



LEGEND

- Amended construction area
- Watercourse
- Freight village
- Warehousing
- Moorebank Avenue

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Coordinate System: GDA 1994 MGA Zone 56  
Date issued: July 10, 2017  
Aerial imagery supplied by nearmap (May, 2017)



Figure 8-3: Key operational components



Table 8-1: Revised table of Mitigation Measures

No.	Mitigation measures	Implementation stage	Applicability			
			Warehousing	Freight village	Moorebank Avenue Upgrade	<u>Site infrastructure</u>
<b>0.</b>	<b>General environmental management</b>					
0A	<p>Pre-construction works would be undertaken subject to Environmental Work Method Statement (EWMS) (Appendix H of this RtS). Pre-construction works include the following:</p> <ul style="list-style-type: none"> <li>• works within Works period A (pre-construction activities), including: <ul style="list-style-type: none"> <li>– establishment of site access points</li> <li>– importation of fill for site preparation activities</li> <li>– installation of site fencing</li> <li>– remediation and UXO, EO or EOW management where required.</li> </ul> </li> <li>• survey; acquisitions; or building/ road dilapidation surveys; fencing; investigative drilling, excavation or salvage</li> <li>• clearing any native vegetation within the Amended construction area , with the exception of the southern and eastern swales located outside of the MPE site</li> <li>• establishment of site compounds and construction facilities</li> <li>• installation of environmental mitigation measures</li> <li>• utilities adjustment and relocation that do not present a significant risk to the environment, as determined by the Environmental Representative</li> <li>• other activities determined by the Environmental Representative to have minimal environmental impact</li> <li>• all works as described in Works period A in Section 4 of the EIS and Appendix I of this RtS.</li> </ul>	Pre-construction	Y	Y	Y	<u>Y</u>

## MPE Stage 2 RtS

No.	Mitigation measures	Implementation stage	Applicability			
			Warehousing	Freight village	Moorebank Avenue Upgrade	<u>Site infrastructure</u>
0B	<p>The Construction Environmental Management Plan (CEMP), or equivalent, for the Amended Proposal would be based on the PCEMP (Appendix G of the EIS), and include the following preliminary management plans:</p> <ul style="list-style-type: none"> <li>• Preliminary Construction Traffic Management Plan (PCTMP) (Appendix K of the EIS)</li> <li>• Air Quality Management Plan (AQMP) (Appendix M of the EIS)</li> <li>• Erosion and Sediment Control Plans (ESCPs) and Bulk Earthworks Plans (Appendix P of the EIS).</li> </ul> <p>As a minimum, the CEMP would include the following sub-plans:</p> <ul style="list-style-type: none"> <li>• Construction Traffic Management Plan (CTMP)</li> <li>• Construction Noise and Vibration Management Plan (CNVMP), prepared in accordance with the <i>Interim Construction Noise Guideline</i></li> <li>• Construction Air Quality Management Plan</li> <li>• Flora and Fauna Management Plan</li> <li>• A Soil and Water Management Plan (SWMP) and Erosion and Sediment Control Plan</li> <li>• Contamination Management Plan</li> <li>• Flood Emergency Response and Evacuation Plan</li> <li>• UXO, EO, and EOW Management Plan</li> <li>• Asbestos Management Plan</li> <li>• Heritage (Indigenous and Non-Indigenous) Management Plan/s</li> <li>• Bushfire Management Strategy</li> <li>• Community Information and Awareness Strategy.</li> </ul>	Construction	Y	Y	Y	<u>Y</u>

## MPE Stage 2 RtS

No.	Mitigation measures	Implementation stage	Applicability			
			Warehousing	Freight village	Moorebank Avenue Upgrade	<u>Site infrastructure</u>
0C	<p>The Operational Environmental Management Plan (OEMP), or equivalent, for the Amended Proposal would be based on the following preliminary management plans:</p> <ul style="list-style-type: none"> <li>• Preliminary Operational Traffic Management Plan (POTMP) (Appendix K of the EIS)</li> <li>• Air Quality Management Plan (Appendix M of the EIS)</li> <li>• Stormwater Drainage Design Drawings (Appendix P of the EIS)</li> </ul> <p>As a minimum the OEMP would include the following sub-plans:</p> <ul style="list-style-type: none"> <li>• Operational Traffic Management Plan (OTMP)</li> <li>• Operational Noise and Vibration Management plan (ONVMP)</li> <li>• Air Quality Management Plan</li> <li>• Flora and Fauna Management Plan</li> <li>• Flooding and Emergency Response Plan</li> <li>• Emergency Response Plan in accordance with the requirements of Clause 153C of the POEO Act and the POEO (General) Regulation (Cl. 98B)</li> <li>• Operational Hazard and Risk Management Plan</li> <li>• Bushfire Management Strategy</li> <li>• Community Information and Awareness Strategy.</li> </ul>	Operation	Y	Y	<del>N</del> <u>Y</u>	<u>Y</u>
0D	<p>The construction and/or operation of the Amended Proposal may be delivered in a number of stages. If construction and/or operation is to be delivered in stages a Staging Report would be provided to the Secretary prior to commencement of the initial stage of construction and updated prior to the commencement of each stage as that stage is identified.</p>	Construction and Operation	Y	Y	Y	<u>Y</u>

## MPE Stage 2 RtS

No.	Mitigation measures	Implementation stage	Applicability			
			Warehousing	Freight village	Moorebank Avenue Upgrade	<u>Site infrastructure</u>
1.	<b>Traffic and Transport</b>					
1A	<p>A Construction Traffic Management Plan (CTMP) would be prepared, based on the PCTMP prepared as part of the EIS (refer to Appendix K of the EIS). The CTMP would detail the management controls to be implemented to avoid, minimise and mitigate impacts of construction of the Amended Proposal to traffic performance on the surrounding road network, pedestrian and cyclist access, and the amenity of the surrounding environment and would include the following key initiatives:</p> <ul style="list-style-type: none"> <li>• Review of speed restrictions along Moorebank Avenue and additional signposting of speed limitations to reinforce reduced speed limits during construction of the Amended Proposal</li> <li>• Restriction of haulage routes through signage and education to ensure, where possible, that construction vehicles do not travel through nearby residential areas to access the Amended construction area , in particular Moorebank (Anzac Road) or the Wattle Grove residential areas</li> <li>• Inform local residents (in conjunction with the Community Information and Awareness Strategy) of the proposed construction activities and road access restrictions that the construction traffic must adhere to and establish communication protocols for community feedback on issues relating to construction vehicle driver behaviour and construction related matters</li> <li>• Installation of specific warning signs on approach to, and at entrances to, the construction site to warn existing road users of entering and exiting construction traffic</li> <li>• Establishing pedestrian exclusion zones and walking routes/crossing points which integrate within the existing pedestrian network</li> </ul>	Construction	Y	Y	Y	<u>Y</u>

## MPE Stage 2 RtS

No.	Mitigation measures	Implementation stage	Applicability			
			Warehousing	Freight village	Moorebank Avenue Upgrade	<u>Site infrastructure</u>
	<ul style="list-style-type: none"> <li>Distribution of day warning notices to advise local road users of scheduled construction activities and associated traffic movements.</li> <li>Installation of appropriate traffic controls and warning signs for areas identified where potential safety risk issues exist</li> <li>The promotion of car-pooling for construction staff and other shared transport initiatives during the construction phase</li> <li>Management and coordination of the transportation of materials to maximise vehicle loads and therefore minimise vehicle movements</li> <li>Monitoring of traffic on Moorebank Avenue during peak periods to ensure that queuing at intersections does not impact on other road users</li> <li>Reducing, where reasonable and feasible, the volumes of construction vehicles travelling during peak periods, especially if the increase in traffic generated by construction activities impedes on the operation of Moorebank Avenue</li> </ul>					
1B	A road Safety Audit on Cambridge Avenue to be undertaken prior to the commencement of the construction of the Amended Proposal to identify the traffic safety risks and determine appropriate mitigations.	Construction	<u>N</u>	<u>N</u>	Y	<u>Y</u>
1C	<p>Moorebank Avenue would be upgraded for approximately <del>1.4</del> <b>1.5</b> kilometres from approximately <del>95</del> <b>35</b> metres south of the northern boundary of the MPE site to approximately <del>120</del> <b>185</b> metres south of the southern MPE site boundary. The following intersections would also be upgraded as part of the Amended Proposal:</p> <ul style="list-style-type: none"> <li>Moorebank Avenue / MPE Stage 2</li> <li>Moorebank Avenue / MPE Stage 1 northern access</li> <li>Moorebank Avenue / MPE Stage 1 central access</li> </ul>	Construction and Operation	Y	Y	<u>N</u>	<u>N</u>

## MPE Stage 2 RtS

No.	Mitigation measures	Implementation stage	Applicability			
			Warehousing	Freight village	Moorebank Avenue Upgrade	<u>Site infrastructure</u>
	<ul style="list-style-type: none"> <li>Moorebank Avenue / MPE Stage 1 southern emergency access.</li> </ul> <p>The funding of these upgrades would be clarified through discussions with SIMTA, Roads and Maritime and Transport for NSW.</p>					
1D	<p>It is intended that the POTMP would be further progressed and integrated into the OEMP for the Amended Proposal. Specifically, the following key aspects would be addressed in the OTMP:</p> <ul style="list-style-type: none"> <li>Heavy vehicle route management</li> <li>Safety and amenity of road users and public</li> <li>Congestion management on Moorebank Avenue</li> <li>Road user delay management</li> <li>Information signage, distance information and advance warning</li> <li>Driver code of conduct</li> <li>Incident management</li> <li>Traffic monitoring.</li> </ul>	Operation	Y	Y	N	<u>Y</u>
1E	Bicycle and end of trip facilities would be provided in accordance with the <i>City of Sydney Section 3 – General Provisions</i> .	Operation	Y	Y	<u>N</u>	<u>N</u>
1F	Consultation would be undertaken with relevant bus provider(s) regarding the potential to extend the 901 bus service (or equivalent) and additional regular service bus stops with the aim of maximising public transport accessibility to, from and within the Amended operational area.	Operation	Y	Y	<u>Y</u>	<u>Y</u>
<b><u>1G</u></b>	<b><u>Importation of fill to site during construction of the Amended Proposal is to not exceed a total of 22,000 m<sup>3</sup> of material per day. This limit is to be further reduced by an amount equivalent to any fill being imported to the MPW Stage 2 Proposal (SSD 7709) on the same day such that the</u></b>	<b><u>Construction</u></b>	<b><u>N</u></b>	<b><u>N</u></b>	<b><u>N</u></b>	<b><u>Y</u></b>

## MPE Stage 2 RtS

No.	Mitigation measures	Implementation stage	Applicability			
			Warehousing	Freight village	Moorebank Avenue Upgrade	<u>Site infrastructure</u>
	<b><u>combined importation of fill to the Amended Proposal site and MPW site does not exceed 22,000 m³ on any given day.</u></b>					
2.	<b>Noise and Vibration</b>					
2A	<p>A Construction Noise and Vibration Management Plan (CNVMP), or equivalent, would be prepared for the Amended Proposal in accordance with the <i>Interim Construction Noise Guideline</i> (DECC, 2009) (or equivalent), and will include the following:</p> <ul style="list-style-type: none"> <li>• Identification of nearby residences and other sensitive land uses</li> <li>• Description of approved hours of work</li> <li>• Description and identification of construction activities, including work areas, equipment and duration</li> <li>• Description of what work practices (generic and specific) will be applied to minimise noise and vibration</li> <li>• Consider the selection of plant and processes with reduced noise emissions</li> <li>• A complaints handling process</li> <li>• Noise and vibration monitoring procedures</li> <li>• Overview of community consultation required for identified high impact works</li> <li>• Induction and training will be provided to relevant staff and sub- contractors outlining their responsibilities with regard to noise</li> <li>• Procedure for approval of any works undertaken outside of the following hours: <ul style="list-style-type: none"> <li>- Standard hours of 07:00 am to 18:00 pm Monday to Friday, and 08:00am to 13:00 pm Saturday,</li> <li>- Out of hours (OOH) work periods:</li> </ul> </li> </ul>	Construction	Y	Y	Y	<u>Y</u>



## MPE Stage 2 RtS

No.	Mitigation measures	Implementation stage	Applicability			
			Warehousing	Freight village	Moorebank Avenue Upgrade	<u>Site infrastructure</u>
	<ul style="list-style-type: none"> <li>OOH Period 1 is 6:00am – 7:00am weekdays;</li> <li>OOH Period 2 is 6:00pm – 10:00pm weekdays</li> <li>OOH Period 3 is 7:00am – 8:00am Saturday; and</li> <li>OOH Period 4 is 1:00pm – 6:00pm Saturday.</li> </ul>					
2B	<p>Any works undertaken outside of the hours prescribed in mitigation measure 2A would be undertaken in consultation with relevant authorities. Works outside these hours that may be permitted would include:</p> <ul style="list-style-type: none"> <li>Any works which would not result in audible noise emissions at any nearby sensitive receptors.</li> <li>The delivery of oversized plant and/or structures that police or other authorities determine require special arrangements to transport along public roads</li> <li>Emergency work to avoid the loss of lives, property and/or to prevent environmental harm</li> <li>Maintenance and repair of public infrastructure where disruption to essential services and/or consideration of worker safety do not allow work within standard construction hours.</li> <li>Public infrastructure works that shorten the length of the project and are supported by noise-sensitive receivers.</li> <li>Construction works where it can be demonstrated and justified that these works are required to be undertaken outside of standard construction hours.</li> <li>Any other work as approved through the CNVMP.</li> </ul>	Construction	Y	Y	Y	<u>Y</u>
2D	In the event of any noise or vibration related complaint or adverse comment from the community, noise and ground vibration levels (as relevant) would be investigated. Remedial action would be implemented where feasible and reasonable.	Construction and operation	Y	Y	Y	Y

## MPE Stage 2 RtS

No.	Mitigation measures	Implementation stage	Applicability			
			Warehousing	Freight village	Moorebank Avenue Upgrade	<u>Site infrastructure</u>
	The procedures for managing complaints would be provided within the Community Information and Awareness Strategy.					
2E	An Operational Noise Management Plan (ONMP) would be prepared which includes a framework for regular monitoring of operational noise. Monitoring would begin at the commencement of the operation of the Amended Proposal and would be conducted on an annual basis for up to 2 years (after commencement of operations of the Amended Proposal).	Operation	Y	Y	N	<u>Y</u>
<b>3. Air Quality</b>						
3A	<p>The Air Quality Management Plan (Ramboll, 2016), included within Appendix M of the EIS, would be further progressed and incorporated into the CEMP for the Amended Proposal. Specifically, the following key aspects would be addressed in the CEMP:</p> <ul style="list-style-type: none"> <li>• Procedures for controlling/managing dust</li> <li>• Roles, responsibilities and reporting requirements</li> <li>• Contingency measures for dust control where standard measures are deemed ineffective.</li> </ul>	Construction	Y	Y	Y	<u>Y</u>
3B	<p>The Air Quality Management Plan (Ramboll, 2016), included within Appendix M of the EIS would be further progressed and integrated into the OEMP for the Amended Proposal. In accordance with the Air Quality Management Plan the following key aspects would be addressed in the OEMP:</p> <ul style="list-style-type: none"> <li>• Implementation and communication of anti-idling policy for trucks</li> <li>• Complaints line for the community to report on excessive idling and smoky vehicles</li> <li>• Procedures to reject excessively smoky trucks visiting the site based on visual inspection.</li> </ul>	Operation	Y	Y	N	<u>Y</u>

## MPE Stage 2 Rts

No.	Mitigation measures	Implementation stage	Applicability			
			Warehousing	Freight village	Moorebank Avenue Upgrade	<u>Site infrastructure</u>
4.	<b>Biodiversity</b>					
4A	<p>A Construction Flora and Fauna Management Plan (CFFMP) would be prepared as part of the CEMP for the Amended Proposal. Native vegetation clearing for southern and eastern swales located outside of the MPE site would not occur until the Flora and Fauna Management Plan is approved. This would include the following:</p> <ul style="list-style-type: none"> <li>• Clear identification of vegetation exclusion zones</li> <li>• Site induction procedure, including briefings regarding the local threatened flora and local fauna of the site and protocols to be undertaken if they are encountered</li> <li>• A pre-start up check for sheltering native fauna of all infrastructure, plant and equipment and/or during relocation of stored construction materials</li> <li>• Application of speed limits in areas adjacent to native vegetation</li> </ul>	Construction	Y	Y	Y	<u>Y</u>
4B	The threatened plant populations identified within the Boot lands (to the south) would be protected by a minimum 10 metre buffer between the edge of the area of occupied habitat and the Amended construction area.	Construction	Y	Y	Y	<u>Y</u>
4C	Potential bat roosting locations in buildings to be demolished would be checked, as far as is practicable, by a qualified ecologist or wildlife carer for presence of bats prior to demolition. Any bats found would be relocated.	Construction	Y	Y	N	<u>Y</u>
4D	<p>A two-stage approach would be undertaken to clearing:</p> <ul style="list-style-type: none"> <li>• Remove non-hollow bearing trees at least 48 hours before habitat trees are removed.</li> </ul>	Construction	Y	Y	Y	<u>Y</u>

## MPE Stage 2 RtS

No.	Mitigation measures	Implementation stage	Applicability			
			Warehousing	Freight village	Moorebank Avenue Upgrade	<u>Site infrastructure</u>
	<ul style="list-style-type: none"> <li>Hollow bearing trees are to be knocked with an excavator bucket or other machinery to encourage fauna to evacuate the tree immediately prior to felling.</li> <li>Felled trees must be left for a short period of time on the ground to give any fauna trapped in the trees an opportunity to escape before further processing of the trees.</li> <li>Felled hollow bearing trees must be inspected by an ecologist as soon as possible (not longer than 2 hours after felling).</li> </ul>					
4E	Directional lighting will be used where lighting is required in construction areas to avoid impact on fauna.	Construction	Y	Y	Y	<u>Y</u>
4F	<p>Should any animal be injured, the relevant local wildlife rescue agency (e.g. WIRES) and/or veterinary surgery would be contacted as soon as practical.</p> <p>Until the animal can be cared for by a suitably qualified animal handler, if possible minimise stress to the animal and reduce the risk of further injury by:</p> <ul style="list-style-type: none"> <li>Handling fauna with care and as little as possible.</li> <li>Covering larger animals with a towel or blanket and placing in a large cardboard box.</li> <li>Placing small animals in a cotton bag, tied at the top.</li> <li>Keeping the animal in a quiet, warm, ventilated and dark location.</li> </ul>	Pre-construction, construction and operation	Y	Y	Y	<u>Y</u>
4G	A Flora and Fauna Management Plan would be prepared as part of the OEMP for the Amended Proposal. This FFMP would focus on minimising impacts on biodiversity values on the adjacent Boot land.	Operation	Y	Y	N	<u>Y</u>

## MPE Stage 2 RtS

No.	Mitigation measures	Implementation stage	Applicability			
			Warehousing	Freight village	Moorebank Avenue Upgrade	<u>Site infrastructure</u>
<b>5.</b>	<b>Stormwater and Flooding</b>					
5A	<p>A Soil and Water Management Plan (SWMP) and Erosion and Sediment Control Plan (ESCP), or equivalent, would be incorporated into the CEMP for the construction of the Amended Proposal. The SWMP and ESCPs would be developed in accordance with the principles and requirements of Managing Urban Stormwater – Soils &amp; Construction Volume 1 ('Blue Book') (Landcom, 2004) and Volume 2 (DECC 2008). and consider the Preliminary ESCPs (Appendix P of the EIS). The following aspects would be addressed within the SWMP and ESCPs:</p> <ul style="list-style-type: none"> <li>• Construction traffic restricted to delineated access tracks, and maintained until construction complete</li> <li>• Appropriate sediment and erosion controls to be implemented prior to soil disturbance</li> <li>• Stormwater management to avoid flow over exposed soils which may result in erosion and impacts to water quality</li> <li>• Location of stockpiles outside of flow paths on appropriate impermeable surfaces as well as outside of riparian corridors</li> <li>• Inspection of all permanent and temporary erosion and sedimentation control works prior to and post rainfall events and prior to closure of the construction area</li> <li>• Wheel wash or rumble grid systems installed at exit points to minimise dirt on roads.</li> </ul>	Construction	Y	Y	Y	<u>Y</u>
5B	<p>To minimise potential flood impacts as a result of construction of the Amended Proposal, the following measures would be implemented and documented in the SWMP:</p> <ul style="list-style-type: none"> <li>• The existing site catchment and sub-catchment boundaries would be maintained as far as practicable</li> </ul>	Construction	Y	Y	Y	<u>Y</u>

## MPE Stage 2 Rts

No.	Mitigation measures	Implementation stage	Applicability			
			Warehousing	Freight village	Moorebank Avenue Upgrade	<u>Site infrastructure</u>
	<ul style="list-style-type: none"> <li>To the extent practicable, site imperviousness and grades should be limited to the extent of existing imperviousness and grades under existing development conditions.</li> </ul>					
5C	A Flood Emergency Response and Evacuation Plan, or equivalent, would be prepared and implemented for the construction phase of the Amended Proposal to allow work sites to be safely evacuated and secured in advance of flooding occurring at the Amended construction area.	Construction	Y	Y	Y	<u>Y</u>
5D	<p>Stormwater quality improvement devices management measures would be designed and installed on site as presented in the Stormwater and Flooding Environmental Assessment (Appendix P of the EIS), including:</p> <ul style="list-style-type: none"> <li>Gross pollutant traps (GPTs) at Section 6.2.1</li> <li>Rain gardens in the base of the OSD channels, as shown in Figure 6-1 of Appendix P of the EIS. Stormwater quality improvement devices would be designed to meet the performance targets identified in Georges River Estuary CZMP.</li> </ul>	Detailed design and Construction	Y	Y	Y	<u>Y</u>
5E	<p>A water quality monitoring program for the operational phase of the Amended Proposal would be prepared as part of the OEMP for the Amended Proposal and would detail:</p> <ul style="list-style-type: none"> <li>The frequency and duration of sampling</li> <li>Background water quality conditions</li> <li>Sampling methodology</li> <li>Reporting requirements</li> </ul> <p>Water quality monitoring would be undertaken for both Anzac Creek and the Georges River and would include the following parameters:</p> <ul style="list-style-type: none"> <li>Total suspended solids</li> </ul>	Operation	Y	Y	N	<u>Y</u>

## MPE Stage 2 RtS

No.	Mitigation measures	Implementation stage	Applicability			
			Warehousing	Freight village	Moorebank Avenue Upgrade	<u>Site infrastructure</u>
	<ul style="list-style-type: none"> <li>Total phosphorous</li> <li>Total nitrogen</li> <li>Oils and grease.</li> </ul>					
5F	A Flood Emergency Response Plan (FERP) would be developed for the operational <b>phase</b> of the Amended Proposal. The FERP would take into consideration, site flooding and broader flood emergency response plans for the Georges River and Anzac Creek floodplains and Moorebank area. The FERP would also include the identification of an area of safe refuge within the Amended Proposal site that would allow people to wait until hazardous flows have receded and safe evacuation is possible.	Operation	Y	Y	<u>Y</u>	<u>Y</u>
<b>6. Geology, Soils and Land Contamination</b>						
6A	Excavated material would be reused on site where possible. Any excavated material that requires disposal would be subject to waste classification under the <i>Waste Classification Guidelines 2014</i> (NSW EPA, 2014) and would be disposed of at an appropriately licensed facility.	Construction	Y	Y	Y	<u>Y</u>
6B	<p><b><u>Stockpile sites established during construction are to be managed in accordance with stockpile management principles set out in Appendix G of this RtS.</u></b></p> <p><b><u>The construction contractor would progress the Bulk Earthworks strategy (to be included within the CEMP) which would outline the volumes of imported and exported material, any buffer areas, temporary soil stockpiling areas and fencing of excavations, as required.</u></b></p>	<b><u>Pre-construction</u></b> and construction	Y	Y	Y	<u>Y</u>
6C	A Contamination Management Plan (CMP) (or equivalent) would be prepared and included within the CEMP for the Amended Proposal. The CMP would be prepared in consideration of the outcomes of the Environmental Management Plan (GHD, 2016) and Site Audit Statement and Site Audit Report (JBS&G, 2016) and would contain procedures on the following:	Construction	Y	Y	Y	<u>Y</u>



## MPE Stage 2 RtS

No.	Mitigation measures	Implementation stage	Applicability			
			Warehousing	Freight village	Moorebank Avenue Upgrade	<u>Site infrastructure</u>
	<ul style="list-style-type: none"> <li>Handling, stockpiling and assessing potentially contaminated materials encountered during the development works.</li> <li>A management tracking system for excavated potentially contaminated materials to ensure the proper management material movements at the Amended construction area, particularly during excavation</li> <li>Assessment, classification and disposal of waste in accordance with relevant legislation</li> <li>A contingency plan for unexpected contaminated materials (unexpected finds protocol), such as materials that are odorous, stained or containing anthropogenic materials, that may be encountered during construction.</li> </ul>					
6D	A site-wide UXO, EO, and EOW Management Plan (or equivalent) would be developed for the Amended construction area. This plan would be included within the CEMP and address the unexpected discovery of UXO, EO or EOW during construction.	Construction	Y	Y	Y	<u>Y</u>
6E	An Emergency Response Plan would be prepared and implemented. The plan would meet the requirements of Clause 153C of the POEO Act and the POEO (General) Regulation (Cl. 98B) and specify the procedure to be followed in the event of a spill, including the notification requirements and use of absorbent material to contain the spill. A spill kit would be provided on the Amended operational area at all times.	Operation	Y	Y	<u>Y</u>	<u>Y</u>
6F	<p><b><u>In order to accept fill material onto site, the following will be undertaken:</u></b></p> <ul style="list-style-type: none"> <li><b><u>Material characterisation reports/certification showing that the material being supplied is VENM/ENM must be provided.</u></b></li> <li><b><u>Each truck entry will be visually checked and documented to confirm that only approved materials that</u></b></li> </ul>	<b><u>Pre-construction and construction</u></b>	<u>N</u>	<u>N</u>	<u>N</u>	<u>Y</u>

## MPE Stage 2 RtS

No.	Mitigation measures	Implementation stage	Applicability			
			Warehousing	Freight village	Moorebank Avenue Upgrade	<u>Site infrastructure</u>
	<u>are consistent with the environmental approvals are allowed to enter the site. Only fully tarped loads are to be accepted by the gatekeeper. Environmental assurance of imported fill material will be conducted to confirm that the materials comply with the NSW EPA Waste Classification Guidelines and the Earthworks Specification for the MPW site. The frequency of assurance testing will be as nominated by the Environmental assessor/auditor.</u>					
<u>6G</u>	<u>The CEMP would include an Earthworks Specification, which would include details on earthworks material criteria, handling and placement requirements, embankment and cutting formation (including foundation, batter and benching requirements), unsuitable material and bridging layer requirements, conformance testing methods and acceptance criteria (e.g. for material acceptance and compaction control).</u>	<u>Construction</u>	<u>N</u>	<u>N</u>	<u>N</u>	<u>Y</u>
<u>6H</u>	<u>During detailed design, should it be identified that there is the potential for groundwater to be intercepted or affected consultation would be undertaken with NSW DPI.</u>	<u>Detail design</u>	<u>Y</u>	<u>Y</u>	<u>Y</u>	<u>Y</u>
<u>6I</u>	<u>During detailed design, should it be identified that there is the potential for groundwater to be intercepted, a Trigger Action Response Plan would be developed.</u>	<u>Detail design</u>	<u>Y</u>	<u>Y</u>	<u>Y</u>	<u>Y</u>

## MPE Stage 2 RtS

No.	Mitigation measures	Implementation stage	Applicability			
			Warehousing	Freight village	Moorebank Avenue Upgrade	<u>Site infrastructure</u>
7.	Hazard and risk					
7A	Hazards associated with operation of the Amended Proposal would be identified through a Hazard and Operability Study (HAZOP), which would be undertaken as part of the detailed design.	Detail design	Y	Y	<u>Y</u>	<u>Y</u>
7B	<p>The following measures would be included in the CEMP (or equivalent) to minimise hazards and risks:</p> <ul style="list-style-type: none"><li>Construction works, including the storage, handling and use of hazardous construction materials would be undertaken in accordance with the provisions of the <i>Work Health and Safety Act 2011</i> and <i>Work Health and Safety Regulation 2011</i>.</li><li>All demolition activities would be undertaken in accordance with <i>Australian Standard AS2601-1991 – Demolition of Structures</i></li><li>Safe operational access and egress for emergency service personnel and workers will be provided at all times, and specified in the CEMP.</li><li>Regular maintenance and inspection of all environmental and safety protection controls would be undertaken.</li></ul>	Construction	Y	Y	Y	<u>Y</u>
7C	<p>An Asbestos Management Plan would be prepared for the Amended Proposal in accordance with the <i>Code of Practice: How to Manage and Control of Asbestos in the Workplace</i> (WorkCover NSW, 2011). The plan would include, but not be limited to:</p> <ul style="list-style-type: none"><li>Identification of potential (suspected or confirmed) asbestos areas</li><li>an outline of how asbestos risks would be controlled</li></ul>	Construction	Y	Y	<u>Y</u>	<u>Y</u>

## MPE Stage 2 RtS

No.	Mitigation measures	Implementation stage	Applicability			
			Warehousing	Freight village	Moorebank Avenue Upgrade	<u>Site infrastructure</u>
	<ul style="list-style-type: none"> <li>the identification of each person with responsibilities and details of their responsibilities under this plan</li> <li>Reference the asbestos register and risk assessment, which would also be prepared prior to construction being undertaken.</li> </ul>					
7D	<p>All asbestos removal works, including the demolition of the eight structures identified as containing asbestos (refer to Figure 14-1 of the EIS ) will be undertaken in accordance with the Environmental Management Plan (GHD, 2016) and the following:</p> <ul style="list-style-type: none"> <li>The <i>Code of Practice for the Safe Removal of Asbestos</i> (NOHSC, 2005)</li> <li><i>Code of Practice: How to Safely Remove Asbestos</i> (WorkCover NSW, 2011)<sup>6</sup></li> </ul> <p>Asbestos removal would be carried out by an appropriately licensed asbestos removalist. The licensing requirements for asbestos removal are specified in the <i>Code of Practice How to Safely Remove Asbestos</i> (WorkCover NSW, 2011). .</p>	Construction	Y	Y	N	<u>Y</u>
7E	Dangerous goods entering or leaving the Stage 2 site must be notified in advance in accordance with the International Maritime Organisation (IMO) and regulations pertaining to the International Convention for the Safety of Life at Sea (SOLAS).	Operation	Y	Y	N	<u>N</u>
7F	Handling of dangerous goods including unpacking from containers and storage within warehouses on the Amended operational area would be undertaken in accordance with the <i>Storage and Handling of Dangerous Goods Code of Practice</i> (WorkCover NSW, 2005).	Operation	Y	Y	N	<u>N</u>
7G	Staff involved in the transport and handling of dangerous goods within the Amended Proposal site would receive training	Operation	Y	Y	N	<u>Y</u>

<sup>6</sup> Excavation or disturbance of those areas of the Amended construction area where potential for asbestos to be present within the soil is discussed and mitigated in Chapter 13 (Soils, Geology and Contamination).

## MPE Stage 2 RfS

No.	Mitigation measures	Implementation stage	Applicability			
			Warehousing	Freight village	Moorebank Avenue Upgrade	<u>Site infrastructure</u>
	regarding the contents of the dangerous goods provisions and their roles and responsibilities. All training would be recorded and maintained in accordance with the appropriate competent authority (SafeWork NSW).					
7H	Design, installation and maintenance of gas reticulation infrastructure would be undertaken in accordance with <i>Australian Standard AS 2944-1 (2007): Plastic pipes and fittings for gas reticulation – Polyamide pipes</i> and <i>Australian Standard AS 2944-2 (2007): plastic pipes and fittings for gas reticulation – Polyamide fittings</i> .	Operation	Y	Y	Y	<u>Y</u>
7I	Storage of flammable/combustible liquids within the Amended operational area would be carried out in accordance with <i>Australian Standard AS 1940: The Storage and Handling of Flammable and Combustible Liquids</i> . Secondary containment measures would be implemented in a location away from waterways and drainage paths/infrastructure.	Operation	Y	Y	N	<u>N</u>
7J	An Operational Hazard and Risk Management Plan would be developed for the Amended operational area and be implemented as part of the OEMP for the Amended Proposal. This plan would be reviewed regularly and updated should goods entering the site change. As a minimum, the plan would adopt the requirements of the Code of Practice for Storage and Handling of Dangerous Goods (WorkCover NSW, 2005).	Operation	Y	Y	<u>Y</u>	<u>Y</u>
7K	Appropriate testing, alarm systems and work, health and safety (WHS) precautions would be implemented for the safety of personnel and infrastructure.	Operation	Y	Y	N	<u>Y</u>
7L	No hazardous or regulated wastes would be disposed of on site.	Operation	Y	Y	N	<u>Y</u>
8.	<b>Visual Amenity, urban design and landscape</b>					
8A	The following mitigation measures would be implemented, where reasonable and feasible, to minimise the visual impacts of the Amended Proposal:	Construction	Y	Y	Y	<u>Y</u>

## MPE Stage 2 Rts

No.	Mitigation measures	Implementation stage	Applicability			
			Warehousing	Freight village	Moorebank Avenue Upgrade	<u>Site infrastructure</u>
	<ul style="list-style-type: none"> <li>Existing vegetation around the perimeter of construction sites would be retained</li> <li>The early implementation of landscape planting would be considered in order to provide visual screening during the construction of the Amended Proposal</li> <li>Elements within construction sites would be located to minimise visual impacts, e.g. setting back large equipment from site boundaries</li> <li>Construction lighting, on both ancillary facilities and plant and equipment, would be designed and located to minimise the effects of light spill on surrounding sensitive receivers, including residential areas and the proposed conservation area</li> <li>Design of site hoardings would consider the use of artwork or project information</li> <li>Regular maintenance would be undertaken of site hoardings and perimeter areas including the prompt removal of graffiti</li> <li>Re-vegetation/landscaping would be undertaken progressively</li> <li>Where required for construction works, cut-off and directed lighting would be used and lighting location considered to ensure glare and light spill are minimised.</li> </ul>					
8B	<p>The following mitigation measures would be implemented, where reasonable and feasible, for the landscaping of the Amended Proposal:</p> <ul style="list-style-type: none"> <li>Use of native shrubs and ground covers to form a screening barrier when mature.</li> <li>A landscaping corridor of screening vegetation to provide informal street character along Moorebank Avenue.</li> </ul>	Operation	Y	Y	Y	<u>Y</u>

## MPE Stage 2 RtS

No.	Mitigation measures	Implementation stage	Applicability			
			Warehousing	Freight village	Moorebank Avenue Upgrade	<u>Site infrastructure</u>
	<ul style="list-style-type: none"> <li>Use of local species as understory planting to support and enhance local habitat values</li> <li>Use of seeds collected within the local area for planting to reinforce the genetic integrity of the region, where possible.</li> </ul>					
8C	Light for the Amended Proposal would be designed to minimise any direct light spill and would comply with the requirements of <i>Australian Standard AS4282-1997- Control of the Obtrusive Effects of Outdoor Lighting</i> .	Detailed design and operation	Y	Y	Y	<u>Y</u>
<b>9. Indigenous Heritage</b>						
9A	An exclusion zone would be provided around previously identified MPE Isolated Artefacts 2, 3 and 4 (refer to Figure 16-2) to avoid potential disturbance of these artefacts during construction of the Amended Proposal.	Construction	Y	N	N	<u>Y</u>
9B	Management of Aboriginal heritage would be included in the CEMP for the Amended Proposal. Information within the CEMP would include: <ul style="list-style-type: none"> <li>A summary of the findings of the Aboriginal Heritage Impact Assessment Report (provided at Appendix S of the EIS)</li> <li>Guidance on unexpected archaeological and cultural finds (including human remains).</li> </ul>	Construction	Y	Y	Y	<u>Y</u>
9C	All relevant personnel and contractors involved in the design and construction of the Amended Proposal would be advised of the relevant heritage considerations, legislative requirements and recommendations in the Aboriginal Heritage Impact Assessment Report (provided at Appendix S of the EIS).	Detailed design and Construction	Y	Y	Y	<u>Y</u>



## MPE Stage 2 RtS

No.	Mitigation measures	Implementation stage	Applicability			
			Warehousing	Freight village	Moorebank Avenue Upgrade	<u>Site infrastructure</u>
<b>10.</b>	<b>Non-Indigenous Heritage</b>					
10A	A Heritage Management Plan in adherence to NSW Heritage Council guidelines would be prepared as part of the CEMP for the Amended Proposal.	Construction	Y	Y	N	<u>Y</u>
10B	Archaeological monitoring and recording would be conducted at PADs V and W, which have the potential to contain archaeological remains of local significance. Monitoring and recording would be undertaken by a suitably qualified archaeologist, who would assess the likely significance of any archaeological deposits encountered, and provide advice regarding appropriate further action. If highly significant remains were identified during monitoring, it would be appropriate to conduct further monitoring for additional sites of former structures or test excavations.	Construction	Y	N	Y	<u>Y</u>
10C	A Heritage Interpretation Strategy should be prepared prior to the commencement of construction, outlining appropriate interpretive measure for the Amended construction area in the context of the MPE site as a whole.	Construction	Y	Y	<u>Y</u>	<u>Y</u>
10D	If unexpected finds are located during works an archaeological consultant would be engaged to assess the significance of the finds and the NSW Heritage Council notified.	Construction	Y	Y	Y	<u>Y</u>
<b>11.</b>	<b>Greenhouse Gas</b>					
11A	Energy efficiency design aspects would be investigated, where practicable as part of the detailed design process in order to reduce energy and fuel consumption.	Detailed design	Y	Y	N	<u>Y</u>
11B	Project planning would be undertaken to ensure that the site vehicle movements and construction activities are efficient, to avoid double handling of materials and unnecessary fuel use where possible.	Construction	Y	Y	Y	<u>Y</u>

## MPE Stage 2 RtS

No.	Mitigation measures	Implementation stage	Applicability			
			Warehousing	Freight village	Moorebank Avenue Upgrade	<u>Site infrastructure</u>
11C	Fuel efficiency of the construction plant/equipment will be assessed prior to selection, and where practical, equipment with the highest fuel efficiency and which uses lower GHG intensive fuel (e.g. biodiesel) will be used.	Construction	Y	Y	Y	<u>Y</u>
11D	Consideration will be given to material substitution where reasonable and feasible to reduce embodied energy of construction materials.	Detailed design and Construction	Y	Y	Y	<u>Y</u>
11E	Where possible locally sourced materials will be used to reduce GHG emissions associated with transport during construction.	Construction	Y	Y	Y	<u>Y</u>
11F	Waste would be diverted from landfill, including diversion of spoil, construction and demolition waste, and commercial and industrial waste, where reasonable and feasible. The management of waste would be considered as part of the preparation of the CEMP for the Amended Proposal, detailing the appropriate procedures for waste management.	Construction	Y	Y	Y	<u>Y</u>
11G	Fuel efficiency of the operation plant/equipment will be assessed prior to selection, and where practical, equipment with the highest fuel efficiency and which uses lower GHG intensive fuel (e.g. biodiesel) will be used during operation.	Operation	Y	Y	N	<u>Y</u>
11H	Implement adaptation measures to address medium and high rated risks detailed in the climate change risk assessment presented in the Greenhouse Gas (GHG) and Climate Change Risk Assessment (Appendix V of the EIS).	Detailed design Operation	Y	Y	N	<u>Y</u>
<b>12.</b>	<b>Waste</b>					
12A	Measures to mitigate the effect of the construction waste streams would be incorporated into the Amended Proposal's CEMP, including the following information: <ul style="list-style-type: none"> <li>Avoidance and reuse of material will have priority over recycling</li> <li>Recycling will have priority over disposal</li> </ul>	Construction	Y	Y	Y	<u>Y</u>

## MPE Stage 2 RtS

No.	Mitigation measures	Implementation stage	Applicability			
			Warehousing	Freight village	Moorebank Avenue Upgrade	<u>Site infrastructure</u>
	<ul style="list-style-type: none"> <li>Earth excavated from the site will be used for fill material and landscaping where feasible</li> <li>If possible concrete components will be crushed and reused onsite, with the remainder sent to a recycling facility</li> <li>Waste generation will be minimised by ordering the correct quantity of materials</li> <li>Selection of materials which maximise recycled content, while having low embodied water and energy use</li> <li>Selection of materials which maximise durability and lifespan.</li> </ul> <p>The following procedures and protocols will be considered within the CEMP regarding waste management:</p> <ul style="list-style-type: none"> <li>Characterisation of construction waste streams</li> <li>Management of any identified hazardous waste streams</li> <li>Procedures to manage construction waste streams, including handling, storage, classification, quantification, identification and tracking</li> <li>Mitigation measures for avoidance and minimisation of waste materials</li> <li>Procedures and targets for reuse and recycling of waste materials.</li> <li>Inclusion of the waste management strategies included in the Concept Plan Statement of Commitments for construction waste management.</li> </ul>					
12B	<p>Measures to mitigate the effect of the operational waste streams would be incorporated into the Amended Proposal's OEMP, including the following information:</p> <ul style="list-style-type: none"> <li>Addressing waste management requirements and goals in staff inductions</li> </ul>	Operation	Y	Y	N	<u>N</u>

## MPE Stage 2 RtS

No.	Mitigation measures	Implementation stage	Applicability			
			Warehousing	Freight village	Moorebank Avenue Upgrade	<u>Site infrastructure</u>
	<ul style="list-style-type: none"> <li>• Providing staff access to documentation outlining the facility's waste management requirements</li> <li>• Appropriate areas shall be provided for the storage of waste and recyclable material including: <ul style="list-style-type: none"> <li>– Locating recycling bins in kitchen areas beside general waste bins to prevent contamination of recycling</li> <li>– Positioning paper recycling bins close to printer / photocopying equipment</li> <li>– Establishing bays or containers for recyclable waste generated through de-stuffing</li> <li>– Minimising general waste bins at desks but providing adequate container and paper recycling to encourage sorting of recyclables</li> <li>– Ensuring warehouse tenants are providing adequate bin storage for the expected quantity of waste</li> </ul> </li> <li>• Standard signage on how to use the waste management system and what materials are acceptable in the recycling will be posted in all waste collection and storage areas</li> <li>• Waste management planning incorporating principles of the waste hierarchy</li> <li>• All domestic waste shall be collected regularly and disposed of at licensed facilities</li> <li>• By ensuring bins are placed in the correct location and access ways are clear waste collection vehicles will be able to service the development efficiently and effectively</li> <li>• An education programme and on-going monitoring will to be implemented for training personnel to properly sort and transport waste into the right components and destinations</li> <li>• Sewage waste will be discharged to Sydney Water sewerage infrastructure in accordance with Sydney Water requirements</li> </ul>					

## MPE Stage 2 RfS

No.	Mitigation measures	Implementation stage	Applicability			
			Warehousing	Freight village	Moorebank Avenue Upgrade	<u>Site infrastructure</u>
	<ul style="list-style-type: none"> <li>Trade waste will be discharged to the sewer through a trade waste agreement with Sydney Water</li> <li>Inclusion of the waste management strategies included in the Concept Plan Statement of Commitments for operational waste management.</li> </ul>					
<b>13.</b>	<b>Bushfire</b>					
13A	<p>A bushfire management strategy, or equivalent, will be prepared as part of the CEMP for the Amended Proposal. The strategy will include:</p> <ul style="list-style-type: none"> <li>Emergency response plans and procedures</li> <li>Restrictions on activities (namely hot works) that cannot be undertaken on total fire ban days within areas of high Bushfire Hazard Rating, unless otherwise advised by the NSW Rural Fire Service.</li> <li>All construction site offices and temporary buildings will be located outside buffer areas to ensure minimum setbacks of 10 m.</li> <li>All construction site offices will be accessible via access roads suitable for firefighting appliances similar to NSW Rural Fire Service category 1 tankers.</li> </ul>	Construction	Y	Y	Y	<u>Y</u>
13B	<p>A bushfire management strategy, or equivalent, would be prepared as part of the OEMP for the Amended Proposal. In particular, the strategy would ensure management of landscaped areas within the Stage 2 site would be undertaken to maintain minimum dry fuel loads.</p>	Operation	Y	Y	<u>Y</u>	<u>Y</u>
<b>14.</b>	<b>Property and infrastructure</b>					
14A	<p>As relevant, further assessment of services demand, infrastructure requirements and augmentation works, in consultation with relevant infrastructure and service providers would be undertaken.</p>	Detailed design	Y	Y	Y	<u>Y</u>

## MPE Stage 2 RtS

No.	Mitigation measures	Implementation stage	Applicability			
			Warehousing	Freight village	Moorebank Avenue Upgrade	<u>Site infrastructure</u>
<b>15.</b>	<b>Socio-economic</b>					
15A	A community information and awareness strategy would be included in the CEMP and would outline measures to maintain communication with the community and all relevant stakeholders throughout the construction process of the Amended Proposal.	Construction	Y	Y	Y	<u>Y</u>
15B	The Operational Environmental Management Plan (OEMP) would include measures to engage with stakeholders and to manage and respond to feedback received during the operation of the Amended Proposal.	Operation	Y	Y	N	<u>Y</u>

## 9 CONCLUSIONS

SIMTA are seeking approval for the construction and operation of the Moorebank Precinct East (MPE) Stage 2 Proposal (the Proposal) (SSD 7628), which will be the second stage of development under the MPE Concept Approval (MP 10\_0193).

The Environmental Impact Statement (EIS) for the Proposal was publicly exhibited between 13 December 2016 and 24 February 2017.

This RtS has been prepared in accordance with clause 83 of the *Environmental Planning and Assessment Regulation 2000*, to address comments raised by both government agencies and the community during the public exhibition of the EIS, between 13 December 2016 and 24 February 2017. This RtS provides further information and justification for the Proposal in order to, where possible, respond to and address the submissions received (refer to Sections 4 and 5 of this RtS).

This RtS also includes amendments to the exhibited Proposal, now known as the Amended Proposal. These amendments have been undertaken to address submissions received, reflect progression in design development since lodgement of the EIS, provide additional clarity, and also to minimise the overall environmental impact of the Proposal where possible (refer to Sections 6 and 7 of this RtS).

The mitigation measures provided within the EIS (Chapter 22 of the EIS) have been updated to respond to the submissions received (refer to Section 8 of this RtS) and address the scope of the Amended Proposal. Overall, the assessment identifies that the Amended Proposal would, subject to the implementation of updated mitigation measures, result in no substantial environmental impacts in addition to those identified within the EIS.

### 9.1 Overview of submissions and consultation

During the public exhibition period of the Proposal (13 December 2016 to 24 February 2017), submissions were invited from all stakeholders including members of the community and government stakeholders. A total of 156 public submissions were received from the community. A total of eight submissions were received from government agencies and an additional three submissions were received from special interest groups, including immediately surrounding land owners.

It should be noted, as demonstrated within Sections 3 and 5 of this RtS, that a large number of community submissions received were not directly relevant to the scope of the Proposal, but rather were submitted in relation to the overall MPE Project in general, i.e. related to the MPE Concept Approval (MP 10\_0913). Regardless, these submissions have been addressed in Sections 3 and 5 of this RtS.

The key issues which have been raised for the Proposal, by the community and Government agencies (note that multiple issues may have been raised within a single submission), include:

- Traffic and transport (60 submissions)
- Community (45 submissions)
- Natural environment (40 submissions)
- Planning process (33 submissions).

Government agencies raised similar concerns to those provided by the community. These submissions were collated, analysed and included within this RtS (refer to Section 3 and 4 of this RtS).

This RtS includes consideration of all comments raised by stakeholders and provides additional information, where necessary, to respond to and close out all concerns raised. Further, where necessary and suitable, the mitigation measures (previously

provided within Chapter 22 of the EIS) have been updated and included within this RtS (refer to Section 8 of this RtS).

## 9.2 Proposal Amendments

This RtS includes a number of amendments to the Proposal as exhibited. A summary of the amendments the Proposal, for which approval is sought is as follows:

- Realignment of the OSD in the north-eastern corner of the Proposal site
- Changes to the horizontal extent of the Moorebank Avenue Upgrade
- Changes to warehouse layout in two separate locations
- Alterations to drainage design to the south of the MPE site
- Amendments to the Construction Area and Operational Area as a result of the above amendments.

A description of these changes has been provided within Section 6 of this RtS. A consolidated description of the Amended Proposal, including amendments to the Proposal and the Proposal as exhibited in the EIS has been provided in Appendix I of this RtS.

Additional environmental assessment has been undertaken, within Section 7 of this RtS, for each of the amendments to the Proposal, to identify and assess any impacts that differ from those assessed within the EIS. Supplementary technical specialist studies have been provided, as relevant, to support assessment of the potential impacts of the Amendments to the Proposal and are included as appendices to this RtS.

The assessment identifies that the Amended Proposal would, subject to the implementation of updated mitigation measures (refer to Section 8 of this RtS), result in environmental impacts consistent with those identified within the EIS.

## 9.3 Next steps

The DP&E will, on behalf of the NSW Minister for Planning, review and assess the EIS and this RtS. Once the DP&E has completed its assessment, a draft assessment report will be prepared for the Secretary of the DP&E, which may include recommended conditions of approval.

The assessment report will then be provided to the Planning Assessment Commission (PAC) for consideration. The PAC would assess and determine the Proposal, with any additional conditions the PAC considers appropriate.

The PAC's determination, including the final conditions of approval and the Secretary's report, will be published on the DP&E's website immediately after determination, together with a copy of this RtS.

SIMTA is committed to continuing to consult with stakeholders, including the community throughout the planning of the Amended Proposal and future stages of development. Further information on the Amended Proposal is available on the SIMTA website: [www.simta.com.au](http://www.simta.com.au)



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