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Moorebank Precinct East - Concept Plan Modification 2

(MP10_0193_MOD2)

SIMTA

SYDNEY INTERMODAL TERMINAL ALLIANCE

November 2016

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SYDNEY INTERMODAL TERMINAL ALLIANCE

Moorebank Precinct East Intermodal Terminal Facility

Application to Modify Concept Plan Approval (MP10_0193)

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GLOSSARY OF KEY TERMS

Term	Meaning
AIP	Australian Infrastructure Plan (Infrastructure Australia, 2016)
Area of impact	All areas seeking approval for impact under the Modification Proposal including erosion and sediment controls, establishment of site compounds and ancillary facilities.
CBD	Central Business District
CLM Act	*Contaminated Land Management Act 1997*
DA	Development Application
DECCW	Department of Environment, Climate Change and Water
DoEE	Department of the Environment and Energy(Cwlth)
DJLU	Defence Joint Logistics Unit
DNSDC	Defence National Storage and Distribution Centre
DO	Dissolved oxygen
DP	Deposited Plan
DP&E	NSW Department of Planning and Environment
EA	Environmental Assessment
EIS	Environmental Impact Statement
EOD	Explosive Ordnance Demolition
EP&A Act	*Environmental Planning and Assessment Act 1979*
EP&A Regulation	*Environmental Planning and Assessment Regulation 2000*
EPA	Environment Protection Act
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999* (Cwlth)
EPI	Environmental Planning Instrument
EPL	Environment Protection Licence
ESD	Ecologically sustainable development
FBA	Framework for Biodiversity Assessment (NSW OEH, 2015)
The Freight and Ports Strategy	*NSW Freight and Ports Strategy* (Transport for NSW, 2013)
FM Act	*Fisheries Management Act 1994*
GFA	Gross Floor Area
GMREP No.2	*Greater Metropolitan Regional Environmental Plan No.2 - Georges River Catchment*
Heritage Act	*Heritage Act 1977*
IMT	Intermodal terminal
ISEPP	*State Environmental Planning Policy (ISEPP) 2007*

Term	Meaning
Liverpool LEP	*Liverpool Local Environmental Plan 2008*
LEP	Local Environmental Plan
LGA	Local Government Area
Long Term Transport Master Plan	*NSW Long Term Transport Master Plan* (Transport for NSW, 2012)
Major Development SEPP	*State Environmental Planning Policy (Major Development) 2005* (now repealed)
MIC	Moorebank Intermodal Company
MNES	Matters of National Environmental Significance
Modification Proposal	The subject of this Modification Report. Various amendments that are required to facilitate the second stage of development of the MPE Project.
The Moorebank Precinct	Refers to the whole Moorebank intermodal precinct, i.e. the MPE site and the MPW site
Moorebank Precinct East (MPE) Concept Plan Approval (formerly the SIMTA Concept Plan Approval)	MPE Concept Plan Approval (SSD_0193), granted by the NSW Department of Planning and Environment on 29 September 2014 for the development of former defence land at Moorebank to be developed in three stages; a rail link connecting the site to the Southern Sydney Freight Line, an intermodal terminal, warehousing and distribution facilities and a freight village.
Moorebank Precinct East Concept Plan Modification No 1	A Concept Plan modification application, prepared under Section 75W of the EP&A Act which sought inclusion of Lot 1 Deposited Plan (DP) 1130937 in the MPE Concept Plan Approval (No. 10_0193) for the MPE Project and revision of Condition 1.9 of the MPE Concept Plan Approval.
Moorebank Precinct East Concept Plan Modification No 2	The subject of this Modification Report. A Concept Plan modification application, prepared under Section 75W of the EP&A Act which seeks approval for various amendments that are required to facilitate the second stage of development of the MPE Project.
Moorebank Precinct East (MPE) EPBC Approval	Approval (No. 2011/6229) granted under the EPBC Act on March 2014 by the Commonwealth Department of Environment for the development of the SIMTA IMT Facility at Moorebank.
Moorebank Precinct East (MPE) Project (formerly the SIMTA Project)	The MPE Intermodal Terminal Facility, including a rail link and warehouse and distribution facilities at Moorebank (eastern side of Moorebank Avenue) as approved by the MPE Concept Plan Approval (MP 10_0913) and the MPE Stage 1 Approval (14_6766).
Moorebank Precinct East (MPE) Stage 2 Proposal (formerly the SIMTA Stage 2 Proposal/the Proposal)	Stage 2 of the MPE Concept Plan Approval, including the construction and operation of 300,000m^2 of warehousing and distribution facilities on the SIMTA site.

Term	Meaning
Moorebank Precinct East (MPE) site (formerly the SIMTA Site)	The area within the MPE site which includes all areas to be disturbed by the Proposal (including the operational area and construction area). The MPE site includes the former DSNDC site and the land owned by SIMTA which is subject to the MPE Concept Plan Approval (Lot 1 DP1048263). The MPE site does not include the rail corridor, which relates to the land on which the rail link is to be constructed.
Moorebank Precinct West (MPW) Project (formerly the MIC Project)	The MPW Project as approved under the MPW Concept Plan Approval (SSD_5066) and the MPW EPBC Approval (No. 2011/6086).
Moorebank Precinct West (MPW) site (formerly the MIC site)	The site which is the subject of the MPW Concept Plan Approval, MPW EPBC Proposal and MPW Planning Proposal (comprising Lot 1 DP1197707 and Lots 100, 101 DP1049508 and Lot 2 DP 1197707). The MPW site does not include the rail link as referenced in the MPW Concept Plan Approval or MPE Concept Plan Approval.
MPE	Moorebank Precinct East
MPW	Moorebank Precinct West
NO	Nitrogen oxide
NO_2	Nitrogen dioxide
NPW Act	*National Parks and Wildlife Act 1974*
NSW 2021	*NSW 2021: A plan to make NSW number one* (NSW Department of Premier and Cabinet, 2011)
NSW Ports Master Plan	*Navigating the Future NSW Ports 30 Year Master Plan* (NSW Ports, 2015)
NW Act	*Noxious Weeds Act 1993*
OEMP	Operational Environmental Management Plan
Operational area	Extent of operational activities for the operation of the MPE Stage 2 Proposal.
OSD	Onsite detention
PAC	The (NSW) Planning Assessment Commission
PAD	Potential archaeological deposit
PM	Particulate matter
PM_{10}	Coarse particulate matter less than or equal to 10 micrometers in diameter
$PM_{2.5}$	Fine particulate matter less than or equal to 2.5 micrometers in diameter
POEO Act	*Protection of the Environment Operations Act 1997*
Rail Corridor	Area defined as the 'Rail Corridor' within the MPE Concept Plan Approval.
RMS	Roads and Maritime Services

Term	Meaning
SEARs	Secretary's Environmental Assessment Requirements
SEPP	State Environmental Planning Policy
SEPP 33	*State Environmental Planning Policy No.33 - Hazardous and offensive development*
SEPP 55	*State Environmental Planning Policy No. 55 - Remediation of land*
SEPP 64	*State Environmental Planning Policy No. 64 - Advertising and signage*
SIMTA	Sydney Intermodal Terminal Alliance, the Proponent for the MPE Project
SME	School of Military Engineering
SoCs	Revised Statement of Commitments dated June 2014
SSD	State Significant Development
SSFL	Southern Sydney Freight Line
The Stage 1 Proposal (formerly the SIMTA Stage 1 Proposal)	Stage 1 (14-6766) of the MPE Concept Plan Approval for the development of the MPE Intermodal Terminal Facility, including the rail link at Moorebank. This reference also includes associated conditions of approval and environmental management measures which form part of the documentation for the approval.
State and Regional Development SEPP	*State Environmental Planning Policy (State and Regional Development) 2011*
State Infrastructure Strategy	*State Infrastructure Strategy 2012-2032* (NSW Department of Premier and Cabinet (2012))
Subregional Strategy	*South West Subregion Draft Subregional Strategy* (NSW Department of Planning (now the NSW DP&E), 2009).
TEU	Twenty-foot equivalent unit, or one standard shipping container
TSC Act	*Threatened Species Conservation Act 1995*
WM Act	*Water Management Act 2000*

EXECUTIVE SUMMARY

Background and purpose

This modification application has been prepared on behalf of the Sydney Intermodal Terminal Alliance (SIMTA) and seeks approval to modify the Concept Plan Approval (MP 10_0193) for an intermodal terminal (IMT) facility, warehousing and a freight village at Moorebank, NSW (the Moorebank Precinct East Project (MPE Project) (formerly the SIMTA Project)).

The Concept Plan Approval for the MPE Project (MPE Concept Plan Approval) was issued on 29 September 2014, in accordance with section 75O (now repealed) of the *Environmental Planning and Assessment Act 1979* (EP&A Act). The MPE Project is a Transitional Part 3A Project, and therefore the modification provisions in section 75W (now repealed) of the EP&A Act continue to apply pursuant to clause 3C of Schedule 6A of the EP&A Act.

The MPE Project involves the development of an IMT, warehouse and distribution facilities with ancillary offices, a freight village (ancillary site and operational services), stormwater, landscaping, servicing and associated works, together with a rail link connecting the MPE Project to the Southern Sydney Freight Line (SSFL) within the Rail Corridor (the entire area, being the MPE site and Rail Corridor).

The MPE Project (as proposed to be modified) is to be developed in three stages:

- Stage 1 – Construction and operation of the IMT facility and rail link (herein referred to as the Stage 1 Project, refer to Section 1.2.2 for more information)
- Stage 2 – Construction and operation of warehouse and distribution facilities (refer to Section 1.2.3 for more information)
- Stage 3 – Increase in capacity of the IMT facility as per the MPE Concept Plan Conditions of Approval (herein referred to as the future Stage 3 Proposal) and upgrades to the warehousing and distribution facilities (in accordance with the Concept Plan Conditions of Approval) to accommodate the increase in capacity of the IMT.

The Modification Proposal

Since the Concept Plan Approval, a number of design refinements have been made to the MPE Project. The following amendments to the MPE Project are now proposed (Modification Proposal):

- Extend the land to which the MPE Concept Plan Approval applies to recognise works on Moorebank Avenue and drainage works to the south and east of the MPE site
- Moorebank Avenue upgrade from the northern to the southern extent of the MPE site including alterations to the existing lane configuration, increasing the vertical alignment, some widening and ancillary services and infrastructure such as stormwater drainage on the western side of Moorebank Avenue
- Provision of an interim MPE site access to warehousing
- Reconfiguration of the internal road network within the MPE Stage 2 site and use of all internal roads by both light and heavy vehicles, rather than separating heavy and light vehicles within the MPE site
- Importation of clean general fill (approximately 600,000m^3) material for bulk earthworks to adjust the building formation to support the functionality of the site stormwater and drainage system

- Change to the location of, and land uses within the freight village and provision of warehousing along the Moorebank Avenue frontage (previously identified as IMT)
- Changes to the staging of development including construction of all warehouses as part of the MPE Stage 2 Proposal
- Subdivision of the MPE site.

Need for planning approval modification

On a large and complex project, such as MPE, it is common-place and to be expected that modifications will need to be made to a Concept Plan Approval as a consequence of the progress of detailed design. Section 75W (now repealed) of the EP&A Act recognises the need for changes and provides:

"(2) The proponent may request the Minister to modify the Minister's approval for a project. The Minister's approval for a modification is not required if the project as modified will be consistent with the existing approval under this Part."

Some of the individual components of the Modification Proposal are likely to be considered consistent with the MPE Concept Plan Approval and therefore may not specifically require a modification application. However, it is considered appropriate that the components of the Modification Proposal be considered as a group. Accordingly, a modification under Section 75W (now repealed) of the EP&A Act is being sought in relation to all the components of the Modification Proposal.

Justification of the Modification Proposal

The Modification Proposal responds to opportunities to optimise the operation of the IMT, accommodate drainage infrastructure contemplated by the MPE Concept Plan, improve environmental outcomes and enhance safety. The Modification Proposal also addresses matters such as subdivision which were not contemplated at the time the MPE Concept Plan Approval was granted.

The specific need for each of the components of the Modification Proposal is discussed below.

Moorebank Avenue upgrade

The proposed Moorebank Avenue upgrade was developed with reference to background traffic flows, proposed MPE traffic and consideration of surrounding development (in particular the Moorebank Avenue upgrade works included in the MPW Stage 2 Proposal). It includes four-lanes on Moorebank Avenue at the northern extent of the upgrade area and the design also accommodates a future widening to four lanes over the full extent of the upgrade site if warranted by future increases in background traffic levels.

The Moorebank Avenue upgrade would bring the existing road up to current design standards, which would improve the usability and safety of this infrastructure for project traffic and the wider community alike. It would also ensure that Moorebank Avenue is integrated into the precinct by reducing traffic congestion and minimising stormwater impacts and takes advantage of available clean fill from other infrastructure projects.

Interim northern MPE site access

The proposed interim northern warehousing access via the existing Moorebank Avenue intersection with the northern MPE site access would allow construction and interim operational access to warehousing while avoiding direct impacts on the DJLU access to the north.

Internal road network changes

The refinement of the road network, and resultant use of internal roads by heavy and light vehicles has been proposed to maximise the efficiency of operations within the MPE site and to improve safety. With the changes, the transfer roads would be an entirely separate road network, which would improve road safety throughout the MPE site, allowing for direct transfer of containers from the IMT facility to the warehouses.

Importation of general fill and bulk earthworks

The importation of general fill for bulk earthworks is required to facilitate the adequate operation and function of drainage and flooding infrastructure, including OSD basins. Adjustment to the site's final levels via the importation of general fill for bulk earthworks helps achieve the minimum gradients required for the site drainage infrastructure upstream of the OSDs, ensuring the site can be effectively drained in a 100-year annual recurrence interval (ARI) event. The adjustment of the site's levels would also bring the operational area of the MPE site above the regional probable maximum flood (PMF) levels.

Freight village location / uses and warehousing

During the design development process, it was identified that the operation of the freight village could be optimised by moving it from the north-eastern corner of the MPE site, to the north-western corner. By moving the freight village west, it would be positioned at the 'gateway' location adjacent to Moorebank Avenue, thereby attracting greater passing trade, and becoming more commercially viable. This new location would also reduce conflict between vehicles and pedestrians accessing the freight village (i.e. users would travel a shorter distance from Moorebank Avenue that identified in the MPE Concept Plan Approval).

Changes to staging

The proposed changes to staging allows a larger proportion of MPE Project site facilities to be delivered earlier in response to market demand, including construction of all warehouses and the freight village, thereby improving the operation of the MPE site and providing better facilities for users. The new staging would bring forward a larger proportion of the benefits of the MPE Project and by completing all warehouses as part of Stage 2, would reduce potential conflicts between operational vehicles and construction vehicles.

Subdivision

The MPE Project will attract tenants that are seeking to setup long term operations and build greater long term efficiency in their entire supply chain. Subdivision of the site is needed to facilitate the long-term leases on land associated with the land within the MPE Site

Planning approval pathway

The Modification Proposal would not significantly alter the assessment provided in the MPE Concept Plan Environmental Assessment (EA) in relation to relevant legislation and plans. It would also not alter functions of the MPE Project and only minor amendments to MPE Project boundary are proposed in order to facilitate the development of the MPE site. In this context, the Modification Proposal is not considered to represent a 'radical transformation' of the MPE Project as described in the MPE Concept Plan Approval.

The Modification Proposal would also have little or no adverse environmental consequences beyond those envisaged in the MPE Concept Plan Environmental Assessment (EA) (Urbis, 2013). This is consistent with the established principles for modifications under section 75W. With minor revisions, the MPE Concept Plan Conditions of Approval and SoCs are considered adequate to address environmental issues associated with Modification Proposal.

On this basis, it is considered appropriate for assessment of the Modification Proposal to occur in accordance with Section 75W of the EP&A Act and associated Part 3A transitional provisions in of Schedule 6A of the EP&A Act.

Potential environmental impacts

The potential environmental impacts associated with the Modification Proposal have been assessed in the context of the MPE Concept Plan Approval. The main findings of the assessment are as follows:

- **Traffic and transport**
  - Construction traffic impacts of the Modification Proposal would be temporary and short-term. Construction traffic associated with the Modification Proposal would not have an adverse impact on the performance of key intersections near the MPE site, with these intersections continuing to operate satisfactorily during the AM and PM peak periods.
  - The Modification Proposal would not alter the overall operational traffic associated with the MPE Project, as considered by the MPE Concept Plan Approval.
- **Noise and vibration**
  - Construction noise levels associated with the construction of the Modification Proposal would comply with the established construction noise management levels (NML) for standard construction hours set in accordance with the *Interim Construction Noise Guideline* (DECC, 2009) at all receivers. Out of hours works would also comply with NMLs, except for a predicted 1 dB exceedance in Wattle Grove, which is considered negligible.
  - Additional construction traffic associated with the Modification Proposal would have an imperceptible effect on road traffic noise on the surrounding road network and would comply with the established criteria.

- **Biodiversity**
  - Clearing of a very small, isolated and fragmented area of native vegetation, comprising 0.1 hectares of Hard-leaved Scribbly Gum – Parramatta Red Gum heathy woodland of the Cumberland Plain, Sydney Basin would be required. This vegetation was not mapped as part of the MPE Concept Plan EA, but would require removal with or without the Modification Proposal. All other areas to be impacted are planted and disturbed vegetation. Any impacts to native vegetation would be offset and has been considered in the current Biodiversity Offset Strategy to be prepared for the Moorebank Precinct (under the Draft MPE Stage 1 Conditions of Approval).
- **Hazards and risks**
  - The Modification Proposal would have similar construction and operation impacts with respect to hazards and risks to those identified by the Concept Plan Approval EA. In relation to bushfire risk, the Modification Proposal would not alter setbacks from bushfire prone vegetation and would maintain safe operational access/egress for emergency service personnel and occupants.
- **Contamination**
  - Construction of the Modification Proposal is not expected to introduce any new contamination issues / risks that were not previously considered by the Concept Plan Approval EA.
- **Stormwater and flooding**
  - Any additional potential flooding impacts associated with bulk earthworks during a significant rainfall event can be adequately managed with the implementation of the proposed management measures.
  - The Modification Proposal would not significantly alter the imperviousness of the MPE site when compared to the MPE Concept Plan Approval. It would also not significantly increase the imperviousness of the Moorebank Avenue, when compared to the existing road formation. Accordingly, there would not be significant changes to peak discharges from the either the MPE site or Moorebank Avenue attributable to the Modification Proposal
- **Air Quality**
  - Construction and operational phase emissions to air for the Modification Proposal would comply with all relevant impact assessment criteria
- **Heritage**
  - The Modification Proposal would not impact any areas of potential archaeological deposit (PAD)or any known Aboriginal sites. An additional commitment has been given to protect artefacts potentially identified during construction within the southern portion of the Modification Proposal site
  - There would be no additional non-Aboriginal heritage impacts as a result of the Modification Proposal because the heritage assessments undertaken for the MPE Concept Plan Approval and MPE Stage 1 Proposal have assumed complete removal of heritage values from the MPE site. This includes the built heritage associated with the former DNSDC site and any archaeological remains.
- **Visual and urban design**
  - The Modification Proposal would not contribute to a significant increase in visual impact at any viewpoint. A combination of the lighting design, luminaire selection, positioning and aiming would produce lighting results along Moorebank Avenue that comply with *AS4282-1997 Control of Obtrusive Effect of Outdoor Lighting*.

- **Utilities servicing**
  - The Modification Proposal would not affect provision of utility services to the MPE site. Consistent with the Concept Plan EA, all necessary utility services would still be available to the MPE site. Subdivision of the site would make provision for services easements as necessary.

Technical specialist assessments (either in report format or within the main body of this Modification Report) of the above key environmental issues and other environmental issues have been undertaken in consideration of the issues relevant to the Modification Proposal and those previously raised within the SEARs for the MPE Project.

Overall, it has been determined that the Modification Proposal would result in a relatively minor intensification of activity associated with future stages of development. This potential impact would predominately occur during construction and would be managed with minimal environmental impact through the implementation of the mitigation measures identified within the Conditions of Approval, Statement of Commitments (SoCs) and the additional mitigation measures identified in this report. As a result, approval of the Modification Proposal is recommended.

1 INTRODUCTION

This modification application has been prepared on behalf of the Sydney Intermodal Terminal Alliance (SIMTA) and seeks approval to modify the Concept Plan Approval (MP 10_0193) for an intermodal terminal (IMT) facility, warehousing and a freight village at Moorebank, NSW (the Moorebank Precinct East Project (MPE Project) (formerly the SIMTA Project)).

The Concept Plan Approval for the MPE Project was issued on 29 September 2014, in accordance with section 75O (now repealed) of the *Environmental Planning and Assessment Act 1979* (EP&A Act). The MPE Project is a Transitional Part 3A Project, and the modification provisions in section 75W (now repealed) of the EP&A Act continue to apply pursuant to clause 3C of Schedule 6A of the EP&A Act.

Since the Concept Plan Approval and *Environment and Biodiversity Conservation Act 1999* (EPBC Act) Approval (No. 2011/6229), a number of design refinements have been made to the MPE Project. These refinements have been made in response to opportunities to optimise the operation of the IMT, to facilitate the construction process and to address matters such as subdivision which were not contemplated at the time of the Concept Plan Approval. The refinements also respond to advice and consultation with government authorities and service providers, as well as additional data from more detailed environmental and social investigations.

The following amendments to the MPE Project are now proposed (Modification Proposal):

- Extend the land to which the MPE Concept Plan Approval applies to recognise works on Moorebank Avenue and drainage works to the south and east of the MPE site
- Moorebank Avenue upgrade from the northern to the southern extent of the MPE site including alterations to the existing lane configuration, raising of the vertical alignment, some widening and ancillary services and infrastructure such as stormwater drainage on the western side of Moorebank Avenue
- Provision of an interim MPE site access to warehousing
- Reconfiguration of the internal road network within the MPE Stage 2 site and use of all internal roads by both light and heavy vehicles, rather than light vehicles only for internal road No.2
- Importation of clean general fill (approximately 600,000m^3) material for bulk earthworks to adjust the building formation to support the functionality of the site stormwater and drainage system
- Change to the location of, and land uses within the freight village and provision of warehousing along the Moorebank Avenue frontage (previously identified as IMT)
- Changes to the staging of development including construction of all warehouses as part of the MPE Stage 2 Proposal
- Subdivision of the MPE site.

These amendments are required to facilitate the second stage of development of the MPE Project under the Concept Plan Approval. An Environmental Impact Statement (EIS) for Stage 2 of the MPE Project (SSD 16_7628) (MPE Stage 2) has been lodged concurrently with this modification application.

1.1 Background

The MPE Project involves the development of an IMT, warehouse and distribution facilities with ancillary offices, a freight village (ancillary site and operational services), stormwater, landscaping, servicing and associated works, together with a rail link connecting the MPE Project to the Southern Sydney Freight Line (SSFL) within the Rail Corridor (the entire area, being the MPE site and Rail Corridor).

The MPE Project (as proposed to be modified) is to be developed in three stages:

- Stage 1 – Construction and operation of the IMT facility and rail link (herein referred to as the Stage 1 Project, refer to Section 1.2.2 for more information)
- Stage 2 – Construction and operation of warehouse and distribution facilities (refer to Section 1.2.3 for more information)
- Stage 3 – Increase in capacity of the IMT facility as per the MPE Concept Plan Conditions of Approval (herein referred to as the future Stage 3 Proposal) and upgrades to the warehousing and distribution facilities (in accordance with the Concept Plan Conditions of Approval) to accommodate the increase in capacity of the IMT.

1.2 Existing and pending approvals

1.2.1 MPE EPBC and Concept Plan Approval

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 Planning Assessment Commission (PAC) as delegate of the Minister for Planning on the 29 September 2014 for the 'Concept Plan Approval' of the MPE Project under Part 3A[1] of the EP&A Act.

The EPBC and Concept Plan Approvals involved the preparation of design and environmental assessment documentation for the concept plan approval stage. The Conditions of Approval for the EPBC Approval, and the Concept Plan Approval provide a detailed list of further investigations and information that should be undertaken to inform future approvals for the site, and ultimately construction and operation of the MPE Project. The Concept Plan – Land uses which formed the basis for the Concept Plan Approval is reproduced in **Error! Reference source not found.**.

A Concept Plan modification application (Concept Plan Modification 1), prepared under Section 75W of the EP&A Act was submitted concurrently with the EIS for the Stage 1 Project. Concept Plan Modification 1 sought approval for the following modifications:

- Modification A: Inclusion of Lot 1 Deposited Plan (DP) 1130937 in the Concept Plan Approval (MP10_0193) for the MPE Project

[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.

- Modification B: Revision of Condition 1.9 of the Concept Plan Approval (MP10_0193) to exclude provisions 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.

Concept Plan Modification 1 approval is anticipated to be granted by the Planning Assessment Commission (PAC) in late 2016.

1.2.2 MPE Stage 1 Proposal

Approval for the MPE Stage 1 Proposal is anticipated to be granted by the PAC in late 2016 under Part 4, Division 4.1 of the EP&A Act. An EIS was prepared and submitted concurrently with the modification for Concept Plan Modification 1 (refer to discussion above). The Approval allows for the construction and operation of the Stage 1 Project, which includes the following key components:

- An Import Export (IMEX) IMT operating 24 hours, 7 days a week, with a capacity to handle up to 250,000 twenty foot equivalent units (TEU)
- Truck processing, holding and loading areas with an entrance and exit point from Moorebank Avenue
- Rail loading and container storage areas including the installation of four rail sidings with an adjacent container storage area serviced initially by manual handling equipment and progressive installation of overhead gantry cranes
- An administration facility and associated car parking with light vehicle access from Moorebank Avenue
- The Rail link, located within the Rail Corridor and including a connection to the IMT facility, traversing Moorebank Avenue, Anzac Creek and Georges River and connecting to the SSFL
- Ancillary works including vegetation clearance, remediation, earth works, utilities installation/connection, signage and landscaping.

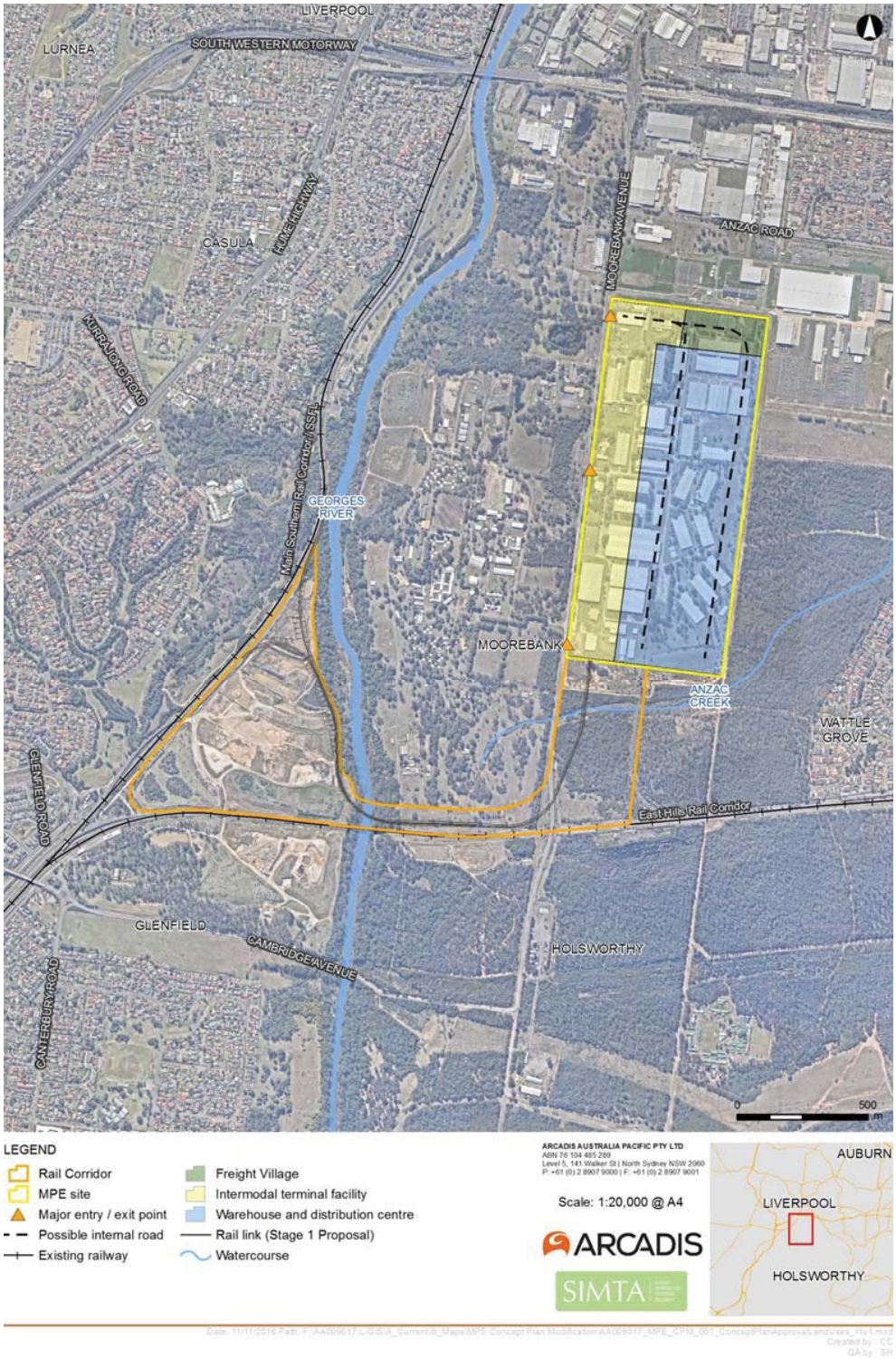

Figure 1-1 Concept Plan Approval land uses (approved in the Concept Plan Application, MP10_0193)

Note: Adapted from Reid Campbell (2012)

1.2.3 MPE Stage 2 Proposal

As noted above, an EIS for MPE Stage 2 (SSD 16_7628) has been lodged concurrently with this modification application. The key components of MPE Stage 2, including those elements the subject of this modification application, are:

- Warehousing comprising approximately 300,000m^2 GFA, additional ancillary offices and the ancillary freight village
- 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 MPE Stage 2 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 two metres 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.

1.2.4 Moorebank Precinct West Project

The Moorebank Precinct West (MPW) Project is located immediately west of the MPE site, across Moorebank Avenue. The MPW Project encompasses the former School of Military Engineering (comprising Lot 1 DP1197707 and Lot 100 DP1049508) and Moorebank Avenue (Lot 2 DP 1197707), collectively known as the MPW site. Approval for the MPW Concept Plan (SSD 5066), under Part 4, Division 4.1 of the EP&A Act to develop the MPW Project, was received on 3 June 2016.

The MPW Project involves the development of an IMT facility linked to the SSFL to provide access to Sydney shipping ports and the interstate freight rail network. It also includes associated commercial infrastructure (i.e. warehousing), a rail link connecting the MPW site to the rail link to be developed for MPE Stage 1 (SSD 14-6766), and a road entry and exit point from Moorebank Avenue.

Approval for the Early Works phase was granted as Stage 1 of the MPW Project within the MPW Concept Plan Approval and pre-construction works for this phase are currently underway. The other phases of the MPW Project are subject to additional approvals under Part 4, Division 4.1 of the EP&A Act.

An EIS seeking approval for Stage 2 of the MPW Project, which includes the construction and operation of an IMT facility, warehousing and a Rail link connection under the MPW Concept Plan Approval was lodged with DP&E in October 2016 and placed on public exhibition between 26 October 2016 and 25 November 2016.

1.3 Consultation

Discussions regarding the Modification Proposal have occurred periodically with DP&E. These discussions commenced in October 2016 and have included meetings, emails and the provision of documentation identifying the need for and proposed approach to the modification.

Consultation with key stakeholders and agencies has also occurred during the preparation of the EIS for MPE Stage 2. This consultation has included discussions and correspondence with government agencies as well as infrastructure and service providers.

1.4 Structure of this report

The structure of this modification application report is as follows:

- **Section 1 –** Introduction: provides an overview of the MPE Concept Plan Approval, related approvals, the MPE Project and an introduction to the Modification Proposal.
- **Section 2 –** Site description: provides a summary of the MPE site and its context and the area of impact for the Modification Proposal.
- **Section 3 –** Proposed modification: provides a detailed description of the Modification Proposal and the proposed modification to the MPE Concept Plan Approval.
- **Section 4 –** Statutory planning assessment: provides an assessment of the Modification Proposal against the relevant legislation and statutory instruments and considers whether the Modification Proposal can be appropriately considered as a modification.
- **Section 5 –** Environmental assessment: provides an environmental assessment of the Modification Proposal.
- **Section 6 –** Conclusion: provides a summary and conclusion to this modification application report.

The following appendices are included in this modification application report:

- Appendix A – Revised Statement of Commitments
- Appendix B – Construction Traffic Memorandum
- Appendix C – Noise and Vibration Assessment
- Appendix D – Biodiversity Memorandum
- Appendix E – Air Quality Assessment
- Appendix F – Heritage Memorandum

2 SITE DESCRIPTION

Section 2 provides a summary of the area that would be impacted by the Modification Proposal, including a description of its regional setting and local context.

2.1 Site context

The MPE site encompasses the entire site, with the exception of the rail link, for which Concept Plan Approval was granted.

The MPE site is located approximately 27 km south-west of the Sydney Central Business District (CBD) and approximately 26 km west of Port Botany. The site is situated within the Liverpool Local Government Area (LGA) in Sydney's South West Sub-Region, approximately 2.5 km from the Liverpool City Centre.

A number of residential suburbs are located near the area affected by the Modification Proposal[2], including:

- Wattle Grove, located approximately 640 metres from the area of impact
- Moorebank, located approximately 870 metres from the area of impact
- Casula, located approximately 1.3 kilometres from the area of impact
- Glenfield, located over two kilometres from the area of impact.

The MPE site is located near a number of significant industrial areas, including:

- Yulong and ABB sites adjacent to Moorebank Avenue, to the south of the M5 Motorway
- Goodman MFive Industry Park and other industrial and commercial development to the north of the M5 Motorway
- Warwick Farm to the north
- Chipping Norton to the north-east
- Prestons to the west
- Glenfield and Ingleburn to the south-west.

The industrial area at Moorebank is the largest industrial precinct near the MPE Site, comprising around 200 hectares of industrial development, the majority of which is located to the north of the M5 Motorway 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.

[2] The distance of these residential suburbs has been calculated from the closest boundary of the Proposal site to the closest residential receiver within the suburb.

2.2 Site description

2.2.1 MPE site

The MPE site comprises around 83 hectares of land on the eastern side of Moorebank Avenue, Moorebank and adjoins the southern boundary the Defence Joint Logistics Unit (DJLU) (refer to Figure 2-1). The site is rectangular in shape (1,382 metres by 600 metres) and is located mostly within Lot 1 DP1048263.

The MPE site is generally flat with direct frontage and access to Moorebank Avenue (Lot 2 DP 1197707), a privately owned road that is currently accessible to the public.

The MPE site has historically been associated with the Department of Defence, being used in the early 1900s as a training camp and as a military storage facility since 1944. The site was sold by the Commonwealth in 2002, when it was purchased by Qube Holdings, and until recently, was leased back to the Department of Defence for use as the Defence National Storage and Distribution Centre (DSNDC) site.

While the Department of Defence has vacated the MPE 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 slightly elevated central portion on the eastern boundary. This elevated portion results in surface water drainage flowing in a north easterly and south easterly direction towards Anzac Creek and towards Moorebank Avenue and the Georges River to the west
- 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 current landform of the Stage 1 Proposal site, located on the south-western portion of the MPE site, would be altered. The construction footprint of the Stage 1 Proposal partially overlaps the MPE Stage 2 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 identified by the MPE Stage 1 Proposal EIS.

Within the Stage 1 Proposal construction footprint (including the area of overlap with the Stage 2 site), all existing vegetation and buildings would be cleared and demolished to facilitate construction of an IMT and Rail Link.

Similar to the Stage 1 Project, with the MPE Stage 2 Proposal (inclusive of the Modification Proposal) all existing vegetation and buildings would be cleared and demolished to facilitate construction of warehousing, the freight village, internal roads and ancillary supporting infrastructure.

2.2.2 Siting of the Modification Proposal

The Modification Proposal occupies the entire MPE site, approximately 1.4 kilometres of Moorebank Avenue between the northern MPE site boundary and 120 metres south of the southern MPE site boundary and a portion of the MPW site, immediately west of Moorebank Avenue, which is required for construction and a permanent OSD basin. Figure 2-1 shows the site of the Modification Proposal in its local context.

The site of the Modification Proposal was selected to meet the following requirements:

- Minimise the extent of encroachment outside the MPE site as identified in the MPE Concept Plan Approval
- Allow for the upgrade of Moorebank Avenue along the existing alignment
- Allow for drainage works and infrastructure including and OSD basin to the west of Moorebank Avenue and a drainage swale at the southern extent of the MPE site.

All works associated with the Modification Proposal, including erosion and sediment controls and establishment of site compound(s) and ancillary facilities, would occur within the area described above.

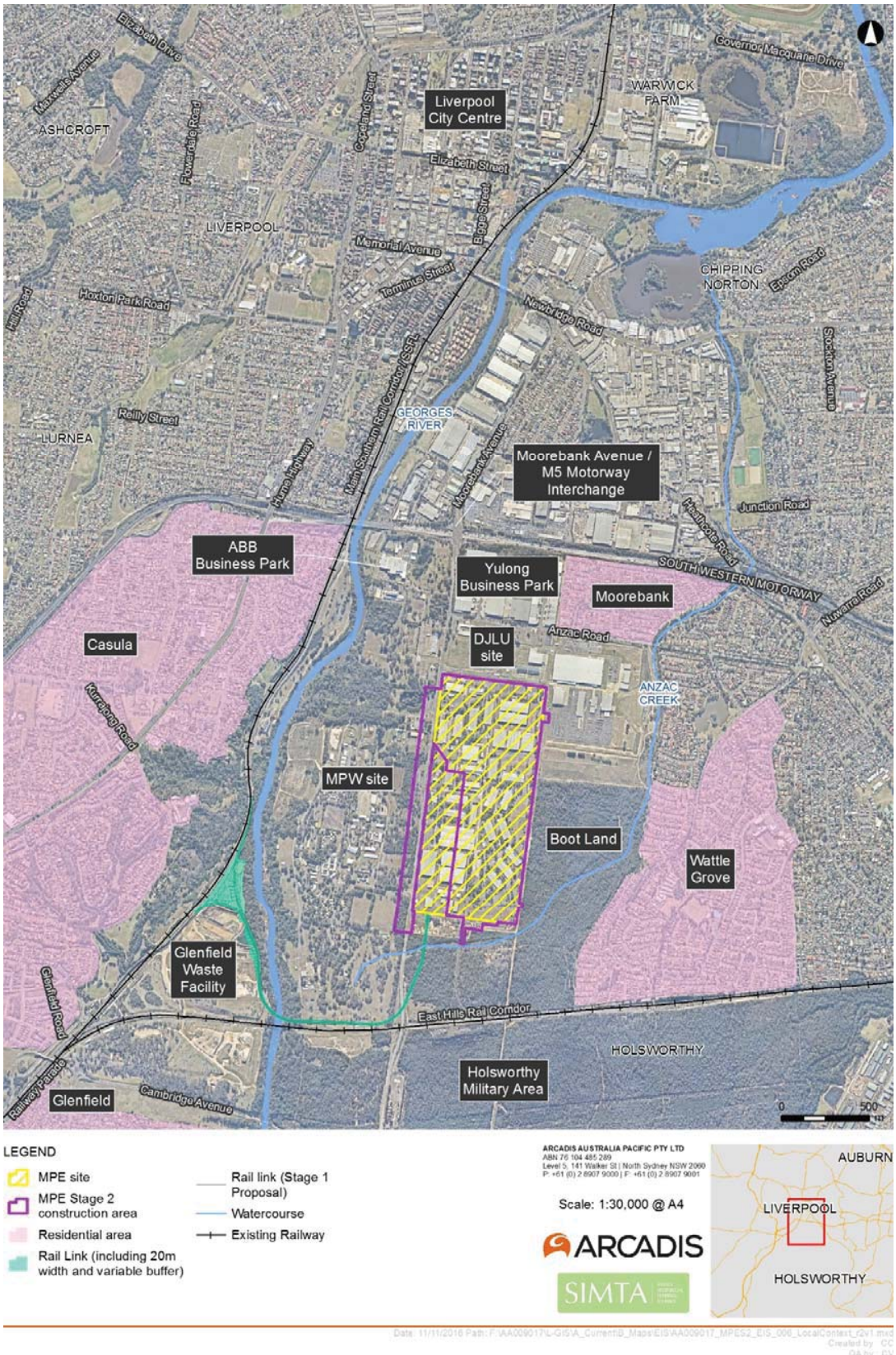

Figure 2-1 Site of the Modification Proposal and local context

3 MODIFICATION PROPOSAL

3.1 Need for approval modification

The MPE Project is a Transitional Part 3A Project, and the modification provisions in section 75W (now repealed) of the EP&A Act continue to apply pursuant to clause 3C of Schedule 6A of the EP&A Act. Section 75W provides:

"(2) The proponent may request the Minister to modify the Minister's approval for a project. The Minister's approval for a modification is not required if the project as modified will be consistent with the existing approval under this Part."

The main consideration in determining whether proposed amendments are consistent with the MPE Concept Plan Approval, and therefore whether a modification to the approval is needed, is whether they are consistent with the description of the rpject to which the approval applies and whether they satisfy the requirements of MPE Concept Plan Approval Condition of Approval No.1.1, specifically:

The Concept Plan involves the use of the site as an intermodal facility, including a rail link to the Southern Sydney Freight Line within an identified rail corridor, warehouse and distribution facilities, freight village (ancillary site and operational services), stormwater, landscaping, servicing and associated works

1.1 The Concept Plan approval shall be undertaken generally in accordance with:

a. *Major Project Application 10_0193*
b. *the Environmental Assessment SIMTA Sydney Intermodal Terminal Alliance Part 3A Concept Application, Volumes 1-4, prepared by Urbis and dated March 2012*
c. *the Environmental Assessment SIMTA Sydney Intermodal Terminal Alliance Transitional Part 3A Concept Application, Volumes 1-4, prepared by Urbis and dated August 2013;*
d. *the SIMTA Sydney Intermodal Terminal Alliance Submissions Report (including final Statement of Commitments), prepared by Urbis and dated December 2013; and*
e. *the terms of this approval.*

The following sections consider the amendments comprising the Modification Proposal in relation to the MPE Concept Plan Approval and associated environmental assessment documentation. For each amendment, a conclusion is provided regarding whether a modification to the MPE Concept Plan Approval is required.

Land to which the MPE Concept Plan Approval applies

The MPE Concept Plan Approval (MP10_0193), the concept plan instrument of approval specifically prescribes that the land to be developed for the intermodal site and rail corridor as follows:

Intermodal site: Land generally described as being located on the eastern side of Moorebank Avenue, between Anzac Road and the East Hills Passenger Line, Moorebank (Lot 1 in DP 1048263); and

Rail corridor: Land generally described as being located between the intermodal site and the East Hills Passenger Line to the south, part of the East Hills passenger Line/Commonwealth Land to the southwest, and the northern portion of the Glenfield Waste Disposal Facility to the west, comprising:

- Lot 3001 DP 1125930	*- Lot 52 DP 517310*
- Lot 1 DP 825352	*- Lots 101 – 104 DP 1143827*
- Lot 2 DP 825348	*- Lot 91 DP 1155962*
- Lots 1 & 2 DP 1061150	*- Lot 4 DP 1130937*
- Lot 1 DP 712701	*- Conveyance Book 76 Number 361*
- Lots 5 – 7 in DP 833516	*- George's River, Crown Land*
- Lot 51 in DP 515696	*- Lot 1 DP 1130937*[1]
- Crown Road[1]	*- Public road reserve of Moorebank Avenue (north of Anzac Road)*[1]

1. Subject to approval of MPE Concept Plan Modification 1, anticipated to be granted by PAC late 2016.

While the MPE Concept Plan Approval instrument of approval and environmental assessment indicate that Lot 3001 DP1125930 (which has since been subdivided and includes Lot 2, DP 1197707 (Moorebank Avenue) and Lot 1, DP 1197707 (the MPW site)) is also land to which the approval applies. However, approval for development on this land is expressed to be only for the purpose of the Rail Corridor and therefore does not apply to other works, including the Moorebank Avenue roadworks described below.

While it was always contemplated that drainage would flow across adjacent lands, the description of land to which the MPE Concept Plan Approval applies for the intermodal site also does not capture land to the immediate south and east of the MPE site, on which drainage works would need to occur (formerly Lot 3001 DP1125930, now Lot 4 DP1197707 and Lot 3002 DP1125930).

As the proposed road works on Moorebank Avenue within Lot 3001 DP1125930 (on current Lot 1 and Lot 2 of DP 1197707), and the proposed drainage works within Lot 3001 DP1125930 (on current Lot 4 DP1197707 and Lot 3002 DP1125930) fall outside land to which the MPE Concept Plan Approval relates (for the intermodal site), they may not be considered generally in accordance with the MPE Concept Plan Approval and associated assessment documents. The extension of land to which the MPE Concept Plan Approval applies (for the intermodal site) has therefore been included as part of the Modification Proposal.

Moorebank Avenue roadworks

The MPE Concept Plan Approval includes four key components:

- Rail link connecting the site to the SSFL
- IMT Facility
- Warehousing and distribution facilities comprising approximately 300,000 m^2 of warehouses and distribution facilities
- Freight village of approximately 8,000 m^2 of support services such as site management, security offices, driver facilities, and convenience, retail and business services.

The MPE Concept Plan Approval and the associated SoC contemplates a road capacity upgrade of Moorebank Avenue to four lanes between the M5 Motorway interchange and the southern MPE site access. While this upgrade requirement only needs to be addressed within 24 months of operating at 300,000 TEU throughput, part of these works are to be undertaken in an earlier stage of development to better prepare for an increased future capacity of the IMT and improve traffic capacity on Moorebank Avenue.

The proposed Moorebank Avenue road works partially address the SoCs, by providing a partial upgrade to four lanes and delivering clear benefits as discussed in Section 4 of this Modification Report. However, they may not be considered generally in accordance with the Concept Plan Approval and associated assessment documents. This is due to the proposed changes in the vertical alignment, because the requirement for the upgrade has not yet been triggered and because the proposed works only partially address the future upgrade requirement. The Moorebank Avenue upgrade has therefore been included as part of the Modification Proposal.

Interim site access

The MPE Concept Plan EA (Urbis, 2013) identified three access points to the MPE site, including a Moorebank Avenue northern access with traffic signals approximately 300 metres to the south of the Moorebank Avenue/Anzac Road intersection.

Subsequent to the MPE Concept Plan EA, the MPE Project was refined and an interim site access to warehousing on the MPE site is now proposed at the location of the existing northern SIMTA site access, approximately 200 metres south of the access point proposed in the MPE Concept Plan EA. The interim site access has been proposed pending the finalisation of consultation with the Department of Defence and Roads and Maritime Services regarding provision of a shared access with DJLU at the location identified by the MPE Concept Plan EA. In this context, it is also noted that the current DJLU intersection was constructed subsequent to the MPE Concept Plan Approval and the northern site access cannot now be implemented unless the intersection is integrated with the DJLU access.

While use of the existing northern MPE site access for construction and operation is intended to be an interim solution, which would be replaced with the access point proposed in the MPE Concept Plan EA during a future development stage, it may not be considered generally in accordance with the MPE Concept Plan Approval and associated assessment documents. The interim site access has therefore been included as part of the Modification Proposal.

Internal road network changes

The Urban Design and Landscape Report prepared to support the Concept Plan EA (Reid Campbell, 2011) for the MPE Project included a road network and hierarchy to support the various land uses on the MPE site (refer to Figure 1-1). This is hierarchy includes:

- Moorebank Avenue frontage: The primary connection to the MPE site for all roads, vehicle access, and pedestrian and cyclist entry and exit
- Estate Road: the major access road into the MPE site for both heavy and light vehicles, including a dual carriageway, landscaped median, integrated pedestrian and bicycle path and landscape buffer
- Internal Road 1: A service road for heavy vehicles to access warehouse and distribution facilities with an 18 metre road reserve and 8 metre bio-retention corridor
- Internal Road 2: A dedicated internal road for light vehicles to the freight village and dedicated staff parking areas for potential large format distribution warehousing along the north and eastern boundaries of the site.

Proposed changes to the road network and hierarchy would result in both heavy and light vehicles using internal road 1, internal road 2 and service roads throughout the MPE site. This may not be considered generally in accordance with the MPE Concept Plan Approval and associated assessment documents. The changes to the configuration and use of the MPE site internal road network have therefore been included as part of the Modification Proposal.

Fill importation for bulk earthworks

The MPE Concept Plan EA did not specifically consider the importation of general fill to the MPE site and Moorebank Avenue for purpose of bulk earthworks. Accordingly, the proposed importation of general fill may not be considered generally in accordance with the MPE Concept Plan Approval and associated assessment documentation. The importation of general fill to the site has therefore been included as part of the Modification Proposal.

Freight village location / uses and warehousing changes

The MPE Concept Plan EA included the provision of ancillary terminal facilities (i.e. a freight village) in the north-eastern corner of the MPE site, adjacent to the northern site boundary. The Concept Plan Conditions of Approval limit the freight village to a maximum gross floor area (GFA) of 8,000m^2.

The MPE Concept Plan EA noted that the final composition of the freight village would be based on demand and would be privately operated by tenants. It further noted that the village is likely to include the following infrastructure with a maximum building height of 15 metres:

- Site management and security offices
- Retail and business service centre, potentially including a convenience store, banking facilities and post office
- Meeting rooms/conference facilities available for hire by individual tenants
- Sleeping facilities for drivers
- A café/restaurant.

The freight village is now proposed to be located in the north-western corner of the MPE site with an additional use within the village, being light industrial uses (refer to section 3.2 of this Modification Report). While the SoCs encourage locating buildings at or near the north-eastern boundary of the MPE site to provide beneficial acoustic shielding to the nearest residences, noise modelling has confirmed that the revised warehousing layout provides adequate noise attenuation. This allowed relocation of the freight village to a more accessible location for users.

Amendments to the warehousing layout are also proposed with warehouses to be located on the frontage to Moorebank Avenue north of the IMT facility (in place of an extended IMT facility). This amendment has been identified through design development, with it being determined that the footprint of the IMT (at full capacity) can be reduced through an optimisation of operational layout and on-going procedures. The location of this warehousing is consistent with the overall themes of the MPE Concept Plan EA in that it would shield the IMT from receivers (to the north and west), whilst not increasing the overall GFA of warehousing and remaining consistent with local planning controls.

While this amendment does not change the intent, objectives, strategic need or overall concept, it may not be considered generally in accordance with the MPE Concept Plan Approval and associated assessment documentation. The proposed changes to the freight village location / uses and warehousing has therefore been included as part of the Modification Proposal.

Staging of the MPE Project

MPE Concept Plan EA notes that the MPE Project would be constructed in three 'indicative' stages. While three stages are still proposed, a large proportion of works originally included as part of Stage 3 as described in the Concept Plan EA, including construction of all warehouses, would now occur as part of the MPE Stage 2 Proposal. Table 3-1 provides a comparison of the of the MPE Project staging as proposed in the MPE Concept Plan EA to the Modification Proposal.

Table 3-1 Comparison of MPE Concept Plan and Modification Proposal staging

Stage [3]	MPE Concept Plan	Modification Proposal
2	Construction of the central portion of the intermodal terminal warehousing and distribution facilities and the south-eastern portion of large format warehousing and distribution facilities, including: • Circulation rods required to service the proposed warehouses • Staff and visitor car parking spaces required to service the proposed warehouses • Landscaping treatments within the development areas • Provision/upgrade of stormwater infrastructure and utility services required to service the stage 2 warehouses	• Warehousing comprising approximately 300,000m^2 GFA, additional ancillary offices and the ancillary freight village • Establishment of an internal road network, and connection of the MPE site to the surrounding road network • Ancillary supporting infrastructure within the MPE site and along Moorebank Avenue, • Partial upgrade to Moorebank Avenue
3	The final stage is anticipated to include: • Extension of the intermodal terminal from 650 m to 1,250 m in length • Construction of the remaining warehouses and distribution facilities. • Construction of the ancillary terminal facilities in the north-eastern corner of the site • Completion of the circulation roads	• Subsequent increases in IMT facility throughput as driven by market demand • Automation and expansion of the IMT facility • Construction of the final northern site access and internal road along the northern MPE site boundary • Ancillary supporting infrastructure within the MPE site • Any other activities to be undertaken to complete the full build of the MPE Project, as

[3] There would be no amendment to the staging of Stage 1 of the MPE Concept Plan Approval (i.e. the Stage 1 Proposal), under this Modification Report.

Stage [3]	MPE Concept Plan	Modification Proposal
	• Staff and visitor car parking spaces required to service the additional warehouses • Completion of landscaping treatments • Provision/upgrade of stormwater infrastructure and utility services required to service the additional warehouses.	identified in the MPE Concept Plan EA

While the staging plan included as part of the MPE Concept Plan EA was expressed to be indicative, the proposed change may still not be considered generally in accordance with the Concept Plan Approval and associated assessment documentation. The proposed changes to staging have therefore been included as part of the Modification Proposal.

Subdivision of the MPE site

The MPE Concept Plan environmental assessment and instrument of approval did not mention and therefore contemplate the subdivision of the MPE site or the provision of services easements as part of the development of the MPE Project. Subdivision of the MPE site and provision of easements is now proposed and this may not be considered generally in accordance with the Concept Plan Approval and associated assessment documentation. Subdivision of the MPE site has therefore been included as part of the Modification Proposal.

3.2 Description of the Modification Proposal

3.2.1 Overview

The amendment to the MPE Project in relation to which the modification to the MPE Concept Plan Approval is sought are illustrated by **Error! Reference source not found.** and described below:

- Extend the land to which the MPE Concept Plan Approval applies to recognise works on Moorebank Avenue and drainage works to the south and east of the MPE site
- Moorebank Avenue upgrade from the northern to the southern extent of the MPE site including alterations to the existing lane configuration, raising of the vertical alignment, some widening and ancillary services and infrastructure such as stormwater drainage on the western side of Moorebank Avenue
- Provision of an interim MPE site access to warehousing
- Reconfiguration of the internal road network within the MPE Stage 2 site and use of all internal roads by both light and heavy vehicles, rather than separating heavy and light vehicles within the MPE site
- Importation of clean general fill (approximately 600,000m^3) material for bulk earthworks to adjust the building formation to support the functionality of the site stormwater and drainage system

- Change to the location of, and land uses within the freight village and provision of warehousing along the Moorebank Avenue frontage (previously identified as IMT)
- Changes to the staging of development including construction of all warehouses as part of the MPE Stage 2 Proposal
- Subdivision of the MPE site.

3.2.2 Modification Proposal components

Land to which the MPE Concept Plan Approval applies

To accommodate the proposed road works on Moorebank Avenue and drainage works to the south and east of the MPE site contemplated as part of the MPE Concept Plan, it is proposed that the land to which the MPE Concept Plan Approval applies (for the intermodal terminal, warehousing and Moorebank Avenue upgrade) be extended to include Lot 3001 DP1125930 (which has since been subdivided and now includes Lot 1 1197707, Lot 2 of DP1197707, Lot 4 DP1197707 and Lot 3002 DP1125930).

Moorebank Avenue roadworks

Roadworks on Moorebank Avenue were contemplated as part of the MPE Concept Plan. Upgrade works are now proposed for about 1.4 kilometres, commencing from just south of the northern boundary of the MPE site to approximately just south of the southern MPE site boundary. These works would occur within the existing Moorebank Avenue road corridor and along the eastern boundary of the MPW site (refer to **Error! Reference source not found.** 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 of the roadway to four lanes, two lanes in each direction
- Signalling and intersection works
- Increasing the vertical alignment from existing levels, including kerbs, gutters and a sealed shoulder.

The horizontal alignment of Moorebank Avenue is not expected to change significantly as a result of the proposed roadworks, with the upgraded road remaining primarily within the existing Lot 2 of DP1197707. The vertical alignment of Moorebank Avenue within the operational footprint of the Moorebank Avenue upgrade (refer to **Error! Reference source not found.**) would be changed. At the northern and southern extents of this work, the vertical alignment would be graded to tie-in to the remainder of Moorebank Avenue.

In addition to the proposed roadworks proposed as part of the Moorebank Avenue upgrade, an on-site detention (OSD) basin for stormwater would be constructed immediately west of Moorebank Avenue, partially within the Moorebank Avenue site and partially within the MPW site. Stormwater runoff along the section of Moorebank Avenue being upgraded as part of the Modification Proposal would be conveyed through a pit and pipe system to this OSD. Water from the OSD would then discharge to a culvert that flows westwards through the MPW site and discharges to the Georges River.

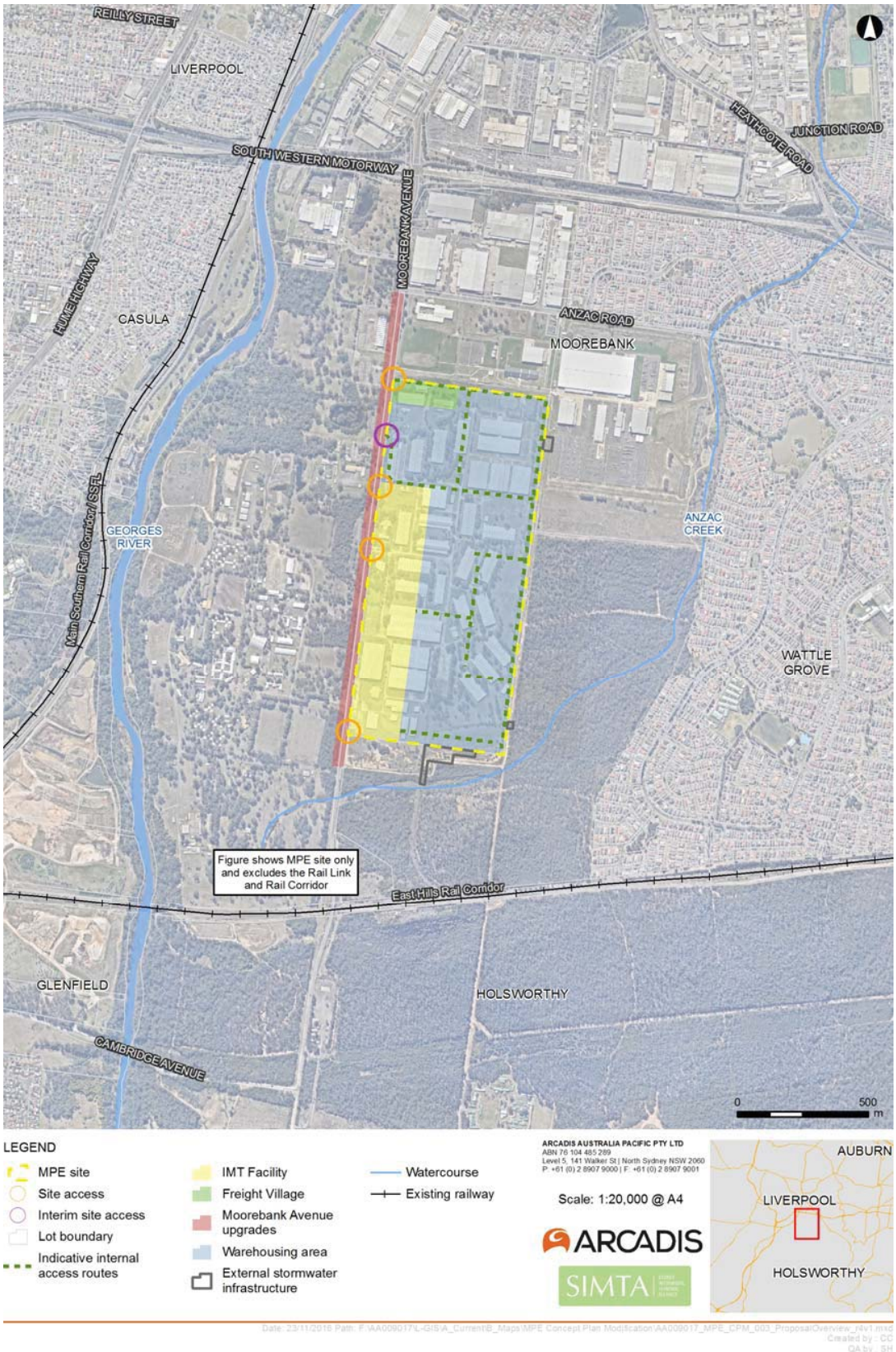

Figure 3-1 Components of the Modification Proposal

Interim site access

An interim access to warehousing on the MPE site would be via the existing Moorebank Avenue signalised intersection with the northern MPE site access. The interim access is located to the north of the MPE Stage 1 Proposal (refer to **Error! Reference source not found.**), would be upgraded and would allow for vehicular access to warehouse and distribution facilities to enable the direct delivery and dispatch of goods to the warehouses.

Internal road network changes

With the Modification Proposal, the MPE site would include internal roads, service roads and transfer roads as described below and as illustrated by Figure 3-1.

The modified internal network would be an interim arrangement pending agreement with the Department of Defence and Roads and Maritime Services regarding provision of a shared access with DJLU at the location identified by the MPE Concept Plan EA.

The interim network would include two main internal roads, which would provide for the main east-west and north-south traffic movements throughout the MPE Stage 2 site. The internal roads would be two lanes wide (one lane in each direction) and would be wide enough to accommodate heavy vehicle turning movements. The MPE Concept Plan EA envisaged only light vehicles using the internal road along the eastern boundary of the site.

Service roads would connect to the internal roads within the MPE Stage 2 site, providing access to warehouses and the freight village, while transfer roads would provide connections between the warehouses and the MPE Stage 1 IMT facility.

Fill importation for construction

Bulk earthworks to facilitate construction of the of MPE Stage 2 would include the delivery of general fill (approximately 600,000m^3). As part of the bulk earthworks, drainage and utilities phase of construction, the MPE Stage 2 site and Moorebank Avenue would be raised and levelled to facilitate placement of drainage and flooding infrastructure.

Freight village location / uses and warehousing

The freight village would be located in the north-western corner of the MPE site as shown by **Error! Reference source not found.** (relocated from the north-east corner as contemplated by the MPE Concept Plan EA).

The freight village would provide for a mixture of retail, commercial and light industrial land uses, with a combined GFA of approximately 8,000m^2.

The key distinction between the uses proposed by the MPE Concept Plan EA and those proposed as part of the Modification Proposal, is that light industrial uses are now also proposed as part of the Modification Proposal.

Modification Proposal also includes changes to the warehousing layout, including provision of warehouses along the Moorebank Avenue frontage (previously identified as IMT by the MPE Concept Plan Approval).

Staging of the MPE Project

The MPE Project would now be delivered in three stages, with Stage 2 generally including the following:

- Warehousing comprising approximately 300,000m^2 GFA, additional ancillary offices and the ancillary freight village
- Establishment of an internal road network, and connection of the MPE site to the surrounding road network
- Ancillary supporting infrastructure within the MPE site and along Moorebank Avenue, including:
  - Stormwater, drainage and flooding infrastructure
  - Utilities relocation and installation
  - Vegetation clearing, remediation, earthworks, signage and landscaping
- Partial upgrades to Moorebank Avenue

Stage 3 would generally include the following:

- Subsequent increases in IMT facility throughput as driven by market demand
- Automation and expansion of the IMT facility
- Construction of the final northern site access and internal road along the northern MPE site boundary
- Any other activities to be undertaken to complete the full build of the MPE Project, as identified in the MPE Concept Plan EA.

Subdivision of the MPE site

The MPE site would be subdivided for the purpose of segregating the IMT and warehouse and distribution facilities, and also for the tenanting of individual warehouses within the MPE site. The subdivision would indicatively include industrial lots, an IMT facility lot, and a water supply easement.

3.3 Proposed Concept Plan Approval Modification

In summary, a modification to the MPE Concept Plan Approval is sought to extend the land to which the MPE Concept Plan Approval applies (for the intermodal terminal, warehousing and Moorebank Avenue upgrade) land permit the Moorebank Avenue upgrade, interim alteration to the MPE site access, changes to the use of the internal road network, the importation of fill, changes to staging and subdivision of the MPE site.

The proposed modifications described above necessitate amendments to the MPE Concept Plan Approval conditions, which are identified below. Words proposed to be deleted are shown in ***~~bold italic strike through~~*** and words to be inserted are shown in ***underlined bold italics***.

Schedule 1

Land	Intermodal site: Land generally described as being located on the eastern side of Moorebank Avenue, between Anzac Road and the East Hills Passenger Line, Moorebank (Lot 1 in DP 1048263, ***Lot 4 DP1197707 and Lot 3002 DP1125930***); and

	Moorebank Avenue: Land described as Moorebank Avenue generally between the Anzac Road/Moorebank intersection to approximately 200 metres south of the intermodal site (Lot 1 DP 1197707 and Lot 2 DP 1197707); and
	Rail corridor: Land generally described as being located between the intermodal site and the East Hills Passenger Line to the south, part of the East Hills passenger Line/Commonwealth Land to the southwest, and the northern portion of the Glenfield Waste Disposal Facility to the west, comprising:
	- Lot 3001 DP 1125930 - Lot 52 DP 517310 - Lot 1 DP 825352 - Lots 101 – 104 DP 1143827 - Lot 2 DP 825348 - Lot 91 DP 1155962 - Lots 1 & 2 DP 1061150 - Lot 4 DP 1130937 - Lot 1 DP 712701 - Conveyance Book 76 Number 361 - Lots 5 – 7 in DP 833516 - George's River, Crown Land - Lot 51 in DP 515696 - Lot 1 DP 1130937[1] - Crown Road[1] - Public road reserve of Moorebank Avenue (north of Anzac Road)[1]
Project	The Concept Plan involves the use of the site as an intermodal facility, including a rail link to the Southern Sydney Freight Line within an identified rail corridor, ***an upgrade of Moorebank Avenue,*** warehouse and distribution facilities, freight village (***including*** ancillary site and operational services***, retail, commercial and light industrial land uses***), stormwater, landscaping, servicing***, and*** ~~***and***~~ associated works***.*** ~~***.***~~ ***and subdivision.***

Schedule 2

1. Terms of Concept Plan Approval

1.1 The Concept Plan approval shall be undertaken generally in accordance with:

a) Major Project Application 10_0193;
b) the Environmental Assessment SIMTA Sydney Intermodal Terminal Alliance Part 3A Concept Application, Volumes 1-4, prepared by Urbis and dated March 2012
c) the Environmental Assessment SIMTA Sydney Intermodal Terminal Alliance Transitional Part 3A Concept Application, Volumes 1-4, prepared by Urbis and dated August 2013;
d) the SIMTA Sydney Intermodal Terminal Alliance Submissions Report (including final Statement of Commitments), prepared by Urbis and dated December 2013; and
e) the Concept Plan Modification Report (MP 10_0193 MOD1)[1]
f) the Concept Plan Modification Report (MP10_193 MOD2)
g) the terms of this approval.

1. Subject to approval of MPE Concept Plan Modification 1 anticipated to be granted by the PAC in late 2016.

2. Note some of the legal descriptions in the proposed amendments to Schedule 1 reflect subdivision and consolidation of land parcels.

Table 3-2 outlines the changes to the SoCs proposed by SIMTA, as the proponent of the Modification Proposal. This includes an additional commitment, over and above those included in the Revised Statement of Commitments (June 2014), to address impacts specific to the Modification Proposal.

Table 3-2 Proposed changes to Statement of Commitments

Aspect	Statement of Commitment	Timing
Development and staging	The Proponent commits to carrying out the development of the SIMTA Intermodal Terminal Facility generally in accordance with the following plans and documents: • ~~Land Use Plan, prepared by Reid Campbell.~~ • ~~Indicative Staging Plan, prepared by Reid Campbell.~~ • ***Section 3 of the Concept Plan Modification Report (MP10_193 MOD2)***	Throughout the construction and operation of the SIMTA proposal
Heritage	***The Proponent commits to establishing an exclusion zone around MPE Isolated Artefact 2, MPE Isolated Artefact 3, and MPE Isolated Artefact 4 to protect these artefacts from potential impacts arising as a result of construction.***	***Prior to construction of the second stage of works***
Noise and Vibration	~~All construction activities will have regard to the standard hours of 7:00am to 6:00pm Monday to Friday and 8:00am to 1:00pm Saturday (with approval from relevant authorities). Any works undertaken outside of these hours will be undertaken in consultation with relevant authorities.~~ ~~Works outside these hours that may be permitted will include:~~ • ~~Any works which do not cause noise emissions to be audible at any nearby sensitive receptors.~~ • ~~The delivery of materials which is required outside of these hours as requested by Police or other authorities for safety reasons. Local residents, commercial and industrial premises will be informed of the timing and duration of approved works in accordance with the notification provisions outlined in the CNMP.~~ • ~~Emergency work to avoid the loss of lives, property and/or to prevent environmental harm. Any other work as approved through the CNMP Process~~ ~~Any other work as approved through the CNMP Process.~~	During construction

Aspect	Statement of Commitment	Timing
	Construction activities associated with the Development shall be undertaken during the following standard construction hours: • ***7.00 am to 6.00 pm Mondays to Fridays, inclusive; and*** • ***8.00 am to 1.00 pm Saturdays*** • ***at no time on Sundays or public holidays.*** ***Works may be undertaken outside of standard construction hours, subject to future development applications (including noise assessments).*** ***Construction works outside of the standard construction hours may be undertaken in the following circumstances:*** • ***construction works that generate noise that is:*** – ***no more than 5 dB(A) above rating background level at any residence in accordance with the Interim Construction Noise Guideline (Department of Environment and Climate Change, 2009); and*** – ***no more than the noise management levels specified in Table 3 of the Interim Construction Noise Guideline (Department of Environment and Climate Change, 2009) at other sensitive receivers; or*** • ***for the delivery of materials required outside these hours by the NSW Police Force or other authorities for safety reasons; or*** – ***where it is required in an emergency to avoid the loss of lives, property and/or to prevent environmental harm;*** – ***works approved through an EPL, or*** – ***works as approved through the out-of-hours work protocol outlined in the CEMP.***	

4 PLANNING ASSESSMENT

Section 4presents a justification for the Modification Proposal, reviews relevant legislation and environmental planning instruments and confirms that modification under section 75W of the EP&A Act is the appropriate planning approval pathway.

4.1 Justification of the Modification Proposal

Section 3 of the Concept Plan EA presents a strategic and project justification as was required by the Director-General's requirements issued on 24 December 2010. This section provides an update to that analysis in the context of the Modification Proposal.

4.1.1 Strategic level justification

The components of the Modification Proposal together form a key part of the MPE Stage 2 Proposal and future stages of development for the MPE Project. They are therefore appropriately justified at a strategic level in the context of the larger MPE Project.

Strategic planning and policy framework

The MPE Concept Plan EA identified the MPE Project as consistent with the following strategic planning policy documents:

- NSW 2021: A plan to make NSW number one
- Sydney Metropolitan Plan 2036
- Draft Metropolitan Strategy for Sydney to 2031
- NSW Long Term Transport Masterplan
- State Infrastructure Strategy 2012-2032
- Draft South West Subregional Strategy
- Action for Air
- Railing Port Botany's Containers
- Port Freight Logistic Plan
- Draft National Ports Strategy and National Land Freight Strategy Discussion Paper
- NSW Freight and Ports Strategy

The Modification Proposal does not alter the consistency of the MPE Project with these documents. Noting that some of the strategic plans and policy documents considered for the MPE Concept Plan EA are no longer current, the following sections review other relevant documents.

Australian Infrastructure Plan

The *Australian Infrastructure Plan* (AIP) (Infrastructure Australia, 2016a) provides a positive reform and investment roadmap for Australia, and sets out the infrastructure challenges and opportunities that Australia faces over the next 15 years. This plan also provides the solutions required to drive productivity growth and provides 78 recommendations for reform with the aim of addressing existing infrastructure gaps.

A business case assessment for the Moorebank IMT was undertaken by Infrastructure Australia under the AIP. The assessment stated that the Moorebank IMT aligned with the AIP's strategic priorities of 'increasing Australia's productivity' and 'expanding Australia's productive capacity'. The summary included in the business case assessment noted that:

- 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.
- 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.
- 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.

The business case assessment was approved by the Infrastructure Australia board in February 2015. The business case assessment noted that the local environment of the Proposal is complex and relies on investments made by others, including the NSW Government ensuring adequate connections between Moorebank Avenue and the M5 Motorway. 'Moorebank Intermodal Terminal road connection upgrade' is identified as an initiative on the *Infrastructure Priority List*.

The MPE Project Concept Plan and Modification Proposal are considered to be consistent with the priorities included in the AIP.

"Navigating the Future" NSW Ports' 30 Year Master Plan

"Navigating the Future" NSW Ports' 30 Year Master Plan (NSW Ports Master Plan) (NSW Ports, 2015), was prepared by NSW Ports in 2015 and, in conjunction with the Sustainability Plan, sets out a vision for achieving sustainable and efficient port supply chains in NSW for the next 30 years.

This Master Plan sets out five objectives to drive a sustainable future for the port supply chains:

- Provide efficient road and rail connections to the ports and IMTs
- Grow rail transport of containers
- Use land infrastructure efficiently
- Grow port capacity
- Protect the ports and IMTs from urban encroachment.

Under the 'grow rail transport of containers' priority, the NSW Ports Master Plan notes that maximising the transport of containers by rail between Port Botany and Sydney metropolitan intermodal terminals will be essential for cost-effective, efficient and sustainable container distribution through Sydney. It also notes that Port Botany would not be able to achieve an annual container throughput of seven million TEU without rail becoming a more significant component of the port logistics chain. The NSW Ports Master Plan includes the development and commencement of operations of the Moorebank IMT as an action required for the effective implementation of this plan.

Further the NSW Ports Master Plan identifies that intermodal terminals are critical to the logistics chain, and essential if we are to increase the volume of containers moved by rail. The strategy for growing intermodal terminals with dedicated freight rail connections is well recognised as necessary to efficiently service the container transport needs of a growing Sydney. The NSW Ports Master Plan notes that intermodal terminals facilitate landside transport-logistic efficiencies and offer a sustainable and practical transport solution to meet the challenge of Sydney's growing freight volume. It also states that where warehouse/distribution centres adjoin an intermodal terminal, containers can be transferred between the warehouse and the intermodal terminal without travelling on the external network. Transport operators that use intermodal terminals reduce the distance travelled by their trucks, resulting in a more effective and efficient use of their truck fleet.

The MPE Project Concept Plan and Modification Proposal are considered to be consistent with the objectives included in the NSW Ports Master Plan.

A Plan for Growing Sydney

A Plan for Growing Sydney (NSW DP&E, 2014) replaces the draft Metropolitan Plan for Sydney. *A Plan for Growing Sydney* is the NSW Government's 20 year plan to develop a competitive economy with world-class services and transport, to deliver greater housing choice to meet Sydney's changing needs and lifestyles, to create communities that have a strong sense of wellbeing, and to safeguard the natural environment.

Direction 1.4 of A Plan for Growing Sydney identifies transforming the productivity of Western Sydney through growth and investment is pivotal to Sydney's long term prosperity. The investment from the private sector associated with this Proposal will assist in providing growth opportunities in Western Sydney.

Direction 1.5 of *A Plan for Growing Sydney* identifies the need to enhance capacity at Sydney's gateways and freight networks. IMTs, and the associated warehousing and distribution facilities, play an important role in the broader freight network, allowing for greater movements of freight by rail and assisting to reduce road congestion, especially around Sydney's ports.

The MPE Project Concept Plan and Modification Proposal are considered to be consistent with the relevant directions included in the *A Plan for Growing Sydney.*

State Infrastructure Strategy 2012-2032 and State Infrastructure Update

The *State Infrastructure Strategy 2012-2032* (State Infrastructure Strategy) (NSW Department of Premier and Cabinet, 2012) is a 20 year strategy which outlines the State Government's short, medium and long term initiatives concerning infrastructure delivery and reform. The State Infrastructure Strategy identifies and prioritises the delivery of critical public infrastructure to drive productivity and economic growth.

The *State Infrastructure Strategy* identifies strategic infrastructure options to meet the challenges of population growth and substantial increases in freight volumes. It identifies that rail's share of the freight task has reduced over the last 10 years, partially due to relative cost of moving freight by road over short distances. The strategy identifies that rail could be cost competitive or cheaper than road transport if certain changes were implemented. These changes include the provision of IMTs and warehousing in the vicinity of IMTs.

The *State Infrastructure Strategy* identifies transport access to and from Sydney's international gateways as a short-term infrastructure priority. The development of an IMT at Moorebank in the next five years, and supporting infrastructure in five to ten years' time, are principle recommendations of the strategy.

An update to the State Infrastructure Strategy (*State Infrastructure Strategy Update*, NSW Department of Premier and Cabinet, 2014) was prepared by Infrastructure NSW at the direction of the Premier to guide how the proceeds from the Rebuilding NSW initiative could be spent. The State Infrastructure Strategy Update makes 30 recommendations to Government on the next round of critical infrastructure for NSW, which prioritise reducing congestions, supporting population growth and stimulating productivity across Sydney and regional NSW.

As part of the update to the 'International gateways' section, under the strategic objective of 'connect Sydney and NSW regions to national and global markets and suppliers' there is a new key infrastructure recommendation to assess and prioritise projects that ensure efficient road connections from Port Botany to the Moorebank Intermodal Terminal as an opportunity to manage the growing freight demand. Further, the opening of new intermodal terminals at Moorebank and the expanded use of existing terminals would improve the economies of short haul rail freight.

The MPE Project locates warehousing and distribution facilities alongside an IMT facility on the same site which will reduce freight movements on the external road network. In turn, this will assist in increasing the rail mode share of freight and is considered to align with the objectives of the State Infrastructure Strategy 2012-2032 and Update.

The MPE Project Concept Plan and Modification Proposal are considered to be consistent with the relevant directions and objectives included in the State Infrastructure Strategy.

Strategic need

An IMT at Moorebank responds to Sydney's need for more freight handling capacity and the MPE Project is a critical component through the delivery of warehousing on the same site as an IMT Facility that will enable more containerised freight to be moved 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, there is a need to invest in new IMT capacity and associated warehousing and distribution facilities at locations accessible to freight rail lines.

From a strategic perspective, the MPE Project would result in wider regional and interstate benefits including:

- 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, reduce costs associated with road damage, congestion and accidents, and lead to better environmental outcomes. The MPE Project would increase operational and cost efficiencies for the handling, storage and distribution of freight
- Job creation: The MPE Project would result in the creation construction employment opportunities during the peak construction period and jobs associated with the operation of the warehousing area
- Improved environmental outcomes by contributing to reducing road congestion: the introduction of an IMT at Moorebank as part of the MPE Project would result in fewer truck journeys every day, with reductions in greenhouse gas emissions, fuel consumption and other air pollution and potential increases in road network performance
- Social benefits through reducing road traffic and associated noise along key road freight routes between Moorebank and Port Botany

- Easing the Port Botany bottleneck associated with the current road task to enable the Port to more effectively cope with future growth in container trade and provide large scale freight capacity.

The MPE Project, which includes the construction of warehouse and distribution facilities to support an IMT at Moorebank, would provide freight distribution functionality from the IMT, thereby minimising the need for heavy vehicles to travel to Port Botany via the road network and contributing to reducing road congestion along this key transport link. By including warehouses and distribution facilities at the same location as the IMT would contribute to providing additional capacity on the freight transport network, thereby maximising the capacity of Port Botany and encouraging more efficient business operations.

4.1.2 Project level justification

The Modification Proposal responds to opportunities to optimise the operation of the MPE Project, accommodate drainage infrastructure contemplated by the MPE Concept Plan, improve environmental outcomes and enhance safety. The Modification Proposal also addresses matters such as subdivision which were not contemplated at the time of the Concept Plan Approval. The specific need for each of the components of the Modification Proposal is discussed below.

Need for the Moorebank Avenue upgrade

The Concept Plan Approval indicates that Moorebank Avenue would be required to be upgraded within 24 months of operating an MPE Project with a throughput of 300,000 TEU per annum. SIMTA has considered the overall works program for the MPE Project and identified that benefits can be achieved through undertaking, in part, the upgrade to Moorebank Avenue before the IMT facility reaches 300,000 TEU throughput and deliver the upgrades as part of Stage 2 of the Project.

In designing the upgrade, consideration was given to the constraints of the MPE site, in particular that posed by drainage from the MPE site and Moorebank Avenue to the Georges River. It was determined that the optimal design was to increase the vertical alignment of Moorebank Avenue to improve surface drainage across Moorebank Avenue to the west into the Georges River as this approach would best retain existing flow patterns in the surrounding area and minimise the size of abortive temporary infrastructure.

The extent of the proposed Moorebank Avenue upgrade was determined with reference to background traffic flows, proposed MPE traffic and consideration of surrounding development (in particular the Moorebank Avenue upgrade included in the MPW Stage 2 Proposal). The Moorebank Avenue upgrade does not currently extend north of the MPE site to ensure minimal impact to the entrance to the DJLU facility, which has been previously identified as a key consideration for Defence and is currently the subject of further discussions with Defence.

While the Modification Proposal includes four-lanes on Moorebank Avenue at the northern extent of the upgrade, the design has also been developed to accommodate a future widening to four lanes over the full extent of the upgrade site if warranted by future increases in background traffic levels. In addition to this, the Modification Proposal would bring the existing road up to current Roads and Maritime Services design standards, which would improve the usability and safety of this infrastructure for project traffic and the wider community alike.

Need for changes interim northern site access

The proposed interim northern warehousing access via the existing Moorebank Avenue intersection with the northern MPE site access would allow construction and interim operational access the MPE Stage 2 Proposal while avoiding direct impacts on the DJLU access to the north. The Concept Plan Approval includes a permanent northern access at the north boundary of the MPE site adjoining the DJLU site. This access will require agreement for a revised access arrangement with Defence and discussions are underway to agree on the final configuration, however the timing of this agreement does not align with the timing for the MPE Stage 2 Proposal and an interim northern warehouse access is therefore required.

This interim access, although temporary, would be designed and constructed to be consistent with the relevant standards. Further the interim access would not replace the long term entrance proposed within the MPE Concept Plan Approval.

Traffic modelling indicates the interim northern warehousing access would perform satisfactorily with no queuing back to the nearest upstream/downstream intersection on Moorebank Avenue (refer to Section 5.1 of this Modification Report).

Need for the changes to the freight village

During the design development of the MPE Stage 2 Proposal, it was identified that the operation of the freight village could be optimised by moving it from the north-eastern corner of the MPE site, to the north-western corner. By moving the freight village west, it would be positioned at the ‘gateway’ location adjacent to Moorebank Avenue, thereby becoming more commercially viable. In addition, this location change would reduce conflict between vehicles and pedestrians accessing the freight village (i.e. users would travel a shorter distance from Moorebank Avenue than that identified in the Concept Plan Approval).

Amongst other operational efficiency reasons, the former location of the freight village was nominated within the MPE Concept Plan as the conceptual noise modelling assumed that it would provide sound attenuation from the IMT component for nearby sensitive receivers from the MPE Project. The amended site layout would retain warehousing around the perimeter of the IMT thereby providing greater sound attenuation, with the location of the freight village being further distance sensitive residential receivers. Further, recent detailed noise modelling (refer to Section 5.1) has however predicted that the revised site layout, with the freight village located in the north-western corner of the MPE site, would provide adequate attenuation and would comply with the relevant noise criteria.

Need for internal road network changes

The refinement of the road network, and resultant use of internal roads by heavy and light vehicles has been proposed to maximise the efficiency of operations within the MPE site. In addition, the changes ensure that the transfer roads would be an entirely separate road network, which would improve road safety throughout the MPE site, allowing for direct transfer of containers from the IMT facility to the warehouses.

The proposed changes to the internal road layout and the associated revised warehouse layout are expected to have minor effects on operational noise levels at sensitive receivers in Wattle Grove and significantly reduced operational noise levels at sensitive receivers in Wattle Grove North (referred to as Moorebank in the MPE Concept Plan Approval) (refer to section 5.2 of this Modification Report).

Need for importation of fill

The importation of general fill for bulk earthworks is required to facilitate the adequate operation and function of drainage and flooding infrastructure, including OSD basins. Adjustment to the site's final levels via the importation of general fill for bulk earthworks helps achieve the minimum gradients required for the site drainage infrastructure upstream of the OSDs, ensuring the site can be effectively drained in a 100-year annual recurrence interval (ARI) event. The adjustment of the site's levels would also bring the operational area of the MPE site above the regional probable maximum flood (PMF) levels.

The importation of fill to the MPE Project would be restricted to an acceptable daily limit that would ensure that traffic impacts on the local road network are minimised to an acceptable standard appropriate for roads adjoining similar construction projects.

These impacts would be managed in partnership with any adjoining developments under construction and the local community in line with the requirements of the SoCs. The SoCs also require the preparation of a Construction Traffic Management Plan.

In addition, it is anticipated that any noise and air quality-related impacts associated with this construction activity would be temporary and manageable with the implementation of standard mitigation and management measures.

Need for changes to staging

The proposed changes to staging allows a larger proportion of MPE Project site facilities to be delivered earlier in response to market demand, including construction of all warehouses and the freight village, thereby improving the operation of the MPE site and providing better facilities for users of the MPE site. Also, the staging proposed would not impact on the overall final build scenario as identified under the Concept Plan Approval.

The amended staging would bring forward a larger proportion of the benefits of the MPE Project (refer to Section 4.1.1 of this Modification Report) and by completing all warehouses as part of Stage 2, would reduce potential conflicts between operational vehicles and construction vehicles.

Need for site subdivision

The MPE Project will attract tenants that are seeking to setup long term operations and build greater long term efficiency in their entire supply chain. The term of these leases will likely exceed five years, which is the maximum lease term permitted for parts of lots under Section 23F and 23G of the *Conveyancing Act 1919*. Subdivision of the site is needed to facilitate the long-term leases on land associated with the land within the MPE Site.

4.2 Statutory planning review

A summary of the Commonwealth, State and Local Government legislation which are relevant to the MPE Concept Plan Approval and Modification Proposal are summarised in Table 4-1.

Table 4-1: Legislation applicable to the MPE Project and Modification Proposal

Legislation	Associated environmental concerns	Approval or assessment requirement
Commonwealth		
Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)	Impacts to Matters of National Environmental Significance (MNES), particularly disturbance to listed threatened species, ecological communities and/or migratory species, and impact(s) on Commonwealth land.	The MPE Project was declared a controlled action by the Commonwealth Minister of the Environment due to the potential for the Project to impact on listed threatened species and communities (sections 18 and 18A of the EPBC Act), and Commonwealth Land (sections 27 and 27A of the EPBC Act). Approval was granted for the MPE Project by the Commonwealth Minister for the Environment on 6 March 2014 (No. 2011/6229). Subject to the implementation of the EPBC Act conditions of approval, no additional assessment or approval is required under the EPBC Act.
State		
EP&A Act *EP&A Regulation* *State Environmental Planning Policy (Infrastructure) 2007* *State and Regional Development SEPP*	Planning approval pathway determination and any potential impacts on the environment.	The MPE Concept Plan Approval was granted on 29 September 2014 subject to conditions and with associated SoCs. The components of the Modification Proposal may not be considered generally in accordance with the Concept Plan Approval and associated assessment documents. Modification of the MPE Concept Plan approval is therefore being sought in accordance with 75W of the EP&A Act (now repealed) which continues to operate pursuant to clause 3C of Schedule 6A of the EP&A Act.
Protection of the Environment Operations Act 1997 (POEO Act)	Impacts of the operation of the Proposal relating to air quality, noise emissions and discharge of polluted water.	The Stage 2 of the MPE Project, including components of the Modification Proposal, would require crushing, grinding or separating of materials, and concrete works, both of which are activities listed under Schedule 1 of the POEO Act. Therefore, an Environmental Protection Licence (EPL) would be required for the Modification Proposal.

Legislation	Associated environmental concerns	Approval or assessment requirement
Contaminated Land Management Act 1997 (CLM Act) *State Environmental Planning Policy No. 55-Remediation of Land* (SEPP 55)	Disturbance of contaminated land and potential for further soil contamination	Assessment of the contamination potential within the area of impact is included in Section 5.5 of this Modification Report. There are no specific areas requiring direct remediation within the MPE site, but various contamination aspects of potential concern could however impact on the site should they not be managed appropriately. The 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 potential contamination existing once the MPE Project, including the Modification Proposal, is operational is considered to be low.
National Parks and Wildlife Act 1974 (NPW Act)	Disturbance of any objects or places of Aboriginal heritage significance	Under Section 89J of the EP&A Act development applications assessed as SSD (which is the approval process for the MPE Stage 2 Proposal) do not require an Aboriginal heritage impact permit (AHIP) (under section 90 of the NPW Act). A review of potential impacts on Aboriginal heritage as a result of the Modification Proposal is included in Section 5.8. Impacts on Aboriginal heritage are not expected as a result of the Modification Proposal.
Threatened Species Conservation Act 1995 (TSC Act)	Disturbance to listed threatened species and ecological communities	A review of potential impacts on biodiversity as a result of the Modification Proposal is included in Section 5.3. The Modification Proposal would require clearing of only a very small, isolated and fragmented area of native vegetation, comprising 0.1 hectares of Hard-leaved Scribbly Gum – Parramatta Red Gum heathy woodland of the Cumberland Plain, Sydney Basin. All other areas to be impacted are planted and disturbed vegetation. Any impacts to native vegetation would be offset.
Noxious Weeds Act 1993 (NW Act)	Spread and impact of weeds	Spread and impact of noxious weeds within the MPE site associated with the Modification Proposal would be managed in accordance with the MPE Concept Plan Approval and associated SoCs. The Modification Proposal will not have any further impacts to those already defined in the Concept Plan Approval.
Fisheries Management Act 1994 (FM Act)	Disturbance to aquatic flora and fauna	The Modification Proposal would not result in any disturbance to aquatic flora and fauna.

Legislation	Associated environmental concerns	Approval or assessment requirement
Water Act 1912 (Water Act) *Water Management Act 2000* (WM Act)	Disturbance of groundwater aquifers, impacts to flooding behaviour and/or water quality of surrounding water bodies	Under Section 89J of the EP&A Act, development applications assessed as SSD (which is the approval process for the MPE Stage 2 Proposal) do not require a permit under section 89, 90 or 91 of the WM Act.
Conveyancing Act 1919	The maximum lease term permitted for parts of lots under Section 23F and 23G of the *Conveyancing Act 1919* is five years.	Subdivision of the site is proposed as part of the Modification Proposal.
Roads Act 1993 (Roads Act)	Impacts of the construction and/or operation of the Proposal on traffic flows and works to public and private roads.	Under Section 138 of the *Roads Act 1993*, approval is required for works undertaken within a public road reserve. An approval under Section 138 of the Roads Act must be consistent with any conditions of consent under Division 4.1, Part 4 of the EP&A Act (Section 89K(f), EP&A Act). Moorebank Avenue, to the south of the intersection with Anzac Road, is owned by the Commonwealth of Australia and, as such, the *Roads Act 1993* does not apply.
Heritage Act 1977 (Heritage Act)	Disturbance to any object that is of state or local heritage significance	Under Section 89J of the EP&A Act, development applications assessed as SSD (which is the approval process for all stages of development of the MPE Concept Plan) do not require a permit under section 139 of the Heritage Act. Additional impacts on non-Aboriginal heritage are not expected as a result of the Modification Proposal.
Waste Avoidance and Resource Recovery Act 2001 (WARR Act)	Waste management and potential opportunities for diversion of waste from landfill	A waste impact assessment for the Modification Proposal is included in Section 5.11 of this Modification Report. Actions to mitigate waste impacts associated with the Modification Proposal works would be consistent with those included in the MPE Concept Plan Approval and associated SoCs.

Legislation	Associated environmental concerns	Approval or assessment requirement
Rural Fires Act 1997 (Rural Fires Act)	Bushfire management/prevention and ensuring the site is suitably protected from the threat of bushfires	Under Section 89J of the EP&A Act development applications assessed as SSD (which is the approval process for the MPE Stage 2 Proposal) do not require a bush fire safety authority (under section 100B of the Rural Fires Act). A review of bushfire risk as a result of the Modification Proposal is included in Section 5.11. Bushfire risk associated with the Modification Proposal would be managed in accordance with the MPE Concept Plan Approval and associated SoCs.
State Environmental Planning Policy No. 33- Hazardous and Offensive Development (SEPP 33)	Management of hazardous and dangerous goods	A review of hazards and risks associated with the Modification Proposal is included in Section 5.4. The Modification Proposal would not result in a change to the approved land use for the MPE site.
State Environmental Planning Policy No. 64- Advertising and Signage (SEPP 64)	Location and design of signage and impact on the surrounding visual environment	The MPE Project, including the Modification Proposal, is considered consistent with the objectives of SEPP 64 (clause 3) in that, the signage would be compatible with the surrounding area, provides suitable communication for wayfinding and would be of high design quality.
Greater Metropolitan Regional Environmental Plan No 2 – Georges River Catchment	Drainage and site runoff including potential impacts on water quality and flooding of the Georges River Catchment	An assessment of water quality impacts has been undertaken for the Modification Proposal, and is included in Section 5.6 of this Modification Report.

4.3 Planning approval pathway

The MPE Project was granted Concept Approval on 29 September 2014 under the former Part 3A of the EP&A Act. Part 3A of the EP&A Act continues to have effect in relation to the MPE Project by operation of Schedule 6A of the EP&A Act given its status as a Transitional Part 3A Project.

This modification application has been submitted under s75W of the EP&A Act, which continues to apply to this approved Concept Plan in accordance with Schedule 6A, clause 3C of the EP&A Act. As noted in Section 3.1 of this Modification Report, Section 75W(2) allows a Proponent to submit a request for modification of a Part 3A project with the Secretary of the DP&E.

There are however some circumstances where the nature, extent or impacts of proposed changes are such that they cannot be considered as a modification under Section 75W of the EP&A Act. In this context, it is an accepted principle that that modifications under Section 75W should be of limited environmental consequences beyond those evaluated in the original environmental impact assessment for a project. They also should not amount to a 'radical transformation' of the project to which approval was originally given.

Section 5 of this document discusses the environmental impacts of this modification. As discussed in Section 5, this modification is expected to have limited environmental consequences beyond those envisaged in the Concept Plan EA. On this basis, it is considered appropriate for assessment of the Modification Proposal to occur in accordance with Section 75W of the EP&A Act.

The Modification Proposal would also not alter functions of the MPE Project and only minor changes to MPE Project boundary are proposed in order to facilitate the development of the site. In this context, the Modification Proposal is not considered to represent a radical transformation of the MPE Project as described in the MPE Concept Plan Approval.

5 ENVIRONMENTAL ASSESSMENT

5.1 Traffic and transport

5.1.1 MPE Concept Plan Approval

Several studies were undertaken to support the MPE Concept Plan Approval EA with a focus on operational traffic and transport. These included:

- *Strategic Needs for Intermodal Terminal and Freight Demand* (Hyder Consulting, 2013a)
- *Transport and Accessibility Impact Assessment* (Hyder Consulting, 2013b)

The Freight Demand Modelling Report established trends in the overall movement of freight containers to and from Port Botany and defined the freight catchment that the MPE Project would service; identifying that the MPE Project would service a catchment area with a total demand of 1 million TEU throughput in the Liverpool local government area, the South West Region of Sydney and parts of the Sydney's Industrial West.

The Transport and Accessibility Impact Assessment assessed the performance of the road network with and without the MPE development in both 'core' and 'inner' areas. The core and inner areas are those areas which the MPE Project is predicted to contribute to traffic growth. The core area focuses on those parts of the network that are of critical significance to the project, includes twelve intersections and is generally bounded by the following roads:

- M5 Motorway between Hume Highway and Heathcote Road (east and west)
- Hume Highway (north and south)
- Moorebank Avenue between Newbridge Road and Cambridge Avenue (north and south)
- Anzac Road (east).

The inner area includes 21 intersections covering following roads:

- Hume Highway and Campbelltown Road from Macquarie Street to Glenfield Road.
- Camden Valley Way from M5/M7 Interchange to Hume Highway. The intersection of M5 off-ramp and Beech Road is also included.
- Macquarie Street, Terminus Street and Newbridge Road from Hume Highway to Nuwarra Road.
- Heathcote Road from Nuwarra Road to Macarthur Drive.

A total of 13 intersections were identified as potentially being impacted by future traffic growth, both with or without the MPE Project, within the core and inner areas. Traffic modelling and analysis found that eight intersections outside the core area would operate with an unacceptable level of service during the AM and PM peak regardless of the MPE Project, meaning that the intersections require upgrades to support the existing background traffic demand without the MPE Project. The study found that that additional traffic impact from the MPE Project would be largely confined within the boundary of core area. The results show that outside the core area, there is no significant adverse impact on key roads following the introduction of the MPE Project.

Analysis showed that in 2031, combined with background traffic growth, the MPE Project would deteriorate the level of service at five key intersections within the core area. These being:

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

Mitigation measures to limit the deterioration in level of service were identified and modelled and showed that road capacity improvements would mitigate the forecast impacts from the MPE Project operating at peak assessed capacity of 1 million TEU throughput and 300,000m^2 GFA of warehousing. Acknowledging that the MPE Project will be developed in stages a road upgrade staging plan, along with timings for the upgrades, was proposed.

This staging plan indicated that the following upgrades may potentially be required (subject to further detailed assessments) at the following locations:

- Moorebank Avenue from the MPE site to the M5 interchange
- Moorebank Avenue / Anzac Road intersection
- M5 Motorway / Moorebank Avenue grade separated interchange.

These upgrades are included in the SoCs as subject to further detailed assessment with future applications.

5.1.2 Impact assessment

A Traffic and Transport Memorandum has been prepared by Arcadis (refer to Appendix B), to consider additional traffic impacts associated with the Modification Proposal.

Construction

Construction traffic generation

The daily construction vehicle movements (two-way) for the Modification Proposal were assumed for the peak construction period, for both heavy and light vehicles, and the movements presented are considered a worst case scenario:

- Heavy vehicles: approximately 1030 two-way trips per day
- Light vehicles: approximately 430 two-way trips per day

The estimated number of hourly two-way truck movements varies between 44 and 67 depending on the time of day, with the highest number of truck trips expected to be between 7am and 6pm. The estimated highest number of light vehicle two-way trips is expected to be 120 light vehicle trips per hour and falls between 6am and 7am.

Construction traffic distribution

The majority of staff cars, approximately 90 per cent, would access and egress the site from the north via Moorebank Avenue. About 10 per cent are expected to use Anzac Road.

All trucks are expected to access and egress the site from the north via Moorebank Avenue. No construction trucks would travel via Anzac Road. There may be a small number of truck movements via Cambridge Avenue for disposal of unsuitable material at the Glenfield Waste Facility, if required.

MPE Concept Plan Approval construction traffic impacts

The traffic impact assessment for the MPE Concept Plan Approval did not directly address construction traffic impacts on the basis that construction traffic impacts would be temporary and a short-term consequence of works needed for upgrades to the local road network as well as the development of the MPE Project.

Modification Proposal construction traffic impacts

The results of the Construction Traffic Impact Assessment indicate that the construction traffic associated with the Modification Proposal would not have an adverse impact on the performance of key intersections near the MPE site and would operate at an acceptable LoS during the AM and PM peak periods.

Temporary construction traffic impacts would be managed with the implementation of a Construction Traffic Management Plan, which would document management controls to be implemented during construction to avoid or minimise impacts to traffic, pedestrian and cyclist access, and the amenity of the surrounding environment.

The Construction Traffic Management Plan would be implemented so that through traffic would not be unduly delayed and that safe and efficient passage is provided throughout the construction period.

Operation

The Modification Proposal would not alter the overall operational traffic associated with the MPE Project, as considered by the MPE Concept Plan Approval.

The Modification Proposal does however include provision of an interim site access to warehousing. Modelling indicates that both the existing Moorebank Avenue / DJLU Access Road and proposed Moorebank Avenue / interim site access intersections are expected to perform satisfactorily with the addition of the MPE Project traffic in 2019 and 2029.

5.1.3 Mitigation measures

Conditions of Approval

The Concept Plan Approval included a number of additional requirements for all future approvals under the Concept Plan Approval with regards to traffic and transport, as described in Table 5-1. These requirements are considered sufficient for assessment of the Proposed Modification.

Table 5-1 MPE Concept Plan Conditions of Approval – Traffic and transport

Aspect	Condition
Schedule 3 – 2. Future Assessment Requirements	
2.1 Traffic and Transport	Any future Development Application shall include a Traffic Impact Assessment that assesses intersection and road network impacts, including impacts on Cambridge Avenue. The traffic assessment shall: a) undertake detailed model analysis commensurate with the stage, to confirm network operation and identify intersection upgrade requirements; b) consider the constructability constraints of proposed upgrade(s) at key intersections, such as vehicle sweep paths, geometry and sight lines; c) assess construction traffic impacts, including: i. the identification of routes and the nature of existing traffic on these routes; ii. an assessment of construction traffic volumes (including spoil haulage/delivery of materials and equipment to the road corridor and ancillary facilities); and iii. potential impacts to the regional and local road network (including safety and level of service) and potential disruption to existing public transport services and access to properties and businesses. d) assess operational traffic and transport impacts to the local and regional road network, including: i. changes to local road connectivity and impacts on local traffic arrangements, road capacity/safety; ii. traffic capacity of the road network and its ability to cater for predicted future growth and iii. monitoring of vehicle numbers on Cambridge Avenue. e) provide an updated Traffic Management and Accessibility Plan including: i. measures to prevent heavy vehicles accessing residential streets to maintain the residential amenity of the local community public transport; ii. cyclist facilities; and iii. iv. driver code of conduct. In particular, the Traffic Impact Assessment must identify upgrades and other mitigation measures required to achieve the objective of not exceeding the capacity of the following intersections and roads – (a) Moorebank Avenue/ Newbridge Road (b) Moorebank Ave/ Heathcote Road (c) Cambridge Ave (d) M5 Motorway/ Moorebank Avenue (e) M5 Motorway/ Heathcote Road (f) M5 Motorway/ Hume Highway.

Statement of Commitments

Mitigation measures identified by the SoCs that are applicable to traffic and transport, and which would apply to the Modification Proposal, are listed in Table 5-2 below.

Table 5-2 Concept Plan Statement of Commitments (traffic and transport)

Reference	Statement of Commitment	Timing
Transport and Access	The Proponent commits to negotiating with the relevant agencies/authorities as required to facilitate the staged delivery of the following road infrastructure upgrades in accordance with the Transport Accessibility Impact Assessment:	
	• Provide a new traffic signal at SIMTA's northern access with Moorebank Avenue.	Prior to exceeding 250,000 TEU terminal (rail side) throughput
	• Provide a new traffic signal approximately 750 metres south of SIMTA Central access.	Prior to exceeding 250,000 TEU terminal (rail side) throughput
	• Widen Moorebank Avenue to four lanes between the M5 Motorway/Moorebank Avenue grade separated interchange and the southern SIMTA site access. Some localised improvements will be required around central access and southern access points	Address within 24 months of operating at 300,000 TEU throughput per annum
	• Concurrent with four lane widening on Moorebank Avenue, the Moorebank Avenue/Anzac Road signal will require some form of widening at the approach roads.	
	• Potential upgrading works at the M5 Motorway/Moorebank Avenue grade separated interchange to cater for both background and additional SIMTA traffic growth as outlined in Table 9-1 of the Transport Accessibility Impact Assessment (and Table 6 of the Environmental Assessment report).	Address within 24 months of operating at 500,000 TEU throughput per annum
	The Proponent commits to negotiating with the relevant agencies/authorities as required to facilitate the staged delivery of the public transport infrastructure in accordance with the Transport Accessibility Impact Assessment:	
	• Designing and constructing the central spine road and other site roads to accommodate buses, bus infrastructure and cyclist use for employees	Throughout the detailed planning, construction and operation stages of the SIMTA proposal
	• Construction of a covered bus drop off/pick up facility within the site to encourage the use of buses for employees.	
	• Review and rationalisation of the locations of Route 901 bus stops in the vicinity of the site to match the proposed northern terminal entry location and enhance accessibility	
	• Providing peak period and SIMTA shift work responsive express buses to/from the site and	

Reference	Statement of Commitment	Timing
	Liverpool Station via Moorebank Avenue and Newbridge Roads with frequency dependant on the development of the site. • Providing peak period express buses to/from the site and Holsworthy rail station via Anzac Road, Wattle Grove Drive and Heathcote Road with frequency dependant on the development of the site. • Consulting with relevant bus provider(s) regarding the potential to extend the Route 901 bus through the site via the light vehicle road and increasing peak period bus service frequencies to better match the needs of existing and future employees of the locality with frequency dependent on the development of the site. • Consulting with relevant bus providers regarding changes to existing bus stop location and the identification of new bus stop locations if required.	
	The Proponent shall encourage walking and cycling by the inclusion of appropriate facilities including under cover bike storage, showers and change facilities.	Address in the planning applications for the three major stages of the Concept Plan, where relevant, taking into account employee numbers
	The Proponent commits to undertaking an actual truck trip generation survey after 24 months of operation and then progressively as the SIMTA site is developed.	Address after 24 months of commencing operation and within 24 months of operating at an annual throughput of 500,000 TEU and 1,000,000 TEU
	The Proponent commits to developing a Construction Traffic Management Plan to minimise the potential impacts of the construction stage(s), including: • Heavy vehicle access routes • Location of construction worker parking • Mitigation measures to avoid any unacceptable impacts on the surrounding land uses. • Mitigation measures to avoid any unacceptable impacts on regular bus services and school bus services operating on roads within the vicinity of the site and pedestrian and cyclist access.	Prior to construction
	The Proponent commits to developing a Traffic Site Management Plan prior to the commencement of operations at the site to minimise the potential impacts, including:	Address prior to commencement of operation for each of the three major

Reference	Statement of Commitment	Timing
	• Management measures to avoid trucks parking and idling either within or outside of the site boundaries • Provision of adequate parking for heavy vehicles to accommodate any potential delays in schedule times	stages of the Concept Plan

Traffic and transport issues associated with the construction and operation of the MPE Project would be managed in accordance with the Concept Plan Approval and associated SoCs referred to above. These are considered adequate to address the potential impacts of the Modification Proposal.

5.2 Noise and vibration

5.2.1 MPE Concept Plan Approval

A Noise and Vibration Impact Assessment was undertaken as part of the Concept Plan Approval EA (Wilkinson Murray, 2013). The assessment identified the following key characteristics relating to the existing noise environment at the MPE site and within the surrounding area:

The following residential receiver noise catchments were identified:

- Residential receiver R1 – 500 metres to the east in Wattle Grove
- Residential receiver R2 – 500 metres to the north in Moorebank (now referred to as Wattle Grove North)
- Residential receiver R3 – 900 metres to the west in Casula
- Residential receiver R4 – 1,600 metres to the south west in Glenfield
- Non-residential receiver - All Saints Senior College
- Non-residential receiver - Casula Powerhouse
- Non-residential receiver - DNSDC Re-location Site.

Noise modelling was undertaken to determine the potential construction and operational noise impacts associated with the MPE Project against the following criteria:

- Operational Noise Criteria using the 'intrusiveness' and 'amenity' criteria from the *NSW Industrial Noise Policy* (INP) (Environment Protection Authority 2000)
- Sleep disturbance criteria, using the EPA's *Noise Guide for Local Government* (NGLG)
- Road traffic noise criteria, using the EPA's *NSW Road Noise Policy (RNP)*
- Rail traffic noise criteria were established using the EPA's *Interim Guideline for the Assessment of Noise from Rail Infrastructure Projects* and *Rail Infrastructure Noise Guideline*. Sections of the rail link on private land were assessed against the criteria established under the INP for operational noise.
- Construction noise criteria from the EPA's *Interim Construction Noise Guidelines* (ICNG)
- Construction vibration criteria using the *EPA's Assessing Vibration: A Technical Guideline.*

During construction, noise levels were predicted to meet the established noise management levels (NMLs), except at some residences within the R3 catchment (i.e. Casula) where exceedances of up to 9 dBA above the NML were predicted during the construction of the rail link. Table 5-3 shows the predicted construction noise impacts (for standard construction hours) for the MPE Concept Plan Approval. Out of hours scenarios were not specifically assessed, however works outside standard construction hours were contemplated in certain circumstances as identified in the SoCs.

Table 5-3 Construction noise impacts – MPE Concept Plan Approval

Receiver	Construction works period						NML	Exceedance
	Site Preparation	Earthworks, Drainage & Utilities	Granular Base Construction	Pavement Construction	Buildings	Rail Siding		
Wattle Grove	48	44	36	47	45	46	52	0 dB
Wattle Grove North	45	41	33	44	42	42	46	0 dB
Casula	46	42	34	45	43	**60**	51	9 dB
Glenfield	34	30	22	43	31	46	54	0 dB

Construction vibration criteria were also predicted to be met given the distance of sensitive receivers from the MPE site and the close proximity nature of vibration impacts.

A conservative approach to noise modelling was taken using the worst case operational scenario with the facility operating at peak throughput and compared to the intrusiveness and amenity criteria established in accordance with the INP. With the exception of residential receivers in the R3 catchment (i.e. in Casula noted above), the noise modelling showed that operational noise was expected to comply with all relevant noise criteria at nearby receivers.

The INP criteria was expected to be exceeded by 4dB(A) in the R3 catchment when the MPE project is operating at an annual throughput of 1,000,000 TEU with a total warehousing GFA of 300,000 m^2. Analysis of the modelling results indicated that operation of trucks within the MPE Project are the major contributor to the noise levels in the R3 catchment. Subsequent modelling with a noise barrier in place along the western boundary of the site (because at the time information regarding the MPW Project and associated noise shielding from buildings was not available) was shown to reduce operational noise levels by 4dB(A) within the R3 catchment and hence to a level compliant with the INP criteria.

5.2.2 Impact assessment

Wilkinson Murray have undertaken an assessment of the potential noise impacts associated with the Modification Proposal (refer to Appendix B). The main findings of the assessment are summarised below.

Construction

Changes to the MPE site boundary, the interim site access, internal road network, the freight village, warehousing, staging and subdivision are all expected to have negligible construction noise impacts. These components of the Modification Proposal are not expected to increase construction noise when compared to the MPE Concept Plan Approval.

Construction noise

The proposed roadworks on Moorebank Avenue and the proposed general fill bulk earthworks on both Moorebank Avenue and the MPE site would involve additional construction activities and the use of additional plant and equipment. Table 5-4 shows the predicted construction noise associated with these activities.

Table 5-4 Construction noise impacts – standard construction hours

Receiver	Modification Proposal Construction (Standard hours)	NML	Exceedance
Wattle Grove	49	52	0 dB
Wattle Grove North	45	46	0 dB
Casula	47	51	0 dB
Glenfield	35	54	0 dB

Table 5-4 shows that noise levels associated with the construction of the Modification Proposal would comply with the established construction noise management levels (NML) for standard construction hours set in accordance with the *Interim Construction Noise Guideline* (DECC, 2009) at all receivers. They are also within the range of noise levels predicted for the MPE Concept Plan Approval.

Table 5-5 Construction noise impacts – out of hours#

Receiver	Modification Proposal Construction (out of hours)	NML OOH2	NML OOH3	NML OOH4	Exceedance
Wattle Grove	43	42	47	47	1 dB
Wattle Grove North	39	41	41	41	0 dB
Casula	41	42	46	46	0 dB
Glenfield	30	49	49	49	0 dB

OOH2 6.00pm – 10.00pm weekdays; OOH3 7.00am – 8.00am Saturday; OOH4 1.00pm – 6.00pm Saturday

Table 5-5 shows that compliance with NMLs for the out of hours works would also be achieved, except for a predicted 1 dB exceedance in Wattle Grove. This exceedance is considered negligible and can be adequately addressed by construction noise mitigation and management measures.

Construction noise levels associated with the additional bulk earthworks would also be generally consistent with the range of predicted construction noise levels for the Concept Plan, and would comply with the established NMLs.

Construction traffic noise

The proposed roadworks on Moorebank Avenue and the proposed general fill bulk earthworks on both Moorebank Avenue and the MPE site would generate additional traffic along the M5 Motorway, along Moorebank Avenue from the MPE site northwards and minor additional light vehicle traffic along Anzac Road. No heavy vehicles associated with construction would travel along Anzac Road, or along Moorebank Avenue, north of the M5 Motorway.

From assessments undertaken for MPE Stage 2 Proposal and MPW Project, the existing levels of road noise at the most affected residential receivers along the M5 Motorway, Moorebank Avenue and Anzac Road exceed 60 dBA LAeq, 15hour and 55 dBA LAeq, 9hour. Therefore, in accordance with the RNP, any increases in road noise levels at sensitive receivers along these roads should be below 2 dB. Table 5-6 shows the predicted increase in road traffic noise due to construction traffic associated with the Moorebank Avenue works and general fill bulk earthworks included in the Modification Proposal and confirms that the increases are considerably less than the criteria of 2dB

Table 5-6 Predicted increases in road traffic noise

Location	Predicted Increase (dBA)	
	Day[1]	Night[1]
M5 Motorway – East of Moorebank Avenue	0.1	0.0
M5 Motorway – West of Moorebank Avenue	0.2	0.1
Moorebank Avenue – North of M5 Motorway	0.0	0.1
Anzac Road – East of Moorebank Avenue	0.0	0.0

1. Day = 7.00am – 10.00pm, Night = 10.00pm – 7.00am

The additional construction traffic associated with the Modification Proposal would have an imperceptible effect on road traffic noise on the surrounding road network and would comply with the established criteria.

Construction vibration

Consistent with the MPE Concept Plan Approval, construction vibration criteria are expected to be met for the components of the Modification Proposal given the distance of sensitive receivers from the MPE site remains similar to that originally assessed in the MPE Concept Plan Approval.

Operation

Changes to the MPE site boundary, the interim site access, changes to the freight village and subdivision are all expected to have a negligible operational noise impacts. Other components of the Modification Proposal have the potential to influence operational noise, either beneficially or adversely. Table 5-7 provides predicted operational noise levels associated with MPE Stage 1 and MPE Stage 2 (inclusive of the Proposed Modification).

Table 5-7 Predicted LAeq, 15min Noise Levels – MPE Stage 1 & MPE Stage 2

Receiver	Predicted $L_{Aeq, 15min}$ Noise Level (dBA)		Night time[1] Criterion (dBA)	Exceedance (dB)	Difference c/- MPE Concept Plan (dB)	
	Calm[2]	Adverse[3]			Calm[2]	Adverse[3]
Wattle Grove	28	32	42	0	0	-1
Wattle Grove North	<20	23	41	0	-9	-10
Casula	31	35	39	0	-1	-2
Glenfield	20	25	42	0	1	0

1. Night = 10:00pm-7:00am.
2. CONCAWE Category 4.
3. CONCAWE Category 6.

Table 5-7 shows that when compared to the MPE Concept Plan, reduced levels of operational noise are expected.

While the roadworks on Moorebank Avenue would adjust the vertical alignment of the road, as no sensitive receivers are located adjacent to the subject section of Moorebank Avenue, proposed works are unlikely to change road traffic noise levels when compared to the Concept Plan Approval.

The proposed changes to the internal road network within the MPE site would result in heavy vehicles operating closer to sensitive residential receivers in Wattle Grove. However, changes to the warehouse layout would provide a small amount of additional shielding to sensitive receivers in Wattle Grove, and a substantial amount of additional shielding to sensitive receivers in Wattle Grove North, when compared to that proposed in the MPE Concept Plan Approval. Accordingly, the proposed changes to the internal road layout and the associated revised warehouse layout are expected to have minor effects on operational noise levels at sensitive receivers in Wattle Grove and significantly reduced operational noise levels at sensitive receivers in Wattle Grove North.

Modelling indicates that the importation of general fill for bulk earthworks and in order to adjust the building formation levels for stormwater drainage would have a negligible effect on operational noise levels at sensitive receivers. While these types of changes have the potential to influence noise attenuation, between sources and receivers, due to ground effects and barrier effects, due to the distance between the site and sensitive receivers, and the relatively small adjustments, significant changes are not expected. The most significant barrier effects for noise sources on the MPE site are provided by the proposed warehouses. As any adjustments to the building formation also result in adjustment to the noise sources, the barrier effects from the MPE warehouses would be maintained.

As noted above, the warehouses on the MPE site provide significant beneficial shielding of noise between the site and sensitive receivers in Wattle Grove. The benefits of the shielding from the warehouses would outweigh their associated incremental noise emissions. Accordingly, the construction of all warehouses at an earlier stage would be beneficial for some receivers.

5.2.3 Mitigation measures

Conditions of Approval

The Concept Plan Approval included a number of additional requirements for all future approvals under the Concept Plan Approval with regards to noise, as described in Table 5-8. These requirements are considered sufficient for assessment of the Modification Proposal.

Table 5-8 MPE Concept Plan Conditions of Approval – Noise

Aspect	Condition
Schedule 3 – 2. Future Assessment Requirements	
2.1 Noise and Vibration	Any future Development Application shall include an updated assessment of noise and vibration impacts. The assessment shall: a) The assessment shall: i. assess construction noise and vibration impacts associated with construction of the intermodal facility including rail link, including impacts from construction traffic and ancillary facilities. The assessment shall identify sensitive receivers and assess construction noise/vibration generated by representative construction scenarios focusing on high noise generating works. 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 ii. assess operational noise and vibration impacts and identify feasible and reasonable measures proposed to be implemented to minimise operational noise impacts of the intermodal facility and rail link, including the preparation of an Operational Noise Management and Monitoring Plan; and iii. be prepared in accordance with: NSW Industrial Noise Policy (EPA 2000), Interim Construction Noise Guideline (DECC 2009), Assessing Vibration: a technical guide (DEC 2006), the Rail Infrastructure Noise Guideline (EPA 2013), Development Near Rail Corridors and Busy Roads Interim Guideline (DoP 2008), and the NSW Road Noise Policy 2011. b) All site-dedicated locomotives must meet EPA Noise Limits for Locomotives contained within the NSW operational rail licences for operation of new or substantially modified locomotives operating on the NSW network; and c) Any future application shall include a train noise strategy including, but not limited to, train operational procedures and driver training that minimise noise on the rail link and within the intermodal terminal.

Statement of Commitments

Based on the recommendations of the *Noise and Vibration Assessment* prepared for the Concept Plan Approval, SIMTA committed to a number actions relating to noise and vibration impacts. The SoCs associated with the MPE Concept Plan Approval that are relevant to noise and vibration are provided in Table 5-9.

Table 5-9 Concept Plan Statement of Commitments (noise and vibration)

Reference	Statement of Commitment	Timing
Noise and vibration	The Proponent will undertake further detailed assessments at each application stage after the Concept Plan Approval to provide input to planning and confirm the need for and degree of noise mitigation if required. This should be undertaken based on the most detailed information available at that stage of works. These subsequent assessments should address the DGR requirements for the SIMTA proposal as a minimum.	Provide with the planning applications for the three major stages of the Concept Plan
	The Proponent will carry out detailed assessments when the SIMTA proposal is operational, including monitoring of operational noise levels at nearby receivers. The monitoring data should be used to validate noise models used in these assessments.	Address within 12 months of commencing operation and within 12 months of operating at an annual throughput of 500,000 TEU and 1,000,000 TEU
	The Proponent shall consider locating buildings at or near the north-eastern and south-eastern boundaries of the site to provide beneficial acoustic shielding to the nearest residences.	Address in the planning applications for the warehouse buildings and/or freight village
	The Proponent shall consider locating less noise-intensive activities and operations at the northeastern and south-eastern corners of the site where residences are closest	Address in the planning applications for the three major stages of the Concept Plan
	The Proponent will carry out detailed assessments for the subsequent application stages and when the SIMTA proposal is operational, including monitoring of background noise levels at nearby receivers. The monitoring data should be used to validate noise models used in these assessments. The subsequent assessments should address the environmental assessment requirements, as determined by the approval authority, as a minimum.	Provide with the planning applications for the three major stages of the Concept Plan and within 12 months of the commencement of operation for each stage
	Prior to undertaking demolition and construction on site, a Construction Noise and Vibration Management Plan should be prepared based on details of the proposed construction methodology, activities and equipment This should identify potential noise and vibration impacts and reasonable and feasible noise mitigation measures (such as those identified in this report) that may be implemented to minimise any potential impacts, including engineering and management controls.	Prior to demolition and/or construction

Reference	Statement of Commitment	Timing
	All construction activities will have regard to the standard hours of 7:00am to 6:00pm Monday to Friday and 8:00am to 1:00pm Saturday (with approval from relevant authorities). Any works undertaken outside of these hours will be undertaken in consultation with relevant authorities. Works outside these hours that may be permitted will include: • Any works which do not cause noise emissions to be audible at any nearby sensitive receptors. • The delivery of materials which is required outside of these hours as requested by Police or other authorities for safety reasons. Local residents, commercial and industrial premises will be informed of the timing and duration of approved works in accordance with the notification provisions outlined in the CNMP. • Emergency work to avoid the loss of lives, property and/or to prevent environmental harm. Any other work as approved through the CNMP Process • Any other work as approved through the CNMP Process.	During construction

Noise and vibration issues associated with the MPE Project would be managed in accordance with the Concept Plan Approval and associated SoCs referred to above. These are considered adequate to address the potential impacts of the Modification Proposal.

5.3 Biodiversity

5.3.1 MPE Concept Plan Approval

Impacts on biodiversity associated with construction and operation of the MPE Project were assessed in the Concept Plan Approval in the Flora and Fauna Assessment (Hyder Consulting, 2013c).

Five vegetation types were identified within the study area, of which four correspond with threatened ecological communities (TECs) listed under the NSW *Threatened Species Conservation Act 1995* (TSC Act), based on analysis of existing vegetation maps and ground truthing. These are:

- Castlereagh Scribbly Gum Woodland in the Sydney Basin bioregion
- Castlereagh Swamp Woodland
- River-flat Eucalypt Forest on Coastal Floodplains of the NSW North Coast, Sydney Basin and South-east Corner bioregions
- Freshwater Wetlands on Coastal Floodplains of the NSW North Coast, Sydney Basin and South-east Corner bioregions

The fifth vegetation type, and only type not listed as a threatened ecological community, identified in the Concept Plan study area was ‘urban/exotic’.

Two threatened flora species listed under the EPBC Act and TSC Act were recorded within the study area:

- *Persoonia nutans* (Nodding Geebung), listed as Endangered under the EPBC Act and on Schedule 1 of the TSC Act
- *Grevilla parviflora subsp. parviflora* (Small-flower Grevillea), is listed as Vulnerable under the EPBC Act and on Schedule 2 of the TSC Act

Another threatened species, *Acacia pubescens* (Downy Wattle), was recorded at the edge of bushland to the east of the MPE site. *Acacia pubescens* is listed as Vulnerable under the EPBC Act and on Schedule 2 of the TSC Act.

Four threatened fauna species listed under the TSC Act and/ or EPBC Act were also recorded:

- Eastern Bent-wing Bat (*Miniopterus schreibersii*)
- Southern Myotis (*Myotis macropus*)
- Eastern Free-tail Bat (*Mormopterus norfolkensis*)
- Grey-headed Flying Fox (*Pteropus poliocephalus*).

Other species of concern that were not recorded but were identified as having the potential to occur within the study area included:

- Green and Golden Bell Frog (L*itorea aurea*)
- Spotted-tail Quoll (*Dasyurus maculatus*)
- Macquarie Perch (*Macquaria australasica*).

These species were specifically addressed in the Flora and Fauna Assessment and were identified as not being impacted by the MPE Project.

The study area as assessed contains, and is bound by, significant barriers to fauna movement, including Moorebank Avenue, the East Hills Railway line and chain-mesh fencing surrounding the MPE site, Royal Australian Engineers Golf Course and Glenfield Waste Disposal Facility. This would limit movement into and through the study area to small terrestrial mammals, reptiles, amphibians, bats and birds.

The following biodiversity values were assessed as likely to be impacted as a result of the MPE Project:

- Two threatened flora species listed under the EPBC Act and TSC Act
- Four TECs listed under the TSC Act
- Four threatened fauna species, of which one is listed under the EPBC Act and TSC Act and three are listed under the TSC Act
- Habitat for threatened flora species
- Habitat for locally occurring fauna species
- Potential habitat for threatened terrestrial and aquatic fauna species.

Assessments of significance were prepared for threatened flora and fauna species and ecological communities known or likely to be impacted by the MPE Project. Assessment of seven particular threatened species and communities listed under the EPBC Act that are known or likely to be present in the vicinity of the proposed development was also undertaken. These assessments concluded that the four threatened ecological communities, four threatened terrestrial fauna species and one aquatic fauna species would not be significantly impacted by the MPE Project. Impacts on these threatened species and communities can be adequately addressed through mitigation measures.

The threatened plant species *Grevillea parviflora* subsp. *parviflora* was also considered unlikely to be significantly impacted by the MPE Project. The Assessment of Significance for *Persoonia nutans* concluded that this endangered species would be significantly impacted as a result of the MPE Project due to the construction of the rail corridor, which was subsequently further assessed under the MPE Stage 1 Proposal.

5.3.2 Impact assessment

Arcadis have undertaken an assessment of the potential biodiversity impacts associated with the Modification Proposal (refer to Appendix D). The components of the Modification Proposal, and their identified potential impacts on biodiversity, are summarised in Table 5-10.

Table 5-10 Potential biodiversity impacts associated with the Modification Proposal

Element	Biodiversity impacts
Extend the land to which the MPE Concept Plan Approval applies to recognise upgrade works on Moorebank Avenue and drainage works to the south and south-east of the MPE site	Refer to discussion for other components of the Modification Proposal below. Some minor vegetation clearance may be required in these extended areas. Further detail would be provided in future development applications.
Moorebank Avenue upgrade from the northern to the southern extent of the MPE site including modifications to the existing lane configuration, some widening and the provision of ancillary services and infrastructure such as stormwater drainage.	Roadworks on Moorebank Avenue would result in removal of scattered planted trees over mown exotic grass verges in the road reserve. These trees include seven trees identified as containing small hollows or fissures, all of which are located in the Moorebank Avenue road reserve. The Moorebank Avenue Upgrade site also extends into areas of EEC within the MPW site, however the assessment of these impacts has been undertaken in the MPW Project, and therefore no further assessment is required for the Modification Proposal.
Provision of an interim site access to the warehousing from Moorebank Avenue.	The vegetation in this area is planted and disturbed, and minimal biodiversity impacts are anticipated. There would be no change in impact from the MPE Concept Plan Approval.
Reconfiguration of the internal road network within the MPE site and use of all internal roads by both light and heavy vehicles, rather than light vehicles only for internal road No.2	The vegetation in this area is planted and disturbed, and minimal biodiversity impacts are anticipated. There would be no change in impact from the MPE Concept Plan Approval.
Importation of general fill material (of approximately 600,000m^3) and bulk earthworks	The clearing of the entire MPE site was assessed in the MPE Concept Plan Assessment; the loss of 0.1 hectare of Hard-leaved Scribbly Gum – Parramatta Red Gum heathy woodland of the Cumberland Plain, Sydney Basin was not previously assessed, as this area was not mapped. All other areas to be impacted are planted and disturbed vegetation. Any impacts to native vegetation would be offset and has been considered in the current Biodiversity Offset Strategy prepared to be prepared for the Moorebank

Element	Biodiversity impacts
	Precinct (under the Draft MPE Stage 1 Conditions of Approval).
Change to the location of and land uses within the freight village, and provision of warehousing along the Moorebank Avenue frontage	The vegetation in the new location for the freight village is planted and disturbed, and no additional biodiversity impacts are anticipated.
Changes to the staging of development including construction of all warehouses as part of the MPE Stage 2 Proposal	Changes to staging would not result in any biodiversity impacts and there would be no change in impact from the MPE Concept Plan Approval.
Subdivision of the MPE site	Subdivision would not result in any biodiversity impacts and there would be no change in impact from the MPE Concept Plan Approval.

5.3.3 Mitigation measures

Conditions of Approval

The Concept Plan Approval included a number of additional requirements for all future approvals under the Concept Plan Approval with regards to biodiversity, as described in Table 5-11. These requirements are considered sufficient for assessment of the Modification Proposal.

Table 5-11 MPE Concept Plan Conditions of Approval – Biodiversity

Aspect	Condition
Schedule 3 – 2. Future Assessment Requirements	
2.1 Biodiversity	Any future Development Application shall include a Flora and Fauna assessment. The assessment shall: a) assess impacts on the biodiversity values of the site and adjoining areas, including Endangered Ecological Communities and threatened flora and fauna species and their habitat, impacts on wildlife and habitat corridors, riparian land, and habitat fragmentation and details of mitigation measures, having regard to the range of fauna species and opportunities for connectivity (terrestrial, arboreal and aquatic) across the rail link between the site and the EHPL; b) include a Vegetation Management Plan that has been prepared in consultation with the NSW Office of Water; c) document how impacts to the *Persoonia nutans* and the Grevillea parviflora subsp. *Parviflora* flora species have been minimised through the detailed design process; d) include the details of available offset measures to compensate the biodiversity impacts of the proposal where offset measures are proposed to address residual impacts, in particular the following should be considered: i. As stipulated in principle 2 of 'NSW offset principles for major projects (state significant development and infrastructure)', for terrestrial biodiversity, established assessment tools, such as the BioBanking Assessment Methodology (BBAM), are considered best practice;

Aspect	Condition
	ii. the Biodiversity Offset Strategy will be undertaken in accordance with the 'NSW offset principles for major projects (state significant development and state significant infrastructure)'; and iii. Offsets shall be identified, and demonstrate that they can be secured.

Statement of Commitments

Based on the recommendations of the *Flora and Fauna Assessment*, SIMTA committed to a number actions relating to biodiversity impacts. The SoCs associated with the MPE Concept Plan Approval that are relevant to the Modification Proposal and biodiversity are provided in Table 5-12.

Table 5-12 Concept Plan Statement of Commitments (biodiversity)

Reference	Condition of Approval / Statement of Commitment	Timing
	Aquatic Flora and Fauna The Proponent will implement the following measures to protect the aquatic flora and fauna as part of the applications for the detailed planning applications (where relevant and applicable): • Implementation of Construction and Operation Management Plans for maintenance of structures in riparian and aquatic zones. • Thorough assessment of any development within the Anzac Creek CSWL community, including potential impacts on groundwater quality and quantity • Lantana removal within nominated construction zones to reduce degradation of streamside vegetation and offset any potential impacts to aquatic biodiversity.	During construction Provide with the planning applications for the three major stages of the Concept Plan that impact on Anzac Creek During construction
	• The riparian setback for Anzac Creek, as specified by NOW, is 30 metres (20 metre CRZ and 10 metre VB), while for Georges River the riparian setback is likely to be a minimum of 50 metres (40 metre CRZ and 10 metre VB)	Provide with the planning applications for the three major stages of the Concept Plan
	• Riparian corridors will be appropriately revegetated to restore and/or maintain ecological, functional and habitat values and impede surface flows and drop sediment before it reaches the waterways.	During construction

Reference	Condition of Approval / Statement of Commitment	Timing
	• Water quality and quantity issues will be managed during the construction phase through the implementation, inspection and maintenance of best practice soil and water management techniques which will be defined in the CEMP for sedimentation and erosion control during construction.	During construction
	• Water quality and quantity issues will be managed during the operation phase through the implementation, inspection and maintenance of Water Sensitive Urban Design (WSUD) measures such as rainwater tanks, grass filter strips, swales and bio retention.	During construction

Biodiversity issues associated with the MPE Project would be managed in accordance with the Concept Plan Approval and associated SoCs tabled above. These are considered adequate to address the potential impacts of the Modification Proposal.

5.4 Hazards and risks

5.4.1 MPE Concept Plan Approval

A *Potential Hazard and Risks Assessment* (Hyder, 2013d) was prepared as part of the Concept Plan Approval EA, and included an assessment of the potential hazards and risks associated with the development of an IMT facility, warehouse and distribution facilities and ancillary services.

The Concept Plan EA identified the following key potential hazards and risks that could arise during the construction and operation of the MPE Project:

- Presence of asbestos in existing structures and soil on the MPE Stage 2 site
- Potential for soil and groundwater contamination as a result of previous activities on the MPE site (including unexploded ordnance)
- Potential transport, storage and handling of dangerous goods
- Bushfire.

The *Potential Hazards and Risks Assessment* reached a number of conclusions and provided recommendations to be implemented during construction and operation of the MPE Project, including management procedures and some further investigations to address the potential risks and hazards identified.

An assessment of the MPE Project against relevant factors for bushfire risk in *Planning for Bush Fire Protection* (RFS, 2006) was included in the *Potential Hazard and Risks Assessment.* The assessment noted that bushfire risk is most likely to arise from the large area of native vegetation contained within the Commonwealth land, adjoining the MPE site to the east and south.

The following principles were adopted to address bushfire risk:

- Afford occupants of any building adequate protection from exposure to a bushfire
- Ensure safe operational access and egress for emergency service personnel and residents
- Provide for ongoing management and maintenance of bushfire protection measures, including fuel loads in asset protection zones
- Ensure that utility services are adequate to meet the needs of fire fighters.

5.4.2 Impact assessment

Construction

Construction phase hazards and risks are not expected from the proposed changes to staging and the proposal to subdivide the MPE site. Other components of the Modification Proposal would have similar construction phase hazards and risks to those identified by the Concept Plan Approval EA (refer to 5.4.1 of this Modification Report) and therefore construction of the Modification Proposal is not expected to introduce any new hazards and/or risks, to those already assessed under the MPE Concept Plan Approval.

Operation

The Modification Proposal would not alter the findings of the Concept Plan Approval EA and associated *Preliminary Hazards and Risks Assessment* in relation to the management of dangerous goods. In this context, it is noted that there would be no substantial change to the operational layout or processes employed at the site.

In relation to bushfire risk, the Modification proposal would not alter setbacks from bushfire prone vegetation and would maintain safe operational access/egress for emergency service personnel and occupants.

5.4.3 Mitigation measures

Conditions of Approval

The Concept Plan Approval included a number of additional requirements for all future approvals under the Concept Plan Approval with regards to hazards and risks, as described in Table 5-13. These requirements are considered sufficient for assessment of the Modification Proposal.

Table 5-13 MPE Concept Plan Conditions of Approval – Hazards and Risks

Aspect	Condition
Schedule 3 – 2. Future Assessment Requirements	
2.1 Hazards and Risks	Any future Development Application shall be accompanied by a preliminary risk screening completed in accordance with *State Environmental Planning Policy No. 33 – Hazardous and Offensive Development* and *Applying SEPP 33* (DoP 2011), with a clear indication of class, quantity and location of all dangerous goods and hazardous materials associated with the proposal. Should preliminary screening indicate that the proposal is 'potentially hazardous,' a Preliminary Hazard Analysis (PHA) must be prepared in accordance with *Hazardous Industry Planning Advisory Paper No. 6 – Guidelines for Hazard Analysis* (DoP 2011) *and Multi-Level Risk Assessment* (DoP 2011). The PHA should: a) Estimate the risks from the facility; b) Be set in the context of the existing risk profiles for the intermodal facility and demonstrate that the proposal does not increase the overall risk of the area to unacceptable levels; and c) Demonstrate that the proposal complies with the criteria set out in the *Hazardous Industry Planning Advisory Paper No. 4 – Risk Criteria for Land Use Safety Planning*.

Aspect	Condition
2.1 Bushfire Management	Any future Development Application shall be accompanied by an assessment against the Planning for Bushfire 2006 (NSW Rural Fire Service).

Statement of Commitments

Based on the recommendations of the *Hazards and Risks Assessment*, SIMTA committed to a number 0f actions relating to hazards and risks. The SoCs associated with the MPE Concept Plan Approval that are relevant to hazard and risk are provided in Table 5-14.

Table 5-14 Concept Plan Statement of Commitments (hazard and risk)

Aspect	Commitment	Timing
Hazards and Risks	<u>Asbestos</u> • The Proponent will develop an asbestos management plan for the MPE Project containing a risk assessment undertaken in accordance with Code of Practice for the Management and Control of Asbestos in the Workplace (NOHSC, 2005). • Where the management plan recommends the removal of asbestos from site, all works will be 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 an emergency plan. <u>Dangerous Goods</u> • The Proponent commits to undertaking a preliminary hazard assessment either during the preparation of the subsequent detailed planning applications (where tenants and purposes have been defined) or by tenants during the operational phase of development, as required by State Environmental Planning Policy No. 33 Hazardous and Offensive Development (SEPP No. 33). • Once the level of risk has been identified the aim will be to reduce the risk to 'as low as reasonably possible' (ALARP) 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 Preliminary Hazard Assessment (PHA), SIMTA will require potential tenants to demonstrate measures to reduce the risk to an acceptable level prior to acceptance of tenancy. • The Proponent will require all tenants to disclose the anticipated type and quantity of goods entering the SIMTA site prior to award of tenancy. Prior to commencement of a lease on the SIMTA 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 site.	Prior to demolition and/or construction Prior to occupation of buildings by tenants proposing to store, handle or transport dangerous goods During operation

Aspect	Commitment	Timing
	• These plans will be reviewed regularly and updated as goods entering the site may change with the tenancies. The requirements in the Code of Practice for storage and handling of dangerous goods (Work Cover NSW, 2005) would be adopted in these plans as a minimum.	
	Spills • The Proponent commits to the preparation of a Construction and Operational Management Plan prior to the commencement of site operations for control/mitigation and management of any spillage/leaks etc.	Prior to commencement of operation for the first stage of works
	Unexploded Ordnance • The Proponent commits to undertaking and remediation (where necessary) prior to the commencement of construction.	Prior to construction on land potentially affected by UXO
	Bushfire Management • The Proponent commits to incorporating the key objectives identified by the Rural Fire Service (RFS) into relevant future design stages, in accordance with the following principles: – Afford occupants of any building adequate protection from exposure to a bush fire. – Ensure safe operational access and egress for emergency service personnel and residents – Provide for ongoing management and maintenance of bush fire protection measures, including fuel loads in asset protection zones (APZs) – Ensure that utility services are adequate to meet the needs of fire fighters	Address in the planning applications for the three major stages of the Concept Plan

Hazard and risks associated with the MPE Project would be managed in accordance with the Concept Plan Approval and associated SoCs referred to above. These are considered adequate to address the potential impacts of the Modification Proposal.

5.5 Contamination

5.5.1 MPE Concept Plan Approval

A *Preliminary Environmental Site Assessment of the MPE Site and Rail Corridor Lands* (Preliminary ESA) (Golder Associates, 2013a) and a *Phase 1 Environmental Site Assessment – Rail Corridor Land for SIMTA Moorebank Intermodal Terminal Facility* (Phase 1 ESA) (Golder Associates, 2013b) was prepared as part of the Concept Plan Approval EA.

The Preliminary ESA did not did not identify any significant contamination issues which would preclude the development of the MPE site. It did however recommend further assessment based on the detailed design of subsequent stages of the MPE Project, with the aim of identifying the extent of contamination and remediation actions required, and matching these requirements to the development of the site. These recommendations are reflected in the SoCs and the Concept Plan Conditions of Approval (refer below).

5.5.2 Impact assessment

Construction

Contamination risks and impacts can be broadly divided into two main categories:

- Those that presently exist onsite and have built up over time
- Those that may be induced or created from the Proposal, either through construction or operational activities (managed through onsite management and monitoring methods).

Construction of the Modification Proposal is not expected to introduce any new contamination issues / risks that were not previously considered by the Concept Plan Approval EA and the Preliminary ESA. Previous investigations have investigated potential contamination risk at the at the MPE site with no evidence of widespread residual contamination having been reported.

Moorebank Avenue is the main additional area of impact associated with the Modification Proposal. The areas of contamination interest relating to the Moorebank Avenue site have been identified as follows:

- Potential for surficial contamination along the length of the Moorebank Avenue site from spills / leaks of fuels relating to the use of this area as a roadway
- The southern portion of the Moorebank Avenue site is directly adjacent and downgradient of the former refuelling facility (part of the Stage 1 MPE Project). Groundwater underneath this portion of the site is reportedly impacted by hydrocarbons that have migrated from the former refuelling facility (GHD, 2016)
- Part of northern portion of the Moorebank Avenue site has previously been identified as an aspect of environmental concern (Egis, 2000). This portion of the Moorebank Avenue was reportedly used for Explosive Ordnance Demolition (EOD) and dog training area. It was considered that there was a low possibility of this portion of the Moorebank Avenue site being impacted by explosives, unexploded ordinance (UXO) and metals.

Construction of the Modification Proposal, specifically the proposed roadworks on Moorebank Avenue, would have the potential to release and/or expose existing sources of contamination into the surrounding environment through disturbance of soils and groundwater. Potential exposure pathways for contamination may include:

- Direct dermal contact with contaminated soil or groundwater during construction or operation
- Inhalation of contaminated dust or vapour during construction or maintenance
- Ingestion of contaminated dust during construction or maintenance
- Mobilisation and/or exposure of contaminants in soil or groundwater through construction activities.

General fill brought to the MPE site and Moorebank Avenue would be clean and appropriately tested and have waste classification certificates (or equivalent) certifying the material is suitable for use on the MPE site.

Operation

There are no identified operation phase contamination issues / risks specific to the Modification Proposal and it is noted that the MPE site has been assessed as suitable for the desired commercial / industrial land use with no specific areas requiring direct remediation prior to operation.

Accidental spills and leaks have the potential to result in contaminants being transported into the surrounding environment and groundwater, but this risk is not specific to the Modification Proposal. The reconfiguration of the internal road network as part of the Modification Proposal would improve road safety throughout the MPE site by separating the transfer road network, and this may reduce the risk of accidents resulting in spills.

As the majority of the MPE site would be hardstand, the potential for the migration of fuels and chemicals to soil and groundwater is considered to be low.

5.5.3 Mitigation measures

Conditions of Approval

The Concept Plan Approval included a number of additional requirements for all future approvals under the Concept Plan Approval with regards to contamination, as described in Table 5-15. These requirements are considered sufficient for assessment of the Proposed Modification.

Table 5-15 MPE Concept Plan Conditions of Approval – Contamination

Aspect	Condition
Schedule 3 – 2. Future Assessment Requirements	
2.1 Soil and Water	d) include a contamination assessment in accordance with the guidelines made under the *Contaminated Land Management Act 1997* and in consultation with the EPA for the subject site including the Glenfield Waste Facility. The assessment shall include: i. the potential environmental and human health risks of site contamination on the project site; ii. a Remediation Action Plan; iii. consideration of implications of proposed remediation actions on the project design and timing; and iv. a Phase 2 environmental site assessment of the project site including rail corridor.

Statement of Commitments

Based on the recommendations of the Preliminary ESA and Phase 1 ESA, SIMTA committed to a number of actions relating to contamination. The SoCs associated with the MPE Concept Plan Approval that are relevant to contamination are provided in Table 5-16.

Table 5-16 Concept Plan Statement of Commitments (contamination)

Aspect	Commitment	Timing
Contamination	The following tasks will be undertaken in association with the detailed planning applications for the staged redevelopment of the SIMTA site: • Confirming what, if any, actions were taken in regards to the Milsearch (2002) recommendations and the associated low risk ordnance issues. • Undertaking further investigations in the areas of environmental concern likely to be impacted upon by the proposed development. These investigations will be based on the detailed design of the proposed development to identify the extent of contamination, and what, if any, remediation activities are needed. The remediation of areas of the site (if any) would be best matched to the development of the site and considered as part of the future design.	Provide with the planning applications for the three major stages of the Concept Plan
	• Developing a Contamination Management Plan with detailed procedures on: – Handling, stockpiling and assessing potentially contaminated materials encountered during the development works; – Landfill gas management during the excavation, handling, and stockpiling of waste materials, if excavation is required during the development, in the area of the Glenfield Quarry and Landfill; – Assessment, classification and disposal of waste in accordance with relevant legislation; and – A contingency plan for unexpected contaminated materials, such as materials that is odorous, stained or containing anthropogenic materials, that may be encountered during site works.	Prior to construction of the three major stages of the Concept Plan

Contamination issues associated with the MPE Project would be managed in accordance with the Concept Plan Approval and associated SoCs referred to above. These are considered adequate to address the potential impacts of the Modification Proposal at the concept stage. Further measures may be proposed based on investigations undertaken for the MPE Stage 2 EIS.

5.6 Stormwater and flooding

5.6.1 MPE Concept Plan Approval

A *Stormwater and Flooding Environmental Assessment* (Hyder Consulting, 2013e) and *Flood Study and Stormwater Management Report* (Hyder Consulting, 2013f) was prepared as part of the Concept Plan Approval EA.

The *Stormwater and Flooding Environmental Assessment* was undertaken having regard to the site context and identified three existing catchments that discharge from the site, two eastwards towards Anzac Creek and one westward into the Georges River.

The *Flood Study and Stormwater Management Report* determined the peak flows leaving the site and concluded that the proposed volume of detention storages would adequately mitigate additional site run-off up to and including the 100 year annual recurrence interval (ARI) storm. Flooding risk associated with the development of the warehousing and distribution was also identified.

Water quality was also assessed with the Georges River and Anzac Creek being classified as lowland aquatic ecosystems of south-eastern Australia (ANZECC, 2000). Water quality parameters were found to be within the guidelines with the exception of pH and dissolved oxygen (DO). Spot measurements within the Georges River and Anzac Creek demonstrated pH 6.06 and 5.62 respectively (guideline value 6.50) and DO below the lower guideline value of 60 per cent saturation in both locations.

5.6.2 Impact assessment

Construction

During construction, and specifically during bulk earthworks, there is potential for soil to be eroded from the construction area and deposited onto nearby lands or downstream of either the Georges River or Anzac Creek. This is generally consistent with the Concept Plan Approval, which contemplated some earthworks on the MPE site. The soils and topography of the MPE site have been identified as posing a low erosion hazard. The soils are generally fine grained and require a relatively long residence time in sediment basins to achieve the Total Suspended Solids (TSS) concentrations suitable for discharge off site.

Bulk earthworks would have the potential to cause flooding impacts on surrounding properties during a significant rainfall event, in the absence of permanent, operational flood management measures. Flood risk to nearby properties and to the MPE site itself may occur through the failure of existing or temporary water containment measures, or through a rainfall event exceeding the capacity of those controls. The risk of regional flooding for a storm event up to the 100 year Annual Recurrence Interval (ARI) or Probable Maximum Flood (PMF) event is considered negligible.

Operation

Water quantity

The Modification Proposal would not significantly alter the imperviousness of the MPE site when compared to the MPE Concept Plan Approval. It would also not significantly increase the imperviousness of the Moorebank Avenue, when compared to the existing road formation. Accordingly, there would not be significant changes to peak discharges from either the MPE site or Moorebank Avenue attributable to the Modification Proposal.

DRAINS modelling results indicate that the proposed drainage systems and OSD basins would provide adequate system capacities and mitigate potential adverse flood impacts associated with development of the MPE Stage 2 site from existing conditions. It can therefore be inferred that any small changes to peak discharges which might be attributable to the Modification Proposal would also be adequately accommodated. Table 5-17 shows a comparison of existing and post development peak discharges from the MPE Stage 2 site.

Table 5-17 Comparison of existing and developed case – peak discharge

Discharge location	Site Condition	Catchment Area (ha)	Flow (m^3/s)		
			5y ARI	100y ARI	PMP
Outlet A (Greenhills Road Nth)	Existing[4]	21.76	3.4	4.1	23
	Proposed	**29.49**	**1.4**	**1.9**	**32**
Outlet B (Greenhills Road Sth)	Existing	27.45	0.5	3	15
	Proposed	**17.79**	**0.3**	**1.8**	**21**
Outlet C (Moorebank Avenue)	Existing	59.95	6.9	12.9	75
	Proposed	**61.72**	**4.7**	**6.9**	**120**

For Anzac Creek, the results of the Stream Erosion Index (SEI) calculations indicate that the increase in flow volume attributable to the MPE Stage 2 Proposal (inclusive of the Modification Proposal) is unlikely to have any significant impact on the downstream system. For the Georges River, it is noted that annual catchment flow volumes are many orders of magnitude greater than from the site (which represents less than 0.07% of the total catchment area). It can therefore be inferred that any small changes to flow volume which might be attributable to the Modification Proposal would also have no significant impact on these downstream systems.

Water quality

Significant changes to operational water quality are not expected as a result of the Modification Proposal because there would be no significant change to flow discharges, discharge points and land uses when compared to the MPE Concept Plan Approval. The performance of proposed operational treatment measures (i.e. gross pollutant traps and rain gardens) would comply with the catchment specific targets of the Georges River Estuary Coastal Zone Management Plan (CZMP) and neutral or beneficial effect (NorBE) targets. Total pollutant loads contained in the runoff from the site (to both the Georges River and Anzac Creek) would be less than or equal to loads under existing conditions as shown in Table 5-18. It can therefore be inferred that any small changes in stormwater quality attributable to the Modification Proposal would be also be adequately addressed by proposed operational treatment measures.

[4] Existing refers to the existing site conditions pre undertaking of any site development under the MPE Concept Plan Approval.

Table 5-18 Summary of stormwater quality performance – with and without treatment

Scenario	Pollutant loads (kg/ year)			
	Gross pollutants	TSS	TP	TN
Proposal (no treatment)	14,000	93,200	182	1,200
Proposal (with treatment)	0	9,460	38.2	501
Percentage reduction achieved	100%	90%	79%	58%
Percentage reduction target	90%	85%	60%	45%
Existing	5,550	24,800	62.3	564
Reduction achieved from existing	5,550	15,340	24.1	63

Flooding

Modelling was undertaken for the MPE Stage 2 Proposal, 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, including during the Climate Change Scenario.

The adjustment to building formation level will, consistent with assessment in the MPE Concept Plan EA, result in the operational area of the MPE site being above the regional PMF levels. However, areas not impacted by regional flooding may still be affected by local PMF flow regimes.

The impacts associated stormwater flows from the MPE site to the Georges River are expected to be negligible in the context of the Georges River catchment as a whole.

For Anzac Creek, modelling indicates with the development of the MPE Stage 2 site:

- There is no increase in flood levels in the100 year ARI nine hour event.
- For the PMF one hour event, the proposed bulk earthworks and development would generally result in no increase in flood levels along the broader Anzac Creek floodplain. However, local flood level increases adjacent to the site of approximately 0.2 metre immediately south of the site, and approximately 0.3 metre in the area to the north-east of the site would result.

The modelling also demonstrates that potential adverse flood impacts attributable to the MPE Project (inclusive of the Modification Proposal) have been adequately mitigated along the Anzac Creek floodplain for up to 100 year events, and generally along the overall floodplain for events greater than the 100 year event. While the modelling indicates that there may be local flood level increases impacting on the neighbouring property immediately to the north-east of the proposal area, these impacts would be limited to the open vehicular parking areas, and would only occur in extremely rare events (of greater than 100 year ARI).

5.6.3 Mitigation measures

Mitigation measures identified within the MPE Concept Plan Approval and associated Statement of Commitments that are applicable to stormwater and flooding, and which would apply to the Modification Proposal, are listed in Table 5-19 below.

Table 5-19 Concept Plan Statement of Commitments (stormwater and flooding)

Reference	Statement of Commitment	Timing
Stormwater and Flooding	The Proponent will incorporate stormwater quantity and quality management measures into the detailed applications in accordance with the objectives and performance standards outlined in the *Stormwater and Flooding Environmental Assessment* report and including:	Provide with the planning applications for the three major stages of the Concept Plan
	• Preparation of a Soil and Water Management Plan (SWMP) and Erosion and Sediment Control Plan (ESCP) for both the construction and operation phases.	Prior to construction
	• Implementation of management plan strategies prior to commencement of the staged construction phase	
	• Monitoring and review performance of sediment and water control structures during construction and operation phases	Throughout construction and operation
	The Proponent will prepare and update a flood emergency response plan as necessary to address the staged development of the site. Details are to be provided prior to the construction of each of the three major stages of the development.	Prior to construction of the three major stages

Stormwater and flooding issues associated with the MPE Project would be managed in accordance with the MPE Concept Plan Approval and associated SoCs referred to above. These are considered adequate to address the potential impacts of the Modification Proposal.

5.7 Air quality

5.7.1 MPE Concept Plan Approval

An Air Quality Impact Assessment (Pacific Environment, 2011) was prepared for the Concept Plan Approval EA, which takes into account all stages of the MPE Project, but did not specifically consider construction air quality.

The Air Quality Impact Assessment provided a modelling scenario for the operation of the MPE Project, based on a conceptual busiest hour of operations for the MPE Project once operating at an annual throughput of one million TEU[5]. Pollutant emissions from the following sources were estimated and used to predict the impacts from the operation of the MPE Project:

- Locomotives idling on-site during container unloading and loading
- Trucks travelling along Moorebank Avenue and moving and idling within the MPE site
- Container handling equipment (forklifts, gantry cranes) unloading/loading containers
- Forklifts operating within warehouse areas.

Dispersion modelling was undertaken using Ausplume to predict potential off-site impacts from the operation of the MPE Project. The results of the modelling indicated that operations for the MPE Project at maximum capacity (i.e. 1,000,000 TEU throughput) would not result in exceedances of the relevant impact assessment criteria for nitrogen dioxide, for all averaging periods and at all receptors.

Particulate Matter (PM) modelling predictions were made based on the maximum operating capacity of the MPE Project compared against air quality indicators for coarse particulate matter (PM_{10}) and fine particulate matter ($PM_{2.5}$). The modelling indicated that maximum predicted incremental 24-hour PM concentrations at sensitive receivers would be approximately 8 $\mu g/m^3$, which equates to 16% of the impact assessment criteria for PM_{10} and 32% of the advisory reporting standard for $PM_{2.5}$.

5.7.2 Impact assessment

Ramboll Environ have conducted an assessment of the potential construction and operational air quality impacts associated with the Modification Proposal (refer to Appendix E). It was found that additional assessment was only warranted in relation some components of the Modification Proposal, specifically the reconfiguration of the internal road network and bulk earthworks. Other findings of in relation to operational air quality are as follows:

- Trucks travelling along Moorebank Avenue were assessed in the Concept Plan Approval AQIA. Upgrade works as part of the Modification Proposal would have no material effect of local air quality and would not change the conclusions in the Air Quality Impact Assessment prepared for the Concept Plan Approval EA.
- Emission for trucks accessing the site were estimated based on distance based emission factors (i.e. grams per km travelled). Providing the interim site access and changes to the configuration of the internal road network are unlikely to significantly change the total return distanced travelled and therefore unlikely to change the emissions estimates, modelling and conclusions in the Air Quality Impact Assessment prepared for the MPE Concept Plan Approval EA
- Changes to the staging of the development is not expected to change the conclusions of the Air Quality Impact Assessment prepared for the Concept Plan Approval EA, which assessed the ultimate proposed site freight throughput for the Concept Plan. Subdivision of the MPE site is not expected to change the conclusions of the Air Quality Impact Assessment prepared for the MPE Concept Plan Approval EA.

[5] Although this assessment was for one million TEU throughput the Concept Plan Approval subsequently limited the MPE Project to movement of container freight by road to 500,000 TEU.

The approach to the assessment follows guidelines recommended in the *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales* ("the Approved Methods") (NSW EPA, 2005). Local air quality impacts from the Modification Proposal have been assessed using a Level 2 assessment approach, in accordance with the Approved Methods.

The key emissions to air during the construction phase of the Modification Proposal are fugitive dust or particulate matter (PM). During operation of the Modification Proposal, the key emissions would be associated with the combustion of diesel and other fossil fuels.

Modelling predictions have been compared against the NSW EPA's impact assessment criteria, outlined in the Approved Methods. As the Approved Methods do not include impact assessment criteria for $PM_{2.5}$, modelling predictions are compared with the National Environment Protection (Ambient Air Quality) Measure (AAQ NEPM), national reporting standards (NEPC, 2015). For the construction phase of the Modification Proposal, amenity impacts associated with construction dust are also considered against NSW EPA impact assessment criteria for dust deposition.

Construction

Due to the staged nature of MPE Project, construction impacts for the overall Concept MPE Plan Approval were not assessed quantitatively, rather it was identified that air quality impacts from each stage of construction would be assessed for each staged approval and managed under the Construction Environmental Management Plan (CEMP) developed at each stage. This remains the case for the Modification Proposal, however an assessment of construction phase impacts has been conducted to address potential impacts associated with bulk earthworks.

Modelling results for construction phase emissions are presented in Table 5-20 to Table 5-22.

Table 5-20 Construction phase – modelling predictions - receptor maximum for PM10

Receptor	PM_{10} (µg/m^3)	
	24-Hour Max	Annual Ave
	Incremental increase	Incremental increase
Goal	50 µg/m3	30 µg/m3
Receptor Max	4.2	0.4

Table 5-21 Construction phase – modelling predictions - receptor maximum for PM2.5

Receptor	$PM_{2.5}$ (µg/m^3)	
	24-Hour Max	Annual Ave
	Incremental increase	Incremental increase
Goal	25 µg/m^3	8 µg/m^3
Receptor Max	1.3	0.1

Table 5-22 Construction phase – modelling predictions - receptor maximum for TSP and dust deposition

Receptor	TSP (µg/m^3)	Dust Deposition
	Annual Ave Incremental increase	Annual Ave Incremental increase
Goal	90 µg/m^3	2g/m^2/m
Receptor Max	0.6	0.3

The modelling results indicate that the construction phase emissions for the Modification Proposal would comply with all relevant impact assessment criteria. The maximum predicted increase in annual average PM_{10} (0.4 µg/m³), $PM_{2.5}$ (0.1 µg/m³), TSP (0.6 µg/m³) and dust deposition (0.3 g/m^2/month) are considered minor when compared against existing background conditions. The highest predicted short-term impacts occur at the DJLU (north of the site), with a maximum 24-hour PM_{10} of 4.2 µg/m³ and maximum 24-hour $PM_{2.5}$ of 1.3 µg/m³.

Operation

The main operational change for the Modification Proposal that differs from that assessed in the for the MPE Concept Plan Approval EA, relates to traffic movements on internal roadways. In the MPE Concept Plan Approval, traffic movements were assessed along Moorebank Avenue and within the IMT facility. Under the Modification Proposal, the internal and service roads throughout the MPE site, would be used by both light and heavy vehicles.

For the MPE Concept Plan Approval, the total travel distance assumed for emission estimation was 3 km and was combined with the average daily traffic (ADT) movements based on a container throughput of 1,000,000 TEU. The proposed changes to traffic movements on internal roadways for the Modification Proposal would not change these assumptions (travel distance or ADT movements) and therefore the Modification Proposal would not change the modelling results or conclusions presented in the MPE Concept Plan EA.

It is also noted that traffic movements on internal and external roadways will also be assessed for each staged approval.

5.7.3 Mitigation measures

Conditions of Approval

The Concept Plan Approval included a number of additional requirements for all future approvals under the Concept Plan Approval with regards to air quality, as described in Table 5-23. These requirements are considered sufficient for assessment of the Proposed Modification.

Table 5-23 MPE Concept Plan Conditions of Approval – Air quality

Aspect	Condition
Schedule 3 – 2. Future Assessment Requirements	
2.1 Air quality	Any future Development Application shall include a comprehensive air quality impact assessment for each stage of the proposal, including: a) An assessment in accordance with the Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales (2005) (or its later version and updates; b) Taking into account the final project design with consideration to worst-case meteorological and operating conditions; c) Quantitatively assessing the predicted emission of: i. Solid particles; ii. Sulphur oxides; iii. Nitrogen oxides; and iv. Hydrocarbons. d) Assessing cumulative air impacts at a local and regional level (including but not limited to contemporaneous operations such as those of the proposed Commonwealth Government MIT; and e) A comprehensive air quality management plan that includes at least the following information: i. Explicit linkage of proposed emission controls to the site specific best practice determination assessment and assessed emissions; ii. The timeframe for implementation of all identified emission controls; iii. Proposed key performance indicator(s) for emission controls; iv. Proposed means of air quality monitoring including location (on and off-site), frequency and duration; v. Poor air quality response mechanisms; vi. Responsibilities for demonstrating and reporting achievement of key performance indicator(s); vii. Record keeping and complaints response register; and viii. Compliance reporting.

Statement of Commitments

Based on the recommendations of the Air Quality Impact Assessment, SIMTA committed to a number actions relating to air quality. The SoCs associated with the MPE Concept Plan Approval that are relevant to air quality are provided in Table 5-24.

Table 5-24 Concept Plan Statement of Commitments (air quality)

Aspect	Commitment	Timing
Air quality	The Proponent will undertake an air quality monitoring programme during the initial phases of both construction and operation of the SIMTA site in accordance with the Air Quality Impact Assessment and including: Nuisance Dust Air Emissions – PM_{10} and Nitrogen Dioxide	Within 12 months of commencing operation and within 12 months of operating at an annual throughput of 500,000 TEU and 1,000,000 TEU

Aspect	Commitment	Timing
	The Proponent shall consider the need to develop a vehicle efficiency and emissions reduction program for the facility to encourage good maintenance and efficient vehicle selection, taking into account the results of the air quality monitoring programme.	Within 12 months of commencing operation and within 12 months of operating at an annual throughput of 500,000 TEU and 1,000,000 TEU
	The Proponent commits to the preparation of a Construction Environmental Management Plan prior to the construction of each stage to provide air quality and dust management/mitigation procedures to be adopted during each of the construction phases of the development.	Prior to construction
	The Proponent commits to the preparation of a Greenhouse Gas Management Plan for the three major stages of the development in accordance with the provisions of the Greenhouse Gas Assessment.	Provide with the planning applications for the three major stages of the Concept Plan

Air quality issues associated with the MPE Project would be managed in accordance with the Concept Plan Approval and associated SoCs referred to above. These are considered adequate to address the potential impacts of the Modification Proposal.

5.8 Heritage

5.8.1 MPE Concept Plan Approval

Aboriginal heritage

An *Aboriginal Heritage Impact Assessment* (AHMS, 2012) was prepared as part of the Concept Plan Approval EA, and included an assessment of the potential impacts associated with the development of the MPE Project. The assessment was informed by a detailed background analysis of previous archaeological investigations in the region and included:

- A search of the AHIMS database identifying sites in the local area
- A site survey undertaken in conjunction with Aboriginal communities. Aboriginal consultation was undertaken with Tharawal Local Aboriginal Land Council (LALC), Cubbitch Barta Native Title Claimants, Darug Tribal Aboriginal Corporation, Daraug Aboriginal Cultural Heritage Assessments, Tocomwall and Darug Land Observations.

The following key characteristics relating to the identified Aboriginal heritage significance at the MPE site and within the surrounding area were identified:

- No Aboriginal places are registered within the MPE site, predominantly due to highly disturbed nature of the site to accommodate the existing DNSDC facility. Further, the Registered Aboriginal Parties (RAPs) indicated that they did not consider the MPE site to have any Aboriginal heritage value
- Seven isolated stone artefacts and three areas of potential archaeological deposit (PAD) were identified. One of these artefacts (MPE Isolated Artefact 1) is located within the study area and three artefacts (MPE Isolated Artefact 2, 3 and 4) were recorded just south of the study area.

The assessment concluded that, as the design of the MPE Project has not been finalised (i.e. was at Concept Plan stage), it is not known how it may impact specifically on the PADs or site identified within the Concept Plan Approval.

Non-Aboriginal heritage

A Non-Indigenous Heritage Assessment (Artefact, 2013) was prepared for the Concept Plan Approval EA. The assessment identified one listed heritage item, the DNSDC site within the MPE site; and one listed heritage item, the School of Military Engineering complex (SME), adjoining the MPE site.

Non-Indigenous Heritage Assessment concluded that the MPE Project is likely to involve the demolition and/or removal of all or some of the heritage buildings on the DNSDC site. These changes were identified as affecting the heritage significance of the World War II buildings located at the DSNDC site, but the assessment also noted that it is likely that these impacts would be mitigated by a combination of conservation, adaptive reuse, and relocation of some of the World War II structures. The possibility that archaeological remains of former structures exist throughout the site was also noted, with these having the potential to be of moderate research significance.

In relation to the SME, Non-Indigenous Heritage Assessment noted that impacts would be limited to a small portion of the SME site, and would not have any impact on the heritage significance of the item.

A number of heritage listed items located in the vicinity of the MPE site were also identified, with only one of these, Glenfield Farm (listed on the State Heritage Register (SHR)), potentially affected by the MPE Project. The assessment noted that the MPE Project would include the establishment of a landscaping ‘buffer zone’ along Moorebank Avenue, which would include screening vegetation with dense tree canopy cover and that this feature would help to mitigate potential impacts on views from Glenfield Farm resulting from new buildings within the MPE site.

5.8.2 Impact assessment

Artefact have undertaken an assessment of the potential construction and operational air quality impacts associated with the Modification Proposal (refer to Appendix F). The main findings of the assessment are summarised below.

Aboriginal heritage

Previous heritage assessments for the MPE Concept Plan Approval and MPE Stage 1 Proposal have concluded that the MPE site has been highly disturbed and modified. There were no areas of potential archaeological deposit (PAD) identified within the site and overall the site is considered to have low to nil potential to contain intact Aboriginal archaeological deposits.

However, these previous assessments did identify four isolated artefacts on, or in close proximity to, the MPE site. MPE Isolated Artefact 1, a 'mudstone flake' was recorded by AHMS in 2012. It was assessed as having low archaeological significance. The artefact was not recorded on the Aboriginal Heritage Information Management System (AHIMS) register and no site card is available. The artefact was not located during a recent site visit for the MPE Stage 2 Proposal. As the artefact could not be located and has not been registered, it is recommended that no additional assessment or management of the site is required.

MPE Isolated Artefact 2, a 'possible mudstone flake core', MPE Isolated Artefact 3, a 'possible silcrete core', and MPE Isolated Find 4, a chert core, were recorded by AHMS in 2012. These artefacts were assessed as having a low archaeological significance. These sites were not recorded on the AHIMS. Although MPE Isolated Artefact 2 and MPE Isolated Artefact 3 are within the southern portion of the Modification Proposal site they would not be impacted by the works and would be protected by an exclusion zone to be established during construction. MPE Isolated Artefact 4 is outside of the modification area.

The Modification Proposal would not impact any areas of PAD or any known Aboriginal sites.

Non-Aboriginal heritage

Previous heritage assessments for the MPE Concept Plan Approval and MPE Stage 1 Proposal have assumed complete removal of heritage values from the MPE site (Artefact 2012, 2015). This includes the built heritage associated with the former DNSDC site (listed on the Liverpool LEP 2008) and any archaeological remains. As such the Modification Proposal would not increase impacts to non-Aboriginal heritage values within the former DNSDC site. Indirect impacts to heritage items in the vicinity, such as the State Heritage Register (SHR) listed Glenfield Farm, would not be increased as a result of the Modification Proposal.

There would be minor impacts to the LEP listed School of Military Engineering (SME) site as a result of roadworks on Moorebank Avenue. As impacts to the SME have been approved under the MPW Concept and Stage 1 Early Works approval there are no additional impacts to the SME site as a result of the Modification Proposal. There would be no additional heritage impacts as a result of the road upgrade and provision of the OSD basin.

The interim site access at the existing Moorebank Avenue intersection with the northern DSNDC site access would not result in additional heritage impacts as all heritage values would be removed from the former DNSDC site.

Reconfiguration of the internal road network within the MPE site and use of all internal roads by both light and heavy vehicles, would not result in additional heritage impacts. The original road layout of the former DNSDC site would be impacted by the approved proposal, therefore changes in alignment of the new roads would not add to the existing impacts.

Bulk earthworks on the MPE and Moorebank Avenue would not result in additional heritage impacts, as heritage values of the former DNSDC site were assumed to be removed under the MPE Concept Plan Approval. Adjustment of the building formation would not be substantial enough to result in additional impacts to views and setting of heritage items in the vicinity such as Glenfield Farm.

Change to the location of and land uses within the freight village, and provision of warehousing along the Moorebank Avenue northern frontage would not result in additional heritage impacts as all heritage values were assumed to be removed from the former DNSDC site (MPE site) by the Concept Plan.

There would be no additional heritage impacts as a result of changing to staging of development as all heritage values were assumed to be removed from the site by the Concept Plan.

There would be no additional impacts as a result of subdivision of the site as the historical layout for the former DNSDC site would not be retained under the Concept Plan Approval. As heritage values would be removed from the site the original lot boundaries would lose their context and would not be an element of significance.

5.8.3 Mitigation measures

Conditions of Approval

The Concept Plan Approval included a number of additional requirements for all future approvals under the Concept Plan Approval with regards to Aboriginal and non-Aboriginal heritage, as described in Table 5-25. These requirements are considered sufficient for assessment of the Modification Proposal.

Table 5-25 MPE Concept Plan Conditions of Approval – Heritage

Aspect	Condition
Schedule 3 – 2. Future Assessment Requirements	
Heritage	Any future Development Application shall assess heritage impacts of the proposal. The assessment shall: a) consider impacts to Aboriginal heritage (including cultural and archaeological significance), in particular impacts to Aboriginal heritage sites identified within or near the project should be assessed. Where impacts are identified, the assessment shall demonstrate effective consultation with Aboriginal communities in determining and assessing impacts and developing and selecting options and mitigation measures (including the final proposed measures); and b) consider impacts to historic heritage. For any identified impacts, the assessment shall: i. outline the proposed mitigation and management measures (including measures to avoid significant impacts and an evaluation of the effectiveness of the measures). Mitigation measures should include (but not be limited to) photographic archival recording and adaptive re-use of buildings or building elements on site); ii. be undertaken by a suitably qualified heritage consultant(s); and iii. include a statement of heritage impact.

Statement of Commitments

Based on the recommendations of the *Aboriginal Heritage Impact Assessment* prepared for the Concept Plan EA, SIMTA as the Proponent committed to a number actions relating to Aboriginal and non-Aboriginal heritage. The SoCs associated with the MPE Concept Plan Approval that are relevant to contamination are provided in Table 5-26.

Table 5-26 Concept Plan Statement of Commitments (heritage)

Aspect	Commitment	Timing
Heritage	The Proponent commits to the implementation of the following General Mitigation Measures in the Aboriginal Cultural Heritage Assessment and include: • Consultation between SIMTA and relevant Registered Aboriginal Parties (RAPs) throughout the design and construction of the SIMTA proposal. • Where possible, SIMTA should aim to avoid impacting any known Aboriginal heritage objects, sites or places and places that have potential Aboriginal heritage or cultural values, throughout the life of the SIMTA proposal. • Where impact cannot be avoided, SIMTA should choose partial impact rather than complete impact wherever possible and ensure that appropriate measures to mitigate impacts are developed and implemented as required and as appropriate during design, construction and operation of the various stages of the SIMTA proposal. • If relocation of any element of the SIMTA proposal outside area assessed in this study is proposed, further assessment of the additional area(s) should be undertaken to identify and appropriately manage Aboriginal objects/sites/places that may be in this additional area(s). • In the event that previously undiscovered Aboriginal objects, sites or places (or potential Aboriginal objects, sites or places) are discovered during construction, all works in the vicinity of the find should cease and SIMTA should determine the subsequent course of action in consultation with a heritage professional, relevant Registered Aboriginal Parties and/or the relevant State government agency as appropriate • Should suspected human skeletal material be identified, all works should cease and the NSW Police and the NSW Coroner's office contacted. Should the burial prove to be archaeological of Aboriginal origin, consultation with a heritage professional, relevant RAPs and/or the relevant State government agency, should be undertaken by SIMTA. • SIMTA should ensure that any reports or documents for the SIMTA proposal concerning Aboriginal heritage comply with applicable statutory requirements (those currently applicable are outlined in this report), are prepared in accordance with best practice professional standards and, where appropriate, ensure findings are provided to OEH AHIMS Registrar and the relevant RAPs.	Provide an implementation plan with the planning application for the first stage of works (including the rail link)

Aspect	Commitment	Timing
	Non-Indigenous Heritage • The Proponent commits to undertaking the recommendations within the Non-Indigenous Heritage report and including: • Preparing a Statement of Heritage Impact (SoHI) for submission to the Minister for Planning and Infrastructure as part of staged planning applications at State level. • Commencing discussions with the appropriate heritage bodies regarding the potential listing of the DNSDC site on the National Heritage List or the State Heritage Register. • Preparing a Statement of Heritage Impact for each stage, including the legal status of the site and advice on required actions depending on whether the site is listed or unlisted at the time that approval is sought. • Development of an overall mitigation strategy for the DNSDC site, which may be based on Table 3 of the Non-Indigenous Heritage report. • Undertaking further archaeological assessment and investigation or monitoring, where required in areas designated as having archaeological potential that would be impacted by the proposal. The SoHIs for each stage should address the archaeological potential within the development area for each stage • If any archaeological deposit or item of heritage significance is located within the study area and is at risk of being impacted, the NSW Heritage Council should be notified and a heritage consultant/archaeologist should be engaged to assess the item to determine its heritage significance.	Provide with the planning applications for the three major stages of the Concept Plan as applicable to that stage of the project

Heritage issues associated with the MPE Project would be managed in accordance with the Concept Plan Approval and associated SoCs referred to above. Recognising that MPE Isolated Artefact 2 and MPE Isolated Artefact 3 are within, and Isolated Artefact 4 is in close proximity to the additional land to the south of the MPE site included in the Modification Proposal, in additional mitigation measure is also recommended:

- Establish an exclusion zone around MPE Isolated Artefact 2, MPE Isolated Artefact 3, and MPE Isolated Artefact 4 to protect these artefacts from potential impacts arising as a result of construction.

The SoCs, as modified, are considered adequate to address the potential impacts of the Modification Proposal.

5.9 Visual and urban design

5.9.1 MPE Concept Plan Approval

An *Urban Design and Landscape Report* (Reid Campbell, 2013a) was prepared for the Concept Plan Approval. The report found that the MPE Project would integrate into the surrounding land form and surrounding development through the use of architecturally designed structures, landscaping and select vegetation removal.

A *Visual Impact Assessment* (Reid Campbell, 2013b) undertaken for the Concept Plan Approval involved the preparation of a 3-dimensional massing model to inform the likely maximum and realistic visual impact at key viewpoints. The modelling was based on siting, setback, height, landscaping and general design principles described in the *Urban Design and Landscape Report*.

The assessment stated that the MPE Project would generally be in keeping with the existing character of the area. However, some relatively high and/or bulky structures/equipment may increase the visibility of the MPE site beyond its current levels, with some limited and localised visual impacts. The assessment found that the existing development surrounding the MPE site would generally screen the MPE Project from most of the surrounding area.

The most prominent views of the MPE Project would occur at localised boundary points at Moorebank Avenue and Anzac Road and at some nearby residential properties, however these impacts were assessed as relatively low level given current exposure to the industrial character of the MPE site and linear infrastructure within the Rail Corridor. A number of mitigation measures including landscaping, planting and built-form screening were recommended to reduce this overall impact.

In addition to the above, a light spill analysis was conducted and concluded that the light spill to residential properties, from the MPE Project, would be well within the required criteria as specified in Australian Standard *AS4282-1997* '*Control of Obtrusive Effect of Outdoor Lighting*'.

5.9.2 Impact assessment

Construction

During construction of the Moorebank Avenue upgrade, access works and the importation and placement of fill, the most visible elements would be construction plant such as dozers, graders, excavators, rollers and mobile cranes. These would be visible from areas such as Moorebank Avenue, but less prominent from the residential areas of Casula and Wattle Grove. Given the low rise nature of construction works associated with the components of the Modification Proposal, visual impacts would be generally low to moderate from most viewpoints, highly localised and temporary.

Other sources of visual impact during construction, such as the establishment of hoardings and construction fencing would potentially create highly localised visual impacts primarily along Moorebank Avenue. These impacts would however be experienced with or without the Modification Proposal.

Lighting would be required during construction to illuminate ancillary facilities, and on plant and equipment. The impacts of light spill during construction are expected to be minor, localised and temporary. The considerable separation of residential dwellings from the MPE site would also further reduce the impact of construction lighting, and lighting would be designed and located to minimise the effects of light spill on surrounding sensitive receivers. These impacts would however be experienced with or without the Modification Proposal.

Operation

Visual impact

The component of the Modification Proposal with the greatest potential for visual impacts are the bulk earthworks which would result in some site features being slightly more prominent in the surrounding landscape.

However, the extensive native bushland areas, Department of Defence facilities on neighbouring lands, the MPW site and the general pattern of industrial type development surrounding the MPE site would provide screening for sensitive receivers. Views would still be available along Moorebank Avenue.

As part of investigations for the MPE Stage 2 Proposal, a range of viewpoints were analysed to identify potential visual impacts of the MPE Stage 2 Proposal, which includes the Moorebank Avenue upgrades included in the Modification Proposal. The analysis determined a level of potential visual impact by considering the relationship between 'visual adaption' (significant changes to the landscape and visual amenity that are likely to occur as a result of the proposal) and 'visual sensitivity' (likely duration of views and number of observers from a given viewpoint).

The results of that assessment found that the visual impacts ranged from negligible/low to low/moderate across all viewpoints. Table 5-27 presents relevant results of the visual assessment. Overall, it is not expected that the components of the Modification Proposal would contribute to a significant increase in visual impact at any viewpoint.

Table 5-27: Operational visual impacts

Viewpoint ID	MPE Project Visual Impact	Modification Proposal Visual Impact
South of site, Moorebank Avenue (view north)	**Low** The proposed development would be highly prominent at this location. There is little or no visual sensitivity from this viewpoint as it is within an already established industrial zone.	**Low/moderate** The MPE Project would be highly prominent at this location. However, the compatibility of the existing urban context would mean that any additional industrial elements would not detract from the visual amenity of the viewpoint.
West of site, Moorebank Avenue	**Low** The proposed development would be highly prominent at this location. There is little or no visual sensitivity from this viewpoint as it is within an already established industrial zone.	**Low/moderate** The MPE Project would be highly prominent at this location. However, the compatibility of the existing urban context would mean that any additional industrial elements would not detract from the visual amenity of the viewpoint.
Corner of Moorebank Avenue and Road marked as DS NNSW LMA	**Low** The proposed development would be highly prominent at this location. There is little or no visual sensitivity from this viewpoint as it is within an already established industrial zone.	**Low/moderate** The MPE Project would be highly prominent at this location. However, the compatibility of the existing urban context would mean that any additional industrial elements would not detract from the visual amenity of the viewpoint.

Figure 5-1, Figure 5-2 and Figure 5-3 illustrate the visual impact of the MPE project, inclusive of the Modification Proposal, from selected viewpoints.

Figure 5-1 Indicative viewpoint south of site, Moorebank Avenue

Figure 5-2 Indicative viewpoint west of site, Moorebank Avenue

Figure 5-3 Indicative viewpoint near corner of Moorebank Avenue interim site access

Light spill

While there is some potential that the Modification Proposal could increase the prominence of lighting along the Moorebank Avenue upgrade, creating the potential for additional light spill to that originally contemplated by the MPE Concept Plan Approval, a detailed light spill assessment for the recent MPE Stage 2 Proposal indicated that the combination of the lighting design, luminaire selection, positioning and aiming would produce lighting results that are in compliance with the requirements of *AS4282-1997 Control of Obtrusive Effect of Outdoor Lighting.* This is consistent with the requirements of the SoCs.

5.9.3 Mitigation measures

Conditions of Approval

The Concept Plan Approval included a number of additional requirements for all future approvals under the Concept Plan Approval with regards to visual amenity, urban design and landscaping, as described in Table 5-28. These requirements are considered sufficient for the Modification Proposal.

Table 5-28 MPE Concept Plan Conditions of Approval – visual amenity, urban design and landscaping

Aspect	Condition
Schedule 3 – 2. Future Assessment Requirements	
Visual Amenity, Urban Design and Landscaping	Any future Development Application shall include an assessment of visual impacts. The assessment shall: a) include a description of the visual significance of the affected landscape; b) assess the visual impact of the project on the landscape character of the area, including built form (materials and finishes) and the urban design (height, bulk and scale) of key components including container stacking heights, lighting, bridge crossings, and views to and from the project; and c) include details of hard and soft landscaping treatment and design (including proposed road upgrades relevant to that stage and reinstatement of riparian vegetation).

Statement of Commitments

Based on the recommendations of the *Urban Design and Landscape Report*, the *Visual Impact Assessment* and the lighting analysis, SIMTA committed to a number actions relating to visual amenity and urban design. The SoCs associated with the MPE Concept Plan Approval that are relevant to visual amenity and urban design are provided in Table 5-29.

Table 5-29 Concept Plan Statement of Commitments (visual amenity, urban design and landscaping)

Aspect	Commitment	Timing
Visual and Urban Design	The Proponent commits to the preparation and submission of a Landscape Management Plan with the detailed applications for the for the three major stages of the development that address each of the objectives and design principles contained within the Urban Design and Landscape report and the following mitigation measures: • High quality landscaping throughout the site, which will reinforce and extend the surrounding natural context and ecological qualities into the site. • Inclusion of an 18 metre wide corridor of screening vegetation and a bio-retention swale along the Moorebank Avenue frontage, which will utilise a selection of native tree species with dense tree canopy and low screen planting. • Landscape punctuation of nodal points along Moorebank Avenue. • A 'boundary treatment' or 'buffer zone' along the other site boundaries, consisting of existing local species in the area and providing an essential scale of planting to complement the built form, including: – Southern boundary: combination of 10 metre and 20 metre wide landscape corridors and a bio-retention swale adjacent to the warehouse and distribution facilities and Intermodal Terminal.	Provide with the planning applications for the three major stages of the Concept Plan

Aspect	Commitment	Timing
	– Eastern boundary: total buffer zone of 13.5 metres consisting of 2.5 metre landscape corridor, a 6 metre internal light vehicle access road and a five metre wide bioretention swale. • Land cleared for the railway alignment will be include planting consisting of tall trees with a height of 20 metres at Maturity, interspersed with medium height trees.	
	The Proponent will use lighting which is in accordance with Australian Standard A54282-1997 "Control of Obtrusive Effect of Outdoor Lighting'. The height of the permanent light poles will be a maximum of 40 metres and reduced in height, where possible, to minimise potential light spill while maintaining appropriate safety standards.	Provide with the planning applications for the three major stages of the Concept Plan

Visual amenity, urban design and landscaping issues associated with the MPE Project would be managed in accordance with the Concept Plan Approval and associated SoCs referred to above. These are considered adequate to address the potential impacts of the Modification Proposal.

5.10 Utility servicing

5.10.1 MPE Concept Plan Approval

A *Utilities Strategy Report* (Hyder Consulting, 2013g) was prepared as part of the Concept Plan EA. The report documented consultation with utility service providers and concluded that the required utility services can be provided. The report also noted the need for the following:

- Potable water – connection to the existing 500 millimetre water main on the corner of Anzac Road and Heathcote Road
- Sewer – extension of the existing Sydney Water sewer network, which may include extension of an existing gravity main or construction of a new pumping station and associated rising main
- Electricity supply – disconnection of the existing high voltage supply and the staged provision of two new 11kV feeders from Anzac Village Zone Substation.
- Gas – provision of either a 75 millimetre main in Moorebank Avenue for light commercial applications with a connection at any location along the length of the site or supply from high pressure main at Bapaume Road

The following construction impacts associated with utilities were identified:

- Potable Water – below ground works within the road reserve of Greenhills Road and Anzac Road, connecting to the mains on Heathcote Road. Trenching work and temporary shutdown of the water main on Heathcote Road during tie-in works
- Sewer – below ground work within the easement of Greenhills Road, connecting to the mains within the relocated DNSDC site. Trenching work and temporary shutdown of the rising main through the DNSDC site during tie-in works
- Electrical Supply – below ground work within the road reserve of Greenhills Road and Moorebank Avenue, connecting to the existing substation within the relocated DNSDC site. Trenching work and temporary shutdown of the substation during tie-in works

- Gas – below ground work within the road reserve of Moorebank Ave and leading into the MPE site. Trenching work and temporary shutdown of the gas main that follows Moorebank Avenue during tie-in works.

5.10.2 Impact assessment

The Modification Proposal would not affect the ability to provide utility services to the site. Consistent with the Concept Plan EA and associated *Utilities Strategy Report,* all necessary utility services would still be available to the MPE site.

Water, pressure sewer, power and communication services connections to the MPE site are expected to be undertaken during the MPE Stage 1 works, with this connection then providing the point of supply to the remainder of the MPE site via internal reticulation of these services.

The Moorebank Avenue upgrade component of the Modification Proposal would affect utility services within the Moorebank Avenue corridor. The approach to existing water, gas, power and communication services located within the Moorebank Avenue corridor from Anzac Road to the rail corridor would be determined as a result of further consultation with utility service providers during detailed design and in parallel with finalising the new connections to the MPE suite during MPE Stage 1 as noted above.

There is currently a Sydney Water 750 millimetre sewer rising main that extends north and south from the site along Moorebank Avenue. This asset would be retained and protected during Moorebank Avenue upgrade work, subject to further consultation with Sydney Water.

5.10.3 Mitigation measures

Statement of Commitments

Based on the recommendations of the *Utilities Strategy Report*, SIMTA as the Proponent committed to a number actions relating to utilities. The SoCs associated with the MPE Concept Plan Approval that are relevant to utilities are provided in Table 5-30.

Table 5-30 Concept Plan Statement of Commitments (utilities)

Aspect	Commitment	Timing
Utilities	The Proponent will protect and relocate (where required) the existing services passing through the site, including stormwater, sewer, water, telecommunications and electricity	Prior to/during construction as impacted
	The Proponent will undertake further investigations, as required, and provide details that adequate services are available to the site and/or provide details regarding the proposed servicing upgrades. Details are to be provided with the applications for each of the future stages of the development.	Provide with the planning applications for the three major stages of the Concept Plan
	The Proponent will undertake to source all water supplies for the project from an authorised and reliable source.	Prior to construction and operation
	The Proponent will obtain authorisation for the taking of water for purposes other than water supply, including for dewatering during construction.	Prior to construction

Utilities issues associated with the MPE Project would be managed in accordance with the Concept Plan Approval and associated SoCs referred to above. These are considered adequate to address the potential impacts of the Modification Proposal.

5.11 Other issues

Table 5-31 provides an assessment for the Modification Proposal in relation to the other environmental issues that were identified in Section 15 of the Concept Plan Approval EA, specifically health impacts, economic impacts, ecologically sustainable development (ESD), climate change and waste management.

Table 5-31: Assessment of other issues

Issue	Environmental assessment of Modification Proposal
Health impacts	*Air quality* A *Screening Level Health Risk Assessment* (Screening HRA) was prepared by Toxikos (2012) for the Concept Plan Approval EA. The Screening HRA assessed the health impacts associated with airborne particulates, and considered potential impacts of the MPE Project on air quality in the surrounding residential areas. For the purposes of the Screening HRA a conservative approach was adopted, where it was assumed that the MPE Project would be operating consistent with the busiest hour of operation at ultimate capacity (1,000,000 TEU). The Screening HRA concluded that emissions from the MPE Project were unlikely to have acute or chronic health impacts on the community. The emissions of major importance for possible health impacts are fine particulate matter ($PM_{2.5}$), while it was also noted that nitrogen dioxide (NO_2) would potentially contribute to the overall acute or chronic health risk for the MPE Project. Overall PM_{10}, $PM_{2.5}$ and NO_2 from the MPE Project were assessed as having negligible potential impact on the health of people in the surrounding area, either on their own or in combination. The potential human health impacts associated with the Modification Proposal are consistent with those described above during the operational phase. Emissions during construction were not evaluated by the Screening HRA because they would be temporary, appropriately managed and compliant with relevant air quality standards. As noted in Section 5.7 of this Modification Report (air quality), modelling results prepared for the recent MPE Stage 2 Proposal, which includes all potential construction phase emissions for the Modification Proposal, indicate that the Modification Proposal would comply with all relevant impact assessment criteria. The maximum predicted increase in annual average PM_{10} (0.4 µg/m³), $PM_{2.5}$ (0.1 µg/m³), TSP (0.6 µg/m³) and dust deposition (0.3 g/m^2/month) are considered minor when compared to existing background conditions. During operation, the maximum increase in annual average PM_{10} and $PM_{2.5}$ (0.1 µg/m³) and 24-hour average PM_{10} and $PM_{2.5}$ (0.2 µg/m³) as a result of the Modification Proposal would be minor when compared to existing background conditions. Predicted NO_2 would be well below the relevant impact assessment criteria. *Noise* The Screening HRA did not evaluate the potential human health impacts of exposure to noise. However, based on a review of the potential noise impacts documented in Section 5.2 of this Modification Report, the human health risk associated with noise would be reduced from that expected by the Concept Plan EA.

Issue	Environmental assessment of Modification Proposal
Economic impacts	An *Economic Assessment* was prepared for the Concept Plan Approval EA by Urbis (2011). The economic impacts of the MPE project were identified as positive, specifically: • Direct and indirect jobs over the construction period and during the operation of the facility • Reduction in heavy vehicle movements along the M5 corridor • Reduction in truck vehicle kilometres travelled across the whole Sydney Metropolitan Network • Net travel time savings over a 20-year period with a net present value in the order of $213 million • Net carbon dioxide emissions savings compared to an alternative industrial development on the site consistent with local planning controls The Modification Proposal would not affect the realisation of these identified benefits. The proposed changes to staging are expected to help bring forward some of these benefits.
Climate change	A *Climate Risk Assessment* was prepared for the Concept Plan Approval EA (Hyder Consulting, 2011a). The following climate change risks were identified for the MPE site: • Flooding in the southern portion of the SIMTA site and within the rail corridor, particularly the eastern, central and western areas • Bushfire impacts along the eastern, southern and western boundaries of the proposal site and parallel to the rail corridor • Hail, lightening and wind associated with severe thunderstorms causing damage to infrastructure and structures • Heatwaves causing occupational health and safety issues as well impacts on machinery and equipment The Modification Proposal is not expected to alter assessed climate change risks in relation to weather events and no changes to bushfire risk are likely (refer to Section 5.4 of this Modification Report). The Modification Proposal would not influence flooding on the southern part of the MPE site, but as noted in Section 4.3 of this Modification Report, bulk earthworks would help achieve the minimum gradients required for the site drainage. This would ensure the site can be effectively drained in a 100-year annual recurrence interval (ARI) event, with all OSD outlets set above the 100 year ARI water levels/hydraulic grade lines of the downstream systems into which they discharge. It is also noted that flood modelling to support the design has included a sensitivity analysis with 100-year rainfall intensities increased by 10 percent. This is considered representative of potential climate change impacts, consistent with projected rainfall increases in accordance with the New South Wales Department of Environment and Climate Change (DECC) *Floodplain Risk Management Guideline Practical Consideration of Climate Change* (DECC, 2007).

Issue	Environmental assessment of Modification Proposal
Ecologically sustainable development	The Concept Plan Approval EA identified three core groups of ESD initiatives that would be implemented for the MPE Project: • Site management policies and strategies • Materials selection and energy and water demand management • On-site renewable energy generation. The Modification Proposal would not affect the pursuit of these initiatives.
Waste management	A *Waste Management Strategy* (Hyder Consulting, 2011b) was prepared for the Concept Plan Approval EA. The strategy identifies the types of waste that would be produced at each stage of the MPE Project and proposes waste management and minimisation strategies. The Modification Proposal would not alter the waste streams identified by the Waste Management Strategy and is not expected to substantially change waste quantities. The waste management and minimisation strategies identified by the *Waste Management Strategy* are reflected in the SoCs.

The health, economic, climate change, ESD and waste issues associated with the MPE Project would be managed in accordance with the Concept Plan Approval and associated SoCs (refer to section 5.12 of this Modification Report). These are considered adequate to address the potential impacts of the Modification Proposal.

6 CONCLUSION

This modification application seeks approval to modify the MPE Concept Plan Approval in relation to the following proposed changes:

- Extension the land to which the MPE Concept Plan Approval applies to recognise works on Moorebank Avenue and drainage works to the south and east of the MPE site
- Moorebank Avenue upgrade from the northern to the southern extent of the MPE site including modifications to the existing lane configuration, some widening and the provision of an on-site detention (OSD) basin for stormwater on the western side of Moorebank Avenue
- Provision of an interim site access to warehousing
- Reconfiguration of the internal road network within the MPE Stage 2 site and use of all internal roads by both light and heavy vehicles, rather than light vehicles only for internal road No.2
- Importation of clean fill (approximately 600,000m^3) material and bulk earthworks
- Change to the location of and land uses within the freight village and provision of warehousing along the Moorebank Avenue frontage
- Changes to the staging of development including construction of all warehouses as part of the MPE Stage 2 Proposal
- Subdivision of the MPE site.

The Modification Proposal would not significantly alter the assessment provided in the MPE Concept Plan EA in relation to relevant legislation and plans. It would also not alter functions of the MPE Project and only minor changes to MPE Project boundary are proposed in order to facilitate the development of the site. In this context, the Modification Proposal is not considered to represent a radical transformation of the MPE Project as described in the MPE Concept Plan Approval.

The Modification Proposal would also have limited environmental consequences beyond those envisaged in the MPE Concept Plan EA. With minor revisions, the MPE Concept Plan Conditions of Approval and SoCs are considered adequate to address environmental issues associated with Modification Proposal.

On this basis, it is considered appropriate for assessment of the Modification Proposal to occur in accordance with Section 75W of the EP&A Act and associated Part 3A transitional provisions in of Schedule 6A of the EP&A Act.

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