OPERATIONAL AIR QUALITY MANAGEMENT PLAN

Moorebank Logistics Park – East Precinct

27 MARCH 2020

MOOREBANK INTERMODAL TERMINAL ALLIANCE

Moorebank Logistics Park – East Precinct

Operational Air Quality Management Plan

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009	06/09/2019	Updated to address additional DotEE comments	[redacted]	
010	05/02/2020	Updated to include Area 2 as an operational area	[redacted]	[redacted]
011	27/03/2020	Updated to address MOD 2	[redacted]	[redacted]

ACRONYMS AND DEFINITIONS

Acronym / Term	Meaning
AAQ	Ambient air quality
ADR	Australian Design Rules
CCS	Community Communication Strategy
CO	Carbon monoxide
CoC	Conditions of Consent
Commonwealth CoA	Commonwealth Conditions of Approval
DAWE	Department of Agriculture, Water and the Environment
DNSDC	Defence National Storage and Distribution Centre
DotEE	Commonwealth Department of the Environment and Energy (Now DAWE)
DP&E	Department of Planning and Environment
EIS	Environmental Impact Statement
EMS	Environmental Management System
EP&A Act	*Environmental Planning and Assessment Act 1979*
EPA	NSW Environment Protection Authority
EPL	Environment Protection Licence
EPBC Act	*Environmental Protection and Biodiversity Conservation Act 1999*
Facility	The MPE Concept (MP10_0193), MPE Stage 1 (SSD 6766) and MPE Stage 2 (SSD 7628) Project, including the operation of the IMEX terminal, warehousing and distribution facilities. A rail link is included as part MPE Stage 1 (SSD 6766) and connects the Facility to the SSFL.
FCMMs	Final Compilation of Mitigation Measures
g	gram
GFA	Gross floor area
GHG	Greenhouse gas
HC	Hydrocarbon
HV	Heavy vehicles
IMEX	Import Export Terminal. Includes the following key components: • Truck processing, holding and loading areas with entrance and exit from Moorebank Avenue • Rail loading and adjacent container storage areas serviced by container handling equipment • Administration facility and associated car parking with light vehicle access from Moorebank Avenue
IMT	Intermodal Terminal
km	kilometre
LCC	Liverpool City Council
LNG	Liquefied natural gas

Acronym / Term	Meaning
LPG	Liquefied petroleum gas
LV	Light vehicles
m	metre
MLP	Moorebank Logistics Park
Moorebank Logistics Park	Refers to the whole Moorebank intermodal precinct, i.e. Moorebank Precinct East (MPE) and the Moorebank Precinct West (MPW)
MLP Approvals	• MPE Concept Approval received 29 September 2014 (MP10_0193). • MPE Stage 1 approved 12 December 2016 (SSD 6766) • MPE Stage 2 approved 31 January 2018 (SSD 7628) • MPW Concept and Stage 1 approved 3 June 2016 (SSD 5066) • MPW Stage 2 still under review by DP&E
MLP Owner	Qube Holdings (Qube)
MPE	Moorebank Precinct East
NEPM	National Environment Protection Measure
NGER Act	*National Greenhouse and Energy Reporting Act 2007* (Cth)
NO_2	Nitrogen dioxide
NO_x	Oxides of nitrogen
OEH	Office of Environment and Heritage
OEMP	Operational Environmental Management Plan
Operational area / Operational footprint	Extent of operational activities for the operation of the MLP – East Precinct
OTAMP	Operational Traffic and Access Management Plan
PAH	Polycyclic aromatic hydrocarbons
$PM_{2.5}$	Particulate matter 2.5 micrometres or less in diameter
PM_{10}	Particulate matter 10 micrometres or less in diameter
POEO Act	*Protection of the Environment Operations Act 1997 (NWS)*
POPD	Program for Operational Phase Documentation
Primary Conditions	Conditions specific to the development of the management plan
PUD	Pick-up and delivery vehicles
OAQMP	Operational Air Quality Management Plan
OEMP	Operational Environmental Management Plan
Offensive Odour	Offensive odour means an odour: (a) that, by reason of its strength, nature, duration, character or quality, or the time at which it is emitted, or any other circumstances: (i) is harmful to (or is likely to be harmful to) a person who is outside the premises from which it is emitted, or (ii) interferes unreasonably with (or is likely to interfere unreasonably with) the comfort or repose of a person who is outside the premises from which it is emitted, or

Acronym / Term	Meaning
	(b) that is of a strength, nature, duration, character or quality prescribed by the regulations or that is emitted at a time, or in other circumstances, prescribed by the regulations.
Operational personnel	All persons, including sub-contractors and tenants working on the MLP East Precinct site.
Rail Link	Part of MPE Stage 1 (SSD 6766), connecting the MPE site to the SSFL. The Rail Link is to be utilised for the operation of the Facility.
RMS	Roads and Maritime Services
RNMP	Rail Noise Management Plan
RtS	Response to Submissions
Secondary Conditions	Conditions related to the environmental aspects associated with the plan
SHEMS	Safety Health and Environmental Management System
SIMTA	Sydney Intermodal Terminal Alliance
SIOMP	Stormwater Infrastructure and Operational Management Plan
SME	School of Military Engineering
SO_2	Sulphur dioxide
SSD	State significant development
SSFL	Southern Sydney Freight Line
TEU	Twenty-foot equivalent
TfNSW	Transport for New South Wales
TSP	Total suspended particles
VOCs	Volatile organic compounds
WOEMP	Warehouse Operational Environmental Management Plan

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1 INTRODUCTION

The Sydney Intermodal Terminal Alliance (SIMTA) received approval for the construction and operation of Stages 1 and 2 of the Moorebank Precinct East (MPE) Project (SSD 6766,SSD 7628 and SSD 7628 MOD 2 respectively), which together comprise the two stages of development under the MPE Concept Approval (MP10_0193). This Operational Air Quality Management Plan (OAQMP) has been developed to manage air quality impacts during operations of the MPE, hereafter referred to as the "Moorebank Logistics Park (MLP) East Precinct."

This OAQMP addresses the relevant requirements of the Project Approvals, including the Environmental Impact Statement (EIS), Response to Submissions (RtS) and Minister's Conditions of Consent (CoC), and all applicable guidelines and standards specific to the management of air quality during operations of the MLP East Precinct.

1.1 Background

The MLP is an integral component of the Freight, Ports and Transport strategies of both the NSW and Commonwealth governments to help manage the challenges of an expected tripling of freight volumes at Port Botany by 2031.

The MLP aims to streamline the freight logistics supply chain from port to store, deliver savings to businesses and consumers, and help service the rapidly growing demand for imported goods in south-west Sydney. It is located approximately 27 kilometres (km) south-west of the Sydney Central Business District and approximately 26 km west of Port Botany within the Liverpool Local Government Area. The MLP is divided into an East Precinct and a West Precinct, located east and west of Moorebank Avenue respectively, (Figure 1-1). The MLP East Precinct will be operated and managed under an Operation Environmental Management Plan (OEMP), while the MLP West Precinct is still currently under construction.

The main features of the MLP East Precinct include:

- An Import Export (IMEX) Terminal. The IMEX Terminal comprises:
  - Truck processing, holding and loading areas with an entrance and exit from Moorebank Avenue
  - Rail loading and container storage areas serviced by container handling equipment
  - An Administration facility and associated car parking with light vehicle access from Moorebank Avenue
- A Rail Link connecting the IMEX terminal and the Southern Sydney Freight Line (SSFL) traversing Moorebank Avenue, Anzac Creek, Georges River and Glenfield Waste Facility
- Associated ancillary infrastructure including signage, lighting, landscaping, water management
- Warehouse and distribution facilities including warehousing up to 21 m in height, typically ranging in size from 20,000 m^2 to 62,000 m^2. Individual warehouses typically comprise the following:
  - Office and administration facilities
  - Amenities
  - Car parking
  - Truck loading/unloading docks
  - Internal parking for pick-up and delivery vehicles (PUD)
  - Specialised sortation and conveyor equipment
  - Hardstand areas that provide trailer parking spaces, external PUD parking spaces, vehicle manoeuvring areas and access to the main internal site road
  - Signage for business identification purposes, including backlit illuminated signage on each warehouse
- Internal fitout, comprising racking and storage

- A freight village including a mix of retail, commercial and light industrial spaces typically up 15 m in height and varying in size and design
- An internal road network to enable efficient movement of vehicles, dispatch of freight from the warehouses and transport of containers between the IMEX Terminal and warehouse and distribution facilities

The location of the MLP East Precinct to which this plan applies is shown in Figure 1-1 as the 'MLP East Precinct operational area'.

1.2 Purpose and Application

This OAQMP has been developed to address the requirements of:

- both MPE Stage 1 CoC (SSD 6766) and MPE Stage 2 CoC (SSD 7628) C7 'Management Plan Requirements' which require the preparation of an OAQMP, to the satisfaction of the Secretary of Department of Planning and Environment (DP&E) prior to the commencement of operation. This OAQMP has been prepared in accordance with MPE Stage 1 CoC E14 and G6 (SSD 6766), MPE Stage 2 CoC B59, B60, B61 and C7 (SSD 7628), and the planning instruments and guidelines listed in Section 2.1 and Section 2.2 of this document.
- the EPBC Act Approval and Mitigation Measures (EPBC 2011/6229).

The OAQMP identifies the environmental management measures that will be applied to activities undertaken across the MLP East Precinct to manage identified air quality risks during the operational phase of this project. The specific CoC and Final Compilation of Mitigation Measures (FCMMs) relevant to the development of this plan are identified in Section 2.2.

The most recent, approved version of this plan will be implemented to manage air quality risks during Facility operations and/or activities.

1.3 Proposed staged/progressive application of the OEMP

The OEMP and sub-plans are applicable to the entire MLP East Precinct. However, as operational areas will come online incrementally as warehouses are constructed and tenanted, the OEMP and sub-plans will be progressively applied to those operational areas. The proposed staged/progressive application of the OEMP and sub-plans is described in the Program for Operational Phase Documentation (POPD), which was submitted to the Secretary for review and approval on 25 March 2019.

As detailed in the POPD, CoC B59 requires that an OAQMP be prepared for the entire MLP, including both the East Precinct and the West Precinct, unless this has been prepared and approved under an approval for the MLP West Precinct site. The AQMP will be progressively applied to MLP East Precinct, however, staged to exclude MLP West Precinct as Moorebank Precinct West (MPW) Stage 2 is not yet approved.

The proposed staged/progressive application of the OEMP, as described in the POPD, is shown on Figure 1-2, with dates of operation detailed in Table 1-1. The first area to be operational, includes the IMEX, Rail Link and Warehouse 1 (Area 1). The second area to be operational (Area 2), includes Warehouse 3, 4 and 5. All other areas are not yet operational.

Table 1-1 Progression of the MLP East Precinct operation

Area	Approximate Dates	Component
Area 1	Q3 2019	IMEX, Rail Link and Warehouse 1
Area 2	Q4 2019	Warehouse 3, 4 and 5
Area 3	Q2 2020	Warehouse 6, 7 and 8
Area 4	Q4 2020	Freight village
Area 5	Q4 2021	Warehouse 2

Area	Approximate Dates	Component
Area 6	Q2 2020	Moorebank upgrade

In accordance with CoC C6 (SSD 7628) each warehouse tenant will also prepare a Warehouse OEMP (WOEMP) prior to occupation of the warehouse based on the requirements of the OEMP and sub-plans. The Secretary will be notified one month prior to commencement of operation of each new warehouse in accordance with CoC A18 (SSD 7628). The WOEMP will be submitted to the Secretary for approval prior to commencement of operation of the warehouse.

1.3.1 Relationship of Stages

The OEMP and sub-plans are applicable to the entire MLP East Precinct. However, as areas become operational incrementally, construction areas will be rescinded and will continue to be managed in accordance with CEMP and sub-plans; conversely, operational areas will be managed in accordance with the OEMP and sub-plans. Operation of the site will only commence once the OEMP and sub-plans have been approved by the Secretary and Minister (or delegate) of the Minister responsible for administering the EPBC Act.

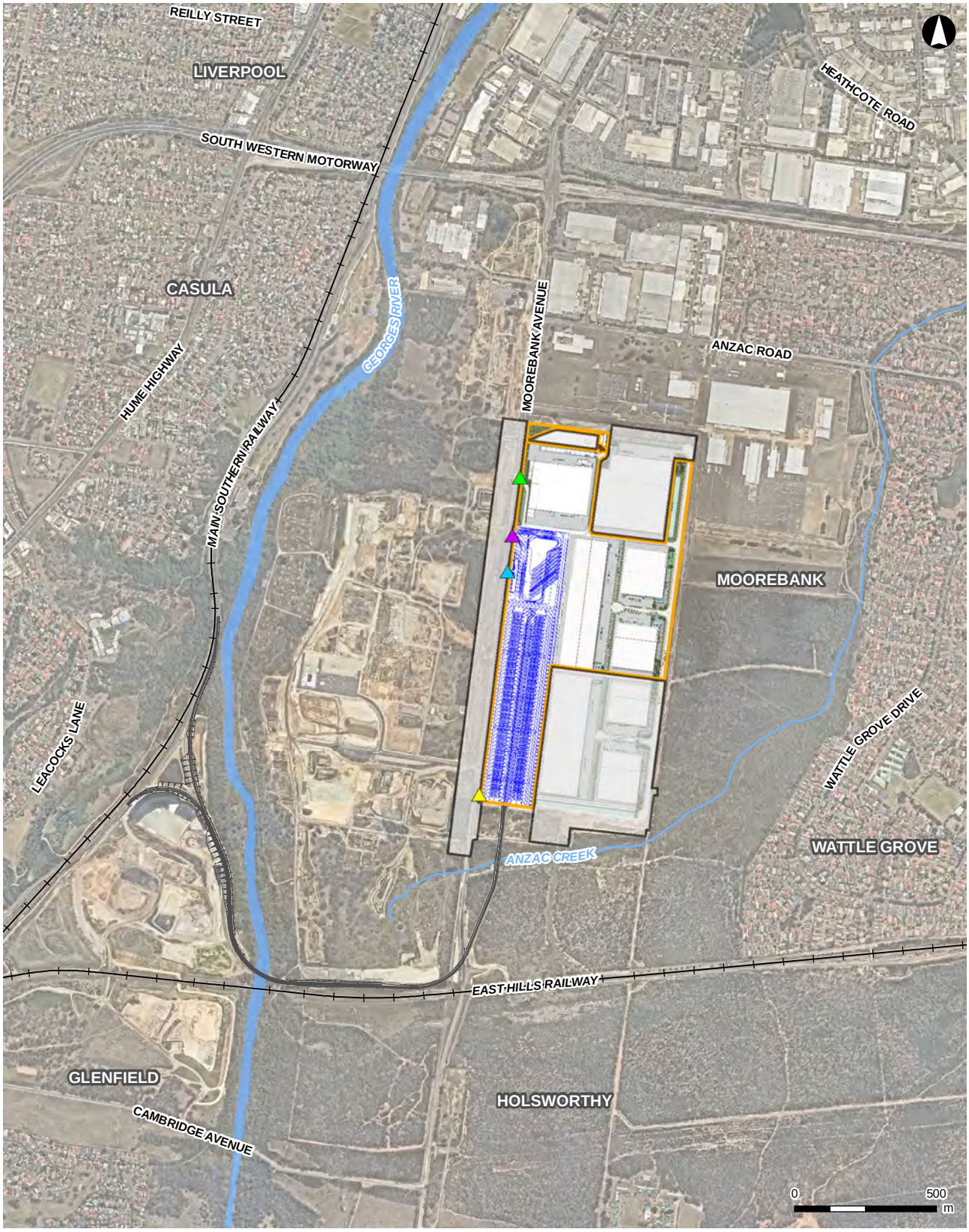
The Environmental Representative (ER), under CoC C24(d) (SSD 7628), is required to review the CEMP and OEMP to ensure they are *"consistent with requirements of the consent."* The ER will continue to review and endorse any proposed changes to the CEMP and subplans until such time construction is complete and the MLP East Precinct site is fully operational. The ER will also review and endorse the updated figures for all operational documentation to ensure parity between construction and operational documentation. The operational figures will then be submitted to DP&E for information as described in Section 1.3.2.

Until the entire MLP East Precinct is operational, all construction zones will be fenced off to provide clear distinction between construction zones and the operational facility.

1.3.2 Triggers

As required by CoC A18 (SSD 7628) the Secretary will be notified one month prior to commencement of operation of each new area shown in Table 1-1 and Figure 1-2. The notification will include updated figures detailing the new areas of operation which will fall under the remit of the OEMP as well as the reduced construction areas. As described in Section 1.3.1,the updated areas will have been endorsed by the ER prior to submission to the Secretary for approval.

Following notification, the OEMP and each sub-plan will be updated and approved with the new operational site layout, while the CEMP and applicable sub-plans will be revised to show the reduced area of construction.



LEGEND

- MLP East Precinct construction area
- MLP East Precinct operational area
- Warehouse access
- IMEX truck access
- IMEX office access
- Emergency access
- Existing railway
- Watercourse
- Operational rail link

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Coordinate System: GDA 1994 MGA Zone 56
Date issued: March 13, 2020
Aerial imagery supplied by Nearmap (Jan, 2020)

1:20,000 at A4

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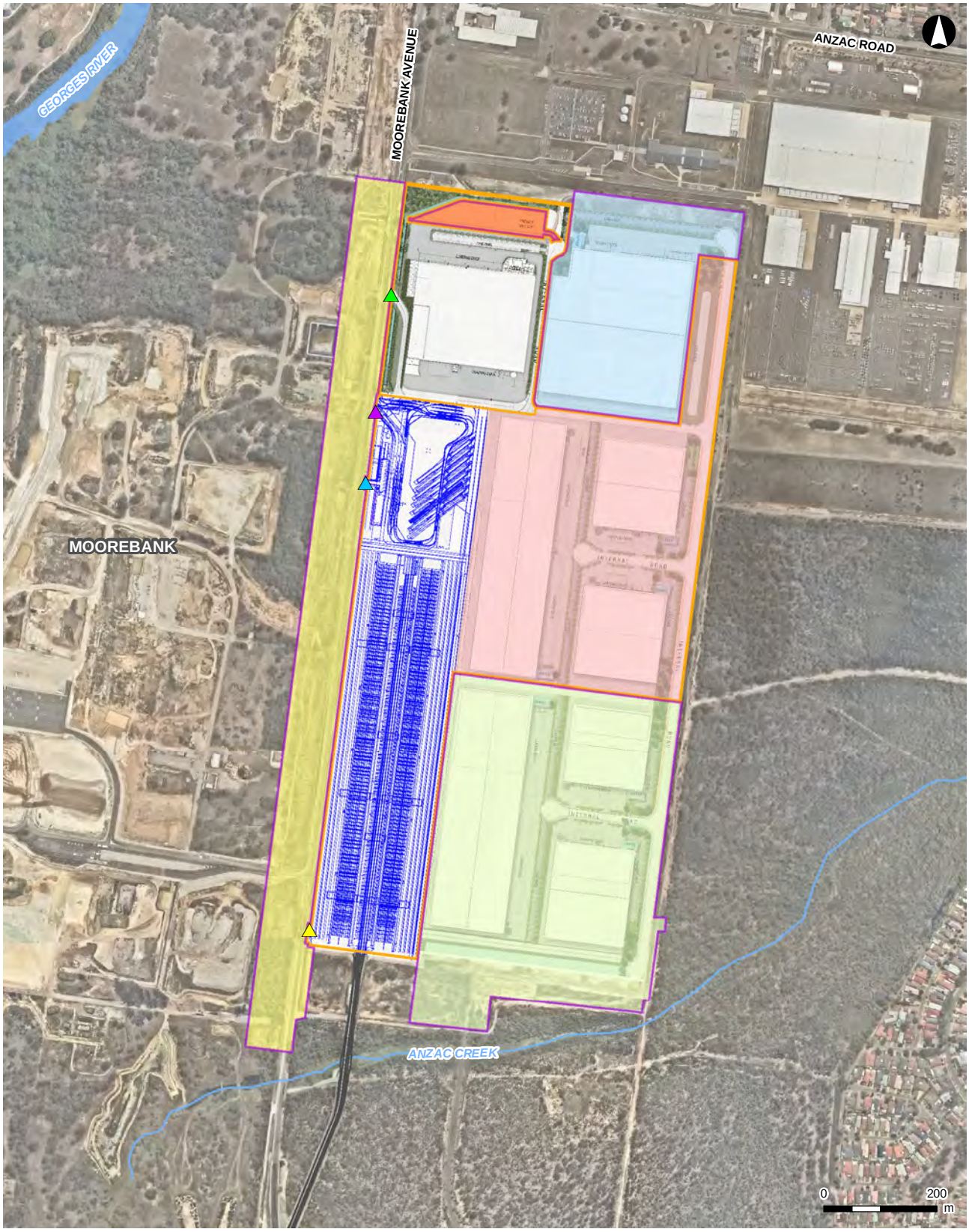
Figure 1-1: MLP East Precinct Site Location



LEGEND

- MLP East Precinct construction area
- MLP East Precinct operational area
- Watercourse
- Operational rail link
- Warehouse access
- IMEX truck access
- IMEX office access
- Emergency access

Operational staging:

- Area 1
- Area 2
- Area 3
- Area 4: Freight Village
- Area 5
- Area 6

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Figure 1-2: Proposed staged/progressive staging of the MLP East Precinct

1.4 Structure of the AQMP

Combining strategies, plans and programs is permitted by CoC A16 and CoC A17, subject to the approval of the Secretary. Qube has elected to combine the requirements of both SSD 6766 and SSD 7628 which relate to the management of air quality into one plan.

Approval to combine the requirements of both SSD 6766 and SSD 7628 was sought from the Secretary on the 25 March 2019. The AQMP addresses the relevant conditions and FCMMs from both consents (See Table 2-2 to Table 2-5).

1.5 Objectives and Targets

Table 1-2 outlines the objectives and targets set out for the MLP East Precinct for the management of air quality during operation. These objectives and targets were developed by the Principal's Representative based on collective industry experience and best practice and endorsed by the Project's Environmental Representative.

Table 1-2: Objectives and Targets

Objective	Target	Timeframe	Accountability
Ensure compliance with relevant CoC, applicable legislative and other requirements	No written warnings or infringement notices	Ongoing	Site SHEQ Manager/Advisor
Ensure that reasonable and feasible management measures are implemented to manage impacts on surrounding residents and commercial stakeholders	No exceedances of air quality criteria No community complaints regarding air quality (e.g. visible nuisance dust, visible exhaust fumes)	Ongoing	Site SHEQ Manager/Advisor

1.6 Consultation

This OAQMP has also been prepared in consultation with relevant stakeholders. A description and summary of the consultations and agreed outcomes and actions are outlined in Table 1-3 and refer to Appendix A for evidence of consultation.

Table 1-3: Consultation Summary

Agency	Date	Person contacted	Comment	Status
LCC	16/05/19	Murray Wilson	Updates to Author Details table and Section 2.1 to replace incorrect reference to AS/NZS standard.	Closed
EPA	29/04/19	Craig Flemming (Unit Head, Sydney Industry Section)	Declined to comment on management plans and post approval documentation	Closed

2 STATUTORY REQUIREMENTS

2.1 Legal and Other Obligations

Details about the legislation, planning instruments and guidelines considered during development of this plan are listed below, with specific details provided in the Legislation Register within Appendix B of the OEMP.

- *Environmental Planning and Assessment Act 1979*
- *Environment Protection and Biodiversity (EPBC) Act 1999*
- *Fuel Quality Standards Act 2000 (Commonwealth)*
- *Protection of the Environment Operations (POEO) Act 1997*
- *Protection of the Environment Operations (Clean Air) Regulation 2010*

Additional legislation, standards and guidelines relating to the management of air quality include:

- Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales ("Approved Methods") (NSW Environment Protection Authority (EPA), 2016)
- AS/NZS 3580.1.1:2016 Methods for sampling and analysis of ambient air - Part 1.1: Guide to siting air monitoring equipment.
- Australian / New Zealand Standard AS/NZS 3580.10.1:2016 (Methods for Sampling and Analysis of Ambient Air, Method 10.1 Determination of Particulate Matter – Deposited Matter – Gravimetric Method)
- EU Stage IIIA and IV emission standard (EU Directive 2014/26/EC) (Parliament of the European Union, 2014)
- Infrastructure Sustainability Council of Australia (ISCA) for operation specific requirements
- National Environment Protection (Ambient Air Quality) Measure (AAQ NEPM)[1] (Australian Government, 2003),
- US Tier US EPA Tier 3 and 4 emissions standards (US EPA, 2014)
- DRAFT Post Approval Guideline – Environmental Management Plan, 2018, Department of Planning and Environment.

2.2 Development Consent

The operation of the MLP East Precinct was approved under both the *Environmental Planning and Assessment Act* 1979 (EP&A) Act) and the *Environment Protection and Biodiversity Conservation Act* 1999 (EPBC Act). Both these approvals have environmental conditions relevant to the operational works for the MLP East Precinct, which are discussed below.

The operational requirements for the Facility, including consultation, impact mitigation and management, are documented in the following suite of documents:

- *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) Approval (No. 2011/6229), March 2014
- MPE Concept Approval (MP 10_0193), approved 29 September 2014
- Moorebank Precinct East – Concept Plan – Response to Submissions (RtS) (Urbis, December 2013)
- State Significant Development (SSD) Consent SSD 6766, approved 13 March 2018 (superseding initial approval 12 December 2016)

[1]It is noted that the purpose of the AAQ NEPM is to attain ambient air quality that allows for the adequate protection of human health and wellbeing', and compliance with the AAQ NEPM is assessed through air quality monitoring data collected and reported by each state and territory.(http://www.nepc.gov.au/nepms/ambient-air-quality)

- Moorebank Precinct East – Stage 1 – Environmental Impact Statement (Arcadis Australia Pacific Pty Limited, May 2015)
- Moorebank Precinct East – Stage 1 – Response to Submissions (Arcadis Australia Pacific Pty Limited, September 2015), including Final Compilation of Mitigation Measures (FCMMs)
- State Significant Development (SSD) Consent SSD 7628, approved 31 January 2018
- State Significant Development (SSD) Consent SSD 7628 Modification 2, approved on 31 January 2020
- Moorebank Precinct East – Stage 2 – Environmental Impact Statement (Arcadis Australia Pacific Pty Limited, December 2016)
- Moorebank Precinct East – Stage 2 – Response to Submissions (Arcadis Australia Pacific Pty Limited, July 2017), including FCMMs.

2.2.1 EPBC Act Approval

The EPBC Act approval for the MPE Concept was granted by the Federal Minister for the Environment in March 2014 (No. 2011/6229). Approval was required due to impacts 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).

The operation of the MLP East Precinct has been designed to be consistent with the EPBC Act Approval conditions. Specific conditions and commitments that are required to be addressed in this plan are identified within Table 2-1. The table also identifies where each of the CoA and commitments have been satisfied.

Table 2-1: EPBC Act CoA

Commonwealth	Requirement	Document Reference
8	For the better protection of Commonwealth land, the person taking the action must engage a suitably qualified expert(s) to prepare an Operation Environment Management Plan (OEMP) for the approval of the Minister. The OEMP must include in relation to operation of the proposed facility:	The OEMP [PREC-QPMS-EN-PLN-0001] and relevant sub-plans, including this OAQMP
	a) identification and quantification of all potential impacts associated with noise, vibration, air quality, traffic and light spill (including cumulative impacts associated with the separately approved but related and adjacent intermodal terminal facility project, EPBC approval 2011/6086) upon Commonwealth land. Consideration must be given to people and communities at SME, DNSDC, Defence housing, and the environment more generally in neighbouring bushland areas. Of note, the air quality assessment must quantify all emissions of carbon monoxide, nitrogen dioxide, $PM_{2.5}$ and PM_{10} arising from project-related sources identified in the EIS.	Section 3.1
	b) refined details (including implementation timeframes) for the mitigation measures outlined in the EIS (sections 7.4.2, 7.4.6, 7.4.7, 7.4.8 and 7.4.9) and summarised at Annexure A	Section 3.3; Table 3-6
	c) refined details of how heavy vehicles entering and exiting the site will be processed, including information on access and circulation both into, and within, the intermodal facility grounds;	See Operational Traffic and Access Management Plan (OTAMP) [PREC-QPMS-EN-PLN-0009]

Commonwealth	Requirement	Document Reference
	d) measures to ensure no heavy vehicles entering or exiting the intermodal facility park, or wait, on Moorebank Avenue;	See OTAMP [PREC-QPMS-EN-PLN-0009]
	e) identification of the trigger values and criteria for all matters mentioned in condition 8(b) (excluding light spill) that will be adopted for monitoring and managing potential impacts to those Commonwealth land	Section 4.1.1 and Section 4.1.2; Table 4-2
	f) details of a comprehensive monitoring program (including locations, frequency and duration) for: i. validating the anticipated impacts associated with condition 8(a), and ii. determining the effectiveness of mitigation/ management measures (including the success of public transport incentives)	Section 4
Annexure A – Summary of Mitigation Measures		
Air	**Operation** The following mitigations and compensatory measures will be undertaken, where feasible, to minimise potential impacts on local and regional air quality during operation of the SIMTA proposal:	
	• Upgrade of rolling stock servicing the SIMTA site	Section 3.3; Table 3-6; AQ22
	• Use of electrically powered container handling equipment in lieu of diesel equipment	Section 3.3; Table 3-6; AQ18
	• Use of LPG forklifts in lieu of diesel forklifts	Section 3.3; Table 3-6; AQ21
	• Minimise truck movements through the efficient management of deliveries and dispatches	Section 3.3; Table 3-6; AQ13
	• Minimise truck idling and queuing on-site	Section 3.3; Table 3-6; AQ1, AQ10, AQ15

2.2.2 EP&A Act Approval

The MLP East Precinct was approved under Part 4, Division 4.7 (previously Division 4.1 prior to 1 March 2018) of the EP&A Act. Approval for MPE Stage 1 was originally received on 12 December 2016 (SSD 6766) and subject to appeal, with revised CoC issued from the Land and Environment Court on 13 March 2018; approval for MPE Stage 2 was received on 31 January 2018 (SSD 7628).

The CoC include requirements to be addressed in this plan and delivered during operation of the Facility. These requirements, and where they are addressed in this document are provided within Table 2-2 for CoC relating to SSD 6766 and Table 2-3 for CoC relating to SSD 7628.

In the compliance tables, Primary Conditions are specific to the development of the management plan, while Secondary Conditions are conditions which are related to the environmental aspects associated with the plan.

Table 2-2: CoC of SSD 6676 (MPE Stage 1)

CoC	Requirement	Document Reference
Primary Condition		
F4	The Applicant shall prepare and implement (following approval) an Operation Environmental Management Plan (OEMP). The Plan shall outline the environmental management practices and procedures that are to be followed during operation, and shall be prepared in consultation with relevant agencies and in accordance with the Guideline for the Preparation of Environmental Management Plans (Department of Infrastructure, Planning and Natural Resources, 2004). The Plan shall include, but not necessarily be limited to: …	The OEMP [PREC-QPMS-EN-PLN-0001] and relevant sub-plans, including this OAQMP
	f) details of management and monitoring of environmental performance, including the actions to be taken to address identified potential adverse environmental impacts (and any impacts arising from staging of the project construction). In particular, the following environmental performance issues shall be addressed in the Plan:	Section 3.3 Section 4
	iv) air emissions including measures for regular performance monitoring of air quality generated by the Project and measures to proactively respond to and deal with air quality complaints	Section 4 Section 4.6
Secondary Conditions		
E14	The Applicant shall carry out all feasible and reasonable measures to minimise dust generated by the Development.	Section 3.3; Table 3-6; AQ16
G6	Port shuttle operations must use: a) Locomotives that incorporate available best practice noise and emission technologies. Prior to the construction of the rail link connecting to the site, the Applicant must submit a report to the Secretary for consideration and approval that has been prepared in consultation with TfNSW and the EPA that justifies the technology proposed and how it meets the objective of best practice noise and emission technologies; and	Section 3.3; Table 3-6; AQ11 Section 4.3; Table 4-6 Refer to the MPE Stage 1 Best Practice Review (Arcadis, 2017)
G12	All container handling equipment, purchased after 2019 must meet US EPA Tier 4 or EU Stage IV emission standard or achieve an equivalent emission control performance to those standards listed in this condition	Section 3.3; Table 3-6; AQ19 and AQ20 Refer to the MPE Stage 1 Best Practice Review (Arcadis, 2017)
G13	The Applicant must carry out any activity, or operate any plant, in or on the premises by such practicable means as may be necessary to prevent or minimise air pollution	Section 3.3; Table 3-6 Refer to the MPE Stage 1 Best Practice Review (Arcadis, 2017)

Table 2-3: CoC of SSD 7628 (MPE Stage 2)

CoC	Requirement	Document Reference
Primary Condition		
B59	The Applicant must prepare an Operational AQMP to the satisfaction of the Secretary for the entire precinct (MPE + MPW), unless this has been prepared and approved under an approval for the MPW site. The AQMP	This AQMP has been prepared for the MLP East

CoC	Requirement	Document Reference
	must be prepared by a suitably qualified and experienced person(s) and must form part of the OEMP required by condition C3. The AQMP must include:	Precinct only as MPW Stage 2 is yet to be approved.
	a) identification of sources and quantify airborne pollutants	Section 3.1
	b) best practice reactive and proactive control measures that will be implemented for each emission source	Section 3.3; Table 3-6; AQ5, AQ6, AQ7
	c) provisions for the implementation of additional mitigation measures in response to issues identified during monitoring and reporting	Section 4
	d) for all emission sources associated with site operations:	
	i) key performance indicator(s)	Section 4.1; Table 4-2
	ii) monitoring method(s)	Section 4.1; Table 4-2
	iii) location, frequency and duration of monitoring	Section 4.1; Table 4-2 Figure 3-2
	iv) record keeping	Section 4.1.2 Section 4.3; Table 4-6
	v) complaints register	Section 4.6
	vi) response procedures	Section 4.4 Section 4.5 Section 4.6 Section 4.7
	vii) compliance monitoring	Section 4.3 Section 4.7
C7	The Applicant must ensure that the environmental management plans required under this consent are prepared in accordance with any relevant guidelines, and include:	
	a) detailed baseline data;	Section 3.1
	b) a description of:	
	i. the relevant statutory requirements (including any relevant approval, licence or lease conditions);	Section 2.2; Table 2-1, Table 2-2, Table 2-3, Table 2-4 and Table 2-5
	ii. any relevant limits or performance measures/criteria; and	Section 4.1; Table 4-1 and Table 4-2
	iii. the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the development or any management measures;	Section 4.1; Table 4-1 and Table 4-2
	c) a description of the management measures to be implemented to comply with the relevant statutory requirements, limits or performance measures/criteria;	Section 3.3; Table 3-6
	d) a program to monitor and report on the:	
	i. impacts and environmental performance of the development; and	Section 4.1
	ii. effectiveness of any management measures (see (c) above);	Section 4.1

CoC	Requirement	Document Reference
	e) contingency plan to manage any unpredicted impacts and their consequences;	Section 4.5 Section 4.7
	f) a program to investigate and implement ways to improve the environmental performance of the development over time;	Section 4.2
	g) a protocol for managing and reporting any:	
	i. incidents and non-compliances;	Section 4.7
	ii. complaints;	Section 4.6
	iii. non-compliances with statutory requirements; and	Section 4.7
	h) a protocol for periodic review of the plan.	Section 4.4
Secondary Conditions		
A32	All plant and equipment used at the site or to monitor the performance of the development must be:	
	a) maintained in a proper and efficient condition; and	Section 3.3; Table 3-6; AQ6, AQ7, AQ8 and AQ9
	b) operated in a proper and efficient manner.	Section 3.3; Table 3-6; AQ6, AQ10, AQ13, AQ14 and AQ15
B54	Best practice reactive and proactive management measures must be implemented to minimise dust generated during all works authorised by this consent	Section 3.3; Table 3-6; AQ16 Section 4.1.1; Table 4-1
B55	Deposited dust must not exceed an increase of 2g/m^2/month or maximum of 4g/m^2/month at the closest off-site sensitive receiver	Section 3.3; Table 3-6; AQ16 Section 4.1.1; Table 4-1
B60	The Applicant must ensure the development does not cause or permit the emission of any offensive odour (as defined in the POEO Act)	Section 3.3; Table 3-6; AQ17
B61	Equipment must be installed and operated in accordance with best practice to ensure that the development complies with all load limits, air quality criteria, air emission limits and air quality monitoring requirements as specified under this consent	Section 3.3; Table 3-6; AQ5, AQ6, AQ9, AQ10, AQ11, AQ17, AQ18, AQ19, AQ20, AQ21, AQ22

The Final Compilation of Mitigation Measures (FCMMs) are presented within the MPE Stage 1 RtS (Arcadis, September 2015), and the MPE Stage 2 RtS (Arcadis, July 2017) documents. The FCMMs as relevant to the Facility and how they have been complied within this plan are provided in Table 2-4 and Table 2-5.

Table 2-4: Final Compilation of Mitigation Measures (MPE Stage 1)

FCMM	Requirement	Document Reference
0B	An Operational Environmental Management Plan (OEMP) will be prepared to provide the overarching framework for the management of all potential environmental impacts resulting from the operation of the Proposal. A number of operational related management plans have been prepared for the Proposal, including: … • Air Quality Management Plan	The OEMP [PREC-QPMS-EN-PLN-0001] and relevant sub-plans, including this OAQMP

FCMM	Requirement	Document Reference
	… The management plans, that will form the basis of the OEMP to be prepared for the Proposal will be based on the preliminary operation management plans listed above…	
Air Quality		
2B	The AQMP will be further progressed and incorporated into the OEMP for the Proposal. In accordance with the AQMP, the following will be addressed in the OEMP:	This OAQMP
	• Implementation and communication of anti-idling policy for trucks and locomotives	Section 3.3; Table 3-6; AQ1, AQ2, AQ4, AQ10, AQ11, AQ15
	• Provision of a point of contact for complaints for the community to report on excessive idling and smoky vehicles used within the Stage 1 site	Section 3.3; Table 3-6; AQ4
	• Procedures to reject excessively smoky trucks visiting the site based on visual inspection	Section 3.3; Table 3-6; AQ8, AQ9
2C	The Proponent will undertake an air quality monitoring programme during the initial phases of both construction and operation of the Proposal including: • Nuisance dust • Air Emissions – PM_{10} and Nitrogen dioxide	Section 4.1
Best Practice Review: Air Quality		
4.1A	The following control measures will be progressively implemented during operation of the IMT:	
	• A vehicle booking system, truck marshalling lanes and rejection of trucks that arrive early will be implemented / provided to minimise wait times and queuing. This system will be implemented on commencement of operation	Section 3.3; Table 3-6; AQ15
	• An electrified locomotive shifter will be installed to reduce the need for excessive locomotive idling. This control will be implemented on commencement of operation	Section 3.3; Table 3-6; AQ11
	• Where new reach stackers are procured, these would be selected to achieve best practice emissions performance to meet US EPA Tier 3/ Euro Stage IIIA standards	Section 3.3; Table 3-6; AQ20
	• Electric gantry cranes to reduce use of diesel-powered equipment. This control will be implemented within seven years of commencement of operation of the Proposal or on the Proposal achieving an annual throughput of 250,000 TEU, whichever is the latter	Section 3.3; Table 3-6; AQ12
4.1B	The following policies and procedures will be developed and included within the OEMP for the Proposal:	
	• An anti-idle policy will be developed and communicated to locomotive and truck operators to minimise unnecessary idling. • Signs will be installed within the IMT to remind drivers of this policy and their obligations	Section 3.3; Table 3-6; AQ1, AQ2, AQ4, AQ10, AQ11, AQ15

FCMM	Requirement	Document Reference
	• Maintenance plans will be updated to include a requirement to consider air emissions and where possible improve air emission performance at next overhaul/upgrade	Section 3.3; Table 3-6; AQ3
	• Training will be provided to locomotive drivers to maximise fuel efficiency	Section 3.3; Table 3-6; AQ1
	• Equipment with smoky exhausts (more than 10 seconds) should be stood down for maintenance based upon visual inspection	Section 3.3; Table 3-6; AQ8
	• Trucks with smoky exhausts (more than 10 seconds) shall be rejected from the site based upon visual inspection	Section 3.3; Table 3-6; AQ9
	• Loading and unloading will be coordinated where possible to minimise truck trip distances as they travel through Stage 1 site	Section 3.3; Table 3-6; AQ14

Table 2-5: Final Compilation of Mitigation Measures (MPE Stage 2)

FCMM	Requirement	Document Reference
0C	The Operational Environmental Management Plan (OEMP), or equivalent, for the Amended Proposal would be based on the following preliminary management plans: … • Air Quality Management Plan (Appendix M of the EIS) ...	The OEMP [PREC-QPMS-EN-PLN-0001] and relevant sub-plans, including this OAQMP
Air Quality		
3B	The Air Quality Management Plan (Ramboll, 2016), included within Appendix M of the EIS would be further progressed and integrated into the OEMP for the Amended Proposal. In accordance with the Air Quality Management Plan the following key aspects would be addressed in the OEMP:	This OAQMP
	• Implementation and communication of anti-idling policy for trucks	Section 3.3; Table 3-6; AQ1, AQ2, AQ4, AQ10, AQ11, AQ15
	• Complaints line for the community to report on excessive idling and smoky vehicles	Section 3.3; Table 3-6; AQ4
	• Procedures to reject excessively smoky trucks visiting the site based on visual inspection	Section 3.3; Table 3-6; AQ9
3C	During construction and operation, real-time boundary monitoring would be used to measure site emissions and alert site personnel when dust triggers are breached. This monitoring would determine if the best practice measures are effective and/or if additional reactive controls are needed on any particular day.	Section 4.1
11G	Fuel efficiency of the operation plant/equipment will be assessed prior to selection, and where practical, equipment with the highest fuel efficiency and which uses lower GHG intensive fuel (e.g. biodiesel) will be used during operation.	Section 3.3; Table 3-6; AQ5, AQ23

FCMM	Requirement	Document Reference
11H	Implement adaptation measures to address medium and high rated risks detailed in the climate change risk assessment presented in the Greenhouse Gas (GHG) and Climate Change Risk Assessment (Appendix V of the EIS).	Refer to Urban Heat Island Management Strategy (UHIMS) Adaptation measures also addressed during detailed design.

2.3 Roles and Responsibilities

All personnel undertaking operational activities within the MLP East Precinct are responsible for the implementation of this OAQMP. The key roles and responsibilities for MLP East Precinct personnel as they relate to this OAQMP are presented in Table 2-6.

Table 2-6: Roles and Responsibilities

Roles	Responsibilities
Operations Manager	• Accountable for the environmental performance, including air quality, of the MLP East Precinct. • Provides sufficient resources to implement, develop and maintain the OAQMP throughout the operating life of the MLP East Precinct. • Implement stop work procedures where they believe a work activity to be an actual or potential cause of pollution to the environment anywhere within the MLP East Precinct • Reviews and approves changes to the OAQMP.
Area Managers: **IMEX** **Rail Link** **Estate Manager**	• Communicates the requirements of the OAQMP and environmental obligations to operational team • Has the authority to stop work processes within the area of responsibility to prevent air quality non-conformances from occurring or continuing • Monitors operations against the requirements of the OAQMP and CoC and takes action to resolve issues where required • Where required, implements changes to activities to manage ongoing compliance • Reports incidents to Operations Manager in accordance with the OEMP.
Site Safety, Health, Environment and Quality (SHEQ) Manager/Advisor	• Reviews and implements this OAQMP • Monitors operations against this OAQMP through regular site inspections to evaluate compliance with the CoC, • Has the authority to implement reasonable steps to avoid or minimise unintended or adverse air quality impacts, including to direct that relevant actions be ceased immediately should an adverse impacts be likely to occur • Reports air quality incidents to Area Manager and Operations Manager where required, in accordance with the Incident reporting system outlined in the OEMP • Acts as the 24-hour EPA contact • Facilitates the inductions and training program for relevant persons involved with IMEX, Rail Link and Estate operations • Maintain the register of air quality incidents, potential; incidents and complaints and implements subsequent remedial action.

Roles	Responsibilities
Individual Tenants	• Responsible for their own environmental performance for operational activities on leased areas • Reports air quality incidents to Area Manager and / or the Site SHEQ Manager/Advisor • Track their compliance with the relevant air quality requirements in the CoC and provides Environmental Compliance Reports to Qube which detail their compliance status with the CoC relevant to the respective WOEMP for inclusion in Qube Annual Compliance Reports as required.

3 IMPLEMENTATION

This section addresses the key air quality risks associated with operation of the MLP East Precinct and the environmental controls established to manage key risks.

3.1 Existing Environment

The following sections summarise the known factors influencing air quality within and adjacent to the MLP East Precinct. The key reference document is Section 8.2 of the MPE Stage 1 EIS and Section 9.3 of the MPE Stage 2 EIS.

3.1.1 Meteorological Conditions

Prevailing wind conditions

Figure 3-1 shows the seasonal wind rose of recorded wind speed and direction data from the Office of Environment and Heritage (OEH) Liverpool monitoring station (for the years 2014 to 2018), demonstrating the prevailing wind conditions in the area. Prevailing winds influence the dispersion of dust, and other air emissions potentially generated by the Facility.

The recorded wind pattern is dominated by southwest to westerly airflow during autumn and winter, switching to east to southeast flow during summer months. The highest wind speeds are most frequently experienced from the southwest direction.

Average recorded wind speeds are low (approximately 2 m/s in all seasons), with the frequency of calm conditions (wind speeds less than 0.5 m/s) ranging from 9.3% to 13.5% of the time.

The prevailing wind directions are shown in Figure 3-1.

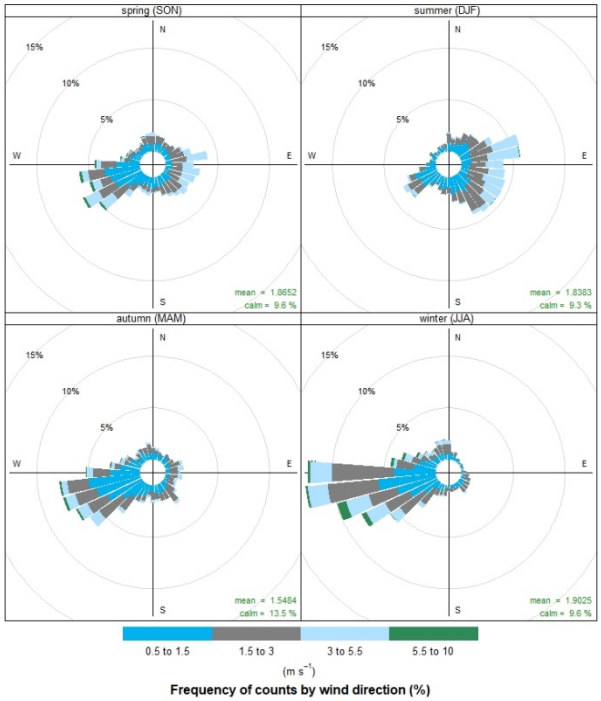


Figure 3-1: Seasonal Wind Rose - Liverpool 2014-2018

Ambient Temperature

Monthly mean temperatures range between 5°C to 18°C, with monthly mean maximum temperatures of 17°C to 28°C. The highest temperatures are typically experienced during the summer months, while the lowest are generally experienced between May and September.

Rainfall

Precipitation has the potential to impact on dust generation and removal of atmospheric pollutants, and is therefore an important factor in quantifying predicted air emissions. Historical data recorded at Bankstown Airport since 1968 indicates the region is characterised by moderate rainfall, with a mean annual rainfall of 870 mm, and an annual rainfall range between 493 mm and 1398 mm. There is typically significant variation in monthly rainfall within the area, with the wettest periods usually during the summer and autumn months.

3.1.2 Existing Ambient Air Quality

Air quality data from the OEH Liverpool monitoring station was analysed for the most recent five-year period (2014-2018)[2] for PM_{10}, $PM_{2.5}$, NO_2, CO, SO_2 and TSP. The dust deposition annual average was obtained from the monitoring data as presented in the MPW Concept and Stage 1 EIS where monitoring was conducted at three locations across the suburbs of Wattle Grove, Casula and Glenfield. Background dust deposition levels recorded range from 0.6 g/m^2/month and 0.8 g/m^2/month, expressed as an annual average (insoluble solids) as presented in Table 3-1.

Baseline air quality for particles (PM_{10} and $PM_{2.5}$) can be described as fair to poor, while baseline air quality for NO_2, SO_2 and CO can be described as very good.

Background air quality concentrations for key pollutants for the MLP and surrounding areas is summarised in Table 3-1. The number of times the impact assessment criteria are exceeded for the same period is presented in Table 3-2.

Table 3-1: Adopted Background Air Quality Concentrations for the MLP East Precinct[3]

Pollutant	Averaging Period	Adopted Background Value	Source
PM_{10}	24-hour average [a]	31.0 µg/m^3	OEH Liverpool monitoring station (2014-2018)
	Annual average	20.5 µg/m^3	OEH Liverpool monitoring station (2014-2018)
$PM_{2.5}$	24-hour average [a]	14.8 µg/m^3	OEH Liverpool monitoring station (2014-2018)
	Annual average	9.0 µg/m^3	OEH Liverpool monitoring station (2014-2018)
NO_2	1-hour average [a]	63.9 µg/m^3	OEH Liverpool monitoring station (2014-2018)
	Annual average	21.1 µg/m^3	OEH Liverpool monitoring station (2014-2018)
CO	1-hour average	2.9 mg/m^3	OEH Liverpool monitoring station (2014-2018)

[2] Data accessed using the following website: https://www.environment.nsw.gov.au/aqms/search.htm.

[3] This data is more recent (2014-2018) than the background data used in the modelling for MPE Stage 2 EIS (2010-2014) and demonstrates that the background levels are still greater than the emissions from the Facility. It is noted that 2018 was an exceptionally high year for $PM_{2.5}$ due to drier weather conditions.

Pollutant	Averaging Period	Adopted Background Value	Source
	8-hour average	2.5 mg/m^3	OEH Liverpool monitoring station (2014-2018)
SO_2	1-hour average	52.4 µg/m^3	OEH Liverpool monitoring station (2014-2018)
	24-hour average	10.5 µg/m^3	OEH Liverpool monitoring station (2014-2018)
	Annual average	2.6 µg/m^3	OEH Liverpool monitoring station (2014-2018)
TSP	Annual average	51.2 µg/m^3	OEH Liverpool monitoring station (2014-2018)
Dust deposition	Annual average	1g/m^2/month[4]	Monitoring data for MPW Concept and Stage 1 EIS
Note: [a] based on the 90th percentile of the daily average for 5 years of data			

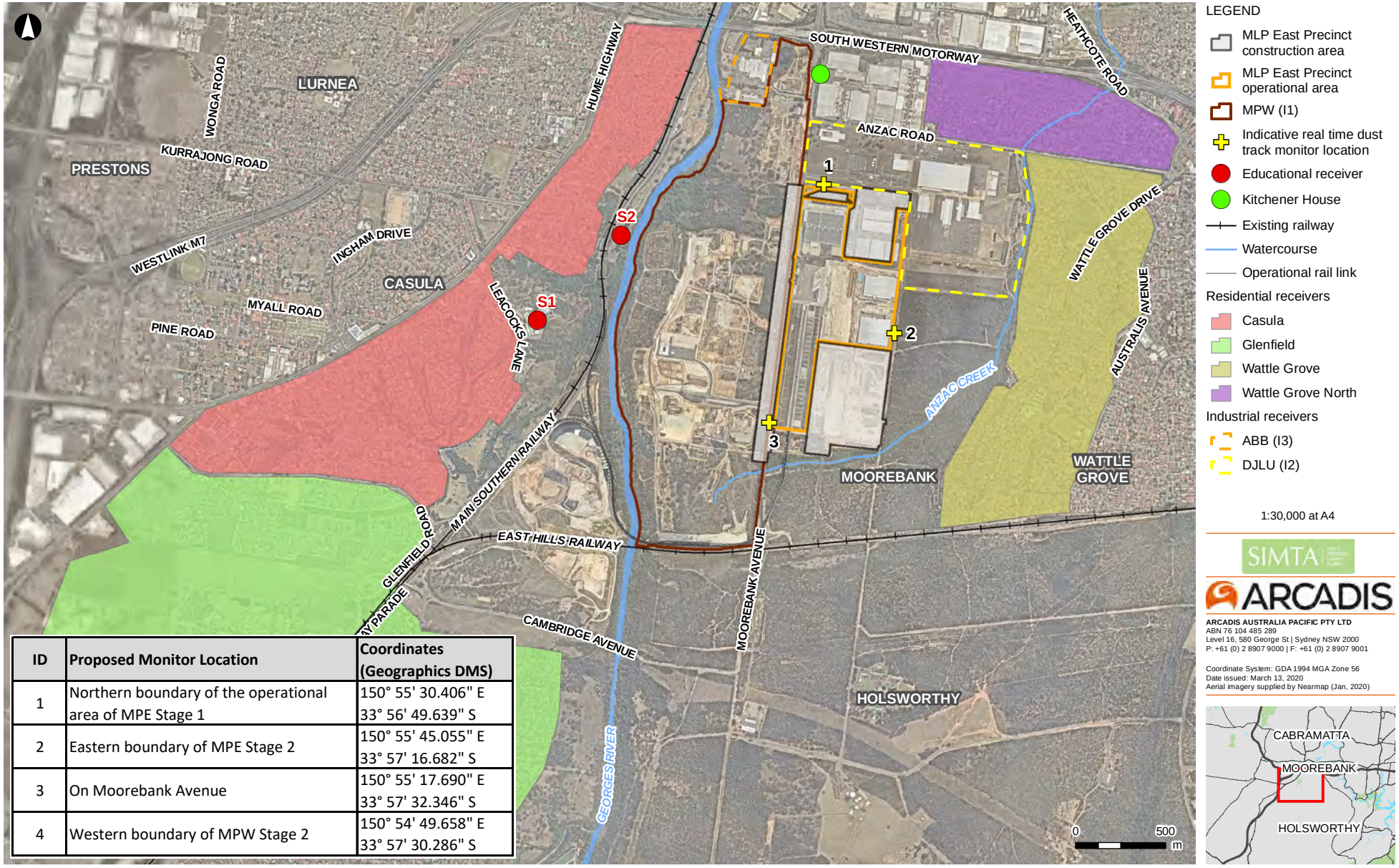
Table 3-2 Number of exceedances of the impact assessment criteria for Liverpool OEH site

Year	NO 1-hr	CO 8-hr	PM_{10} 24-hr	$PM_{2.5}$ 24-hr	SO_2 1-hr
2014	0	0	0	0	0
2015	0	0	1	2	0
2016	0	0	3	4	0
2017	0	0	2	3	0
2018	0	0	13	8	0

3.1.3 Sensitive Receivers

Ramboll (2016) reviewed the residential and sensitive receiver areas within the vicinity of the Facility. These sensitive receivers are located in the neighbouring suburbs of Wattle Grove, Moorebank, Casula and Glenfield and are shown in Figure 3-2.

[4] Background dust concentrations are sourced from ambient air quality monitors established on the Project site in 2012 and presented in Table 7-5 of the MPE Concept EIS.



ID	Proposed Monitor Location	Coordinates (Geographics DMS)
1	Northern boundary of the operational area of MPE Stage 1	150° 55' 30.406" E 33° 56' 49.639" S
2	Eastern boundary of MPE Stage 2	150° 55' 45.055" E 33° 57' 16.682" S
3	On Moorebank Avenue	150° 55' 17.690" E 33° 57' 32.346" S
4	Western boundary of MPW Stage 2	150° 54' 49.658" E 33° 57' 30.286" S

Figure 3-2: Sensitive receivers and proposed real-time air quality monitors

3.2 Aspects, Impacts and Risks

As outlined in Section 8.3.2 of the MPE Stage 1 EIS and Section 9.4.2 of the MPE Stage 2 EIS, diesel combustion in trucks, locomotives and container handling equipment will be the key source of emissions associated with the MLP East Precinct. This section details potential air quality impacts related to operational activities.

3.2.1 Operational Activities

The main operational activities associated with the generation of air emissions include:

- Light vehicles (LV) and heavy vehicles (HV) servicing the Facility
- Truck transfers within the Facility
- Diesel locomotives travelling along the Rail Link to and from the Facility
- Diesel locomotives idling during train loading and unloading
- Container handling equipment
- Onsite plant and equipment
- Liquefied natural gas (LNG) forklifts operating within warehouse areas
- Warehouse cooling and heating (including gas fired boilers)
- Warehouse plant, equipment and vehicles.

3.2.2 Potential Operational Impacts

The MLP East Precinct operational activities are not expected to generate significant amounts of nuisance dust. There may be minor ground disturbance activities associated with landscaping and the repair and maintenance of sealed areas/roads, however these activities are likely to be temporary and short term in nature.

Odour from the operational MLP East Precinct is not considered likely, but some odour may result from the operations of the Glenfield Waste Facility located near the Rail Link. Odour from this site will be managed in accordance with the site's management plans[5].

Other pollutants arising from the above activities that are of greatest concern include the following:

- PM_{10} and $PM_{2.5}$
- Oxides of nitrogen (NO_x)
- Sulphur Oxides (SO_2)
- Carbon monoxide
- Volatile organic compounds (VOCs) such as benzene, 1-3-butadiene and polycyclic aromatic hydrocarbons (PAHs)

A summary of the annual emissions associated with operational activities of the Facility are provided in Table 3-3. Modelling was undertaken in accordance with the "Approved Methods," (NSW EPA, 2016).

[5] MPE Stage 1 EIS (Arcadis, 2016)

Table 3-3 Summary of annual emissions for the MLP East Precinct (tonnes/annum)

Source / Activity	CO	NO_x	SO_2	PM_{10}	$PM_{2.5}$	HC	VOC
MPE Stage 1 *(Source: Section 8.3.2 of the MPE Stage 1 EIS)*[6]							
Trucks (travelling and idling)	3.5	7.0	0.001	0.2	0.2	-	0.5
Locomotives (idling and travelling to SSFL)	1.1	10.9	0.002	0.2	0.2	0.4	0.4
Container Handling Equipment	25.9	26.6	0.003	1.5	1.4	3.0	3.1
Total	**30.5**	**44.5**	**0.006**	**1.9**	**1.8**	**3.4**	**4.0**
MPE Stage 2 *(Source: Section 9.4.2 of the MPE Stage 2 EIS)*[7]							
Warehouse traffic - HV	0.3	4.5		0.1	0.1	0.1	0.1
Warehouse traffic - LV	12.0	2.0		0.1	0.1	0.8	0.8
Terminal transfer to warehouse	0.1	0.4		0.0	0.0	0.0	0.0
Warehouse forklifts	13.7	3.1	0.4	0.2	0.2	5.5	5.8
Warehouse heating/cooling	5.5	6.6	0.0	0.5	0.5		0.4
Total	**31.7**	**16.6**	**0.4**	**0.9**	**0.8**	**6.4**	**7.1**

Based on emissions factors and activity data assumptions, container handling equipment, trucks, locomotives and warehouse heating and cooling are the largest emissions sources. Section 4 outlines how emissions will be managed in accordance with the CoC and overarching OEMP (PREC-QPMS-EN-PLN-0001).

Dispersion Modelling

The AERMOD modelling system was used to estimate the dispersion of pollutants associated with the Facility. The cumulative operational scenario included the cumulative operation of the MLP East Precinct and MPW Stage 2 Project, incorporating a total of 750,000 twenty-foot equivalent unit (TEU) (250,000 TEU and 500,000 TEU respectively) and 515,000 m^2 GFA of warehousing (215,000 m^2 and 300,000 m^2). This was used to predict the concentration of the emissions at various sensitive receivers.

The predicted cumulative (MPE stage 1, MPE Stage 2 and background) maximum pollutant concentrations (receiver maximum) are presented in Table 3-4. The Receiver Maximum $PM_{2.5}$ concentrations were determined by adding the highest modelled prediction across all receptors to the background concentrations as presented in the MPE Stage 2 EIS (i.e. 5-year average of 2010-2014).

As shown in Table 3-1, adopted annual background $PM_{2.5}$ concentrations are already in exceedance of the criteria and are not significantly increased as a result of the incremental cumulative emissions generated by both the Facility and MPW Stage 2 Project.

[6] Annual emissions are based on the assumption (for a worst-case scenario modelling assessment) that six reach stackers would operate continuously for an entire year. The use of six reach stackers was employed within the original modelling assessment, however this number may be subject to change when operations begin in 2019.
[7] Annual emissions are based on the assumption (for a worst-case scenario modelling assessment) that all 24 forklifts would operate at an average 50% load for an entire year.

Table 3-4: Summary of cumulative pollutant modelling predictions at most affected sensitive receivers[8]

Pollutant	Period	Background Concentrations	Air quality goal criteria	Receiver maximum
PM_{10} (ug/m^3)	24 hour maximum	Daily varying	50 µg/m^3	48.5 µg/m^3
	Annual average	19.4 µg/m^3	30 µg/m^3	20.0 µg/m^3
$PM_{2.5}$ (ug/m^3)	24 hour maximum	Daily varying	25 µg/m^3	24.4 µg/m^3
	Annual average	8.2 µg/m^3	8 µg/m^3	8.8 µg/m^3
NO_2 (µg/m^3)	1 hour maximum	63.9 µg/m^3	246 µg/m^3	187.7 µg/m^3
	Annual average	20.4 µg/m^3	62 µg/m^3	37.4 µg/m^3
CO (mg/m^3)	1 hour maximum	5.0 mg/m^3	30 mg/m^3	5.1 mg/m^3
	8 hour maximum	3.1 mg/m^3	10 mg/m^3	3.1 mg/m^3
SO_2 (µg/m^3)	1 hour maximum	74.4 µg/m^3	570 µg/m^3	75.4 µg/m^3
	24 hour maximum	13.6 µg/m^3	228 µg/m^3	13.8 µg/m^3
	Annual average	2.6 µg/m^3	60 µg/m^3	2.7 µg/m^3

The maximum predicted incremental concentrations of 1,3-butadiene, benzene and PAHs (expressed as 99.9th percentiles) for the MLP East Precinct only are presented in Table 3-5. These VOCs were modelled during the EIS (refer to MPE Sage 2 Appendix M) and impact assessment criteria were applied at and beyond the site boundary in accordance with the "Approved Methods." The highest predicted modelled concentration (the Receiver Maximum) of VOCs across the modelled area were used as a worst-case scenario to determine compliance. The results identify that all VOCs are below the relevant assessment criteria as detailed in Table 3-5.

Table 3-5: Assessment of VOC concentrations for MLP East Precinct[9]

Pollutant	Air quality goal criteria	Predicted concentration (µg/m^3)			
		Receiver Maximum		Grid maximum	
		MPE S1	MPE S2	MPE S1	MPE S2
1,3 Butadiene	40 µg/m^3	0.01	0.06	0.2	0.32
Benzene	29 µg/m^3	0.07	0.17	1.1	0.88
PAH (as BaP)	0.4 µg/m^3	0.02	0.01	0.2	0.07

In summary, the modelling predictions for all air pollutants indicate that the risk of adverse air quality impacts generated by the Facility are low. Incremental increases in key pollutants at surrounding residential receivers would be largely indistinguishable from the adopted background conditions and would comply with all relevant assessment criteria.

[8] Background concentrations and cumulative pollutant modelling predications are sourced from Table 19-10 of Section 19.4.3 of the MPE Stage 2 EIS and are based on a 2010-2014 5-year annual average.
[9] Assessment of VOC concentrations are sourced from Table 8-17 of Section 8.3.2 of the MPE Stage 1 EIS and Table 9-18 of Section 9.4.2 of the MPE Stage 2 EIS.

3.3 Management Measures

This section describes the overall approach to managing and mitigating risks to air quality during the operation of the Facility.

Management measures are summarised in Table 3-6. These measures are based on best practice and compliance requirements detailed in Section 2.2, as well as Qube's (Facility Delivery Company) requirements and standards, which include, but are not limited to:

- Environmental Aspects and Impacts Identification Procedure (SHEMS-QH-06-PR-0046)
- Emergency Response Management (SHEMS-QH-13-PR-0131)
- Incident Reporting and Management (SHEMS-QH-13-PR-0126)
- Safety Health and Environment Policy (SHEMS-QH-01-PO-0000).

Responsibility for the management of emissions associated with warehousing, including forklifts and gas heating/cooling will fall with each tenant.

Table 3-6: Management Measures

ID	Management Measure	Timing	Responsibility	Reference
GENERAL – Measures for minimising exhaust fumes				
AQ1	An anti-idle policy will be developed, and training will be provided to locomotive drivers and truck operators to maximise fuel efficiency and minimise unnecessary idling.	During operations	Site SHEQ Manager/Advisor	EPBC Act Approval Annexure A SSD 6766 FCMM 2B SSD 7628 FCMM 3B SSD 6766 FCMM 4.1B
AQ2	Signs will be installed within the IMT to remind drivers of the anti-idle policy and their obligations.	Prior to commencement of operations	Operations Manager	SSD 6766 FCMM 2B SSD 7628 FCMM 3B SSD 6766 FCMM 4.1B
AQ3	Maintenance plans will be developed and implemented that include a requirement to consider air emissions and where possible improve air emission performance at next overhaul/upgrade. For example, if an emissions upgrade kit is compatible for a particular model locomotive, this will be considered at overall/upgrade if that locomotive is under operational control of the MLP East Precinct.	During operations	Operations Manager	SSD 6766 FCMM 4.1B
AQ4	A complaints line will be available for the community to report excessive idling and smoky vehicles associated with the facility.	During operations	Operations Manager	SSD 6766 FCMM 2B SSD 7628 FCMM 3B
DIESEL EXHAUST – measures for minimising emissions of VOC, SO_2, PAHs, particulate matter, NO_2 and CO				
AQ5	Fuel efficiency of the operation plant/equipment will be assessed prior to selection, and where practical, equipment with the highest fuel efficiency and which uses lower GHG intensive fuel (e.g. biodiesel) will be used during operation. For example, some equipment may not be compatible with using lower GHG intensive fuel (LPG, biodiesel or biodiesel blends). Furthermore, the use of lower GHG intensive fuel may not be practical if the GHG benefit is offset by an increase in emissions of air pollutants (such as NOx or $PM_{2.5}$).	Prior to the commencement of operations	Operations Manager	SSD 7628 FCMM 11G

ID	Management Measure	Timing	Responsibility	Reference
AQ6	All registered vehicles visiting and operated within the Facility will be regulated under the Australian Design Rules (ADRs) and the Fuel Quality Standards Act (2000).	During operations	Site SHEQ Manager/Advisor	SSD 7628 CoC A32 a) SSD 7628 CoC A32 b) SSD 7628 CoC B59 b) SSD 7628 CoC B61 Appendix M of MPE Stage 2 EIS
AQ7	All vehicles, equipment and locomotives will be maintained in accordance with the manufacturer's specifications.	During operations	Site SHEQ Manager/Advisor	SSD 7628 CoC A32 a) SSD 7628 CoC B59 b) SSD 7628 CoC B61
AQ8	Equipment with smoky exhausts (visible black smoke emitted for a continuous period of more than 10 seconds) shall be stood down for maintenance.	During operations	Site SHEQ Manager/Advisor	SSD 7628 CoC A32 a) SSD 6766 FCMM 2B SSD 6766 FCMM 4.1B
AQ9	Trucks with smoky exhausts (visible black smoke emitted for a continuous period of more than 10 seconds) shall be excluded from the Facility.	During operations	Site SHEQ Manager/Advisor	SSD 7628 CoC A32 a) SSD 6766 FCMM 2B SSD 7628 FCMM 3B SSD 6766 FCMM 4.1**B**
AQ10	Unnecessary idling for vehicles or locomotives will be avoided with engines turned off during periods of inactivity.	During operations	Site SHEQ Manager/Advisor	EPBC Act Approval Annexure A SSD 7628 CoC A32 b) SSD 7628 CoC B61 SSD 6766 FCMM 2B SSD 6766 FCMM 4.1B SSD 7628 FCMM 3B
AQ11	An electrified locomotive shifter will be installed to reduce the need for excessive locomotive idling.	Commencement of operations	Site SHEQ Manager/Advisor	SSD 7628 CoC B61 SSD 6766 FCMM 2B SSD 6766 FCMM 4.1A
AQ12	Electric gantry cranes will be installed to reduce use of diesel-powered equipment.	Within seven years of commencement of operation or on the Facility achieving	Site SHEQ Manager/Advisor	SSD 7628 CoC B61 SSD 6766 FCMM 4.1A

ID	Management Measure	Timing	Responsibility	Reference
		an annual throughput of 250,000 TEU (whichever is sooner)		
AQ13	Trips and trip distances will be controlled and reduced for example by the efficient management of deliveries and dispatches.	During operations	Site SHEQ Manager/Advisor	EPBC Act Approval Annexure A SSD 7628 CoC A32 b)
AQ14	Loading and unloading will be coordinated to minimise truck trip distances as they travel through the Facility.	During operations	Site SHEQ Manager/Advisor	SSD 7628 CoC A32 b) SSD 6766 FCMM 4.1B
AQ15	A vehicle booking system, truck marshalling lanes and rejection of trucks that arrive early will be implemented to minimise wait times and queuing.	Commencement of operations	Site SHEQ Manager/Advisor	EPBC Act Approval Annexure A SSD 7628 CoC A32 b) SSD 6766 FCMM 2B SSD 6766 FCMM 4.1A
DUST – visible dust from landscaping and maintenance practices				
AQ16	Working practices will be modified to prevent dust emissions when nuisance dust is seen leaving the Facility, in accordance with best practice management measures described in the CAQMP.	Visible dust pollution	Site SHEQ Manager/Advisor	SSD 7628 CoC B54 SSD 7628 CoC B55 SSD 6766 CoC E14
ODOUR EMISSIONS – associated with refuelling				
AQ17	Refuelling of equipment will be sited as far from sensitive receivers as practical and limited to low volatility fuels (i.e. diesel) to prevent odour impacts.	During operations	Site SHEQ Manager/Advisor	SSD 7628 CoC B60
EQUIPMENT FUELS – measures for minimising emissions of VOC, SO_2, PAHs, particulate matter				
AQ18	Where feasible, electricity powered container handling equipment will be used instead of diesel equipment. Feasibility relates to technical and logistical considerations. For example, whether specific electric container handling equipment is compatible with the operational logistics for the MLP East Precinct or whether electric technology options are available for specific types of equipment.	Commencement of operations	Site SHEQ Manager/Advisor	EPBC Act Approval Annexure A SSD 7628 CoC B61

ID	Management Measure	Timing	Responsibility	Reference
AQ19	All container handling equipment, purchased after 2019, will meet US EPA Tier 4 or EU Stage IV emission standard or achieve an equivalent emission control performance to those standards.	Commencement of operations	Site SHEQ Manager/Advisor	SSD 6766 CoC G12 SSD 7628 CoC B61
AQ20	New reach stackers will meet US EPA Tier 4 or EU Stage IV emission standards.	During operations	Site SHEQ Manager/Advisor	SSD 6766 CoC G12 SSD 7628 CoC B61 SSD 6766 FCMM 4.1A
AQ21	Where feasible, tenants will be encouraged to use LNG powered forklifts instead of diesel vehicles. Feasibility relates to technical and logistical considerations. For example, whether LNG powered forklifts are compatible with the operational logistics for individual tenants.	Commencement of operations	Individual tenants	EPBC Act Approval Annexure A SSD 7628 CoC B61
AQ22	All rolling stock servicing the Facility will be upgraded to comply with best practice within 7 years of operation of the IMEX terminal (See Section 4.1.3).	During operations	Site SHEQ Manager/Advisor	EPBC Act Approval Annexure A SSD 7628 CoC B61
AQ23	Where feasible, warehouse heating and cooling equipment will be run using electricity generated from solar arrays installed on warehouse rooves. Feasibility relates to technical and logistical considerations. For example, depending on the overall power demand for individual tenants, and when this demand is highest (day/night), solar power may not be technically feasible.	During operations	Individual tenants	SSD 7628 CoC B61 SSD 7628 FCMM 11G

4 MONITORING AND REVIEW

4.1 Monitoring Requirements

In accordance with FCMM 2C of the MPE Stage 1 Consent (SSD6766), an air quality monitoring programme will be established for the initial phase of operation, focused on the key pollutants PM_{10} and NO_2. In accordance with FCMM 3C of the MPE Stage 2 Consent (SSD7628) and condition 8 (f) of the EPBC Act approval, real-time boundary monitoring will be installed to measure PM_{10}, $PM_{2.5}$, NO_2 and CO emissions throughout Operation. As required under condition 8 (f) of the EPBC Act approval, the monitoring program will be used to validate the anticipated impacts presented in the air quality assessment and determine the effectiveness of mitigation measures. In addition, daily visual inspections will ensure appropriate operational response to minimise environmental impact in the event of an incident or non-compliance.

4.1.1 Visual Inspection

Daily visual inspections will be undertaken by the Area Manager to monitor compliance with MPE Stage 1 CoC E14 and G13, MPE Stage 2 CoC B54 and CoC 55 and this plan.

Daily inspections will focus on the following key issues:

- Excessive truck and locomotive idling
- Generation of exhaust fumes (smoky exhausts for periods exceeding 10 seconds)
- Nuisance dust visibly leaving site
- Emission of offensive odours.

A summary of the reactive measures and corrective actions in response to non-compliance during visual inspections are summarised in Table 4-1.

Table 4-1: Reactive management measures and corrective action in response to visual inspection

Emissions source	Management measure or control	Corrective actions
Excessive idling	Ensure container equipment engines are turned off during periods of inactivity.	Remind equipment operators of anti-idle policy through toolbox talks
	Respond to excessive truck queuing by rejecting vehicles that arrive outside of allocated time slots and / or reallocation of deliveries and dispatch.	Review of vehicle booking system and truck lane management
		Communicate action back to truck or freight operator
	Ensure locomotive engines are turned off during periods of loading and unloading.	Remind locomotives operators of anti-idle policy and communicate non-compliance back to rolling stock operator
Excessive/prolonged generation of exhaust fumes	On-site equipment with smoky exhausts (visible black smoke emitted for a continuous period of 10 seconds) shall be stood down for maintenance.	Install/utilise replacement equipment for essential tasks. For non-essential tasks, on-site equipment will be serviced in accordance with the maintenance plan and manufacturer's specifications and only returned to site when the issue has been resolved.
		Review maintenance procedures and frequency
	Trucks with smoky exhausts shall be excluded from the Facility.	Communicate action back to truck or freight operator

Emissions source	Management measure or control	Corrective actions
Nuisance dust	Minimise disturbances that may create dust. If dust is generated, stop activity or use dust suppression (eg water)	Remind operational staff of obligations to minimise air quality impacts

The Key Performance Indicators (KPI) or targets for operational air quality management at the site will be zero community complaints, monitored though the community complaints line, and compliance for the ambient air monitoring outlined in Table 4-2. Management of air quality community complaints is discussed further in Section 4.6.

4.1.2 Air Quality Monitoring

Ambient air monitoring requirements relevant to the OAQMP are summarised in Table 4-2. Locations of sensitive receivers and proposed monitoring sites are shown in Figure 3-2. Air quality monitoring results will be reported on a monthly basis and used to validate the predicted impacts presented in Section 3.2 and measure the effectiveness of the air quality management measures outlined in Table 3-6. Records of all monitoring will be managed in accordance with Section 6.5 of the OEMP (PREC-QPMS-EN-PLN-0001). As detailed in Section 4.4, should an exceedance of the monitoring criteria and trigger values presented in Table 4-2 be recorded, an investigation will be undertaken to identify the likely source of the exceedances. If the exceedance is attributed to emission sources at the MLP East Precinct, a review of the management measures detailed in Table 3-6 and implementation of further corrective actions will be undertaken as appropriate to prevent further exceedance of the monitoring criteria and trigger values.

Table 4-2: Ambient Air Monitoring Requirements

Monitoring Focus	Averaging period	Criteria / Trigger	Monitoring method	Monitoring locations	Frequency
PM_{10}	24 hour average	50 µg/m^3	Continuous real-time monitors	One upwind and one downwind location representative of the closest sensitive receptor. Note, the site boundary is representative of the closest receptor in some cases (adjacent commercial premises). If required, monitors can be moved to areas along the boundary which are best suited to measuring impacts from significant emission generating operations at the time. Refer to Figure 3-2	Continuous for the duration of operations
	Annual average	25 µg/m^3			
$PM_{2.5}$	24 hour average	25 µg/m^3	Continuous real-time monitors		
	Annual average	8 µg/m^3			
NO_2 (µg/m^3)	1 hour average	246 µg/m^3	Continuous real-time monitors		
	Annual average	62 µg/m^3			
CO	1 hour average	30 mg/m^3	Continuous real-time monitors		
	8 hour average	10 mg/m^3			
Dust deposition	Annual average	4g/m^2/month	Dust deposition gauges		For the duration of concurrent construction activities.

4.1.3 Locomotive emissions

Qube is required to operate the MLP East Precinct as a non-discriminatory access terminal, meaning the IMEX terminal can be accessed by any rail operator within the existing fleet of port shuttle locomotives used by the industry. On this basis, while Qube cannot directly control the technology used by the existing fleet, they can influence it through imposition of minimum performance expectations for air emissions for port shuttle locomotives that enter the IMEX terminal.

Following consultation with the EPA and TfNSW and based on an understanding of industry best practice, the following benchmarks will be implemented for the Facility.

Table 4-3: Locomotive emission benchmarks

Locomotive Type	Standard	Period Improvements	Ultimate Outcome
Existing locomotives	Operate with diesel particulate emissions of < 0.30 g/kWh (grams per kilowatt hour)	Any overhauls of existing locomotives after the commencement of operations of the IMEX terminal would need to comply	All existing locomotives to comply within 7 years of operation of the IMEX terminal
New locomotives	Operate with diesel particulate emissions of < 0.27 g/kWh and NOx emissions of < 7.37 g/kWh	Any new locomotives ordered after the commencement of operations of the IMEX terminal would need to comply	N/A
New locomotives	Operated with diesel particulate emissions of < 0.13 g/kWh and NOx emissions of < 7.37 g/kWh	Any new locomotives ordered after 5 years of the commencement of operations of the IMEX terminal would need to comply	N/A

The above measures would be adopted until such time as an industry standard or guideline has been established, at which time the relevant standard or guideline including associated timeframes would apply.

4.1.4 Summary of Operational Air Quality Monitoring

Table 4-4 below outlines the details of the operational air quality monitoring to be undertaken.

Table 4-4 Summary of Air Quality Monitoring

Criteria	Description
Location References	Refer to Figure 3-2
Types and numbers of Monitors	4 x Dust deposition gauges (PMs) 4 x continuous real-time PM_{10} and $PM_{2.5}$ monitors (DustTrak or similar) 4 x continuous real-time CO and NO_2 monitors (Cairpol microsensor or similar)
Responsibility	SHEQ Manager/Advisor
Frequency of Measurements	Monthly (dust deposition) for the duration of concurrent construction activities Continuous (PM_{10}, $PM_{2.5}$, NO_2 and CO)
Criteria	See Table 4-2 for ambient air quality goals
Guidelines / Legislative Requirements	*Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales* *Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales*

Criteria	Description
Monitoring of Effectiveness of Controls	Monthly review of monitoring data and analysis of effectiveness of controls Daily visual inspections of dust and vehicle exhausts Continuous air quality monitoring and alerts for exceedances of trigger values.
Reporting of Monitoring	See Table 4-6 for air quality reporting requirements

4.2 Environmental Auditing

The auditing of compliance against this OAQMP will be undertaken in accordance with the EMS and CoC as outlined within the overarching OEMP (PREC-QPMS-EN-PLN-0001). The relevant auditing requirements applicable to this OAQMP are summarised in Table 4-5.

Table 4-5: Environmental Auditing and Required Frequency

Requirement	Area/Location	Responsibility	Frequency
Auditing of site operations against OEMP and EMS	Whole Facility	Qube	Quarterly
Independent Environmental audit	Whole Facility	Independent Auditor	Within 12 months of operation commencing Every 3 years thereafter unless directed by Secretary or Minister (or delegate)

4.3 Reporting

Reporting requirements for monitoring, auditing and as required in the CoC will be undertaken in accordance with the overarching OEMP (PREC-QPMS-EN-PLN-0001).

Reporting requirements applicable to this OAQMP are summarised in Table 4-6.

Table 4-6: Environmental Reporting Requirements

Requirement	Area/Location	Responsibility	Frequency	Submitted to
Air quality monitoring reporting	Whole Facility	Qube	Annually (part of the Annual review)	DP&E/DoEE
Air quality monitoring reporting	Whole Facility	Qube	Internal monthly reporting	Qube Site SHEQ Manager
Annual Review	Whole Facility	Qube	Annually	DP&E/DoEE
Compliance reporting	Whole Facility	Qube	Pre-operation Annually Six-monthly	DP&E/DoEE Compliance
Compliance reporting	Warehouses	Individual Tenants	Six-monthly	Qube Site SHEQ Manager
Best Practice Progress Review for emission technologies for locomotives	Rail Link and IMEX	Qube	Pre-operation Annually for up to 7 years from commencement of operation	DP&E/DoEE

4.4 Review and Improvement

This OAQMP will be reviewed and improved in accordance with the CoC and Section 6.2.1 of the OEMP (PREC-QPMS-EN-PLN-0001). Continuous improvement will be achieved by the ongoing evaluation of environmental management performance and effectiveness of this plan against environmental policies, objectives, targets and review of monitoring results against Project air quality criteria and triggers. This includes the provision of additional mitigation measures.

Should the results of monitoring detailed in Section 4.1 identify an exceedance of air quality criteria, further investigation will be undertaken to ascertain if the exceedance is attributable to the Project and if so to identify the cause of the exceedance. Corrective actions to be implemented will depend on the identified cause of the exceedances. Contingency measures include:

- Review of training procedures and review of communication of anti-idling policy if idling trucks and/or locomotives are identified as the cause of the exceedances
- Standing down plant or equipment for repair if plant or equipment exhausts are identified as the cause of the exceedance.
- Requiring specific locomotives to demonstrate that the minimum performance expectations for port shuttle locomotives are achieved.

Where monitoring data demonstrates ongoing compliance with the criteria in Table 4-2 and where no exceedances of the criteria are attributable to the Project, monitoring for individual pollutants identified in Table 4-2 may be discontinued in consultation with all relevant stakeholders, and subject to approval of revised OAQMP by the Federal Minister (or delegate).

A copy of the revised and re-approved OAQMP and changes will be distributed to all relevant stakeholders in accordance with the approved document control procedure, as outlined in Section 1.5.3 of the OEMP.

4.5 Incidents

All air quality incidents will be reported and managed in accordance with Qube's Incident Reporting and Management Procedure (SHEMS-QM-13-PR-0126).

Incidents will be classified based on the incident's severity as shown in Section 4.6 of the OEMP (PREC-QPMS-EN-PLN-0001).

All incidents will be managed and reported according to Section 4.6 of the OEMP.

4.6 Complaints

As per MPE Stage 1 CoC F4 and MPE Stage 2 CoC B59, complaints relating to air quality will be handled in accordance with Section 4.5.1 of the OEMP and the Community Communication Strategy (CCS).

4.7 Non-Compliance, Non-Conformances and Corrective Actions

All air quality related non-compliances, non-conformances and resulting corrective actions will be managed in accordance with Section 6.4 of the OEMP.

APPENDIX A EVIDENCE OF CONSULTATION

[redacted]

Subject: FW: Documentation Review - EPA comments

From: [redacted]
Sent: Monday, 29 April 2019 3:48 PM
To: [redacted]
Cc: [redacted]
Subject: RE: Documentation Review

HI [redacted],

As you are aware, The EPA routinely declines to comment on Management Plans and other post approval documentation.

I understand there are numerous such documents required by the various consents for the Moorebank Precincts.

I suggest that you send a comprehensive list of all the documents that require consultation with the EPA. The EPA will then identify which, if any, the EPA will review.
This way you can quickly satisfy the need to consult with the EPA without the need for redundant correspondence reiterating the EPA's position one by one for each document.

Please note that at this stage there is no role for the EPA in your project during the operating stage and therefore any operational related plans are not going to be of interest to the EPA. You should consider, regardless of the consent conditions, whether it would be appropriate to consult with the appropriate regulatory authority under POEO Act for operational matters.

If, in future, there is a need for an operational licence under POEO, the relevant documentation may be required for the licence application.

Regards,

[redacted]
Unit Head, Sydney Industry Section
Metropolitan Branch, NSW Environment Protection Authority
T 02 9995 6927 [redacted]
[redacted] www.epa.nsw.gov.au @EPA_NSW

Report pollution and environmental incidents 131 555 (NSW only)
or +61 2 9995 5555

NSW EPA

From: [redacted]
To: [redacted]
Cc: [redacted]
Subject: FW: Operational Air Quality Management Plan Moorebank Logistics Park- East Precinct
Date: Thursday, 16 May 2019 4:24:21 PM

Hi [redacted]

Please see below Liverpool Council's response on the above.

Could you please have a look and I'll give you a call tomorrow to discuss.

Thanks,
[redacted]

Regards,
[redacted]
ENVIRONMENTAL MANAGER
TACTICAL GROUP

LEVEL 15 | 124 WALKER STREET | NORTH SYDNEY | NSW | 2060

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Before printing this document, please consider the environment.

From: [redacted]
Sent: Thursday, 16 May 2019 4:01 PM
To: [redacted]
Cc: [redacted]
Subject: FW: Operational Air Quality Management Plan Moorebank Logistics Park- East Precinct

Hi [redacted],

In regards to the submitted Operational Air Quality Management Plan, please see Council's comments below.

- It is unclear who the actual authors are associated with an environmental consultancy regarding the Operational Air Quality Management Plan Moorebank Logistics Park- East Precinct (Report No. PREC-QPMS-EN-PLN-0012, Revision 002) prepared by Madeleine Watson-Reeves and Ronan Kellaghan dated 1st April 2019.
- The NSW EPA confirmed that they did not wish to comment on any of the Operational Management Plans for the Intermodal as a licence is not required for Schedule 1 activities under the *Protection of the Environment Operations (POEO) Act 1997*.

  According to Schedule 1 of the *POEO Act 1997*, 'railway systems activities' means "the installation, on site repair, onsite maintenance or onsite upgrading of track, including the construction or significant alteration of any ancillary works or the operation of rolling stock on track". However, 'railway systems activities' does not include the loading of freight into or onto and unloading of freight from, rolling stock or an activity at a freight depot or centre.
- Section 6 of the *POEO Act 1997* stipulates that a local authority is the **Appropriate Regulatory Authority (ARA)** for non-scheduled activities within its area except for a matter for which a public authority (other than the local authority) is declared under subsection (3) to be the ARA. In these circumstances, a public authority is the ARA for a matter for which it is declared to be the ARA by the Regulations.

  The proposed SIMTA Intermodal Terminal Facility represents a large-scale operation and Liverpool City Council is not equipped or resourced to regulate the facility which is proposed to operate 24 hours a day, 7 days a week. **Therefore, it is our view that the NSW EPA shall be declared, under section 6 (3) of the *POEO Act 1997*, the ARA for all non-scheduled activities associated with the SIMTA Intermodal Terminal Facility.**
- Based upon the submitted information, it is understood that an Environmental Representative would be appointed by the proponent to immediately respond to any future pollution incidents, complaints and

concerns. Although self-regulation is important, an appropriately skilled and resourced Regulatory Authority is required to control site activities. It is our understanding that the NSW EPA would be the ARA for the operation of rolling stock on track. **Therefore, it was expected that the NSW EPA would have an interest in reviewing and commenting on the Operational Management Plans for the development**.

- If the NSW EPA is reluctant to provide feedback in relation to the Operational Management Plans and regulate non-scheduled construction and operational activities at the facility. Potential risks to the environment and public health are likely to eventuate given the Government's perseverance in appointing Council as the ARA. It is envisaged that the Department of Planning and Environment will have primary responsibility for assessing compliance with the approval during the construction and operational phases of the project. **According to the NSW Planning and Environment website, the Department of Planning and Environment's compliance team monitors and enforces the conditions of projects granted by the Minister for Planning or their delegate.**

  Our belief is that the Department of Planning and Environment is equipped with the appropriate skills, knowledge and enforcement powers to regulate the proposed development during construction and operation. A united regulatory response between the Department and NSW EPA would alleviate Council's role in regulating non-scheduled activities at the site.

Operational Air Quality Management Plan Moorebank Logistics Park- East Precinct

- The OAQMP references 'Australian / New Zealand Standard AS/NZS 3580.1.1:2007 (Methods for Sampling and Analysis of Ambient Air, Part 1.1 Guide to Siting Air Monitoring Equipment)'. **This Standard was superseded by AS/NZS 3580.1.1:2016** Methods for sampling and analysis of ambient air - Part 1.1: Guide to siting air monitoring equipment.

- The Minister's CoC required the Applicant to prepare and implement an Operational Environmental Management Plan (OEMP) including details relating to management and regular performance monitoring of air quality generated by the Project and measures to proactively respond to and deal with air quality complaints. Despite a requirement for regular performance monitoring, the submitted OAQMP indicates that an air quality monitoring program would only be established for the initial phase of operation, focused on the key pollutants PM_{10} and NO_2.

- **The air quality monitoring program shall be carried out by a suitably qualified and experienced air quality consultant for the entire duration of the site's operation**. The implementation of a comprehensive air quality monitoring program during the entire operational phase of the Project would assist in measuring air quality trends and compliance rates during these periods. Council supports the comprehensive monitoring initiatives during the operational phase of the development to encourage environmental best practice and facilitate adherence with the Approval.

Regards,

[redacted]
Executive Planner

LIVERPOOL CITY COUNCIL | LIVERPOOL THE GREAT SOUTH WEST

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From: [redacted]
Sent: Wednesday, 8 May 2019 4:16 PM
To: [redacted]
Subject: FW: Moorebank Precinct East - Operation Air Quality Management Plan

Hi [redacted],

Are you able to advise if you wish to review the above.

DPE has advised, that strictly speaking we are not required to but has advised that as Council will be the ARA the EPA recommends that Council does comment

Happy to discuss

Regards

[redacted]
Manager Planning and Transport Strategy

02 8711 7610 | [redacted] | [redacted] | www.liverpool.nsw.gov.au
Customer Service: 1300 36 2170 | 33 Moore Street Liverpool, NSW 2170, Australia

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From: [redacted]
Sent: Wednesday, 8 May 2019 3:51 PM
To: [redacted]
Subject: Moorebank Precinct East - Operation Air Quality Management Plan

Hi [redacted]

Please find attached the original email sent from the Applicant (Tactical Group on behalf of SIMTA) to Murray Wilson on 11 April 2019 seeking LCC's comments on the OAQMP for the Moorebank Precinct East development. A dropbox link is included in the email attached.

I've also attached EPA's consultation letter which is where the suggestion to provide the plan to LCC originated (not DPE as stated).

As the condition only requires EPA consultation to be completed I will be commencing a review of this document and preparing it for approval. However, as LCC will be the ARA I definitely welcome any comments you have on the plan.

th

If you could please provide comments on the plan to the Applicant prior to the 17 May, (and cc me in) this would be greatly appreciated and will form part of the Planning Secretary's consideration of the approval.

Please give me a call if you require any further information.

Kind regards,

[redacted]
Senior Environmental Assessment Officer
Infrastructure Management
Level 29, 320 Pitt Street | GPO Box 39 | Sydney NSW 2001
T 02 8275 1168

NSW GOVERNMENT | Planning & Environment

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Operational Air Quality Management Plan (Revision 002 dated 1 April 2019)

Status of comments from LCC

Stakeholder	Comment Date	Stakeholder Comment	Arcadis Response	Response Date
LCC	16-May-2019	It is unclear who the actual authors are associated with an environmental consultancy regarding the Operational Air Quality Management Plan Moorebank Logistics Park- East Precinct (Report No. PREC-QPMS-EN-PLN-0012, Revision 002) prepared by Madeleine Watson-Reeves and Ronan Kellaghan dated 1st April 2019.	'Author Details' table updated to reflect Ronan Kellaghan as the reviewer of the document.	17-May-2019
LCC	16-May-2019	The NSW EPA confirmed that they did not wish to comment on any of the Operational Management Plans for the Intermodal as a licence is not required for Schedule 1 activities under the Protection of the Environment Operations (POEO) Act 1997. According to Schedule 1 of the POEO Act 1997, 'railway systems activities' means "the installation, on site repair, onsite maintenance or onsite upgrading of track, including the construction or significant alteration of any ancillary works or the operation of rolling stock on track". However, 'railway systems activities' does not include the loading of freight into or onto and unloading of freight from, rolling stock or an activity at a freight depot or centre.	The MLP East Precinct constitutes construction and operation of a *'freight depot or centre, where freight will be loaded onto and from rolling stock'*, as defined under the POEO Act. Under Clause 33(2) (f) and (g) of Schedule 1 of the POEO Act, these activities are excluded from the definition of a 'railway systems activity', for which an EPL is required under the POEO Act. Advice from the EPA (DOC 13/6031, 25 February 2013) states that construction and operation of private sidings and turnouts do not require an EPL. For these reasons, an EPL is not required for operation of the MLP Est Precinct.	17-May-2019
LCC	16-May-2019	Section 6 of the POEO Act 1997 stipulates that a local authority is the Appropriate Regulatory Authority (ARA) for non-scheduled activities within its area except for a matter for which a public authority (other than the local authority) is declared under subsection (3) to be the ARA. In these circumstances, a public authority is the ARA for a matter for which it is declared to be the ARA by the Regulations. The proposed SIMTA Intermodal Terminal Facility represents a large-scale operation and Liverpool City Council is not equipped or resourced to regulate the facility which is proposed to operate 24 hours a day, 7 days a week. Therefore, it is our view that the NSW EPA shall be declared, under section 6 (3) of the POEO Act 1997, the ARA for all non-scheduled activities associated with the SIMTA Intermodal Terminal Facility.	The Department of Planning and Environment (DP&E) has confirmed in consultation with Tactical Group, that DP&E Compliance will act as the Appropriate Regulatory Authority (ARA) for the MLP East Precinct Facility. Due to this, neither the NSW Environmental Protection Agency nor the Liverpool City Council are required to be the ARA, and therefore it is considered acceptable that the NSW EPA are not required to perform reviews of Operational Management Plans for the development.	17-May-2019

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LCC	16-May-2019	Based upon the submitted information, it is understood that an Environmental Representative would be appointed by the proponent to immediately respond to any future pollution incidents, complaints and concerns. Although self-regulation is important, an appropriately skilled and resourced Regulatory Authority is required to control site activities. It is our understanding that the NSW EPA would be the ARA for the operation of rolling stock on track. Therefore, it was expected that the NSW EPA would have an interest in reviewing and commenting on the Operational Management Plans for the development.	As above, the DP&E has confirmed in consultation with Tactical Group, that the DP&E Compliance will act as the ARA for the MLP East Precinct Facility.	17-May-2019
LCC	16-May-2019	If the NSW EPA is reluctant to provide feedback in relation to the Operational Management Plans and regulate non-scheduled construction and operational activities at the facility. Potential risks to the environment and public health are likely to eventuate given the Government's perseverance in appointing Council as the ARA. It is envisaged that the Department of Planning and Environment will have primary responsibility for assessing compliance with the approval during the construction and operational phases of the project. According to the NSW Planning and Environment website, the Department of Planning and Environment's compliance team monitors and enforces the conditions of projects granted by the Minister for Planning or their delegate. Our belief is that the Department of Planning and Environment is equipped with the appropriate skills, knowledge and enforcement powers to regulate the proposed development during construction and operation. A united regulatory response between the Department and NSW EPA would alleviate Council's role in regulating non-scheduled activities at the site.	As above, the DP&E has confirmed in consultation with Tactical Group, that DP&E Compliance will act as the ARA for the MLP East Precinct Facility.	17-May-2019
LCC	16-May-2019	The OAQMP references '*Australian / New Zealand Standard AS/NZS 3580.1.1:2007 (Methods for Sampling and Analysis of Ambient Air, Part 1.1 Guide to Siting Air Monitoring Equipment)*'. This Standard was superseded by *AS/NZS 3580.1.1:2016 Methods for sampling and analysis of ambient air - Part 1.1: Guide to siting air monitoring equipment*.	Section 2.1 – reference to '*Australian / New Zealand Standard AS/NZS 3580.1.1:2007 (Methods for Sampling and Analysis of Ambient Air, Part 1.1 Guide to Siting Air Monitoring Equipment)*' has been removed and replaced with *AS/NZS 3580.1.1:2016 Methods for sampling and analysis of ambient air - Part 1.1: Guide to siting air monitoring equipment*.	17-May-2019

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LCC	16-May-2019	The Minister's CoC required the Applicant to prepare and implement an Operational Environmental Management Plan (OEMP) including details relating to management and regular performance monitoring of air quality generated by the Project and measures to proactively respond to and deal with air quality complaints. Despite a requirement for regular performance monitoring, the submitted OAQMP indicates that an air quality monitoring program would only be established for the initial phase of operation, focused on the key pollutants PM_{10} and NO_2.	Section 4.1 was updated in Revision 3 of the OAQMP. The update included the addition of the following: *'Real-time boundary monitoring will be installed to measure PM_{10}, $PM_{2.5}$ and NO_2 emissions throughout Operation'* This was included to address the requirement for regular performance monitoring throughout Operation. Figure 3-2 shows the locations of these continuous real-time monitors for the MLP East Precinct Facility	17-May-2019
LCC	16-May-2019	The air quality monitoring program shall be carried out by a suitably qualified and experienced air quality consultant for the entire duration of the site's operation. The implementation of a comprehensive air quality monitoring program during the entire operational phase of the Project would assist in measuring air quality trends and compliance rates during these periods. Council supports the comprehensive monitoring initiatives during the operational phase of the development to encourage environmental best practice and facilitate adherence with the Approval.	Table 4-2 outlines the continuous real-time monitoring of air quality which will be undertaken for the duration of Operations. These pollutants will be reported on a monthly basis by the Site Safety, Health, Environment and Quality (SHEQ) Manager/Advisor. There are no specific requirements in the MLP Project Approvals that require that the *'air quality monitoring program to be carried out by a suitably qualified and experienced air quality consultant for the entire duration of the site's operation*.' However, the OAQMP inclusive of the air quality monitoring program was developed, in part, by Ronan Kellaghan who is a senior air quality consultant with over 14 years' experience as a specialist in air quality management. This is reflected in the 'Author Details' section at the beginning of the Plan.	17-May-2019