MOOREBANK INTERMODAL PRECINCT

Moorebank Precinct East:
Six-Monthly Operations Compliance Report

Report: #10

Period: November 2024 – April 2025

30 APRIL 2025

Moorebank Intermodal Precinct

MOOREBANK INTERMODAL PRECINCT

November 2024 – April 2025

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REVISIONS

Revision	Date	Description	Prepared by	Approved by
00	09/06/2025	Final	Tactical Group	Richard Mason

KEY TERMS AND ACRONYMS

Acronym/Term	Meaning
CNBMP	Container Noise Barrier Management Plan
CoC	Conditions of Consent
DPE	Department of Planning and Environment
DPH&I	Department of Planning, Housing and Infrastructure
EPBC Act	Environmental Protection and Biodiversity Conservation Act 1999
ERP	Emergency Response Plan which includes the Bushfire Emergency and Evacuation Plan (BEEP), Bushfire Management Plan (BMP) and Flood Emergency Management Plan (FEMP)
IMEX	Import Export
MLP	Moorebank Logistics Park
OAQMP	Operational Air Quality Management Plan
OCR	Six Monthly Operational Compliance Report
OCCS	Operational Community Communication Strategy
OEMP	Operational Environmental Management Plan
ONVMP	Operational Noise and Vibration Management Plan
OTAMP	Operational Traffic and Access Management Plan
OWRMP	Operational Waste and Resource Management Plan
POCR	Pre-operations Compliance Report
POPD	Program for Operational Phase Delivery
SIOMP	Operational Stormwater Infrastructure and Operation and Maintenance Plan
SSD	State Significant Development
UDLP	Urban Design and Landscape Plan
WTP	Workplace Travel Plan
SSD 6766	Stage 1 of the MPE Concept Approval (MP 10_0193) as approved under SSD 6766. It involves the construction and operation of an IMEX terminal and associated Rail Link.
SSD 7628	Stage 2 of the MPE Concept Approval (MP 10_0193) as approved under SSD 7628. It involves the construction and operation of warehousing and distribution facilities on the MPE site and upgrades to approximately 1.5 kilometres of Moorebank Avenue from

Acronym/Term	Meaning
	approximately 35 metres south of the northern boundary of the MPE site to approximately 185 metres south of the southern MPE site boundary.

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1 EXECUTIVE SUMMARY

In accordance with SSD 7628 Condition of Consent (CoC) C21(c)(iii), a Six-monthly operational compliance report (OCR) must be prepared.

The Department approved the Program for Operational Phase Delivery (POPD) on 21 May 2019 which outlined the staged submission of operational documents under condition A14 of SSD 7628. The Department also considered the combining of strategies, plans or programs to be acceptable, provided that all relevant conditions across both SSD 6766, and SSD 7628 are met.

Regular reviews of compliance against the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC 2011/6229) Conditions of Approval are undertaken but are not the subject of this compliance report.

This OCR has been prepared in accordance with the requirements of the *Compliance Reporting Post Approval Requirements (NSW DP&E, June 2018)* and has been prepared to outline the progress of compliance for all operational requirements against the Project Approvals from November 2024 to April 2025.

2 INTRODUCTION

2.1 Project Overview

Application Number	
Project name:	Moorebank Intermodal Precinct – Operational Area 1 and 2
Proponent	Moorebank Intermodal Precinct
Site Address	MIP East Precinct site, Moorebank Avenue, Moorebank
Project Phase	Six Monthly Operation Compliance Report (OCR)
Project Activity	Operation of an import-export terminal, rail link and warehouse and distribution facilities and associated infrastructure.
Report date	Monday, 30 June 2025

2.2 Project Approvals

Approval for the construction and operation of the MIP East Precinct was obtained progressively as follows:

- The Project obtained (EPBC 2011/6229) approval dated 6 March 2014
- Moorebank Precinct East (MPE) Concept Approval – 10_0193
- MPE Stage 1 – SSD 6766
- MPE Stage 2 – SSD 7628
- MPE Stage 2 – SSD 7628 – Subdivision partial development consent
- MPE Stage 2 – SSD 7628_MOD 1 – Modification 1
- MPE Stage 2 – SSD 7628_MOD 2 – Modification 2
- MPE Stage 2 – SSD 7628_MOD 3 – Modification 3
- MPE Stage 2 – SSD 7628_MOD 4 – Modification 4
- MPE Stage 2 – SSD 7628_MOD 5 – Modification 5
- MPE Stage 2 – SSD 7628_MOD 6 – Modification 6

2.3 Scope and Purpose

In accordance with SSD 7628 Condition C21 (c) (iii), a Six-Monthly Operation Compliance Report (OCR) is required to outline progress of compliance for all operation requirements against the MPE Stage 1 and Stage 2 approval.

There is no specific requirement under SSD 6676 for the submission of an OCR, however this report has been prepared to address the operational requirements for both SSD 6766 and SSD 7628 and has been prepared in accordance with the requirements of the *Compliance Reporting Post Approval Requirements* (NSW DP&E, June 2018).

3 PROJECT DESCRIPTION

3.1 Site Location

The Moorebank Intermodal Precinct (MIP) 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 MIP 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 MIP is divided into an East Precinct and a West Precinct, located east and west of Moorebank Avenue, respectively.

The MIP East Precinct commenced operations in May 2020 and is the subject of this Operation Compliance Report (OCR). The MIP West precinct is also now operational.

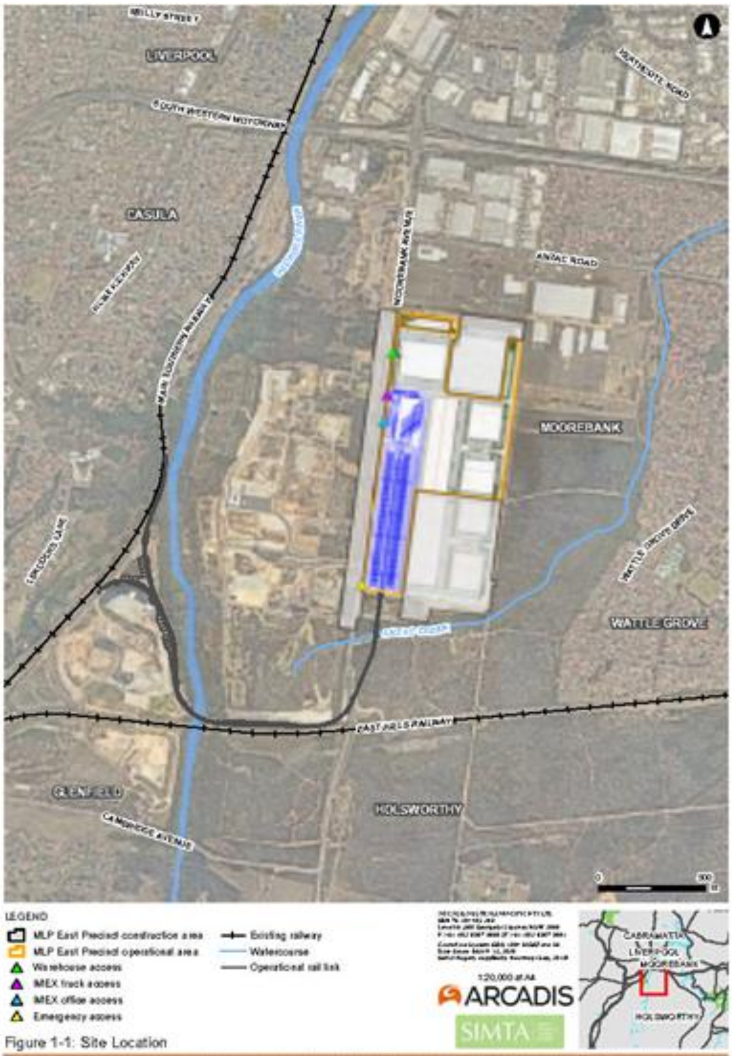

Figure 1 MLP East Precinct Layout – sourced MPE STAGE 2 OEMP Rev 18

3.2 Scope of Works

The main features of the MIP East Precinct include:

- The 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 and Georges River.
- 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 fit out, 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.
- Security and Administration offices and demountable.

3.3 Operational activities undertaken

Documents can be submitted in stages as permitted by CoC A14 and CoC A15. The application of the operational documents will be staged to take progressive affect across the MIP East Precinct site as construction is completed, and operations commences was detailed in the POPD approved by the DPIE on 21 May 2019.

This OCR has been prepared in accordance with the requirements of the Compliance Tracking Program (CTP) to outline progress of compliance for all operation requirements against both SSD 6766 and SSD 7628. This OCR covers the period from November 2024 – April 2025.

The following works have been undertaken:

- Movement and storage of containers in and out of the terminal via rail
- Truck processing, holding, and loading areas.
- Primary and secondary container loading/ unloading areas.
- Transfer of containers between terminal and warehouses vis internal transfer vehicles
- Pickup and delivery of goods to warehouses via truck movements
- Warehouse 1, Warehouse 3, Warehouse 4, Warehouse 5 and Warehouse 7a and 7b are occupied and operational. Warehouse 6A is occupied but not currently operating, whereas Warehouse 6B is currently operational.
- Warehousing and Administrative Activities
- Security, maintenance and monitoring of all infrastructure and equipment related to the above activities.

No major construction related activities occurred in 2025, with only internal fit-out and preparation for operations occurring. These activities were undertaken during standard working hours, unless stated otherwise.

Project Compliance Summary

This OCR outlines the progress of compliance for all operational requirements against Project Approvals. Compliance against the project CoC and the Final Compilation of Mitigation Measures (FCMM) are outlined in SSD 6766 Conditions of Consent and SSD 7628 Conditions of Consent**, Appendix A and B** respectively.

A declaration of compliance is available in **Appendix J**.

3.4 Operational Compliance

In accordance with the CoC and OEMP, environmental monitoring activities are required to be undertaken for the operation phase of the MPE Stage 1 and Stage 2 project. These activities include air quality monitoring, noise monitoring, storm water infrastructure and water quality monitoring, Biodiversity Monitoring, and Biannual trip and origin destination reports. A summary of the monitoring results required for this reporting period is addressed in the following sections. The full reports for each of these monitoring requirements are available in the Appendices Section.

3.4.1 Operations Reporting

3.4.1.1 Operations Compliance Report #8

Eight non-compliances remained open from the previous operations compliance report (OCR #8, November 2023 to April 2024 reporting period). The status of these non-compliances have been identified in table 1.

Table 1: Non-compliances in reporting period Nov 23 – Apr 2024

CoC Ref	Type	Detail	Proposed or Completed Action	Current Status
SSD 6766 - G15	Non-compliance	According to the dates for the Annual Noise Review Reports for Year 2 - 2022 and Year 3 - 2023, reports have not been submitted to the DPHI and the EPA within 60 days of completion of the monitoring (as required by CoC G15(h)).	The Annual Noise Review Report was submitted within 60 days of completion of monitoring for the next reporting period.	Closed
SSD 7628 - B28	Non-compliance	No evidence was sighted to verify that the BTODRs for November 2022 and May 2023 reports were submitted to the Department within one month of their preparation.	DPHI receipts were filed for evidence to ensure the document was submitted within the time frame for the next reporting period.	Closed
SSD 7628 - B85	Non-compliance	No evidence was presented to verify that that the Operational Compliance Measurement Reports from Renzo Tonin for WH5, WH4A, WH4B, WH3B, WH3A and WH1 were submitted to the DPHI within 2 months of occupation or each warehouse.	DPHI receipts were filed for evidence to ensure the document was submitted within the time frame for the next reporting period.	Closed
SSD 7628 - B87	Non-compliance	According to the dates of monitoring specified within the Annual Noise Review, the Reports for Year 2 and Year 3 Operations have not been submitted to the EPA within 60	Email receipts were filed for evidence to ensure the document was submitted within the time	Closed

CoC Ref	Type	Detail	Proposed or Completed Action	Current Status
		days of completion of the monitoring as required by this condition.	frame for the next reporting period.	
SSD 7628 – B114A	Non-compliance	A Final Hazard Analysis for Warehouse 7 with the Department's Hazardous Industry Planning Advisory Paper No. 6, 'Hazard Analysis' has not been prepared as per condition B114A (b).	A Final Hazard Analysis for Warehouse 7 was submitted to the Department for the next reporting period.	Closed
SSD 7628 - B114B	Non-compliance	A document setting out a comprehensive Safety Management System, covering all on-site operations, associated transport activities involving hazardous materials for Warehouse 7, safety related procedures, responsibilities and policies and mechanisms ensuring adherence to the procedures has not been developed for Warehouse 7.	A Safet Management System report for Warehouse 7 was submitted to the Department for the next reporting period.	Closed
SSD 7628 - B114C	Non-compliance	Warehouse 7 started being occupied on the 30/10/2023 and then started their operation from the 26/02/2024. This condition is not triggered yet.	A Hazard Audit for Warehouse 7 was submitted to the Department after operations began in the next reporting period.	Closed
SSD 7628 - B114D	Non-compliance	As the Applicant has not prepared all the Plans and Fire Studies as per the requirements from the conditions B114A and B114B yet, this condition is considered not triggered.	Any further requirements for Warehouse 7 as requested by the Department were followed in the next reporting period(s).	Closed

3.4.1.2 Operations Compliance Report #9

There were no non-compliances from the previous compliance report (OCR #9, May 2024 to November 2024 reporting period).

3.4.1.3 Operations Compliance Report #10 (Current Reporting Period)

There are no non-compliances from the current compliance report (OCR #10, November 2024 to April 2025 reporting period).

3.4.1.4 DPHI Notifications

No warning letters were received from DPHI during the reporting period.

3.4.1.5 July 2024 Independent Environmental Audit

The second independent audit for the SSD 7628 consent was undertaken and finalized during the previous reporting period (rev 2.0, 10 July 2024, WolfPeak) covering the period May 2024 to November 2024. The audit report was received and filed on the 11 July 2024 and was lodged with DPHI on 17 July 2024.

3.4.1.6 Incidents Management

There were 8 operational incidents reported in MPE operations in the reporting period.

Of the 8 recorded, none were significant (resulting in Environmental damage or reportable).

All incidents are managed in accordance with the incidents reporting procedure.

Incidents are summarized in Appendix J.

3.4.1.7 Complaints Management

14 complaints were received relating to MPE operations in this period.

These complaints were managed in accordance with the complaints reporting procedure.

Complaints are summarized in Appendix F.

3.4.1.8 Conditions of Consent

Compliance against the CoC is outlined in Appendix A and B. The status of each compliance requirement during the reporting period is recorded using the descriptors prescribed by the CRPAR (DPHI, 2018). These are provided in table 2.

Table 2: Compliance status descriptors (CRPAR 2018)

Status	Description
Compliant	The proponent has collected sufficient verifiable evidence to demonstrate all elements of the requirement have been complied with.
Non-compliant	The proponent has identified a non-compliance with one or more elements of the requirement.
Not triggered	A requirement has an activation or timing trigger that has not been met at the phase of the development when the compliance assessment is undertaken, therefore an assessment of compliance is not relevant.

3.4.2 Air Quality Monitoring

The Six-Monthly Compliance Operational Air Quality reports completed during this period are available in **Appendix C** of this report. Actioning requirements and recommendations raised from the report are consistently being addressed as a part of daily operations.

Air quality monitoring and compliance results are summarised in the sections below for the last reporting period:

3.4.2.1 Dust deposition

Dust deposition data from seven DDGs located around the site is provided by SERS and have been provided for incorporation into the monitoring program since May 2021.

DPE has set the criteria for dust deposition rates, and these are provided in Table 3.

Table 3: Dust deposition criteria

Averaging Period	Maximum increase in deposited dust* level	Maximum total deposited dust level
Annual	2 g/m^2/month (incremental)	4 g/m^2/month (cumulative)

* Deposited dust is assessed as insoluble solids. This is the mass of the insoluble portion of the deposited matter, as defined under AS 3580.10.1: 2016.

[7] https://www.environment.nsw.gov.au/topics/air/understanding-air-quality-data/standards-and-goals

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3.4.2.2 Dust deposition gauge results

The results of the collection period November 2024 to April 2025 as provided by SERS is shown in Table 4.

Table 4: Dust deposition (insoluble solids g/m²/month) results

Date	Stage 1 DDG 1	Stage 2 DDG 1	Stage 2 DDG 2	Stage 2 DDG 3	Stage 2 DDG 4	Stage 2 DDG 5	Stage 2 DDG 6	MPW1	MPW2	MPW3	Average
November 2024	2.2	1.1	0.8	1.1	0.9	0.8	0.5	3.6	**9.7**	3.7	2.4
December 2024	3.0	1.3	1.1	2.0	1.6	0.7	**5.5**	**4.2**	**13.0**	3.4	3.6
January 2025	N/A*	0.2	1.3	3.2	0.7	0.8	2.0	1.8	1.3	0.9	1.4
February 2025	2.7	0.2	0.3	1.4	0.4	0.5	<0.1	2	**8.7**	1.3	1.8
March# 2025	N/A**	0.1	0.3	0.2	0.3	<0.1	0.2	1.5	**4.2**	1.1	0.9
April 2025	N/A**	1.6	0.9	0.8	0.3	<0.1	1.0	2.9	3.0	1.1	1.3

As shown in Table 4 there were six individual gauge exceedances between November 2024 and April 2025. The majority of these occurred at MPW2, which is located adjacent to an area of the site that is still under construction. These results may have been impacted by construction activities.

3.4.2.3 Continuous monitoring results

Monitoring data for $PM_{2.5}$, PM_{10}, NO_2 and CO for the reporting period have been summarised into tables and graphs and are provided in Appendix A. The following sections summarise the results for this reporting period.

3.4.3 Annual exceedances

Twelve months of air quality monitoring are provided graphically and in table form in Appendix A.

AQM04 only had 58% availability for PM2.5 and PM10 in July 2024 and 85% availability for PM2.5 and PM10 in August 2024, however, the monitor had 100% availability for NO2 and CO during these months and high availability for the remaining 12 months. All other monitors had an average availability of 99% during the reporting period.

See Table 5 for the monitoring station availability (%) over a 12-month period.

Table 5: Monitoring station availability (%)

Monitoring station	Nov 2024	Dec 2024	Jan 2025	Feb 2025	Mar 2025	Apr 2025	Average %	Latest calibration date
	% availability each month							
AQM01	99	100	100	100	97	100	99	March 2024
AQM02	99	100	100	100	97	100	99	March 2024
AQM03	99	100	100	100	97	100	99	March 2024
AQM04	99	100	100	100	97	100	99	March 2024

All monitoring stations saw the exact same availability throughout each month, leading to an average availability for each station of 99% for this reporting period.

Compared to the last reporting period, monitor AQM04 availability has improved with an average of 99% for this reporting period (compared to 88% for the previous reporting period).

3.4.3.1 PM2.5 and PM10 Monitoring

The 12-month rolling annual average for the period May 2024 to April 2025 for all four monitors combined was below the annual average criteria (i.e. 7.0 μg/m3 for PM2.5 and 25.0 μg/m3 for PM10) for each month.

As of April 2025, the 12-month rolling annual average for all four monitors was 4.7 μg/m3 for PM2.5 and 12.3 μg/m3 for PM10.

See Appendix A.1 and Appendix A.2 of **Appendix C** for more details.

3.4.3.2 NO2 Monitoring

The 12-month rolling annual average for all four monitors for the period May 2024 to April 2025 was below the annual average criteria (0.03 ppm) for each month.

As of April 2025, the 12-month rolling annual average for NO2 for all four monitors is 0.007 ppm, well below the annual average criteria of 0.03 ppm.

3.4.3.3 CO Monitoring

CO does not require annual reporting.

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3.4.4 24-hour exceedances

3.4.4.1 PM2.5 Monitoring

A review of the data for the reporting period (November 2024 to April 2025) did not identify any exceedance of the 24-hour average criteria (20 µg/m3) for PM2.5 for the 6-month reporting period.

3.4.4.2 PM10 Monitoring

A review of the data for the reporting period (November 2024 to April 2025) did not identify any exceedance of the 24-hour average criteria (50 µg/m3) for PM10 for the 6-month reporting period.

3.4.4.3 NO2 1-hour exceedances

No exceedance of NO_2 1-hour criteria (0.12 ppm / 120 ppb) were observed during the 6-month reporting period.

3.4.4.4 CO 8-hour exceedances

No 8-hour criteria exceedances for CO occurred during the 6-month reporting period.

3.4.5 Air Quality Complaints

One complaint was made relating to air quality in December 2024. The complaint related to dust and an increase in the complainant's pool cleaning. No other formal complaints were received during the reporting period relating to air quality

3.4.5.1 Recommendations

It is recommended that monitors continue to be calibrated annually as per operational requirements and device specifications. The monitors were last calibrated in March 2024, over a year ago. Calibration should occur as soon as possible prior to the next report.

3.4.6 Noise Monitoring

Noise monitoring measurements have been performed, consistent with the requirements of SSD 6766 and SSD 7628 and the Operational Noise and Vibration Management Plan. During this reporting period that following noise measurements were undertaken:

- **Continuous Noise Monitoring**
  - No exceedances of the planning approval noise limits were measured during the period.
  - Continuous noise monitoring at sensitive receivers is required to be undertaken at sensitive receivers in accordance with the approval conditions for MPE Stage 2 (SSD 7628 CoC B64).
  - The primary purpose of the permanent noise monitoring systems is to measure construction-related noise in accordance with the requirements of SSD 7628 Condition B64. Whilst this condition relates to construction noise, the noise monitoring results can also be utilised for operational noise reviews/assessments and to investigate noise complaints (if required).
  - Details of the continuous noise monitoring and measurement locations (CM1 to CM4) are provided in Section 3.1.1 (Figure 3-1) of the MPE ONVMP (Rev 13, 24/01/2023). The measurement systems comprise four Envirosuite permanent noise monitors. The monitoring locations are:
    - CM1: 10 Talbot Court, Wattle Grove
    - CM2: 24 Glenelg Court, Wattle Grove North
    - CM3: 14 Dunmore Crescent, Casula
    - CM4: 26 Goodenough Street, Glenfield
  - During November 2024 the noise monitoring equipment of these monitoring terminals was upgraded with new sound level meters and shade cloth implemented to minimise any downtime in the case that the unit temperature limits are exceeded.
  - The monitor at location CM2 was offline for a period from 19/08/2024 to 10/09/2024. This was due to the power disconnection at their property. All other monitoring locations were fully operational during the period.
  - This noise monitoring is ongoing.

  - **Complaints**11 complaints were received in relation to operational noise levels in the period. Of these 11 complaints, 3 did not relate to operations, and were either related to construction noise or non-MIP noise. These complaints were managed in accordance with the complaints reporting procedure.

- **Other relevant consent monitoring**
  - Noise monitoring was undertaken during February 2025 for Moorebank Precinct West (MPW) to address SSD 7709 CoC B140A. As the MPW noise requirements are cumulative this monitoring also considered MPE noise emissions.
  - The noise monitoring surveys determined that the noise emissions from MIP operations were less than the SSD 7709 Conditions of Consent (CoC) LAeq15min noise limits at all surrounding receiver locations, and that typically, the maximum noise levels from MIP operations were generally compliant with the LAmax noise, however, a number of periods were identified where the LAmax noise levels were above the LAmax noise limit for residences in Casula, which were on occasions from MPE activities.
  - As such, mitigation and management measure recommendations were included to address this noise and further improve noise performance

- **Angle of Attack Rail Noise Report**

  The commissioned report covers rail movements between **INSERT DATE** 2024 and **INSERT DATE** 2025. A summary of the key statistics is provided below:
  - Number of valid train passby events — 2,269 (day), 1,074 (night), 3,343 (day + night)

  - Number of train passby events where the measure AoA values on one or more axles were above the acceptable level defined in Section 2.7.1 of Asset Standards Authority Standard T HR RS 00400 ST – 40, representing less than 1% of passbys.
  - A summary of the maximum AoA value measured for each train is provided in Figure 6-1of AppendixD show that the maximum AoA value is typically less than 12 mrad, except for 19 train passbys that had maximum AoA value greater than the established alarm level.
  - A detailed review of the Angle of Attack (AoA) exceedances identified three wagons that repeatedly triggered AoA alarms. Wagon CQMY 003013 and CQMY 003058, each exceeded the AoA alarm threshold on four occasions. Wagon CQMY 003099 triggered the AoA alarm on two occasions.
  - It is the same Wagon ID (CQMY 003099) that exceeded the AoA alarm level on ten occasions during 1 May 2024 and 1 November 2024. The owner of Wagon ID (CQMY 003099) was notified of the exceedances and were in the process of determining the required rectification works. Following rectification works undertaken during November 2024 this wagon has not been identified as exceeding the AoA alarm level.
  - As of 04/06/2025, the owner of these two further wagons had been notified of the exceedances and were in the process of determining the required rectification works.
  - Three of the 40 passby events with AoA alarm levels resulted in elevated noise levels at the permanent noise monitoring location [i.e. where the calculated LAeq(9hour) noise levels at 30 m were above 60 dB(A)]. Exceedances of the AoA alarm levels were viewed as one-off instances, occurring irregularly.

- **Warehouse Noise Mechanical Plant** monitoring occurred for relevant operational warehouses (E6A, E6B and E7) during the period. For the 2024-2025 review period, for all monitored warehouses, the warehouse mechanical plant and equipment noise emission levels achieve the overall noise levels presented in Table 5 of CoC B80 during all time periods.

Annual noise monitoring reports will be located in **Appendix D** of this report. Actioning requirements and recommendations raised from the report are consistently being addressed as a part of daily operations.

3.4.7 Water Quality Monitoring

The baseline monitoring forms the basis for the ongoing Biodiversity Monitoring Strategy (BMS) to assess stream health in accordance with CoC B106, to determine any change in stream health or water quality throughout the life of the Project and to ascertain whether these changes can be attributed to the Project works. The BMS outlines monitoring requirements and includes the Stormwater Monitoring Strategy required by CoC B43 and B44.

Examination of the results from the spring 2024 surveys found no evidence of changes in the indicator variables (bed and bank stability, water quality, assemblages of aquatic macroinvertebrates and fish) that could be attributed to the Project works. Thus, in accordance with the Biodiversity Monitoring Strategy, no adaptive management contingency measure was triggered.

Within the current reporting period (spring 2024), no construction discharges occurred. Extensive cover by vegetation within the riparian zone and stream channel contribute stability to the refuge pool and the majority of Anzac Creek.

Concentrations of lead in sediments collected at Site AQ1 (range = 21 to 130 mg/kg) continue to exceed the guideline value (50 mg/kg), including at the time of the baseline (91 mg/kg) survey. Copper, nickel and zinc have occasionally exceeded guideline values, but total petroleum hydrocarbons and poly-fluoroalkyl substances (e.g. PFAS and PFOS), continue to comply. Site AQ1 is situated upstream of potential inputs from the Project, so no additional testing at this site is considered necessary.

Reduced dissolved oxygen levels, elevated nitrogen, aluminium and copper measured at the refuge pool (Site AQ12), including prior to commencement of the Project, have consistently suggested that aquatic habitat and biota within Anzac Creek are influenced by various types of anthropogenic disturbance. Importantly, the data collected to date indicate that there has been no further degradation of water quality since the Project related construction work began.

Over the course of the monitoring programme, the diversity of aquatic macroinvertebrates, Australian River Assessment System (AUSRIVAS) and Stream Invertebrate Grade Number Average Level (SIGNAL2) scores have been relatively low, indicating that the aquatic macroinvertebrate fauna have experienced one or more forms of human impact. Despite this, some pollution tolerant taxa have commonly been identified, including dragonfly, caddis fly and mayfly families. Importantly, comparison of the AUSRIVAS and SIGNAL2 scores between the baseline and construction phase continue to indicate an overall stability in aquatic health.

Altogether, ten species of fish have been collected from within the refuge pool: three native species of gudgeon, two native species of eel, one native galaxiid species, one native cat-fish species and three introduced species (Gambusia, Goldfish and Oriental weatherloach), confirming that the creek does provide some habitat for native species of fish. All of the species caught are common within NSW. No threatened species of fish listed under the NSW Fisheries Management Act, 1994 or the Environment Protection and Biodiversity Conservation Act, 1999 have been recorded.

Water quality monitoring report and infrastructure inspection reports are available in **Appendix E** of this report. Actioning requirements and recommendations raised from the report are consistently being addressed as a part of daily operations.

3.4.8 Storm Water Infrastructure (Next audit is in July 2025)

Stormwater infrastructure managed under the Stormwater Infrastructure Operation and Maintenance Plan were inspected and assessed during the period. No significant actions were required for the operation of Stormwater infrastructure at the site.

The annual independent audit was undertaken in September 2024 by a suitably qualified WSUD professional. The next audit and inspection will be undertaken in July 2025.

3.4.9 Biodiversity Monitoring

Biodiversity monitoring will now be managed internally with no separate reporting required under SSD 6766 and 7628.

Monitoring activities undertaken in the period included:

- Monitoring of weed cover
- Monitoring of threatened species occurrence
- Monitoring of viability of native vegetation adjoining the rail easement
- Monitoring of feral fauna occurrence
- Monitoring of Nest boxes

The biodiversity (Flora and Fauna) monitoring report has been provided to the department for information. Actioning requirements and recommendations raised from the report are consistently being addressed as a part of daily operations.

Results during this reporting period:

Lands adjoining the Rail Link (BA341 Boot Land)

- Assessment of the vegetation in BA341 Lands is restricted to within 10 metres either side of the Rail Link and is sampled during the spring/summer season. Biodiversity works under BA341 are separate to this approval and this reporting does not provide any recommendations that would alter the current approach to the management of these areas.
- Native vegetation adjoining the Rail Link is in good condition and has low levels of weed. There was a high diversity of native plant species within the area, with the native woodland assemblage being fully structured, including trees, shrubs and native groundcover vegetation. No signs of change were observed by ecologists in vegetation on either side of the Rail Link. Data collected over the last three years indicates that the operation of the Rail Link is having a negligible impact on adjoining patches of native vegetation. Exotic species are still being recorded in the offset area; however, they are mostly restricted to already disturbed edges within the former construction footprint of the Rail Link.
- During this monitoring period, encroachment of weeds into non-disturbed, natural areas has been minor. Of the weeds species recorded, only Senecio madagascariensis (Fireweed), has been observed successfully colonising the natural areas. No dense infestations of exotic perennial grass species or other aggressive weed species was observed. The lower nutrient soils of natural areas which have a high composition of sand is likely to be unsuitable to the exotic species growing in the Rail Link and is inhibiting encroachment. At current the occurrence of weeds in the Rail Link is not deemed to be impacting upon the presence or persistence of Acacia bynoeana, Persoonia nutans, Grevillea parviflora subsp. parviflora and Hibbertia puberula subsp. Puberula.
- Threatened species transect identified three threatened plant species within 10 metres of the Rail Link corridor fencing, including Persoonia nutans and Hibbertia puberula subsp. puberula. Individuals of these threatened species were mostly observed to be in good condition. Grevillea parviflora subsp. parviflora was identified in the Rail Link in 2023, however was not identified in 2024.The number of

individuals of Persoonia nutans remained the same (one individual) and Hibbertia puberula subsp. puberula decreased by twelve. The threatened plant species Acacia bynoeana (Bynoe's Wattle) was not recorded during the survey and is likely to have perished in this location. No evidence was observed to indicate that this was due to the operation or ongoing management of Rail Link.

- Similarly, the reduction of the Hibbertia puberula subsp. puberula is not thought to be a result of the operation or ongoing management of Rail Link. This reduction could be considered a natural fluctuation considering there are 65 individuals in relatively high density, specifically on the east side of the rail link. It is possible that in the warmer periods (spring and summer) following the period of high rainfall, prolific growth of native groundcovers and shrubs in the understorey occurred.

Riparian vegetation management (RVMP reporting)

- With the Georges River management site, on the eastern side of the Georges River, being incorporated into the BA341 biobank site, native vegetation and biodiversity values are subject to improvement through a combination of management activities including weed removal, bush regeneration, soil stabilisation and habitat enhancement. In 2022, EcoLogical was engaged by National Internodal (owner of the BA341 biobank site) to commence active management of the biobank site (which includes this management site). EcoLogical has been undertaking targeted weed control works throughout this area.
- The Georges River management site on the western side of the Georges River is not incorporated into the BA341 biobank site and is not subject to the management activities being undertaken by EcoLogical. No evidence of bush regeneration works has been observed in this location since the last monitoring survey in 2024. It is recommended that a bush regeneration contractor should be procured to remove weeds and support native plantings.

Koala management & fencing

- The successful detection of Koalas on both the MPW and MPE sides of the biobank highlights the importance of conservation of these areas. It is anticipated that enhancements to the biobanks through revegetation, weed control, fencing and pest animal control, that the Koala population should continue to grow.
- Cyclone mesh fencing is present along the interface between Wattle Grove offset area and the MPE operational facility restricting the movement of Koalas into unsuitable areas. Inspection of areas where gaps under the fence have previously been identified were not subject to increases gap size and subsequently no management actions are currently recommended.
- Currently, no structures (bridges, culverts, refuge posts) have been installed which facilitate the movement of Koalas from the Wattle Grove offset area to adjoining areas of suitable habitat.
- Koala Monitoring will continue in 2025.

Feral animals and weeds

- The assessment of feral animal presence through remote camera monitoring has remained consistent with previous monitoring periods, with Red Fox, Black Rat and Feral Cats detected on cameras with the addition of Brown Hare, Common Myna and Rusa Deer this monitoring period.
- Brown Hare has previously been recorded throughout the offset sites, with several observations in the Georges River offset site in recent months. Brown Hare can cause significant damage when gnawing the bark of young trees and shrubs and can cause severe damage to revegetation sites.
- There is evidence to suggest that Red Fox populations are problematic within the offset sites. Juveniles being recorded indicates a breeding population is present, and at least 10 distinct captures of Red Foxes with prey indicates that management of the Red Fox population should be undertaken to reduce impacts to local biodiversity.
- Rusa deer have been recorded in the MPW management site. Actions are required to monitor the population of Rusa deer and eliminate their impact on the local ecosystem. Rusa deer can have significant impacts on native vegetation due to overgrazing, trampling, and browsing, which may lead to habitat degradation and biodiversity loss.

- As with previous years, cats were also recorded on remote cameras walking along the access tracks on the boundary of the MPE and MPW operational facility. At least two individual cats, potentially domestic, were captured on remote cameras at both sites.
- The occurrence of Black Rat is not considered to be a significant issue.

Nest Box Monitoring

- 99 nest boxes were utilised by native fauna, 31 in the Bootland and 68 in the Georges River corridor, equating to a utilisation rate of 47% for all nest boxes in the 2024 survey period.
- 13 nest boxes were utilised by invasive species, 2 in the Bootland and 11 in the Georges River corridor, equating to an overall utilisations rate of 6%.

Fauna connectivity

- For MPE, fauna habitat connectivity monitoring identified that several species, both native and invasive, are regularly utilising the Anzac Creek corridor to move between patches of native vegetation within the Wattle Grove offset area. Surrounding the Wattle Grove Offset Area is 6-foot high barbed-wire fencing. This is a barrier to wildlife movement and a hazard to native animals. Large logs and coarse woody debris placed on rock ballast remain as the habitat connectivity measure linking riparian vegetation within the MPW precinct with bushland to the south.
- For MPW, mobile native species recorded within the Georges River offset site which are likely to move along riparian vegetation corridors include Petaurus breviceps (Sugar Glider), Pseudocheirus peregrinus (Common Ringtail Possum), Trichosurus vulpecula (Common Brushtail Possum), Wallabia bicolor (Swamp Wallaby) and Macropus robustus (Common Wallaroo). Remote camera monitoring for the Rail Link area identified three species as using the corridor, including Red Fox, Rusa Deer and Swamp Wallaby. Evidently, only a small subset of the native species known to occur within MPW have been recorded using the corridor. Additionally, a six-foot-high cyclone fence with top-lined barbed wire installed to the south of the Georges River management site is likely a barrier to the movement of some fauna species between the MPW site and bushland to the south.

Annual EPBC Offset Site Monitoring

- Generally, Persoonia nutans within offset sites were observed to be in healthy condition, with approximately 89 percent of all individuals observed to be in healthy condition. No evidence of impacts from mammals (trampling or grazing) was observed. If Persoonia nutans populations across offset sites shows a decline in future surveys, a translocation project could be initiated whereby seeds collected from adult individuals in offset sites P3 and P4 are propagated at an offsite location and re-introduced at a later stage as young plants.
- Small-flower Grevillea has a habitat preference for sandy or light clay soils, usually over thin shales, often with lateritic ironstone gravels and nodules. Populations of Small-flower Grevillea in the Sydney region usually occur on Tertiary sands and alluvium and soils derived from the Mittagong Formation. It is recommended that the population be monitored for another year prior to implementing any management actions to increase the population of Grevillea parviflora subsp. parviflora considering the high degree of fluctuation evident in the past monitoring year.
- Some targeted weed control has occurred along the access and firetails in the Wattle Grove Offset site, which are located near to the threatened species offset sites, including brush cutting and careful spot spraying with herbicide targeting the following aggressive weed species: African Lovegrass, Senecio madagascariensis (Fireweed), Conyza sp. (Fleabane), Cortaderia selloana (Pampass Grass), Paspalum sp. (Paspalum), Setaria sp. (Pigeon Grass) and Andropogon virginicus (Whiskey Grass).

3.4.10 Biannual Trip and Origin Destination Report

The BTODR has been undertaken for the November 2024 to April 2025 reporting period and addresses the relevant requirements of the Project Approvals and other guidelines and standards applicable during operations of MPE. The BTODR is proposed to keep an accurate record of the shipping containers and vehicle arrivals / departures against approved volumes.

The Biannual trip and origin destination report has been completed for this period and will be provided to Secretary for information in accordance with B28 separately.

3.5 Compliance Summary

At the completion of this compliance reporting period, it has been deemed that operations have generally been undertaken in compliance with the CoC and approved OEMP and sub-plans. Periodic review of compliance against the CoC will continue to be undertaken.

APPENDIX A - SSD 6766 CONDITIONS OF CONSENT

COMPLIANCE REQUIREMENT	Condition of Consent	COMPLIANCE REQUIREMENT	DEVELOPMENT PHASE	COMPLIANCE STATUS	MONITORING REQUIREMENT METHODOLOGY (See condition and management plan)	ONGOING ACTIVITIES AND IMPLEMENTATION	EVIDENCE AND COMMENTS (Received to date from tenants and consultants)	DPHI Receipt / Consultant Document Name	OUTSTANDING INFORMATION / ACTIONS (Required from tenants and consultants)	PRIMARY RESPONSIBLE	RESPONSIBLE FOR IMPLEMENTATION	RESPONSIBLE FOR REPORTS	RESPONSIBLE FOR LODGING W/ DEPARTMENT	TYPE	CATEGORY	FREQUENCY	Status
SSD 6766	A1	The Applicant shall carry out the development generally in accordance with the: a. State Significant Development Application SSD 6766; b. SIMTA Intermodal Terminal Facility – Stage 1 – Environmental Impact Statement (Hyder Consulting Pty Ltd, May 2014); c. SIMTA Intermodal Terminal Facility – Stage 1 – Response to Submissions (Hyder Consulting Pty Ltd, September 2015); and d. The conditions of this consent.	All	Compliant	Monitoring Documentation	Development in Accordance with Plans and Documents	Interview with auditees 8-9/05/24 SIMTA Intermodal Terminal Facility – Stage 1 – Environmental Impact Statement, Hyder, May 2015 SIMTA Intermodal Terminal Facility – Stage 1 – Response to Submissions, Hyder, September 2015 Evidence referred to elsewhere in this Audit Table 28/3/2025 - Project records indicate that the project is being operated in general accordance with the EIS and RtS. The proponent has demonstrated that reasonable and feasible measures are being implemented to prevent or minimise material harm to the environment. Whilst some non-compliances were identified, these are assigned as non-compliances against the condition to which they relate and on this basis the Auditor does not consider it appropriate to assign a non-compliance with this condition.	N/A	Outstanding Information Required - Nil	ESR	Several consultants	Several consultants	Tactical	Compliance	Compliance	Within three months of every 12 month anniversary of the commencement of MPE 1 (July 2020)	Open
SSD 6766	A2	In the event of an inconsistency between: a. the conditions of this approval and any document listed from condition A1(a) to A1(c) inclusive, the conditions of this approval shall prevail to the extent of the inconsistency; and b. any document listed from condition A1(a) to A1(c) inclusive, and any other document listed from condition A1(a) to A1(c) inclusive, the most recent document shall prevail to the extent of the inconsistency.	All	Compliant	Monitoring Documentation	Development in Accordance with Plans and Documents	Interview with auditees 8-9/05/24 28/3/2025 - Audit assess compliance with the current conditions of consent and the most current version of the documents listed in Conditions A1. No inconsistencies identified during the audit period.	N/A	Outstanding Information Required - Nil	ESR	Several consultants	Several consultants	Tactical	Monitoring Reporting	Compliance	As triggered	Open
SSD 6766	A3	The Applicant shall comply with any reasonable requirement(s) of the Secretary arising from the Department's assessment of: a. any reports, plans or correspondence that are submitted in accordance with this consent; and b. the implementation of any actions or measures contained within these documents.	All	Compliant	Monitoring Documentation	Development in Accordance with Plans and Documents	Interview with auditees 8-9/05/24 Letter DPHI to ESR (address to Tactical), 7/5/24 (Six monthly Compliance Report No.7 June-Oct 2023, 3/4/24 Letter from DPHI to Tactical, 7/9/2023 re. Revised OMPs approval. 28/3/2025 - Compliance Reports have been provided to the DPHI as required. Sighted evidence for the Compliance Report for June to October 2023, dated 3/4/2024 Report No.7 was submitted to the DPHI on the 5/3/2024 and received comments from the DPHI on the 7/5/2024 indicating that are generally satisfied with the report, and exceedances recorded for the dust depositions are to be manage through the POAQMP. Additionally, evidence of the OEMP Rev.18 and sub-plans submission to the DPHI was sighted including the approval of the Plan which was received on the 7/9/52023. DPHI letters of approval of Operational Management Plans indicate they are generally satisfied with the plans. The evidence indicates that in instances were comments were provided by DPHI the requirements of the Department have been addressed.	N/A	Outstanding Information Required - Nil	ESR	Several consultants	Several consultants	Tactical	Compliance	Compliance	As triggered	Open
SSD 6766	A4	This approval will lapse ten years from the date of this approval unless works the subject of this approval are physically commenced, on or before that lapse date.	All	Compliant	Monitoring Documentation	Approval will lapse ten years from the date of this approval	This consent granted 12/12/16 Site inspection 8/05/24 Interview with auditees 8-9/05/24	N/A	Outstanding Information Required - Nil	ESR	Several consultants	Arcadis	Tactical	Plan	Compliance	10 years	Ongoing
SSD 6766	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: a) a description of activities to be undertaken during operation (including staging and scheduling); b) statutory and other obligations that the Applicant is required to fulfil during operation, including approvals, consultations and agreements required from authorities and other stakeholders under key legislation and polices; c) overall environmental policies, guidelines and principles to be applied to the operation of the project; d) a description of the roles and responsibilities for relevant employees involved in the operation of the project, including relevant training and induction provisions for ensuring that employees are aware of their environmental and compliance obligations under these conditions of approval; e) an environmental risk analysis to identify the key environmental performance issues associated with the operation phase; 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: (i) noise emissions including measures for regular performance monitoring of noise generated by the project and measures to proactively respond to and deal with noise complaints; (ii) a description of the proposed and/or implemented measures to minimise visual impact project components, such as landscaping and design considerations; (iii) procedures for the monitoring and maintenance of the watercourse crossings to achieve stable creek bed and banks; (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. The Plan shall be submitted for the approval of the Secretary no later than one month prior to the commencement of operation, or as otherwise agreed by the Secretary. Operation shall not commence until written approval has been received from the Secretary. The approval of an Operation Environmental Management Plan does not relieve the Applicant of any requirement associated with this project approval. If there is an inconsistency with an approved Operation Environmental Management Plan and the conditions of this approval, the requirements of this approval prevail.	Pre-operation	Compliant	OEMP	OEMP - Uploaded on the project website and ensuring tenants are implementing - https://moorebankintermodalprecinct.com.au/precincts/moorebank-precinct-east/	Operational Environmental Management Plan Moorebank Logistics Park – East Precinct, Rev 18, 13/01/23, SIMTA (the OEMP) Post Approval Submission (DPHI portal) undated re: submission of OEMP Rev 18 Stormwater Infrastructure Operation and Maintenance Plan Moorebank Logistics Park – East Precinct, 23/01/23, SIMTA (the SIOMP), Rev.8 Operational Air Quality Management Plan, SIMTA, 23/01/23 (OAQMP), Rev. 12 Operational Noise and Vibration Management Plan, SIMTA, 27/03/20 (the ONVMP) Rev.12 (no changes) Operational Traffic and Access Management Plan, SIMTA, 23/01/23 (OTAMP), Rev. 14 Operational Waste and Resources Management Plan, SIMTA, 23/01/23 (OTAMP), Rev. 11 Operational Flora and Fauna Management Plan, SIMTA, 13/01/23 (OTAMP), Rev. 09 Letter from DPHI to Tactical, 7/9/2023 re. Revised OMPs Email from NSW Safety, Health and Sustainability Manager Qube Logistics to Tactical, 16/5/24 Reach Stacker Inspection checklist, Kalmar Forklift Operator Pre-Start-up Checklist, Qube, 9/2/23 Vehicle refuelling procedure, Qube 25/5/23 (V1.3) Locomotive Fuelling Procedure PCE-156, Qube 16/7/2019, version 4.0 https://simta.com.au/mpe-2/ 12/02/2025 - Report revision 19 received and filed on 4/02/2025. Lodged onto Major Projects website 12/02/2025.	Document Name: OEMP_Rev_19_Compiled_Nov2024 DPHI Receipt: Post Approval Form_20250212040719	Outstanding Information Required - Nil	ESR	KF/ QUBE	Arcadis	Tactical	Compliance	General Operation	Prior operation	Open
SSD 6766	F5	Prior to the commencement of operation, the Applicant shall prepare a Brake Squeal Report on brake squeal identifying the following: a) The extent of brake squeals across the fleet of rail vehicles that will frequently use the terminals. This should identify the number of occurrences of brake squeal, the typical noise levels associated with brake squeal (including the frequency content), and the operational conditions under which brake squeal occurs (e.g. under light braking, hard braking, low / medium / high speed, effects of temperature and weather, etc.); b) The root cause of brake squeal, including the influence of the design, set-up and maintenance of both brake shoes and brake rigging; c) Possible solutions to mitigate or eliminate brake squeal, including modifications to brake rigging and alternative brake shoe designs and compounds; and d) Any monitoring system proposed to capture brake squeal.	pre-operation	Compliant	Brake Squeal Report	Brake Squeal Report	Brake Squeal Report, Renzo, 02/07/19 27/06/2025 - The Brake Squeal Report was prepared prior to operations and addresses the requirements from this condition. Refer comments related to condition G7. The permanent noise monitoring system is positioned at a location on the rail link where it can capture noise levels associated with curve brake squeal should this occur.	Document Name: PREC-QPMS-EN-PLN-0004_CNBMP_Rev 7_clean	Outstanding Information Required - Nil	ESR	QUBE	Renzo Tonin		Monitoring Reporting	Brake Squeal	Prior to the commencement of operation,	Open
SSD 6766	F5A	The Applicant shall prepare and implement (following approval) a Container Noise Barrier Management Plan (CNBMP). The plan shall be prepared by a suitably experienced and qualified acoustics consultant and shall outline the management practices and procedures that are to be followed during night-time operation of the site and for the stacking of containers to be used as noise barriers. The plan shall include, but not necessarily be limited to: a) the preparation of a specification for the stacking of containers to achieve the required level of noise reduction so as to comply with the project specific noise levels** and the sleep disturbance trigger levels*** for the night-time period* at the nearest affected residential receivers and which is to include such details as the minimum numbers of containers, their locations, stacking heights, orientation and maximum gap between containers. The Plan shall include any restrictions on stacking of containers above two high if this is found necessary. b) the measurement of noise from operation of the site and an assessment of compliance with the project specific noise levels and the sleep disturbance trigger levels at the nearest affected residential receivers at the following times: i. not less than 3 months and not more than 6 months after commencement of operation, noise surveys shall be conducted on three separate nights for a period of not less than 2 hours whilst train wagons are being loaded with containers; ii. thereafter for 6 months on one night per month for a period of not less than 2 hours whilst train wagons are being loaded with containers. Noise measurements shall be conducted in accordance with the EPA's Industrial Noise Policy. c) the details of each noise survey shall be documented in a report with a drawing showing the observed location of containers which are subject to the Plan, the measurement equipment used, its calibration status, environmental conditions, receiver locations, methodology, a detailed description of the activities on site, the results obtained and whether or not compliance has been achieved with the project specific noise levels and the sleep disturbance trigger levels at the nearest affected residential receivers. d) if the report concludes that the project specific noise levels and the sleep disturbance trigger levels for the night-time period at the nearest affected residential receivers are not being complied with, then recommendations shall be made by the acoustic consultant to amend the Plan accordingly and the Applicant shall implement those recommendations as soon as practical provided they are feasible and reasonable. e) the Plan shall include a description of the roles and responsibilities for relevant employees involved in the operation of the CNBMP, including relevant training and induction provisions for ensuring that employees are aware of their environmental and compliance obligations under the Plan. The Plan shall be submitted for the approval of the Secretary no later than one month prior to the commencement of operation. Copies of the detailed reports and the Plan (as amended) shall be provided to the Secretary and made available on the Project Website.	Pre-operation	Compliant	CNBMP	CNBMP	Container Noise Barrier Management Plan, SIMTA, 19/03/20 (The CNBMP) Letter DPHI to Qube, 16/08/19 (approval of F5A, G6(b), G7A, and G7 reports) Email, DPHI to Tactical, 19/11/19 CNBMP 28/03/2023 Rev.7, updated 22/11/2023 Rev.8 Letter from DPHI to Aspect, 13/5/2024 re. Container Noise Barrier Management Plan (Condition F5A) approval Annual Noise Review Reports from Renzo Tonin for: - From Feb 2020 to Mar 2021 (Y1 Ops), 21/6/2021, Issue 2 - From Apr 2021 to Apr 2022 (Y2 Ops), 23/05/2022, Issue 2 - From Apr 2022 to Apr 2023 (Y3 Ops), 6/07/2023, Issue 2 Operational Noise Monitoring Report (50% occupation) for Moorebank Logistics Park (MPE), from Renzo Tonin for Q1 2021, 21/6/2021, Issue 3 26/03/2025 - Revision 8 of the CNBMP (Condition-F5A-MP_-Rev8_Redacted10) filed 13/02/2025 - Revision 14 of ONVMP received and filed on 4/02/2025. Lodged onto Major Projects website 13/02/2025. 17/6/2025 - Final revision (revision 2) of annual noise review filed and lodged	Document Name: PREC-QPMS-EN-PLN-0004_CNBMP_Rev 7_clean	Outstanding Information Required - Nil	ESR	ESR	ESR	Tactical	Compliance	Noise Barrier	3 and 6 months after ops commencement 3 perate nights, then 6 monthly on one night per month for 2 hours.	Open
SSD 6766	F5B	Industrial noise (excluding activities covered by the NSW Rail Infrastructure Noise Guideline) generated by the development is to be measured and evaluated for compliance generally in accordance with the relevant requirements of the NSW Industrial Noise Policy (as may be updated from time to time). Table A. See table in Conditions doc for Noise Criteria. Note: References to sensitive receivers should be read in conjunction with the description of sensitive receivers in the EIS noting that Casula includes Glenfield Farm.	Pre-operation	Compliant	OEMP	Industrial Noise Compliance / ONVMP	Operational Noise and Vibration Management Plan Rev 13, SIMTA, 24/01/23 (ONVMP) Post Approval Submission (DPHI portal) undated re: submission of ONVMP to DPHI Container Noise Barrier Management Plan, SIMTA, 19/03/20 (The CNBMP), 28/03/2023 Rev.07 updated 22/11/2023 Rev.8 Letter from DPHI to Aspect, 13/5/2024 re. Container Noise Barrier Management Plan (Condition F5A) approval Letter DPHI to ESR, 7/9/23 (approval of OMPs) Annual Noise Review Reports from Renzo Tonin for: - From Feb 2020 to Mar 2021 (Y1 Ops), 21/6/2021, Issue 2 - From Apr 2021 to Apr 2022 (Y2 Ops), 23/05/2022, Issue 2 - From Apr 2022 to Apr 2023 (Y3 Ops), 6/07/2023, Issue 2 26/03/2025 - Revision 8 of the CNBMP (Condition-F5A-MP_-Rev8_Redacted10) filed 13/02/2025 - Revision 14 of ONVMP received and filed on 4/02/2025. Lodged onto Major Projects website 13/02/2025. 17/6/2025 - Final revision (revision 2) of annual noise review filed and lodged	Document Name: Condition-F5A-MP_-Rev8_Redacted10 Document Name: ONVMP_V14_compiled_Nov2024 DPHI Receipt: Post Approval Form_20250213001116 Document Name: TM306-24-02F03 MPE Annual Review 2025 (r2) DPHI Receipt: Post Approval Form_20250617052152	Outstanding Information Required - Nil	ESR	ESR	Renzo Tonin	Tactical	Compliance	Rail Noise	Prior to Operation	Open
SSD 6766	F5C	The noise criteria in Table A of condition F5B are to apply under all meteorological conditions except the following: a) wind speeds greater than 3 m/s at 10 metres above ground level; or b) stability category F temperature inversion conditions and wind speeds greater than 2 m/s at 10 m above ground level; or c) stability category G temperature inversion conditions.	Pre-operation	Compliant	Brake Squeal Report	Applying Noise Criteria in F5B / ONVMP	Operational Noise and Vibration Management Plan Rev 13, SIMTA, 24/01/23 (ONVMP) Post Approval Submission (DPHI portal) undated re: submission of ONVMP to DPHI Container Noise Barrier Management Plan, SIMTA, 19/03/20 (The CNBMP), 28/03/2023 Rev.07 updated 22/11/2023 Rev.8 Letter DPHI to ESR, 7/9/23 (approval of OMPs) Annual Noise Review Reports from Renzo Tonin for: - From Feb 2020 to Mar 2021 (Y1 Ops), 21/6/2021, Issue 2 - From Apr 2021 to Apr 2022 (Y2 Ops), 23/05/2022, Issue 2 - From Apr 2022 to Apr 2023 (Y3 Ops), 6/07/2023, Issue 2 Consultation Management System Complaints register up to April 2024 13/02/2025 - Revision 14 of ONVMP received and filed on 4/02/2025. Lodged onto Major Projects website 13/02/2025. 17/6/2025 - Final revision (revision 2) of annual noise review filed and lodged	Document Name: Condition-F5A-MP_-Rev8_Redacted10 Document Name: ONVMP_V14_compiled_Nov2024 DPHI Receipt: Post Approval Form_20250213001116 Document Name: TM306-24-02F03 MPE Annual Review 2025 (r2) DPHI Receipt: Post Approval Form_20250617052152	Outstanding Information Required - Nil	ESR	Renzo Tonin	Renzo Tonin	Not Applicable	Compliance	Noise	Prior to Operation	Ongoing
SSD 6766	F6	The Applicant shall prepare and implement (following approval) an Operational Traffic Management Plan to for the proposed vehicle booking system. The plan shall be prepared in consultation with the Cargo Movement Coordination Centre and include details on container turnaround times and interoperable technology (such as Port Botany RFID tags). The Plan shall be submitted for the approval of the Secretary no later than one month prior to the commencement of operation, or as otherwise agreed by the Secretary.	Pre-operation	Compliant	Operational Traffic Management Plan	OTAMP	Operational Traffic and Access Management Plan Moorebank Logistics Park – East Precinct, Rev 14, SIMTA, 20/01/23 Post Approval Submission (DPHI portal) undated re: submission of OTAMP Rev 14 to DPHI Letter DPHI to ESR, 7/9/23 (approval of OMPs) 25/2/2025 - Revision 15 of the OTAMP (OTAMP_Rev-015_compiled_Nov2024) and Nov 2025 revision of the BTODR (1069r10v02_BTODR Nov 2024) has been received and filed.	Document Name: OTAMP_Rev 015_compiled_Nov2024 DPHI Receipt: Post Approval Form_20250213002021	Outstanding Information Required - Nil	ESR	KF/ QUBE	Arcadis	Tactical	Plan	Traffic and Access	no later than one month prior to the commencement of operation	Open
SSD 6766	F7	The Applicant shall undertake signal decommissioning (where required) in consultation with RMS prior to the commencement of operation. The Applicant shall bear the full cost associated with the decommissioning/removal/disposal of the traffic signals and associated equipment.	Pre-operation	Not Triggered	ONVMP OEMP	Signal Decommissioning	Interview with auditees 8-9/05/24 27/06/2025 - This is not relevant for SSD 6766. Moorebank Avenue Works are being completed under SSD 7628	N/A	Outstanding Information Required - Nil	ESR	ESR	ESR	Not Applicable	Compliance	General Operation	Prior to Operation	Open
SSD 6766	F8	The Applicant shall create an easement within the site at the traffic signals to allow RMS to maintain traffic signal components, if required by the design and condition C24. If no easement is required, access to signals should be maintained for maintenance purposes at all times.	Pre-operation	Not Triggered	ONVMP OEMP	Create an Easement	Interview with auditees 8-9/05/24 27/06/2025 - This is not relevant for SSD 6766. Moorebank Avenue Works are being completed under SSD 7628	N/A	Outstanding Information Required - Nil	ESR	ESR	ESR	Not Applicable	Compliance	General Operation	Prior to Operation	Open
SSD 6766	G4	Signage shall be installed in accordance with Drawing A3001 Issue C (Terminal – Signage Details) dated 14/04/2015, unless otherwise agreed by the Secretary.	Operation	Compliant	Road Pavement Deflection Report	Signage Installation	Urban Design and Landscape Plan Moorebank Precinct East Stage 1, SIMTA, 19/12/18 Design Certification Statement, CPB Contractors, 02/05/19 RALP Fencing, Gate & Signage as Built Plans, 14/10/19 IMEX Road Signage, Linemarking & Furniture, Work as executed Plans, 23/10/20 Drawings: - Intermodal Terminal Facility (Stage 1), Terminal - Signage Details No. A3001, 23/03/2015 Issue C - Wayfinding Signage – Site Location Plan, No. 5697.SL1, 22/08/2018 Issue B - Concept Design – Signage Locations, No. PRECRCG-AR-DWG-ASK-106, 10/10/2018, Issue A 28/3/2025 - On 02/05/19 the Principal Construction Contractor for RALP provided a statement that the signage had been installed as per the approved design. As built drawings were also prepared. Signage was installed as shown in Drawing A3001 Issue C (Terminal - Signage Details) dated 23/3/2015. Sighted, drawings for wayfinding signage and the most recent sign location plan dated 22/08/2018	N/A	Outstanding Information Required - Nil	ESR	ESR	Cunneen Sign	Not Applicable	Design	Traffic and Access	Prior to Operation	Open

COMPLIANCE REQUIREMENT	Condition of Consent	COMPLIANCE REQUIREMENT	DEVELOPMENT PHASE	COMPLIANCE STATUS	MONITORING REQUIREMENT METHODOLOGY (See condition and management plan)	ONGOING ACTIVITIES AND IMPLEMENTATION	EVIDENCE AND COMMENTS (Received to date from tenants and consultants)	DPHI Receipt / Consultant Document Name	OUTSTANDING INFORMATION / ACTIONS (Required from tenants and consultants)	PRIMARY RESPONSIBLE	RESPONSIBLE FOR IMPLEMENTATION	RESPONSIBLE FOR REPORTS	RESPONSIBLE FOR LODGING W/ DEPARTMENT	TYPE	CATEGORY	FREQUENCY	Status
SSD 6766	G5	The quantities of Dangerous Goods present at any time on the site or transported from and to the terminal site shall be kept below the screening threshold quantities listed in the Hazardous and Offensive Development Guidelines Applying SEPP 33, (DP&E 2011). The screening threshold quantities for each Dangerous Goods shall be defined in accordance with Table 1: Screening Methods of Applying SEPP 33.	Operation	Compliant	Dangerous Goods Tracking	- Dangerous Goods - WH7 - update evidences of DG container transportation from Apr 24 to date - Confirm if required to WH 6	No Dangerous Goods have been transported during this reporting period Interview and site inspection with auditees 8-9/05/24 Email from Qube Logistics dated 8/5/24 Terminal Operating System N4 DG Report from Riskcon Engineering, 27/4/22 Rev.1 Preliminary Hazard Analysis from Riskcon Engineering, 11/10/2022, WOEMP for WH7 DG Report May 2021-April 2024 28/3/2025 - Dangerous Good's through the Terminal are tracked via the Terminal Operating System N4. A report was run for the three-year period May 2021-April 2024 and confirmed that no DG container has passed through the IMEX during this period. Email was sighted from Qube Logistics dated 8/5/24. Within the terminal gas used for forklifts. 1 x 10kL bulk diesel tank is on site. this is held within a self-bunded purpose-built container. It is understood that only one tenant store dangerous goods, which is located in WH7; DG reports were sighted from Riskcon Engineering, 27/4/22 Rev.1. No Dangerous Goods have been transported during this reporting period for IMEX, Warehouses 1, 3, 4, 5 & 6.	Refer to condition folder MPES1 G5 Dangerous Good for WH7 dangerous goods documents	Outstanding Information Required - Nil	ESR	Knight Frank	Tenant	Aspect	Compliance	Incident	Prior to Operation	Ongoing
SSD 6766	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 b) Wagons that incorporate available best practice noise technologies such as "one- piece" freight bogies or three-piece freight bogies fitted with cross-bracing or steering arms; and including as a minimum permanently coupled 'multi-pack' steering wagons using Electronically Controlled Pneumatic (ECP) braking with a wire based distributed power system (or better practice technology). Prior to the commencement of operation, 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 technologies.	Operation	Compliant	Best practice noise technologies	Submit a report that justifies the technology proposed and how it meets the objective of best practice noise technologies	Operational Air Quality Management Plan Rev 12, SIMTA, 23/01/23 (OAQMP) Post Approval Submission (DPHI portal) updated: submission of OAQMP to DPHI Letter DPHI to ESR, 7/9/23 (approval of OMPs) Best Practice Wagon Report (Condition G6B), Renzo Tonin, 05/11/19 (Rev.10). Letter DPIE to Qube, 16/08/19 (approval of F5A, G6(b), G7A, and G7 reports) Email DPIE to Qube, 31/10/19 Container Noise Barrier Management Plan, SIMTA, 19/03/20 (The CNBMP), 28/03/2023 Rev.07 updated 22/11/2023 Rev.8 Best Practice Progress review 2022, 28/7/2022 (report no.2), Rev.3 from Arcadis Best Practice Progress review 2023, 26/7/2023 (report no.3), Rev.2 from Arcadis - Best Practice Report DPHI outcome on 28/09/2024. Best Practice Progress review 2024, 28/8/2024 (report no.3), Rev.2 from Arcadis	Document Name: TJ741-04F02 (r10) Best Practice Wagon Report_redacted Document Name: MEP_AQ_Best Practice Progress Review_2024_FINAL DPHI Receipt: Other_26092024_040137	Outstanding Information Required - Nil	ESR	QUBE	ARCADIS	Tactical	Monitoring Reporting	Noise and Vibration	Annually	Open
SSD 6766	G7	The Applicant shall install and maintain a rail noise monitoring system on the rail link at the commencement of operation to continuously monitor the noise from rail operations on the rail link. The system shall capture the noise from each individual train pass by noise generation event, and include information to identify: a) Time and date of freight train passbys; b) Imagery or video to enable identification of the rolling stock during day and night; c) LAeq(15hour) and LAeq(9hour) from rail operations; and d) LAF(max) and SEL of individual train passbys, measured in accordance with ISO3095; or e) Other alternative information as agreed with the Secretary. The results from the noise monitoring system shall be publicly accessible from a website maintained by the Applicant. The noise results from each train shall be available on the website ideally within 24 hours of it passing the monitor. The LAeq(15hour) and LAeq(9hr) results from each day shall be available on the website within 24 hours of the period ending. Prior to the commencement of operation, the applicant shall submit for the approval of the Secretary, justification supporting the appropriateness of the location for rail noise monitoring including details of any alternative options considered and reasons for these being dismissed. The rail noise monitoring system shall not operate until the Secretary has approved the proposed monitoring location. The Applicant shall provide an annual report to the Secretary with the results of monitoring for a period of 5 years, or as otherwise agreed with the Secretary, from the commencement of operation of the IMEX terminal. The Secretary shall consider the need for further reporting following a review of the results for year 5.	Operation	Compliant	Rail noise monitoring system	Install and maintain a rail noise monitoring system on the rail link	17/6/2025 - Final revision (revision 2) of annual noise review filed and lodged	Document Name: TM006-24-02F03 MPE Annual Review 2025 (r2) DPHI Receipt: Post Approval Form_20250617052152	Outstanding Information Required - Nil	ESR	Qube	Renzo Tonin	Tactical	Monitoring Reporting	Air and Noise	Annually	Open
SSD 6766	G7A	The applicant shall install and maintain a wayside angle of attack monitoring system on the rail link at the commencement of operation to continuously monitor the angle of attack to the rail of rolling stock wheels. The system shall capture the angle of attack from a wheel on each axle of every train, and include information to identify: a) Time and date of each axle pass by; and b) The identification number of each item of rolling stock. The results from the angle of attack monitoring system shall be: • accessible by train operators from a website maintained by the Applicant. Angle of attack results from each train shall be available on the website within 24 hours of it passing the monitor, unless unforeseen circumstances have occurred. • included in a six-monthly report to the Secretary. The report should at least identify the number of wagons with wheels that exceed the ASA standard angle of attack and the action taken by operators to improve steering performance. Prior to the commencement of operation, the Applicant shall submit for the approval of the Secretary, justification supporting the appropriateness of the location for angle of attack monitoring, the format of the information to be accessible to operators and the format of the public report. The angle of attack monitoring system shall not operate until the Secretary has approved the proposed monitoring location and reporting arrangements.	Operation	Compliant	Angle of attack monitoring system	Install and maintain a rail noise monitoring system on the rail link	Angle of Attack and Rail Noise Monitoring System – G7, G7A (Revision 06 16/07/19) Letter DPIE to Qube, 16/08/19 (approval of F5A, G6(b), G7A, and G7 reports) Email DPIE to Qube, 31/10/19 https://moorebanknoisemonitorweb.tracleq.net/NoiseMonitor/ current to May 2024 DPIE post approval lodgement record 12/05/21 (Rail Link Noise Monitoring Report submission) Moorebank Intermodal Terminal - Six Monthly Review of AoA - November 2021 (rail movements between 15 May 2021 and 25 October 2021) - May 2022 (rail movements between 26 October 2021 and 28 April 2022) - May 2023 (rail movements between 1 December 2022 and 30 April 2023) Annual Noise Review Reports from Renzo Tonin for: - From Feb 2020 to Mar 2021 (Y1 Ops), 21/6/2021, Issue 2 - From Apr 2021 to Apr 2022 (Y2 Ops), 23/05/2022, Issue 2 - From Apr 2022 to Apr 2023 (Y3 Ops), 6/07/2023, Issue 2 Post Approval Form, 29/5/2022 re. Annual Noise Report (Y2 Ops - 23/5/2022) Container Noise Barrier Management Plan, SIMTA, 19/03/20 (The CNBMP), 28/03/2023 Rev.07 updated 22/11/2023 Rev.8 - The AoA nov 23 was submitted to the department in the Compliance report DCR 8 in 23 July 24. - Angle of Attack nov 24. Dated 22 November 2024. Report to be submitted in the 6 months Compliance Report. 17/6/2025 - Final revision (revision 2) of annual noise review filed and lodged	Document Name: TM006-24-02F03 MPE Annual Review 2025 (r2) DPHI Receipt: Post Approval Form_20250617052152	Outstanding Information Required - Nil	ESR	QUBE	Renzo	Tactical	Monitoring Reporting	Noise and Vibration	six-monthly	Open
SSD 6766	G7B	The Applicant shall: (a) not less than three months and not more than twelve months from commencement of operation, engage an appropriately qualified and experienced acoustic engineer to undertake a night-time noise survey at Glenfield Farm (or an equivalent location if access is denied). (b) the noise survey shall be conducted in accordance with the EPA's Rail Infrastructure Noise Guideline 2013 to determine: (i) the contribution of any new rail traffic travelling to and from the development; and, (ii) the increase in the total rail traffic noise level caused by any new rail traffic to and from the development. (c) the noise survey shall be conducted for not less than 12 contiguous days in the winter months (July, August or September). (d) if as a result of the noise survey there is a sustained increase in the total rail traffic noise level due to the noise level from rail traffic travelling to and from the development of more than 2dB(A) for more than 30% of nights surveyed, the Applicant shall within twelve months, construct a noise barrier along the relevant sections of rail link in accordance with the specifications provided by an appropriately qualified and experienced acoustic engineer so as to limit the increase in the total rail traffic noise level at Glenfield Farm caused by any new rail traffic to and from the development to not exceed 2dB(A). (e) the report of the noise survey including the results and recommendations shall be provided to the Secretary.	Operation	Compliant	Best Practice Review (BPR)	Rail Link Noise Monitoring and Mitigation	The Locomotive Best Practice Review was developed in consultation with EPA and TfNSW and a final document has been issued, with confirmation from both parties that consultation comments have been closed out in the final report. This was approved by DP&E on 17/09/2017 The Moorebank Intermodal Terminal Project Best Practice Wagon Report (Condition G6B) was published on 16 April 2019 by Renzo Tonin and is currently in consultation with TfNSW Report submitted in 12 May 2021 Operational Noise and Vibration Management Plan Rev 13, SIMTA, 24/01/23 (ONVMP) Post Approval Submission (DPHI portal) updated re. submission of ONVMP to DPHI Rail operations noise monitoring report from Renzo Tonin for rail movements during - Year 1 - between 1 November 2019 and 8 April 2021 - Year 2 - between 9 April 2021 and 9 May 2022 - Year 3 - between 10 May 2022 and 9 May 2023 DPIE post approval lodgement record 12/05/2021 (Rail Link Noise Monitoring Report submission - Y1) Annual Noise Review Reports from Renzo Tonin for: - From Feb 2020 to Mar 2021 (Y1 Ops), 21/6/2021, Issue 2 - From Apr 2021 to Apr 2022 (Y2 Ops), 23/05/2022, Issue 2 - From Apr 2022 to Apr 2023 (Y3 Ops), 6/07/2023, Issue 2 13/02/2025 - Revision 14 of ONVMP received and filed on 4/02/2025. Lodged onto Major Projects website 13/02/2025. 17/6/2025 - Final revision (revision 2) of annual noise review filed and lodged	Document Name: ONVMP_V14_compiled_Nov2024 DPHI Receipt: Post Approval Form_20250213001116	Outstanding Information Required - Nil	ESR	QUBE	Renzo Tonin		Monitoring Reporting	Rail Link Noise	3-12 months of commencement of operations	Open
SSD 6766	G8	The following measures must be implemented during operation: a) The use of top of rail friction modifiers and automatic rail lubrication equipment in accordance with ASA Standard T HR TR 00111 ST Rail Lubrication, where required; and b) Measures to ensure the rail cross sectional profile is maintained in accordance with ETN–01-02 Rail Grinding Manual for Plain Track to ensure the correct wheel / rail contact position and hence to encourage proper rolling stock steering.	Operation	Compliant	Best Practice Review (BPR)	Use of Automatic Rail Lubrication Equipment / Maintain Rail Cross Sectional Profile	Interview with auditees 8-9/05/24 K48 Monthly Track Patrol, Laing O'Rourke Site inspection 8/05/24 Email Qube logistics 9/5/2024 confirmation on inspection of lubricators Daily Site Inspection Report (DSR), Taylor Rail, 10/8/2023 for refilling greasespots Rail grinding April 2023 Defects report April and May 2023, JMDR Guidelines for Tracks Lubrication (ARTC), March 2006 Rev.0 Issue A Inspection Certification, Taylor Rail for: - May 2023 (6/4/23) - June 2023 (15/5/23) - February 2024 (22/1/24) - March 2024 (22/2/24) - April 2024 (18/3/24) - May 2024 (30/4/24)	Refer to condition folder MPES1 G8 Best Practice Review for documents	Outstanding Information Required - Nil	ESR	QUBE	Arcadis		Monitoring Reporting	Noise and Vibration	3-12 months of commencement of operations	Open
SSD 6766	G10	Containers must be transferred between the site and Port Botany predominantly by rail, unless where unforeseen circumstances have occurred (e.g. an incident, breakdown, derailment or emergency maintenance on the rail line). The Secretary may at any time request the Applicant to demonstrate that the transport of containers between the site and Port Botany container terminals is by rail. This is to be demonstrated upon request by the Secretary for the prior 12 month period.	Operation	Compliant	BTODR - Trip Origin Destination	BTODR	Containers are to be transferred by rail unless there is track maintenance or unforeseen circumstances See report 1065r08v1_BTODR Nov 2023 Interview with auditees 8-9/05/24 Biannual Trip Origin Destination Report (MPE1 and MPE2), Ason Group for: - Nov 2020, 15/02/21 - May 2021, 08/06/2021 - Nov 2021, 16/12/2021 - May 2022, 11/10/2022 - Nov 2022, 19/01/2023 - May 2023, 09/08/2023 - Nov 2023, 26/02/2024 IMEX KPI FY 2024 Letter from Ason group to ESR 7/2/23 re. further changes to the BTODR survey data collection methodology for MPE Turning Movement Survey from Trains Traffic Survey, 18/3/24 25/06/2025 - May 2025 version of the BTODR (1065r11_MPE BTODR May 2025) has been received and filed on the Major Projects website	Document Name: 1065r11_MPE BTODR May 2025 DPHI Receipt: Post Approval Form_20250625050912	Outstanding Information Required - Nil	ESR	QUBE/ KF	Ason	Tactical	Monitoring Reporting	Traffic and Access	6 months	Open
SSD 6766	G11	The Applicant shall prepare a six-monthly report to the Secretary with the results of container and vehicle monitoring for a period of 3 years, or as otherwise agreed with the Secretary, from the commencement of operation of the IMEX terminal. The Secretary shall consider the need for further reporting following a review of the results for year 3. The report shall include: a) The number of twenty foot equivalent units dispatched and received during the period; b) A record of heavy vehicle entry by date and approximate time; and c) The number of light vehicles turning right into the terminal site from Moorebank Avenue and turning left from the terminal site onto Moorebank Avenue for a representative day.	Operation	Compliant	BTODR - container and vehicle monitoring	BTODR	Biannual Trip Origin Destination Report (MPE1 and MPE2), Ason Group for: - Nov 2020, 15/02/21 - May 2021, 08/06/2021 - Nov 2021, 16/12/2021 - May 2022, 11/10/2022 - Nov 2022, 19/01/2023 - May 2023, 09/08/2023 - Nov 2023, 26/02/2024 DPHI post approval portal lodgement 24/02/21 for Nov 2020 report DPHI post approval portal lodgement for the BTODR for Nov 2023, 29/2/2024 DPHI post approval portal lodgement for the BTODR for May 2023, 9/8/2023 25/06/2025 - May 2025 version of the BTODR (1065r11_MPE BTODR May 2025) has been received and filed on the Major Projects website	Document Name: 1065r11_MPE BTODR May 2025 DPHI Receipt: Post Approval Form_20250625050912	Outstanding Information Required - Nil	ESR	QUBE/ KF	Ason	Tactical	Monitoring Reporting	Trip Origin Destination	6 months	Open
SSD 6766	G12	All containers 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.	Operation	Compliant	OAQMP	Container handling equipment purchased after 2019 must meet US EPA	Operational Air Quality Management Plan, SIMTA, 23/01/23 (OAQMP), Rev. 12 Interview with auditees 8-9/05/24 Kalmar FastCharge Straddle Carrier Email Qube Project Manager 9/5/24	Refer to condition folder MPES2 B55, B59 and B60 OAQMP Requirements for documents	Outstanding Information Required - Nil	ESR	QUBE	Arcadis		Monitoring Reporting	Air Quality	Operations	Open

COMPLIANCE REQUIREMENT	Condition of Consent	COMPLIANCE REQUIREMENT	DEVELOPMENT PHASE	COMPLIANCE STATUS	MONITORING REQUIREMENT METHODOLOGY (See condition and management plan)	ONGOING ACTIVITIES AND IMPLEMENTATION	EVIDENCE AND COMMENTS (Received to date from tenants and consultants)	DPHI Receipt / Consultant Document Name	OUTSTANDING INFORMATION / ACTIONS (Required from tenants and consultants)	PRIMARY RESPONSIBLE	RESPONSIBLE FOR IMPLEMENTATION	RESPONSIBLE FOR REPORTS	RESPONSIBLE FOR LODGING W/ DEPARTMENT	TYPE	CATEGORY	FREQUENCY	Status
SSD 6766	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.	Operation	Compliant	OAQMP	Air Pollution Monitoring	See report MP PE Internal Monthly Air Quality Report December 2023 FINAL and MP PE Internal Monthly Air Quality Report January 2024 FINAL. Operational Air Quality Management Plan Rev 12, SIMTA, 23/01/23 (OAQMP) Interview with auditees 8-9/05/24 Monthly Air Quality Monitoring Reports from Arcadis for 2021, 2022 and 2023 Monthly Air Quality Monitoring report - March 2024, 14/5/24, Arcadis Dust Monitoring Summary Reports from SERS for 2021, 2022 and 2023. MPE Operational Air Quality Six Monthly Compliance Report from Arcadis for: - Nov 2020 to Apr 2021, No.2, 4/6/2021 - May to Oct 2021, No.3, 16/12/2021 - Nov 2021 to Apr 2022, No.4, 6/6/2022 - May to Oct 2022, No.5, 11/1/2023 - Nov 2022 to Apr 2023, No.6, 11/7/2023 - May to Oct 2023, No.7, 13/12/2023 Remote Console Operation Manual from Kalmar, 9/4/2021, Rev.D. Sighted Calibration Certificates from Airpol for COV0100008267, COV0100008268 on the 27/01/21 and CNB0100008403, CNB0100008404 and CNB0100008405 on the 25/02/21.	Refer to condition folder MPES2 B55, B59 and B60 OAQMP Requirements for documents	Outstanding Information Required - Nil	ESR	QUBE	Arcadis		Monitoring Reporting	Air Quality	monthly	Open
SSD 6766	G14	Heavy road freight vehicles are not permitted to use Moorebank Avenue south of the East Hills Railway corridor. A main gate monitoring system (e.g. CCTV) shall be installed to identify heavy vehicles turning left from the terminal site onto Moorebank Avenue, or turning right from Moorebank Avenue to the terminal site. The Secretary may at any time request the Applicant to provide a heavy vehicle monitoring report for the prior 12 month period.	Operation	Compliant	Heavy road freight vehicles monitoring report	A main gate monitoring system (eg CCTV) shall be installed/ Provide a heavy vehicle monitoring report for the prior 12 month period.	No heavy road freight vehicle from the project has been identified usng the East Hills Railway Corridor Biannual Trip Origin Destination Report (MPE1 and MPE2), Ason Group for: - Nov 2020, 15/02/21 - May 2021, 08/06/2021 - Nov 2021, 16/12/2021 - May 2022, 11/10/2022 - Nov 2022, 19/01/2023 - May 2023, 09/08/2023 - Nov 2023, 26/02/2024 Interview with auditees 8-9/05/24 Complaints Register current to 31 May 2024 Operational Traffic and Access Management Plan (OTAMP), Rev.12 23/01/2023 25/06/2025 - May 2025 version of the BTODR (1065r11_MPE BTODR May 2025) has been received and filed on the Major Projects website. Also refer to email from Piran Trethewey from 28/03/2025 for further clarification.	Document Name: 1065r11_MPE BTODR May 2025 DPHI Receipt: Post Approval Form_20250625050912	Outstanding Information Required - Nil	ESR	QUBE/ KF	AsonGroup		Monitoring Reporting	Traffic and Access	At the request of the Secretary for a period of 12 months prior to request.	Open
SSD 6766	G15	Within 12 months of the commencement of operation of the project, or as otherwise agreed by the Secretary, the Applicant shall undertake operational noise monitoring to compare actual noise performance of the project against noise performance predicted in the review of noise mitigation measures predicted in documents specified under condition A1 of this approval, and prepare an Operational Noise Report to document this monitoring. The Report shall include, but not necessarily be limited to: a) noise monitoring to assess compliance with the operational noise levels predicted in documents specified under condition A1 of this approval; b) a review of the operational noise levels in terms of criteria and noise goals established in the NSW Road Noise Policy (EPA, 2011); c) sleep disturbance impacts compared to those determined in Condition E25; d) methodology, location and frequency of noise monitoring undertaken, including monitoring sites at which project noise levels are ascertained, with specific reference to locations indicative of impacts on sensitive receivers; e) details of any complaints and enquiries received in relation to operational noise generated by the project between the date of commencement of operation and the date the report was prepared; f) any required recalibrations of the noise model taking into consideration factors such as actual traffic numbers and proportions; g) an assessment of the performance and effectiveness of applied noise mitigation measures together with a review and if necessary, reassessment of all feasible and reasonable mitigation measures; and h) identification of additional feasible and reasonable measures to those predicted in the documents specified under condition A1 of this approval, that would be implemented with the objective of meeting the criteria outlined in the NSW Road Noise Policy (EPA, 2011), when these measures would be implemented and how their effectiveness would be measured and reported to the Secretary and the EPA. The Applicant shall provide the Secretary and the EPA with a copy of the Operational Noise Report within 60 days of completing the operational noise monitoring referred to in (a) above or as otherwise agreed by the Secretary.	Pre-operation	Compliant	Operational noise monitoring	SIMTA	Operational Noise and Vibration Management Plan, SIMTA, 27/03/20 (the ONVMP) Rev.12 (no changes) Operational Noise Monitoring Reports from Renzo Tonin for Q1 2021, 8/6/2021 Letter from DPHI to Qube, 14/09/2021 re. acceptance of Operational Noise Report Annual Noise Review Reports (ANRR) from Renzo Tonin for: - From Feb 2020 to Mar 2021 (Y1 Ops), 21/6/2021, Issue 2 - From Apr 2021 to Apr 2022 (Y2 Ops), 23/05/2022, Issue 2 - From Apr 2022 to Apr 2023 (Y3 Ops), 6/07/2023, Issue 2 Submission of Y1 ANRR to DPHI, 23/6/2021 (via planning portal) Letter from DPHI to Qube 15/09/2021 re. Annual Noise Report for 2021 - late submission. Email Tactical to EPA, 24/6/2021 re. submission of Annual Noise Review for April 2021 Post Approval Form re. submission to DPHI of ANRR for Year 2 - 2022 report, 27/02/2023 13/02/2025 - Revision 14 of ONVMP received and filed on 4/02/2025. Lodged onto Major Projects website 13/02/2025. 17/6/2025 - Final revision (revision 2) of annual noise review filed and lodged	Document Name: ONVMP_V14_compiled_Nov2024 DPHI Receipt: Post Approval Form_20250213001116 Document Name: TM306-24-02F03 MPE Annual Review 2025 (r2) DPHI Receipt: Post Approval Form_20250617052152	Outstanding Information Required - Nil	ESR	QUBE/ KF	Renzo Tonin	Tactical	Monitoring Reporting	Noise and Vibration	Yearly	Ongoing
SSD 6766	G16	Within 12 months of the commencement of operation, and thereafter at any other stage bi-annually if required by the Secretary, the Applicant shall commission and pay the full cost of an Independent Environmental Audit of the SSD. This audit shall: be conducted by a suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary; include consultation with the relevant agencies and local Councils; assess the environmental performance of the SSD and assess whether it is complying with the requirements in this approval, and any other relevant approvals (including any assessment, plan or program required under these approvals); review the accuracy of predicted environmental outcomes discussed in the documents listed in condition A1 review the adequacy of any approved strategy, plan or program required under the abovementioned approvals; and recommend measures or actions to improve the environmental performance of the SSD, and/or any strategy, plan or program required under these approvals. Within 60 days of commissioning this audit, or as otherwise agreed by the Secretary, the Applicant shall submit a copy of the audit report to the Secretary and relevant public authorities, together with its response to any recommendations contained in the audit report. The audit report and response to any recommendations shall be published on the Project website.	Operation	Not Triggered	External audit	Commission and pay the full cost of an Independent Environmental Audit of the SSD.	Undertaken on 10 May 2021. Report submitted 28/06/21 Moorebank Precinct East Operations Independent Audit Program, WolfPeak, 24/02/20 Email, Tactical to WolfPeak, 12/10/2023 (commissioning of audit) Letter DPHI to Tactical, 22/4/2024 (approval of audit team) Email DPHI to Tactical 22/4/2024 re. endorsement of auditors Interview with auditees 8-9/05/24 Consultation records (attached to this audit report) 27/06/2025 - An independent environmental audit will commence if required by the Secretary.	N/A	Outstanding Information Required - Nil	ESR	Tactical	Wolf Peak	Tactical	Compliance	Audit	Within 12 months of operation and bi-annually at the disrection of the Secretary	Ongoing

Moorebank Intermodal Precinct

APPENDIX B - SSD 7628 CONDITIONS OF CONSENT

Condition of Consent	COMPLIANCE REQUIREMENT	DEVELOPMENT PHASE	COMPLIANCE STATUS	MONITORING REQUIREMENT METHODOLOGY (See condition and management plan)	ONGOING ACTIVITIES AND IMPLEMENTATION	EVIDENCE AND COMMENTS [Received to date from tenants and consultants]	DPHI Receipt / Consultant Document Name	OUTSTANDING INFORMATION / ACTIONS (Required from tenants and consultants)	PRIMARY RESPONSIBLE	RESPONSIBLE FOR IMPLEMENTATION	RESPONSIBLE FOR REPORTS	RESPONSIBLE FOR LODGING W/ DEPARTMENT	TYPE	CATEGORY	FREQUENCY	Status
A1	In addition to meeting the specific performance measures and criteria established under this consent all reasonable measures must be implemented to prevent, and if prevention is not reasonable, minimise, any harm to the environment that may result from the construction and operation of the development, and any rehabilitation required under this consent.	All	Compliant	General - Inspection and Audit	Section 5 of this OEMP identifies the management measures to be implemented to prevent and minimise environmental harm. Aspect-specific management measures are also identified in each sub-plan required under this OEMP. Section 6 sets out the processes for monitoring and reviewing the effectiveness of these management measures. Opportunities to further minimise environmental harm will be identified through the ongoing evaluation of environmental management performance and effectiveness of this plan.	Operational Environmental Management Plan Moorebank Logistics Park – East Precinct Rev.18, 13/01/23, SIMTA (the OEMP). Warehouse Operational Environmental Management Plans (various) (WOEMP) as identified in Condition C6 Evidence referred to elsewhere in this Audit Table and the Audit Table for SSD 6766 Site inspection 8/05/24 12/02/2025 - Report revision 19 received and filed on 4/02/2025. Lodged onto Major Projects website 12/02/2025.	DPHI Receipt: Post Approval Form_20250212040719 Document Name: OEMP_Rev_19_Compiled_Nov2024	Outstanding Information Required - Nil	ESR	ESR	Wolfpeak	Tactical	Compliance	Compliance	3 years	Open
A2	The development may only be carried out: (a) in compliance with the conditions of this consent; (b) in accordance with all written directions of the Secretary in relation to this consent; (c) in accordance with the EIS, Submissions Report, Consolidated assessment clarification responses, and updated Biodiversity Assessment Report; (d) in accordance with the amended Development Layout Plans and Design Plans, amended WSUD plans and amended architectural plans to be submitted for the Secretary's approval as part of this consent; and (e) in accordance with the management and mitigation measures at APPENDIX B of this consent.	All	Compliant	General - Inspection and Audit	This OEMP and associated sub-plans have been developed to comply with the Conditions of Consent (CoCs), written directions of the Secretary, amended development layout and management and mitigation measures.	Interview with auditees 9/5/2024 Evidence referred to elsewhere in this Audit Table. MPE Stage 2 Warehousing, State Significant Development (SSD) 7628, granted 31/1/2018 MPE - Stage 2 Proposal Environmental Impact Statement, Arcadis, December 2016 (the EIS) MPE - Stage 2 Proposal Response to Submissions – SSD 16_7628, Arcadis, July 2017, and associated materials (the RtS) Modification 1, granted 14/3/2022 Modification 2, granted 31/01/2020 Modification 3, granted 18/12/2020 Modification 4, granted 19/01/2021 Modification 5, granted 4/9/2023 Modification 6, granted 22/2/2024 - Dangerous Goods Submission of MOD-6 (Aspect) Interim Occupation Certificate No. 19/124520-5 (whole of Warehouse 1), Mckenzie Group, 21/06/19 Final Occupation Certificate checklist for Warehouse 1 Target at 400 Moorebank Ave, Moorebank, Mckenzie Group, 06/06/19 Interim Occupation Certificate No. 20/125116-5 (Warehouse 3 and offices), Mckenzie Group, 20/03/2020 Interim Occupation Certificate No. 20/125115-4 (Warehouse 4A and 4B including ancillary offices, landscaping and on-grade car parking), Mckenzie Group, 22/05/2020 Interim Occupation Certificate No. J/78230/04 (Warehouse 5), Mckenzie Group, 04/12/2020 Occupation Certificate No. 211790/12 (Warehouse 6, excluding 1st floor), Mckenzie Group, 31/01/2018	DPHI Receipt: Post Approval Form_20250212040719 Document Name: OEMP_Rev_19_Compiled_Nov2024	Outstanding Information Required - Nil	ESR	ESR			Monitoring Reporting	Other	During construction	Closed
A3	The Secretary may make written directions to the Applicant: (a) as a result of the Department's assessment of any strategy, plan, program, review, audit, notification, report or correspondence submitted under or in relation to this consent; (b) as a result of the Department's assessment of any review, report or audit undertaken or commissioned by the Department regarding compliance with this consent or in relation to an incident (whether notified to the Department or not); and (c) in relation to the implementation of any actions or measures contained in any of the documents listed in condition A2.	All	Compliant	General - Inspection and Audit	Note only.	Letter from DPHI to Tactical, 7/9/2023 re. Revised OMPs Letter DPIE to Qube, 22/03/21 (approval of Warehouse 3B WOEMP Letter DPIE to Qube, 21/10/20 (approval of Warehouse 4B WOEMP) Letter DPIE to Qube, 12/01/21 (approval of Warehouse 5 WOEMP) Letter DPIE to Qube, 21/05/21 (approval of Warehouse 4A WOEMP) Letter DPIE to Qube, 03/06/20 (approval of Warehouse 3A WOEMP) Letter DPHI to Tactical, 26/09/2023 (approval of Warehouse 6 WOEMP Rev.2) Post Approval Form re. WH6 WOEMP, 7/8/2023 Letter DPHI to Tactical, 28/06/23 (approval of Warehouse 7 WOEMP Rev.0) Post Approval Form re. WH7 WOEMP, 18/7/2023 12/02/2025 - Report revision 19 received and filed on 4/02/2025. Lodged onto Major Projects website 12/02/2025.	DPHI Receipt: Post Approval Form_20250212040719 Document Name: OEMP_Rev_19_Compiled_Nov2024	Outstanding Information Required - Nil	ESR	ESR			Monitoring Reporting	Other	During construction	Open
A4	The conditions of this consent and directions of the Secretary prevail to the extent of any inconsistency, ambiguity or conflict between them and a document listed in condition A2(c) or A2(e). In the event of an inconsistency, ambiguity or conflict between any of the documents listed in condition A2(c) and A2(e), the most recent document prevails to the extent of the inconsistency, ambiguity or conflict. For the purpose of this condition, there will be an inconsistency between documents if it is not possible to comply with both documents, or in the case of a condition of consent or direction of the Secretary and a document, if it is not possible to comply with both the condition or direction and the document.	All	Compliant	General - Inspection and Audit	Note only.	Interview with auditees 8-9/5/2024 12/02/2025 - Report revision 19 received and filed on 4/02/2025. Lodged onto Major Projects website 12/02/2025.	DPHI Receipt: Post Approval Form_20250212040719 Document Name: OEMP_Rev_19_Compiled_Nov2024	Outstanding Information Required - Nil	ESR	ESR			Monitoring Reporting	Other	During construction	Open
A8	The container freight road volume must not exceed 250,000 TEUs p.a., subject to the exception identified in condition A9, which may only be considered under condition A9 after the facility has been in operation.	Operation	Compliant	Item 1 – Surveys 1.01 Coordinate with the Survey to obtain Classified Intersection Counts for the following intersections. - I1: Moorebank Avenue/ M5 South Western Motorway interchange (full interchange survey to include M5 South Western Motorway through lanes) - I2: Moorebank Avenue/ Defence Joint Logistics Unit (DJLU) access - I4: Moorebank Avenue/ Main MPE & IMT access - I7: Moorebank Avenue/ Newbridge Road - I8: M5 South Western Motorway/ Hume Highway - I9: Moorebank Avenue / Anzac Road 1.02 In addition to Item 1.01, coordinate with the Survey company to obtain Origin and Destination Surveys for the following intersections. - OD1: Moorebank Avenue, about 350 metres north of the M5 South Western Motorway - OD2: On westbound off-ramp of M5 interchange - OD3: On westbound on-ramp of M5 interchange - OD4: On westbound on-ramp of M5 interchange - OD5: On westbound off-ramp of M5 interchange - OD6: Moorebank Avenue, about 300 metres south of the M5 South Western Motorway - OD7: Anzac Road - OD9: IMT Main Access - OD10: Cambridge Avenue 1.03 Assist Survey company (if needed) to ensure the safe and efficient movement within the Site by attending Site during installation and removal of cameras	An Operational Traffic and Access Management Plan has been prepared to address the requirements of this condition.	Biannual Trip Origin Destination Report (MPE1 and MPE2), Ason Group for: - Nov 2020, 15/02/21 - May 2021, 08/06/2021 - Nov 2021, 16/12/2021 - May 2022, 11/10/2022 - Nov 2022, 19/01/2023 - May 2023, 09/08/2023 - Nov 2023, 26/02/2024 - Nov 2024, 25/02/2025 25/2/2025 - Revision 15 of the OTAMP (OTAMP_Rev 015_compiled_Nov2024) and Nov 2025 revision of the BTODR (1065r10v02_BTODR Nov 2024) has been received and filed. 25/06/2025 - May 2025 version of the BTODR (1065r11_MPE BTODR May 2025) has been received and filed on the Major Projects website	Document Name: 1065r11_MPE BTODR May 2025 DPHI Receipt: Post Approval Form_20250625050912	Outstanding Information Required - Nil	ESR	ESR	Ason	Tactical	Monitoring and reporting	Traffic and Access	Six months	Open
A9	The movement of container freight by road may exceed the 250,000 TEU limit p.a. by up to a further 250,000 TEU p.a., if the Secretary is satisfied that traffic monitoring and modelling of the operation of the facility demonstrate that traffic movements resulting from the proposed increase in TEU will achieve the objective of not exceeding the capacity of the transport network.	Operation	Compliant	Item 1 – Surveys 1.01 Coordinate with the Survey to obtain Classified Intersection Counts for the following intersections. - I1: Moorebank Avenue/ M5 South Western Motorway interchange (full interchange survey to include M5 South Western Motorway through lanes) - I2: Moorebank Avenue/ Defence Joint Logistics Unit (DJLU) access - I4: Moorebank Avenue/ Main MPE & IMT access - I7: Moorebank Avenue/ Newbridge Road - I8: M5 South Western Motorway/ Hume Highway - I9: Moorebank Avenue / Anzac Road 1.02 In addition to Item 1.01, coordinate with the Survey company to obtain Origin and Destination Surveys for the following intersections. - OD1: Moorebank Avenue, about 350 metres north of the M5 South Western Motorway - OD2: On westbound off-ramp of M5 interchange - OD3: On westbound on-ramp of M5 interchange - OD4: On westbound on-ramp of M5 interchange - OD5: On westbound off-ramp of M5 interchange - OD6: Moorebank Avenue, about 300 metres south of the M5 South Western Motorway - OD7: Anzac Road - OD9: IMT Main Access - OD10: Cambridge Avenue 1.03 Assist Survey company (if needed) to ensure the safe and efficient movement within the Site by attending Site during installation and removal of	An Operational Traffic and Access Management Plan has been prepared to address the requirements of this condition.	As above 25/2/2025 - Revision 15 of the OTAMP (OTAMP_Rev 015_compiled_Nov2024) and Nov 2025 revision of the BTODR (1065r10v02_BTODR Nov 2024) has been received and filed. 25/06/2025 - May 2025 version of the BTODR (1065r11_MPE BTODR May 2025) has been received and filed on the Major Projects website	Document Name: 1065r11_MPE BTODR May 2025 DPHI Receipt: Post Approval Form_20250625050912	Outstanding Information Required - Nil	ESR	ESR	Ason	Tactical	Monitoring and reporting	Traffic and Access	Six months	Open
A10	In determining the TEU limit, the Secretary may take account any roadworks or mitigation measures proposed under a Voluntary Planning Agreement to minimise traffic impacts.	All	Compliant		An Operational Traffic and Access Management Plan has been prepared to address the requirements of this condition.	25/2/2025 - Revision 15 of the OTAMP (OTAMP_Rev 015_compiled_Nov2024) and Nov 2025 revision of the BTODR (1065r10v02_BTODR Nov 2024) has been received and filed. 25/06/2025 - May 2025 version of the BTODR (1065r11_MPE BTODR May 2025) has been received and filed on the Major Projects website	Document Name: 1065r11_MPE BTODR May 2025 DPHI Receipt: Post Approval Form_20250625050912	Outstanding Information Required - Nil	ESR							Open
A11	The maximum GFAs for the following uses apply: (a) 300,000m2 for the warehousing and distribution facilities; and (b) 8,000m2 for the freight village.	Operation	Compliant	GFA monitoring	Ensure the maximum GFAs for the following uses apply: (a) 300,000m2 for the warehousing and distribution facilities; and (b) 8,000m2 for the freight village.	Interview with auditees 8-9/05/24 Site inspection 8/05/24 Precinct Master Plan – Ultimate, Drawing No. 0006, Rev.AL, 25 May 2023, Watson Young. 6/05/2025 - MIP-WYA-006-ULTIMATE MASTER PLAN (B) 12-JULY-24-Reduced (1) master plan filed	Document Name: APPROVED PRECINCT MASTERPLAN (H)	Outstanding Information Required - Nil	ESR	ESR	Ason	Tactical	Monitoring and reporting	Traffic and Access	Six months	Open
A12	The warehousing and distribution facilities must only be used for activities associated with freight using the MPE Stage 1 rail intermodal terminal.	Operation	Compliant	Occupation Environmental - Implemetation of OEMP, subplans, WOEMP and lease	All information is currently on Moorebank project website.	Interview with auditees 9/05/24 Site inspection 8/05/24 Warehouse Operational Environmental Management Plans (various) (WOEMP) as identified in Condition C6. Biannual Trip Origin Destination Report (MPE1 and MPE2), Ason Group for: - Nov 2020, 15/02/21 - May 2021, 08/06/2021 - Nov 2021, 16/12/2021 - May 2022, 11/10/2022 - Nov 2022, 19/01/2023 - May 2023, 09/08/2023 - Nov 2023, 26/02/2024 12/02/2025 - Report revision 19 received and filed on 4/02/2025. Lodged onto Major Projects website 12/02/2025. 29/04/2025 - See WOEMP on project websites	Document Name: 1065r11_MPE BTODR May 2025 DPHI Receipt: Post Approval Form_20250625050912	Outstanding Information Required - Nil	ESR	QUBE	Ason	Tactical	Plan	Warehouse	Monthly	Open
A13	Freight village tenants and occupations are restricted to those activities that provide: (a) ancillary support for the development, its tenants, worker population and visitors; (b) a nexus with activities undertaken in relation to the warehouse, logistics functions of the IMT development and/ or; (c) provide aligned services to the intermodal functions. Prior to occupancy of any freight village tenancy, and every subsequent occupation of these tenancies, details of the tenant and occupation activity is to be submitted to the Secretary demonstrating that the proposed activity complies with this condition.	Pre-operation	Not triggered	Details of the tenant and occupation activity is to be submitted to the Secretary demonstrating that the proposed activity complies with this condition.	Obtain occupation certificates	Interview with auditees 8-9/05/24 Site inspection 8/05/24 WH3, WH4, WH6 and WH7 Occupation certificates (Mckenzie Group)	N/A	No freight village developed as yet.	ESR	Knight Frank	Tenants	Tactical	Other	Warehouse	Prior to occupancy	Open
A14	With the approval of the Secretary, the Applicant may submit any strategy, plan or program required by this consent on a staged basis.	All	Compliant	Documentation Monitoring	Documentation Monitoring	Program for Operational Phase Documentation (POPD), 22/3/2019 Pre-Operational Compliance report, 13/7/2020 Rev.06 (Area 1 – WH1 and IMEX) Pre-Operational Compliance report, 25/6/2021 Rev.04 (Area 2 – WH3, WH4, and WH5) Pre-Operational Compliance report, 9/8/2023 Rev.03 (Area 3 – WH6 and WH7)	Document Name: PREC-ARC-EN-PRG-0001 - POPD MLP East Precinct_2019-03-22_clean_FINAL	Outstanding Information Required - Nil	ESR	Tactical			Monitoring Reporting	Other	Prior to the commencement of construction	Open

Condition of Consent	COMPLIANCE REQUIREMENT	DEVELOPMENT PHASE	COMPLIANCE STATUS	MONITORING REQUIREMENT METHODOLOGY (See condition and management plan)	ONGOING ACTIVITIES AND IMPLEMENTATION	EVIDENCE AND COMMENTS (Received to date from tenants and consultants)	DPHI Receipt / Consultant Document Name	OUTSTANDING INFORMATION / ACTIONS (Required from tenants and consultants)	PRIMARY RESPONSIBLE	RESPONSIBLE FOR IMPLEMENTATION	RESPONSIBLE FOR REPORTS	RESPONSIBLE FOR LODGING W/ DEPARTMENT	TYPE	CATEGORY	FREQUENCY	Status
A15	If the submission of any strategy, plan or program is to be staged, then the relevant strategy, plan or program must clearly describe the specific stage of the development to which the strategy, plan or program applies, the relationship of the stage to any future stages and the trigger for updating the strategy, plan or program.	All	Compliant	Documentation Monitoring	Documentation Monitoring	Operational Environmental Management Plan Moorebank Logistics Park – East Precinct Rev.18, 13/01/23, SIMTA (the OEMP). Post Approval Submission (DPHI portal) updated re: submission of OEMP Rev 18 to DPHI Letter from DPHI to Tactical, 7/9/2023 re. Revised OEMP Pre-Operational Compliance report, 13/7/2020 Rev.06 (Area 1 – WH1 and IMEX) Letter DPHI to Qube, 08/04/20 (MPE operational document approval) Pre-Operational Compliance report, 25/6/2021 Rev.04 (Area 2 – WH3, WH4, and WH5) Post Approval Form 14/04/2021 re. POCR for Area 2 Pre-Operational Compliance report, 9/8/2023 Rev.03 (Area 3 – WH6 and WH7) Post Approval Form re. Submission of POCR on the 9/8/2023 https://simta.com.au/mpe-2/	Document Name: PREC-ARC-EN-PRG-0001 - POPD MLP East Precinct_2019-03-22_clean_FINAL	Outstanding Information Required - Nil	ESR	Several consultants			Monitoring Reporting	Other	Prior to the commencement of construction	Open
A16	With the approval of the Secretary, any strategy, plan or program required by this consent may be combined	All	Compliant	Documentation Monitoring	Note only.	Operational Environmental Management Plan Moorebank Logistics Park – East Precinct Rev.18, 13/01/23, SIMTA (the OEMP). Post Approval Submission (DPHI portal) updated re: submission of OEMP Rev 18 to DPHI Letter from DPHI to Tactical, 7/9/2023 re. Revised OEMP Pre-Operational Compliance report, 13/7/2020 Rev.06 (Area 1 – WH1 and IMEX) Letter DPHI to Qube, 08/04/20 (MPE operational document approval) Pre-Operational Compliance report, 25/6/2021 Rev.04 (Area 2 – WH3, WH4, and WH5) Post Approval Form 14/04/2021 re. POCR for Area 2 Pre-Operational Compliance report, 9/8/2023 Rev.03 (Area 3 – WH6 and WH7) Post Approval Form re. Submission of POCR on the 9/8/2023 https://simta.com.au/mpe-2/	Document Name: PREC-ARC-EN-PRG-0001 - POPD MLP East Precinct_2019-03-22_clean_FINAL	Outstanding Information Required - Nil	ESR	Several consultants		Tactical	Monitoring Reporting	Compliance	Prior to the commencement of construction	Open
A17	In seeking the Secretary's approval, a clear relationship must be demonstrated between the strategies, plans or programs that are proposed to be combined.	All	Compliant	Documentation Monitoring	Note only.	As above	Document Name: PREC-ARC-EN-PRG-0001 - POPD MLP East Precinct_2019-03-22_clean_FINAL	Outstanding Information Required - Nil	ESR	Several consultants		Tactical	Monitoring Reporting	Compliance	Prior to the commencement of construction	Open
A19	Where conditions of this consent require a document to be prepared in consultation with an identified party, the Applicant must: (a) consult with the relevant party prior to submitting the subject document to the Secretary for approval; (b) provide evidence that at least two weeks was provided for the relevant party to comment on the document; and (c) include in the document: (i) details of the consultation undertaken; (ii) a description of how matters raised by those consulted have been resolved to the satisfaction of both the Applicant and the party consulted; and (iii) details of any disagreement remaining between the party consulted and the Applicant and how the Applicant has addressed the matters not resolved.	All	Compliant	Documentation Monitoring	This OEMP and associated sub-plans have been developed in consultation with the identified parties prior to the submission of the document to DP&E. See Section 1.4, Table 1-1 and Appendix H for evidence of consultation with relevant parties.	Refer to evidence in relation to B26, B29, B106, B107, B110, B116, B140, C18	N/A	Outstanding Information Required - Nil	ESR	Several consultants		Tactical	Monitoring Reporting	Compliance	Prior to the commencement of construction	Open
A28	Prior to operation of the development, a compliance certificate for water and sewerage infrastructure servicing of the site under section 73 of the Sydney Water Act 1994 must be obtained.	Pre-operation	Compliant	Obtain a compliance certificate for water and sewerage infrastructure	Obtain a compliance certificate for water and sewerage infrastructure	Section 73 Compliance Certificates, Sydney Water, 18/07/19 1/05/2025 - Received compliance certificates	Refer to condition A28 folder for signed certificates	Outstanding Information Required - Nil	ESR	ESR	Mckenzie Group	Aspect	Other	Stormwater	Prior to operation	Open
A30	Unless the Applicant and the applicable authority agree otherwise, the Applicant must: (a) repair, or pay the full costs associated with repairing any public infrastructure that is damaged by carrying out the development; and (b) relocate, or pay the full costs associated with relocating any infrastructure that needs to be relocated as a result of the development.	All	Not triggered	Monitor any damage or rectification required should activities cause damage to public infrastructure.	Monitor and Report any damage or rectification required should activities cause damage to public infrastructure.	Post construction dilapidation report, road footpaths, and kerbs, Craigmar, 12/05/19. Moorebank Ave Dilapidation findings (roads structural damage), Northrop, 11/07/19. Moorebank Ave Condition F1 Letter, Qube to Tactical, 11/12/19.		Outstanding Information Required - Nil	ESR	ESR	Mckenzie Group	Aspect	Other	Warehouse	Prior to occupancy	Open
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 (b) operated in a proper and efficient manner.	All	Compliant	Monitor all plant and equipment used at the site.	Monitor all plant and equipment used at the site. Ensure maintenace records are kept. Provide evidences/ reports.	Caesarstone WH3: - Daily pre-operational inspection checklist: forklifts and attachments, 30/4/2024 - Forklift Service Schedule Work Order 5/4/2024 - Daily pre-operational inspection checklist: crane and attachments, 15/5/2024 - Service report for Hoist, 3/5/2024 - Caesarstone forklift plant checklist, K24166 and #67 - Caesarstone overhead crane checklist, CSA-EH-022a - Certificate for Base Station Model No. 4463-D, 19/3/2024 Mainfreight WH7: - Risk assessment for mobile plant 22/2/24 including forklift and reach lifts. - Forklift Maintenance history (12 months)	Refer to condition A32, B61 & B88 folder for plant and equipment reports	Outstanding Information Required - Nil	ESR	ESR	ESR	Not Applicable	Monitoring Reporting	Plant and Equipment	During construction	Open
B1	The Applicant must: (a) prepare each plan, program and other documents in consultation with the specified stakeholders; (b) not commence each phase of the project until the plans, programs and other documents required under this consent are approved by or, where not required to be approved, submitted to the Secretary specified within the timeframes; and (c) implement the most recent version of the required plans and programs approved by the Secretary for the duration of the development.	All	Compliant	Records and revisions of consultation and plans.	Monitor and record consultation included in all plans.	Operational Environmental Management Plan Moorebank Logistics Park – East Precinct Rev.18, 13/01/23, SIMTA (the OEMP). Post Approval Submission (DPHI portal) undated re: submission of OEMP Rev 18 to DPHI Letter from DPHI to Tactical, 7/9/2023 re. Revised OMPs https://simta.com.au/mpe-2/ Pre-Operational Compliance report, 9/8/2023 Rev.03 (Area 3 – WH6 and WH7) Post Approval Form re. Submission of POCR on the 9/8/2023 Letter Tactical to DPHI 31/7/2023 re. notification of commencement of Area 3 Post Approval Form 31/7/2023 re. notification of commencement of Area 3 Refer to evidences in C3 and the conditions for each sub plan	N/A	Outstanding Information Required - Nil	ESR	Several consultants			Monitoring Reporting	Plant and Equipment	During construction	Open
B7	All vehicles are to enter and leave the site in a forward direction.	All	Compliant	Traffic Monitoring as per OTAMP	Traffic Monitoring as per CTAMP	Operational Traffic and Access Management Plan Moorebank Logistics Park – East Precinct, Rev.14, SIMTA, 20/01/23 Site inspection 8/05/24 This requirement is specified within the approved OTAMP. The site is set up so that all traffic enters and exits in a forward direction.	Document Name: OTAMP_Rev 015_compiled_Nov2024 DPHI Receipt: Post Approval Form_20250213002021	Outstanding Information Required - Nil	ESR	ESR	Ason	Tactical	Compliance	Plan	As required	Open
B8	All trucks entering or leaving the site with loads must have their loads covered and must not track dirt onto any public road	All	Compliant	Traffic Monitoring as per OTAMP	An Operational Traffic and Access Management Plan has been prepared to address the requirements of this condition.	Operational Traffic and Access Management Plan Moorebank Logistics Park – East Precinct, SIMTA, 15/05/20 Site inspection 8/05/24 This requirement is specified within the approved OTAMP. The site is set up so that all traffic enters and exits in a forward direction.	Document Name: OTAMP_Rev 015_compiled_Nov2024 DPHI Receipt: Post Approval Form_20250213002021	Outstanding Information Required - Nil	ESR	ESR	Ason	Tactical	Compliance	Plan	As required	Open
B26	The Applicant must prepare an **Operational Traffic and Access Management Plan** to the satisfaction of the Secretary. The Plan is to be developed in consultation with the relevant Council, TfNSW and RMS. The plan must be approved by the Secretary prior to the commencement of operation. The Plan must be prepared by a suitably qualified and experienced person(s), and must: (a) demonstrate how the development will be managed during operation to meet the requirements of this development consent; (b) detail numbers and frequency of truck movements, sizes of trucks, vehicle routes and hours of operation; (c) detail access arrangements for the site to ensure road and site safety, and demonstrate there will be no queuing on the road network; (d) detail measures to ensure turning areas and internal access roads are kept clear of any obstacles, including parked cars, at all times; (e) set out procedures for collecting the information required to prepare the Biannual Trip Origin and Destination Report required under condition B28; (f) incorporate the Workplace Travel Plan as required under condition B29; (g) include a driver's code of conduct that requires: (i) compliance with specified travelling speeds; (ii) drivers to adhere to specified transport routes including no access from Cambridge Avenue; and (iii) drivers to implement safe driving practices. (h) include a program to monitor the effectiveness of these measures.	Pre-operation	Compliant	Operational Traffic and Access Management Plan	An Operational Traffic and Access Management Plan has been prepared to address the requirements of this condition.	Operational Traffic and Access Management Plan Moorebank Logistics Park – East Precinct, Rev.14, SIMTA, 20/01/23 Post Approval Submission (DPHI portal) undated re: submission of OTAMP Rev 14 to DPHI 13/02/2025 - Revision 15 of the OTAMP (OTAMP_Rev 015_compiled_Nov2024) and filed on 4/02/2025. Lodged onto Major Projects website 13/02/2025.	Document Name: OTAMP_Rev 015_compiled_Nov2024 DPHI Receipt: Post Approval Form_20250213002021	Outstanding Information Required - Nil	ESR	Ason Group			Plan	Traffic and Access	As required	Open
B27	The Operational Traffic and Access Management Plan required by condition B26 must be implemented by the Applicant for the duration of operations	Pre-operation	Compliant	Operational Traffic and Access Management Plan	An Operational Traffic and Access Management Plan has been prepared to address the requirements of this condition.	Operational Traffic and Access Management Plan Moorebank Logistics Park – East Precinct, Rev.14, SIMTA, 20/01/23 Biannual Trip Origin Destination Report (MPE1 and MPE2), Ason Group for: - Nov 2020, 15/02/21 - May 2021, 08/06/2021 - Nov 2021, 16/12/2021 - May 2022, 11/10/2022 - Nov 2022, 19/01/2023 - May 2023, 09/08/2023 - Nov 2023, 26/02/2024 Interview with auditees 8-9/05/24 and Site inspection 8/05/24 Complaints Register current to 31 May 2024 Container schedule for 21/5/2024 13/02/2025 - Revision 15 of the OTAMP (OTAMP_Rev 015_compiled_Nov2024) and filed on 4/02/2025. Lodged onto Major Projects website 13/02/2025.	Document Name: OTAMP_Rev 015_compiled_Nov2024 DPHI Receipt: Post Approval Form_20250213002021	Outstanding Information Required - Nil	ESR	Ason Group			Plan	Traffic and Access	As required	Open
B28	The Applicant is to prepare a **Biannual Trip Origin and Destination Report** each six months following commencement of any operation (in a format agreed with TfNSW and RMS) that advises: (a) the number of actual and standard twenty foot equivalent shipping containers despatched and received during the period; (b) the number of days in the period that the truck gate was open for despatching trucks 24 hours a day, 7 days a week and detail any exceptions to this and advise actual hours of operation; (c) records of vehicle numbers accessing the site; and (d) representative vehicle origins and destinations, based on a cordon in the surrounding network. A framework for recording and reporting on the data required for the report, prepared to the satisfaction of TfNSW and RMS, is to be submitted to the Secretary three months prior to the commencement of operation. The report is to be submitted within one month of its preparation throughout operation of the project, starting six months from the commencement of operation, unless otherwise agreed by the Secretary, TfNSW and RMS. The cordon count at (d) above will: • apply to all classes of vehicles; and • cover the intermodal terminal, the warehousing facility and any other uses such as the freight village.	Operation	Compliant	Item 1 – Surveys 1.01 Coordinate with the Survey to obtain Classified Intersection Counts for the following intersections. - I1: Moorebank Avenue/ M5 South Western Motorway interchange (full interchange survey to include M5 South Western Motorway through lanes) - I2: Moorebank Avenue/ Defence Joint Logistics Unit (DJLU) access - I4: Moorebank Avenue/ Main MPE & IMT access - I7: Moorebank Avenue/ Newbridge Road - I8: M5 South Western Motorway/ Hume Highway. - I9: Moorebank Avenue / Anzac Road 1.02 In addition to Item 1.01, coordinate with the Survey company to obtain Origin and Destination Surveys for the following intersections. - OD1: Moorebank Avenue, about 350 metres north of the M5 South Western Motorway - OD2: On eastbound off-ramp of M5 Interchange - OD3: On eastbound on-ramp of M5 Interchange - OD4: On westbound on-ramp of M5 Interchange - OD5: On westbound off-ramp of M5 Interchange - OD6: Moorebank Avenue, about 300 metres south of the M5 South Western Motorway - OD7: Anzac Road - OD9: IMT Main Access - OD10: Cambridge Avenue 1.03 Assist Survey company (if needed) to ensure the safe and efficient movement within the Site by attending Site during installation and removal of cameras.	A Biannual Trip Origin and Destination Report will be prepared to address the requirements of this condition.	MPE Biannual Trip Origin Destination Report Framework, Arcadis, 17/09/19 (including consultation records) Biannual Trip Origin Destination Report (MPE1 and MPE2), Ason Group for: - May 2022, 11/10/2022 - Nov 2022, 19/01/2023 - May 2023, 09/08/2023 - Nov 2023, 26/02/2024 - May 2024, 3/6/2024 DPHI post approval portal lodgement for the BTODR for May 2022, 24/10/2022 DPHI post approval portal lodgement for the BTODR for May 2023, 9/8/2023 DPHI post approval portal lodgement for the BTODR for Nov 2023, 29/2/2024 DPHI post approval portal lodgement for the BTODR for May 2024, 5/6/2024 25/02/2025 - Nov 2024 version of the BTODR has been received and filed. 14/03/2025 - Feb 2025 version of the BTODR (1065r10v02_BTODR Nov 2024) has been received and filed on the Major Projects website 25/06/2025 - May 2025 version of the BTODR (1065r11_MPE BTODR May 2025) has been received and filed on the Major Projects website	Document Name: 1065r11_MPE BTODR May 2025 DPHI Receipt: Post Approval Form_20250625050912	13/06/2025 - Surveys carried out May 2025, tenants to provide remaining employee and warehouse data. The report will be prepared during the month of May and lodged within one month. Reporting timelines and deadlines have been discussed with DPHI on the 11/06/2025 regarding a proposed extension for reporting periods as one month is not sufficient time. 25/06/2025 - May 2025 version of the BTODR (1065r11_MPE BTODR May 2025) has been received and filed on the Major Projects website	ESR	QUBE	Ason	Tactical	Report	Traffic and Access	6 monthly	Open

Condition of Consent	COMPLIANCE REQUIREMENT	DEVELOPMENT PHASE	COMPLIANCE STATUS	MONITORING REQUIREMENT METHODOLOGY (See condition and management plan)	ONGOING ACTIVITIES AND IMPLEMENTATION	EVIDENCE AND COMMENTS (Received to date from tenants and consultants)	DPHI Receipt / Consultant Document Name	OUTSTANDING INFORMATION / ACTIONS (Required from tenants and consultants)	PRIMARY RESPONSIBLE	RESPONSIBLE FOR IMPLEMENTATION	RESPONSIBLE FOR REPORTS	RESPONSIBLE FOR LODGING W/ DEPARTMENT	TYPE	CATEGORY	FREQUENCY	Status
B29	Prior to issue of any Occupation Certificate, the Applicant must prepare a **<u>Workplace Travel Plan</u>** to the satisfaction of the Secretary. The Workplace Travel Plan must form part of the Operational Traffic and Access Management Plan required by condition C3, and must: (a) be prepared in consultation with TfNSW; (b) outline facilities and measures to promote public transport usage, such as car share schemes and employee incentives; (c) describe pedestrian and bicycle connections and linkages to and from the site from Moorebank Avenue and within the site including between warehouses and the freight village; (d) describe end of trip facilities available on-site which are to include under cover bike storage, showers and change facilities - the layout, design and security of bicycle facilities must comply with the minimum requirements of Australian Standard AS 2890.3 – 1993 Parking Facilities Part 3: Bicycle Parking Facilities; and (e) include the results of negotiations with the relevant agencies/ authorities as required to facilitate the staged delivery of the public transport infrastructure including: (i) construction of a covered bus drop off/ pick up facility within the site to encourage the use of buses for employees; (ii) review and rationalisation of the locations of Route 901 bus stops in the vicinity of the site to match the proposed northern terminal entry location and enhance accessibility; (iii) peak period and SIMTA shift work responsive express buses to /from the site and Liverpool Station via Moorebank Avenue and Newbridge Roads with frequency dependent on the development of the site; (iv) peak period express buses to/ from the site and Holsworthy rail station via Anzac Road, Wattle Grove Drive and Heathcote Road with frequency dependent on the development of the site; (v) potential to extend the Route 901 bus through the site via the light vehicle road and increasing peak period bus service frequencies to better match the needs of existing and future employees of the locality with frequency dependent on the extent of development of the site; and (vi) changes to existing bus stop locations and the identification of new bus stop locations if required.	Pre-operation	**Compliant**	Workplace Travel Plan	An Operational Workplace Travel Plan has been prepared to address the requirements of this condition.	Workplace Travel Plan, SIMTA, 13/11/19 and 26/03/20 (the WTP) Letter DPIE to Qube, 06/12/19 (initial conditional approval of OTAMP and WTP) Letter DPIE to Qube, 28/04/20 (approval of staged OTAMP and WTP) WTP updated 23/01/2023 Rev 13 Letter DPHI to ESR, 7/9/23 (approval of OMPs) TfNSW letter, 4/9/2023 Mod-5 re. changes to the road upgrades required to support Moorebank Logistics Park WTP Rev 14 13/08/24 - Updated for approval of Modifications 5 and 6 and MIP name change 25/03/2025 - Jan 2025 version of the workplace travel plan (Appendix C of OTAMP_Rev 015_compiled_Nov2024) received and filed	Document Name: OTAMP_Rev 015_compiled_Nov2024 DPHI Receipt: Post Approval Form_20250213002021	Outstanding Information Required - Nil	ESR	Aeon Group			Plan	Traffic and Access	As required	**Open**
B30	The Applicant must ensure that the **Workplace Travel Plan** is implemented for the life of the development.	Operation	**Compliant**	Workplace Travel Plan	Obtain evidence to ensure the workplace travel plan is being implemented	Workplace Travel Plan, SIMTA, 13/11/19 and 26/03/20 (the WTP) Warehouse Operational Environmental Management Plans (various) (WOEMP) as identified in Condition C6. 4 Start Green Star rating for Warehouse 1 – Moorebank Logistics park, 2/8/2021 4 Start Green Star rating for Warehouse 3 and 4 – Moorebank Logistics park, 11/06/2021 4 Start Green Star rating for Warehouse 5 – Moorebank Logistics park, 6/8/2021 Emails from Kight Frank and ESR dated 15/11/21 and 31/8/2023 Shuttle bus demand survey of MPE tenants, 18/10/2022 Site inspection 8/05/24 WTP Rev 14 13/08/24 - Updated for approval of Modifications 5 and 6 and MIP name change	Document Name: OTAMP_Rev 015_compiled_Nov2024 DPHI Receipt: Post Approval Form_20250213002021	Outstanding Information Required - Nil	ESR	Knight Frank/ QUBE	Tenant	Tactical	Monitoring and reporting	Other	Monthly	**Open**
B43	A **Stormwater Monitoring Program** must be prepared in consultation with Council and OEH prior to operation and must be implemented for 5 years following completion of construction to monitor performance of the stormwater treatment system. The Stormwater Monitoring Program must form part of the Biodiversity Monitoring Strategy required by condition B105, prepared with reference to Using the ANZECC Guidelines and Water Quality Objectives in NSW (DEC, 2006).	Pre-operation	**Compliant**	Stormwater Monitoring Program Report	The baseline monitoring forms the basis for the ongoing Biodiversity Monitoring Strategy (BMS) to assess stream health in accordance with CoC B106, to determine any change in stream health or water quality throughout the life of the Project and to ascertain whether these changes can be attributed to the Project works. The BMS outlines monitoring requirements and includes the Stormwater Monitoring Strategy required by CoC B43 and B44. This report is for information only.	Stormwater Network Water Quality Monitoring Data and Reporting, Apical, April 2021 Spring Stormwater Network & Water Quality Monitoring Data and Report for October 2023, from Apical Biodiversity Monitoring Report, Anzac Creek, Spring 2023, Bioanalysis, 9/1/2024 12/02/2024 6/5/2025 - The Stormwater Monitoring Program has been developed in consultation with the OEH and LCC. Consultation was closed out on 2/7/19. Approval of this document is not required by DPIE. SMP submitted to DPIE for information on 7/08/2019	Document Name: 26648.BaselineAquaticEcologicalMonitoring and BMS.Autumn2018.FIN02_clean	Outstanding Information Required - Need the stormwater monitoring program. It says this program is in the BMS, however I can't find the BMS report. 12/02/2025 - Arcadis and NI to clarify the status of the BMS report. 24/3/2025 - Require latest revision of the BMS report Outstanding Information Required - Nil	ESR	ESR	MID	Tactical	Monitoring	Sediment/Water	6 monthly	**Open**
B44	The **Stormwater Monitoring Program** must: (a) assess water quality and quantity performance for construction and Operation discharges and ongoing stormwater discharges from the development to ensure protection of the desired ecological values of Anzac Creek; and (b) include sampling locations and the frequency of sampling including wet weather sampling.	Pre-operation	**Compliant**	Stormwater Monitoring Program Report	The baseline monitoring forms the basis for the ongoing Biodiversity Monitoring Strategy (BMS) to assess stream health in accordance with CoC B106, to determine any change in stream health or water quality throughout the life of the Project and to ascertain whether these changes can be attributed to the Project works. The BMS outlines monitoring requirements and includes the Stormwater Monitoring Strategy required by CoC B43 and B44. This report is for information only.	Stormwater Network Water Quality Monitoring Data and Reporting, Apical, April 2021 Spring Stormwater Network & Water Quality Monitoring Data and Report for October 2023, from Apical Biodiversity Monitoring Report, Anzac Creek, Spring 2023, Bioanalysis, 9/1/2024 6/5/2025 - The monitoring undertaken by Bioanalysis covers the construction and Operation discharges and ongoing stormwater discharges to Anzac Creek (covered in section 5 of the report in the B44 folder).	Document Name: 26648.BaselineAquaticEcologicalMonitoring and BMS.Autumn2018.FIN02_clean	Outstanding Information Required - Need the stormwater monitoring program. It says this program is in the BMS, however I can't find the BMS report. 12/02/2025 - Arcadis and NI to clarify the status of the BMS report. 24/3/2025 - Require latest revision of the BMS report as it says this is on a six monthly basis Outstanding Information Required - Nil	ESR	ESR	MID	Tactical	Monitoring	Sediment/Water	6 monthly	**Open**
B49	Prior to operation, the Applicant must prepare a **<u>Stormwater Infrastructure Operation and Maintenance Plan</u>** to manage the operation and maintenance of stormwater infrastructure on-site and off-site, to the satisfaction of the Secretary. The plan must form part of the OEMP required under condition C3 and must be implemented for the life of the assets and include: (a) the entity responsible for management and maintenance of the assets, including evidence that a maintenance contract is in place with a reputable and experienced maintenance contractor; (b) quarterly inspections, and inspections after major rainfall events; (c) schedule for routine checking, cleaning and servicing of all devices/ systems in accordance with the manufacturer's and/or designer's recommendations; (d) records of all maintenance activities undertaken; (e) quarterly maintenance reports, detailing the results of quarterly inspections, inspections after major rainfall events, and maintenance activities; (f) results of water quality monitoring; (g) investigation, management and mitigation of water quality target exceedances; (h) annual independent auditing; and (i) provision for submission of the quarterly maintenance reports and annual independent audit reports to the Secretary, including the results of inspections, management and maintenance actions and water quality monitoring.	Pre-operation	**Compliant**	Stormwater Infrastructure Operation and Maintenance Plan	A Stormwater Infrastructure Operation and Maintenance Plan has been prepared to address the requirements of this condition.	Stormwater Infrastructure Operation and Maintenance Plan Rev 8, SIMTA, 23/01/23 (the SIOMP) Post Approval Submission (DPHI portal) undated re: submission of SIOMP Rev 8 to DPHI Letter DPHI to ESR, 7/9/23 (approval of OMPs) SIOMP Rev 9 - 13/08/24 - Updated for approval of Modifications 5 and 6 and MIP name change 13/02/2025 - Revision 9 of the SIOMP (PREC-QPMS-EN-PLN-0006 SIOMP_Rev 9_compiled_Nov2024) received and filed on 4/02/2025. Lodged onto Major Projects website 13/02/2025.	Document Name: PREC-QPMS-EN-PLN-0006 SIOMP_Rev 9_compiled_Nov2024 DPHI Receipt: Post Approval Form_20250213005106	Outstanding Information Required - Nil	ESR	MID	MID	Not Applicable	Monitoring Reporting	Stormwater	Prior to operation	**Open**
B50	Assets to be managed under the **Stormwater Infrastructure Operation and Maintenance Plan** must include the channel through the MPW site to the Georges River unless the maintenance of this infrastructure is included in an operational environmental management plan approved by the Secretary for the MPW site.	Pre-operation	**Compliant**	Stormwater Infrastructure Operation and Maintenance Plan	A Stormwater Infrastructure Operation and Maintenance Plan has been prepared to address the requirements of this condition.	Stormwater Infrastructure Operation and Maintenance Plan Moorebank Logistics Park – East Precinct, 26/03/20, SIMTA (the SIOMP), updated on the 23/01/23 (Rev 8). Letter DPHI to ESR, 7/9/23 (approval of OMPs) Precinct Master Plan – Ultimate, Drawing No. 0006, Rev.AL, 25 May 2023, Watson Young 13/02/2025 - Revision 9 of the SIOMP (PREC-QPMS-EN-PLN-0006 SIOMP_Rev 9_compiled_Nov2024) received and filed on 4/02/2025. Lodged onto Major Projects website 13/02/2025.	Document Name: PREC-QPMS-EN-PLN-0006 SIOMP_Rev 9_compiled_Nov2024 DPHI Receipt: Post Approval Form_20250213005106	Outstanding Information Required - Nil	ESR	MID	MID	Not Applicable	Monitoring Reporting	Stormwater	Prior to operation	**Open**
B51	The annual independent audit must be undertaken by a suitably qualified WSUD professional. The audit is to verify the condition of the treatment system(s), verify and document that the system(s) is working as intended, verify the system(s) has been cleaned adequately, verify there is no excessive build-up of material in the system(s) and identify any issues with the treatment system(s) which require rectification for the system(s) to adequately perform its intended function.	Operation	**Compliant**	WSUD	An audit done by a qualified WSUD has been undertaken to verify the treatment system(s).	Moorebank Precinct East – Stage 2 WSUD Independent Audit, June 2021 from Sustainability Workshop (Mark Liebman). Moorebank Precinct East – Stage 2 WSUD Independent Audit, October 2022 from Sustainability Workshop. Moorebank Precinct East – Stage 2 WSUD Independent Audit, September 2023 from Sustainability Workshop.	N/A	Outstanding Information Required - Nil 6/05/2025 - Next audit is in July 2025	ESR	MID	Sustainability Workshop	Not Applicable	Report	Stormwater	Monthly/Quarterly reporting and Annual Audit	**Open**
B55	Deposited dust must not exceed an increase of 2g/m2/month or maximum of 4g/m2/month at the closest off site sensitive receiver.	All	**Compliant**	Dust management	An Operation Air Quality Management Plan has been prepared to address the requirements of this condition.	Operational Air Quality Management Plan Rev.12, SIMTA, 23/01/23 (OAQMP) Monthly Air Quality Monitoring Reports from Arcadis for 2021, 2022 and 2023 Dust Monitoring Summary Reports from SERS for 2021, 2022, 2023, 2024 and 2025. - January 2025 - February 2025 - March 2025 - April 2025 - May 2025 MPE Operational Air Quality Six Monthly Compliance Report from Arcadis for: - Nov 2020 to Apr 2021, No.2, 4/6/2021 - May to Oct 2021, No.3, 16/12/2021 - Nov 2021 to Apr 2022, No,4, 6/6/2022 - May to Oct 2022, No.5, 11/1/2023 - Nov 2022 to Apr 2023, No.6, 11/7/2023 - May to Oct 2023, No.7, 13/12/2023 MIP Internal Monthly Air Quality Reports from Arcadis received and filed: - November 2024 - December 2024 - January 2025 - February 2025 - March 2025 - April 2025 - May 2025 - June 2025 6/05/2025 - The MPE conditions specifically for OAQMP have been closed and superseded by the MPW condition which requires the development of a POAQMP. MIP-POAQMP-_SSD7709-update_Rev16_Redacted (1) has been filed.	Refer to MPES2 B55, B59 & B60 OAQMP Requirements folder for reports	Outstanding Information Required - Nil	ESR	SERs/ Arcadis			Monitoring Reporting	Waste and Resource	During construction - Monthly	**Open**
B59	The Applicant must prepare an **<u>Operational AQMP</u>** 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 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: (a) identification of sources and quantify airborne pollutants; (b) best practice reactive and proactive control measures that will be implemented for each emission source; (c) provisions for the implementation of additional mitigation measures in response to issues identified during monitoring and reporting; (d) for all emission sources associated with site operations: (i) key performance indicator(s); (ii) monitoring method(s); (iii) location, frequency and duration of monitoring; (iv) record keeping; (v) complaints register; (vi) response procedures; and (vii) compliance monitoring.	Pre-operation	**Compliant**	Operational AQMP	An Operational Air Quality Management Plan has been prepared to address the requirements of this condition.	Operational Air Quality Management Plan Rev.12, SIMTA, 23/01/23 (OAQMP) Post Approval Submission (DPHI portal) undated: submission of OAQMP to DPHI Letter DPHI to ESR, 7/9/23 (approval of OMPs) 25/02/2025 - Further clarification to Aspect's questions from Arcadis have been received and filed as an RFI. 6/05/2025 - The MPE conditions specifically for OAQMP have been closed and superseded by the MPW condition which requires the development of a POAQMP. MIP-POAQMP-_SSD7709-update_Rev16_Redacted (1) has been filed. 20/05/2025 - OAQMP Revision 1 (MIP 6 Monthly Air Quality Compliance Report_Nov_24_Apr_25_FINAL) received and filed 22/05/2025 - OAQMP Revision 1 (MIP 6 Monthly Air Quality Compliance Report_Nov_24_Apr_25_FINAL) received and filed	Document Name: MIP-POAQMP-_SSD7709-update_Rev16_Redacted	Outstanding Information Required - Nil	ESR	ESR	Arcadis	Not Applicable	Monitoring Reporting	Air Quality	Prior to operation	**Open**
B60	The Applicant must ensure the development does not cause or permit the emission of any offensive odour (as defined in the POEO Act).	All	**Compliant**	Calibration certs	An Operational Air Quality Management Plan has been prepared to address the requirements of this condition.	Operational Air Quality Management Plan Rev.12, SIMTA, 23/01/23 (OAQMP) Complaints Register current to 31 May 2024 Site inspection 8/05/24 6/05/2025 - The MPE conditions specifically for OAQMP have been closed and superseded by the MPW condition which requires the development of a POAQMP. MIP-POAQMP-_SSD7709-update_Rev16_Redacted has been filed.	Document Name: MIP-POAQMP-_SSD7709-update_Rev16_Redacted	Outstanding Information Required - Nil	ESR	Envirosuite			Monitoring Reporting	Waste and Resource	During construction - Monthly	**Open**
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.	All	**Compliant**	Calibration Certificates	An Operational Air Quality Management Plan has been prepared to address the requirements of this condition.	Operational Air Quality Management Plan Rev.12, SIMTA, 23/01/23 (OAQMP) Monthly Air Quality Monitoring Reports from Arcadis for 2021, 2022 and 2023. Dust Monitoring Summary Reports from SERS for 2021, 2022 and 2023. MPE Operational Air Quality Six Monthly Compliance Report from Arcadis for: - Nov 2020 to Apr 2021, No.2, 4/6/2021 - May to Oct 2021, No.3, 16/12/2021 - Nov 2021 to Apr 2022, No,4, 6/6/2022 - May to Oct 2022, No.5, 11/1/2023 - Nov 2022 to Apr 2023, No.6, 11/7/2023 - May to Oct 2023, No.7, 13/12/2023 Calibration Certificates for Air quality monitors for Envirosuite, 19/3/24 Caesarstone WH3: - Daily pre-operational inspection checklist: forklifts and attachments, 30/4/2024 - Forklift Service Schedule Work Order 5/4/2024 - Daily pre-operational inspection checklist: crane and attachments, 15/5/2024 - Service report for Hoist, 3/5/2024 - Caesarstone forklift plant checklist, K24166 and #67 - Caesarstone overhead crane checklist, CSA-EH-022a - Certificate for Base Station Model No. 4463-D, 19/3/2024 Mainfreight WH7: - Risk assessment for mobile plant 22/2/24 including forklift and reach lifts. - Forklift Maintenance history (12 months) Interim Occupation Certificate No. 20/125116-5 (Warehouse 3 and offices), Mckenzie Group, 20/03/2020 Interim Occupation Certificate No. 20/125115-4 (Warehouse 4A and 4B including ancillary offices, landscaping and on-grade car parking), Mckenzie Group, 22/05/2020 Interim Occupation Certificate No. J/78230/04 (Warehouse 5), Mckenzie Group, 04/12/2020 Occupation Certificate No. 211790/12 (Warehouse 6, excluding 1st floor), Mckenzie Group, 31/01/2018	Refer to condition A32, B61 & B88 folder for plant and equipment reports	Outstanding Information Required - Nil	ESR	Envirosuite			Monitoring Reporting	Waste and Resource	During construction - Monthly	**Open**

Condition of Consent	COMPLIANCE REQUIREMENT	DEVELOPMENT PHASE	COMPLIANCE STATUS	MONITORING REQUIREMENT METHODOLOGY (See condition and management plan)	ONGOING ACTIVITIES AND IMPLEMENTATION	EVIDENCE AND COMMENTS (Received to date from tenants and consultants)	DPHI Receipt / Consultant Document Name	OUTSTANDING INFORMATION / ACTIONS (Required from tenants and consultants)	PRIMARY RESPONSIBLE	RESPONSIBLE FOR IMPLEMENTATION	RESPONSIBLE FOR REPORTS	RESPONSIBLE FOR LODGING W/ DEPARTMENT	TYPE	CATEGORY	FREQUENCY	Status
B64	Continuous **noise monitoring** at sensitive receivers must be undertaken during early works, fill importation, construction and for at least 12 months following occupation of the entire site.	Operation	**Compliant**	Noise Report		15/04/2025 - There is the real-time noise monitoring system in place, provided by Envirosuite. 4 monitors, one each located in Casula, Glenfield, Wattle Grove, Wattle Grove North. https://es2.envirosuite.com/auth/login?ReturnUrl=https%3A%2F%2Fomnia.envirosuite.com%2Flogout%2Fmoorebank%2Fmonitoring%2Freal-time	Document Name: RE_ MPE Stage 2 SSD 7628 - Condition B64 Noise Monitoring Non Compliance	Outstanding Information Required - Nil	ESR	ESR	Renzo Tonin	Tactical	Monitoring Reporting	Air and Noise	6 monthly report	Open
B79	The permitted hours of warehouse and distribution operation are detailed in **Table 4**.	Operation	**Compliant**	Operational Noise and Vibration Management Plan	An Operational Noise and Vibration Management Plan has been prepared to address the requirements of this condition.	Operational Noise and Vibration Management Plan Rev 14, SIMTA, 13/12/24 (ONVMP) Approved WOEMPs include the permitted hours 13/02/2025 - Revision 14 of report received and filed on 4/02/2025. Lodged onto Major Projects website 13/02/2025. 17/6/2025 - Final revision (revision 2) of annual noise review filed and lodged	Document Name: TM306-24-02F03 MPE Annual Review 2025 (r2) DPHI Receipt: Post Approval Form_20250617052152	Outstanding Information Required - Nil	ESR	ESR	Arcadis	Not Applicable	Report	General Operation	Prior occupation	Open
B80	Noise generated by operation of the development inclusive of MPE Stage 1 operations must not exceed the noise limits in **Table 5**.	Operation	**Compliant**	Operational Noise and Vibration Management Plan	An Operational Noise and Vibration Management Plan has been prepared to address the requirements of this condition.	Operational Noise and Vibration Management Plan Rev.13, SIMTA, 24/01/23 (ONVMP) Container Noise Barrier Management Plan, SIMTA, 19/03/20 (The CNBMP) updated 28/03/2023 Rev.07 Annual Noise Review Reports from Renzo Tonin for: - From Feb 2020 to Mar 2021 (Y1 Ops), 21/6/2021, Issue 2 - From Apr 2021 to Apr 2022 (Y2 Ops), 23/05/2022, Issue 2 - From Apr 2022 to Apr 2023 (Y3 Ops), 6/07/2023, Issue 2 Warehouse 5 Operational Compliance Measurement, Renzo 09/04/21 Warehouse 4A Operational Compliance Measurement, Renzo 06/04/21 Warehouse 3B Operational Compliance Measurement, Renzo 06/04/21 ESR MPE WH6 and WH7 – Acoustic Design Report from PWNA, Rev.5 28/3/2023 13/02/2025 - Revision 14 of report received and filed on 4/02/2025. Lodged onto Major Projects website 13/02/2025. 17/6/2025 - Final revision (revision 2) of annual noise review filed and lodged	Document Name: TM306-24-02F03 MPE Annual Review 2025 (r2) DPHI Receipt: Post Approval Form_20250617052152	17/02/2025 - Require noise reports from the tenant to ensure this is being complied. Also, the compliance requirements references a table 5, however there is no table 5 in the report. 15/04/2025 - B80 is the noise limits only. No specific monitoring or reporting are required specific for B80.	ESR	ESR	Renzo Tonin	Tactical	Monitoring Reporting	Noise and Vibration	3 months	Open
B83	An **Operational Noise Management Plan** must be submitted to the Secretary for approval and form part of the OEMP required under condition C3. The report must be prepared by a suitably qualified and experienced person(s) and include: (a) an outline of management actions to be taken to address any potential non-compliances with the limits specified in Table 5; (b) a description of contingency measures to be implemented in the event management actions do not reduce noise levels to a compliant level; and (c) identification of additional feasible and reasonable measures to those proposed in the documents specified under condition A2, that would be implemented with the objective of meeting the criteria outlined in the NSW RNP (EPA, 2011), when these measures would be implemented and how their effectiveness would be measured and reported to the Secretary and the EPA.	Pre-operation	**Compliant**	Noise Management Plan	An Operational Noise Management Plan (ONMP) has been prepared to address the requirements of this condition.	Operational Noise and Vibration Management Plan Rev.13, SIMTA, 24/01/23 (ONVMP). Post Approval Submission (DPHI portal) undated re: submission of ONVMP to DPHI approved by the Department on 09/09/19, updated 24/1/23 ONVMP REV 14 - 13/08/2024 Calibration certificates provided in 02/12/2024 13/02/2025 - Revision 14 of report received and filed on 4/02/2025. Lodged onto Major Projects website 13/02/2025.	Document Name: ONVMP_V14_compiled_Nov2024 DPHI Receipt: Post Approval Form_20250213001116	Outstanding Information Required - Nil	ESR	Arcadis (Renzo Tonin is responsible to implement this plan)			Monitoring Reporting	Noise and Vibration	Prior to operation	Open
B85	The Applicant must carry out **noise monitoring of mechanical plant and other noisy equipment** for a minimum period of one week where valid data is collected following occupation of each warehouse. The monitoring program must be carried out by a suitably qualified and experienced person(s) and a Monitoring Report for Mechanical Plant must be submitted to the Secretary within two months of occupation or each tenancy to verify predicted mechanical plant and equipment noise levels.	Operation	**Compliant**	Noise Monitoring	WH 3a and 4b submitted to DPIE Just completed monitoring for 3b, 4a and 5. Reports outstanding.	26/06/2025 - All monitoring has been carried out between 2021 and to 2025. All reports have been issued to the department. The last report submitted for MPE was for warehouse 7. Findings from the monitoring required modification to fans. When the fans are rectified, the report will be revised and submitted to the department.	Warehouse 5 Operational Compliance Measurement, Renzo 09/04/21 Warehouse 4A Operational Compliance Measurement, Renzo 06/04/21 Warehouse 3B Operational Compliance Measurement, Renzo 06/04/21 Warehouse 1 (Catch) Operational Compliance Measurement, Renzo 19/5/2022 Annual Noise Review – April 2021 to April 2022, Renzo Tonin & Associates, 23/5/2022 Annual Noise Review – April 2022 to April 2023, Renzo Tonin & Associates, 6/7/2023 Warehouse 6 - Noise monitoring access coordination planning has begun. Suggested date 28/03/2025 to undertake attended noise measurements, 13/03/2025 13/05/2025 - Revision 1 (initial issue - draft) received, filed and lodged	Outstanding Information Required - Nil	ESR	ESR	Renzo Tonin	Tactical	Monitoring Reporting	Noise and Vibration	3 months	Open
B86	Within 12 months of occupation of the first warehouse, 50% occupation of the site and 100% occupation of the site, or as otherwise agreed by the Secretary, the Applicant must undertake **operational noise monitoring** to compare actual noise performance of the project against predicted noise performance, and prepare an **Operational Noise Report** to document this monitoring. The Report must include, but not necessarily be limited to: a) noise monitoring to assess compliance with the predicted operational noise levels and the noise limits specified in Table 5; b) a review of the operational noise levels in terms of criteria and noise goals established in the NSW RNP (EPA, 2011); c) sleep disturbance impacts compared to those determined in documents specified under condition A2; d) impacts associated with annoying characteristics such as prominent tonal components, impulsiveness, intermittency, irregularity and dominant low-frequency content; e) methodology, location and frequency of noise monitoring undertaken, including monitoring sites at which project noise levels are ascertained, with specific reference to locations indicative of impacts on sensitive receivers; f) details of any complaints and enquiries received in relation to operational noise generated by the project between the date of commencement of operation and the date the report was prepared; g) any required recalibrations of the noise model taking into consideration factors such as actual traffic numbers and heavy vehicle proportions; and h) an assessment of the performance and effectiveness of applied noise mitigation measures together with a review and if necessary, reassessment of all feasible and reasonable mitigation measures.	Operation	**Compliant**	Annual Noise Monitoring	An operational noise report has been prepared to satisfy the requirements.	Annual Noise Review Reports from Renzo Tonin for: - From Feb 2020 to Mar 2021 (Y1 Ops), 21/6/2021, Issue 2 - From Apr 2021 to Apr 2022 (Y2 Ops), 23/05/2022, Issue 2 - From Apr 2022 to Apr 2023 (Y3 Ops), 6/07/2023, Issue 2	Document Name: TM306-24-02F03 MPE Annual Review 2025 (r2) DPHI Receipt: Post Approval Form_20250617052152	Outstanding Information Required - Nil	ESR	ESR	Renzo Tonin	Tactical	Monitoring Reporting	Noise and Vibration	Annually	Open
B87	The Applicant must provide the Secretary and the EPA with a copy of the Operational Noise Report within 60 days of completing the operational noise monitoring referred to in (a) above or as otherwise agreed by the Secretary.	Operation	**Compliant**	Noise Monitoring	Require evidence of submission of the Annual Noise Review Report to the Department and the EPA.	Annual Noise Review Reports from Renzo Tonin for: - From Feb 2020 to Mar 2021 (Y1 Ops), 21/6/2021, Issue 2 - From Apr 2021 to Apr 2022 (Y2 Ops), 23/05/2022, Issue 2 - From Apr 2022 to Apr 2023 (Y3 Ops), 6/07/2023, Issue 2 Submission to DPHI of Y1 ANRR, 23/06/2021 (via planning portal) Email Tactical to EPA, 24/6/2021 re. submission of Annual Noise Review for April 2021 Operational Noise Monitoring Reports from Renzo Tonin for Q1 2021, 8/6/2021 Letter from DPHI to Qube, 14/09/2021 re. acceptance of Operational Noise Report Six-monthly Operations Compliance Report: - No.1 – May to Nov 2020, 30/3/2021. Post Approval Form, 5/4/2021 - No.2 – Nov 2020 to May 2021, 15/06/2021. - No.3 – May to Nov 2021, 20/12/2021. Post Approval Form, 22/12/2021 - No.4 – Nov 2021 to May 2022, 1/6/2022 (ANRR not included) -No.5 - May to Nov 2022, 16/02/2023. Post Approval Form, 27/2/2023. - No.7 - Jun to Oct 2023, 3/4/2024. - No.8 - Nov 2023 to Apr 2024, 3/4/2024		24/3/2025 - Require evidence of submission of the Annual Noise Review Report to the Department and the EPA. 15/04/2025 - B87 relates to the operational noise reporting prepared for B86. The monitoring for B86 is required at set time intervals identified in the consent. The 50% occupation monitoring has been done, and the last one is 100% occupation, which has not yet been reached for MPE. The only other reason would be if requested by the Secretary.	ESR	ESR	Renzo Tonin	Tactical	Certificate	Noise Monitoring	Annually	Open
B88	To ensure the operational noise impacts are appropriately managed, the following measures apply: a) use of best practice plant; and b) preparation of a risk assessment to determine if non-tonal reversing alarms can be fitted as a condition of site entry. Alternatively, site design may include traffic flow that does not require or precludes reversing of vehicles	Operation	**Compliant**	Noise Monitoring	Require evidence to ensure that best noise monitoring practices are implemented.	Plan Rev.13, SIMTA, 24/01/23 (ONVMP) Warehouse 3A Operational Compliance Measurement, Renzo 01/12/20220 Warehouse 4B (ATS) Operational Compliance Measurement, Renzo 01/12/20220 Warehouse 5 Operational Compliance Measurement, Renzo 09/04/21 Warehouse 4A Operational Compliance Measurement, Renzo 06/04/21 Warehouse 3B Operational Compliance Measurement, Renzo 06/04/21 Warehouse 1 (Catch) Operational Compliance Measurement, Renzo 19/5/2022 Caesarstone WH3: - Daily pre-operational inspection checklist: forklifts and attachments, 30/4/2024 - Forklift Service Schedule Work Order 5/4/2024 - Daily pre-operational inspection checklist: crane and attachments, 15/5/2024 - Service report for Hoist, 3/5/2024 - Caesarstone forklift plant checklist, K24166 and #67 - Caesarstone overhead crane checklist, CSA-EH-022a - Certificate for Base Station Model No. 4463-D, 19/3/2024 Mainfreight WH7 -Risk assessment for mobile plant 22/2/24 including forklift and reach lifts. - Forklift Maintenance history (12 months)	Document Name: ONVMP_V14_compiled_Nov2024 DPHI Receipt: Post Approval Form_20250213001116	24/3/2025 - Require evidence to ensure that best noise monitoring practices are being implemented 15/04/2025 - No specific reporting or monitoring required. B88 has been covered in the MPE noise and vibration management plan.	ESR	ESR	Renzo Tonin	Tactical	Monitoring Reporting	Noise and Vibration	Annually	Open
B89	For the duration of operation heavy road freight vehicles are not permitted to use Moorebank Avenue south of the East Hills Railway corridor. A main gate monitoring system (e.g. CCTV) must be installed to identify heavy vehicles turning left from the terminal site onto Moorebank Avenue, or turning right from Moorebank Avenue to the terminal site. The Secretary may at any time request the Applicant to provide a **heavy vehicle monitoring report** for the prior 12 month period.	Operation	**Compliant**	Heavy Vehicle Monitoring Report	Require evidence to ensure proper measures have been taken to ensure heavy road freight vehicles are not using the East Hills Railway corridor.	Biannual Trip Origin Destination Report (MPE1 and MPE2), Ason Group for: - Nov 2020, 15/02/21 - May 2021, 08/06/2021 - Nov 2021, 16/12/2021 - May 2022, 11/10/2022 - Nov 2022, 19/01/2023 - May 2023, 09/08/2023 - Nov 2023, 26/02/2024 DPHI post approval portal lodgement 24/02/21 for Nov 2020 report DPHI post approval portal lodgement for the BTODR for Nov 2023, 29/2/2024 DPHI post approval portal lodgement for the BTODR for May 2023, 9/8/2023 Interview with auditees 8-9/05/24 Complaints Register current to 31 May 2024 25/06/2025 - May 2025 version of the BTODR (1065r11_MPE BTODR May 2025) has been received and filed on the Major Projects website. Also refer to email from Piran Trethewey from 28/03/2025 for further clarification.	Document Name: Re_ MPE Stage 2 SSD 7628 - Condition B89 Heavy Vehicle Monitoring Non Compliance	Outstanding Information Required - Nil	ESR	ASON Group			Monitoring Reporting	Traffic and Access	Six months	Open

Condition of Consent	COMPLIANCE REQUIREMENT	DEVELOPMENT PHASE	COMPLIANCE STATUS	MONITORING REQUIREMENT METHODOLOGY (See condition and management plan)	ONGOING ACTIVITIES AND IMPLEMENTATION	EVIDENCE AND COMMENTS (Received to date from tenants and consultants)	DPHI Receipt / Consultant Document Name	OUTSTANDING INFORMATION / ACTIONS (Required from tenants and consultants)	PRIMARY RESPONSIBLE	RESPONSIBLE FOR IMPLEMENTATION	RESPONSIBLE FOR REPORTS	RESPONSIBLE FOR LODGING W/ DEPARTMENT	TYPE	CATEGORY	FREQUENCY	Status
B90	For the duration of operation, the Applicant must: a) continue to implement all reasonable and feasible best practice noise mitigation measures; b) continue to investigate ways to reduce the noise generated by the development, including maximum noise levels which may result in sleep disturbance; and c) report on these investigations and the implementation and effectiveness of these measures in the Annual Review to the satisfaction of the Secretary.	Operation	Compliant	Noise Monitoring	Require evidence to ensure that best noise monitoring practices are implemented.	Operational Noise Monitoring for MLP, Renzo Tonin, 23/04/21 Warehouse 3A Operational Compliance Measurement, Renzo 01/12/20220 Warehouse 4B (ATS) Operational Compliance Measurement, Renzo 01/12/20220 Warehouse 5 Operational Compliance Measurement, Renzo 09/04/21 Warehouse 4A Operational Compliance Measurement, Renzo 06/04/21 Warehouse 3B Operational Compliance Measurement, Renzo 06/04/21 Warehouse 1 (Catch) Operational Compliance Measurement, Renzo 19/5/2022 Annual Noise Review Reports from Renzo Tonin for: - From Feb 2020 to Mar 2021 (Y1 Ops), 21/6/2021, Issue 2 - From Apr 2021 to Apr 2022 (Y2 Ops), 23/05/2022, Issue 2 - From Apr 2022 to Apr 2023 (Y3 Ops), 6/07/2023, Issue 2 Letter from DPHI to Qube, 14/09/2021 re. acceptance of Operational Noise Report Six-monthly Operations Compliance Report: - No.1 – May to Nov 2020, 30/3/2021. Post Approval Form, 5/4/2021 - No.2 – Nov 2020 to May 2021, 15/06/2021. - No.3 – May to Nov 2021, 20/12/2021. Post Approval Form, 22/12/2021 - No.4 – Nov 2021 to May 2022, 1/6/2022 (ANRR not included) - No.5 - May to Nov 2022, 16/02/2023. Post Approval Form, 27/2/2023. - No.7 - Jun to Oct 2023, 3/4/2024. - No.8 - Nov 2023 to Apr 2024, 3/4/2024	Document Name: TM006-24-02F03 MPE Annual Review 2025 (r2) DPHI Receipt: Post Approval Form_20250617052152	24/3/2025 - Require evidence to ensure that best noise monitoring practices are implemented 15/04/2025 - This is addressed by annual noise monitoring review report	ESR	ASON Group			Monitoring Reporting	Traffic and Access	Six months	Open
B101	Prior to commencement of operation, the Applicant must prepare a **Heritage Interpretation Plan** based on the recommendations contained in the Heritage Interpretation Strategy (artefact, 2017) approved under MPE Stage 1. The plan must be prepared for the entire Moorebank Intermodal Precinct (MPE and MPW sites).	Pre-operation	Compliant	Heritage Interpretation Plan	A heritage interpretation plan for the entire Moorebank Intermodal Precinct has been prepared.	Heritage Interpretation Plan, 27/06/19 Letter DPIE to Qube, 08/04/20 (MPE S1 and S2 operational document approval)	Document Name: Moorebank Intermodal Terminal_Heritage Interpretation Plan_27062019_final_redacted	Outstanding Information Required - Nil	ESR	ESR	Artefact	Tactical	Monitoring Reporting	Heritage	Prior to operation	Closed
B102	The plan must form part of the OEMP required by condition C3 and must: (a) be prepared by a suitably qualified and experienced person(s); (b) be prepared in consultation with NSW Heritage Division, Council, relevant landowners and stakeholders including the Moorebank Heritage Group (MHG), Department of Defence, as well as the Relevant Aboriginal Parties (RAPs) should themes relating to Aboriginal heritage be included for interpretation; and (c) be approved by the Secretary prior to the commencement of operation.	Pre-operation	Compliant	OEMP	This OEMP has been prepared to meet these requirements.	Heritage Interpretation Plan, 27/06/19 Letter DPIE to Qube, 08/04/20 (MPE S1 and S2 operational document approval) 12/02/2025 - Report revision 19 received and filed on 4/02/2025. Lodged onto Major Projects website 12/02/2025.	Document Name: Moorebank Intermodal Terminal_Heritage Interpretation Plan_27062019_final_redacted	Outstanding Information Required - Nil	ESR	ESR	ESR	Not Applicable	Plan	Other	Prior to operation	Open
B106	Prior to early works, a **baseline monitoring program** must be prepared in consultation with OEH and DPI to define pre-development conditions for water quality, invertebrates and fish assemblages. The results of this monitoring program are to be used to: (a) develop a **Biodiversity Monitoring Strategy** to identify any changes between upstream and downstream sites as a result of the construction and operation of the development; and (b) set the stormwater water quality and quantity performance criteria referred to in condition B41.	Pre-operation	Compliant	Biodiversity Monitoring Report	The baseline monitoring forms the basis for the ongoing Biodiversity Monitoring Strategy (BMS) to assess stream health in accordance with CoC B106, to determine any change in stream health or water quality throughout the life of the Project and to ascertain whether these changes can be attributed to the Project works. The BMS outlines monitoring requirements and includes the Stormwater Monitoring Strategy required by CoC B43 and B44. This report is for information only.	Biodiversity Monitoring Report, Anzac Creek, Spring 2023, Bioanalysis, 9/1/2024 Stormwater Network Water Quality Monitoring Data and Reporting, Apical, April 2021 Sprig Stormwater Network & Water Quality Monitoring Data and Report for October 2023, from Apical Six-Monthly Operations Compliance Report #7 Jun to Oct 2023, 1/2/2024. Post Approval Form 5/3/2024 re. Six-Monthly Operations Compliance Report No.7 12/02/2025 - Report received, and filed on the 7/02/2025	Document Name: MPES2 B106 (8A Final Report 2025.07O2) Anzac Creek Monitoring Spring 2024 DPHI Receipt: Post Approval Form_20250626041141	17/02/2025 - Stakeholders to provide clarification on the info taken from the B106 report and inserted into the BMS Outstanding Information Required - Nil	ESR	ESR	Arcadis	Not Applicable	Monitoring	Aquatic Monitoring	6 monthly	Open
B110	Prior to operation, the Applicant must prepare an **Operational Flora and Fauna Management Plan (OFFMP)** in consultation with OEH. The OFFMP must form part of the OEMP required by condition C3 and must include measures to ensure biodiversity values not intended to be impacted are protected, including but not limited to: (i) weed control; (ii) feral animal control; (iii) pathogen management procedures; (iv) monitoring; and (v) rehabilitation actions.	Pre-operation	Compliant	OFFMP	An Operational Flora and Fauna Management Plan (OFFMP) has been prepared to address the requirements of this condition.	Operational Flora and Fauna Management Plan Rev.9, SMEC, 13/01/23 (the OFFMP) Post Approval Submission (DPHI portal) undated re: submission of OFFMP Rev 7 to DPHI Letter DPHI to ESR, 7/6/23 (approval of OMPs) - Operational Flora and Fauna Management Plan Rev.10, 13/08/24 (the OFFMP) 12/02/2025 - Revision 10 of report received and filed on 4/02/2025. Lodged onto Major Projects website 13/02/2025. 20/05/2025 - Latest annual monitoring report, revision 1B, received and filed (MP_Operational_AMR_Arcadis_2024-2025_Final_v1) 19/06/2025 - Mav weed monitoring report	Document Name: OFFMP_V10_compiled_Nov2024 DPHI Receipt: Post Approval Form_20250213000310	See Arcadis tab, further clarification to be provided on the condition. November 2024 revision of the report has been received. Outstanding Information Required - Nil	ESR	Arcadis	WERS	Not Applicable	Monitoring	Flora and Fauna	as required	Open
B112	The Applicant (the operator/occupant of each premises) must store and handle all chemicals, fuels and oils, including Dangerous Goods as defined in the Australian Code for the Transport of Dangerous Goods by Road & Rail, in accordance with: (a) the requirements of all relevant Australian Standards; and (b) the NSW EPA's Storing and Handling of Liquids: Environmental Protection – Participants Handbook if the chemicals are liquids. In the event of an inconsistency between the requirements listed above, the most stringent requirement shall prevail to the extent of the inconsistency.	Operation	Compliant	Dangerous Good Audit	See Section 3.3.3 The following sub-plans have been prepared to address the requirements of this condition: Emergency Response Plan Operational Traffic and Access Management Plan Operation Waste and Resource Management Plan	Interview with auditees 8-9/05/24 Site inspection 8/05/24 Warehouse Operational Environmental Management Plans (various) (WOEMP) Warehouse Operational Environmental Management Plan for WH7 (Mainfreight), 1/3/2024, Rev. 2 17/03/2025 - Pending contracts and tenant to demonstrate at least one example of how their waste management strategies are being implemented.	Refer to MPES2 B112 Dangerous Goods Tracking folder	Outstanding Information Required - KF to check if we have uploaded in the folder the most updated Environmental Management Plan (WH1 and WH7). Also to confirm with ESR on the dangerous goods tracking plan. 17/03/2025 - Per ESR, tracking to be simplified for tenants	ESR/ QUBE	Knight Frank	Tenant	Tactical	Monitoring Reporting	Other	Annually	Ongoing
B114	The quantities of Dangerous Goods present at any time within the development or transported to and from the development must not exceed the screening threshold quantities in the Department's Hazardous and Offensive Development Guidelines Application Guidelines Applying SEPP 33 except Warehouse 7. The storage of Dangerous Goods and combustible materials in Warehouse 7 must not exceed the quantities listed in Table 3-1 of the Preliminary Hazard Analysis prepared by Riskcon dated 11 October 2022 at all times.	Operation	Compliant	Dangerous Good Audit	Storage of dangerous goods and combustible materials in Warehouse 7 must not exceed the quantities listed in Table 3-1 of the Preliminary Hazard Analysis prepared by Riskcon dated 11 October 2022 at all times.	Interview with auditees 8-9/05/24 Site inspection 8/05/24 Warehouse Operational Environmental Management Plans (various) (WOEMP). Warehouse Operational Environmental Management Plan for WH7 (Mainfreight), 1/3/2024, Rev. 2 Standard Dangerous Good Register current to May 2024 DG Coordinator Monthly Checklist for 10/5/2024 and 18/04/2024 Emergency Response Plan for WH7 from Riskcon Engineering, 16/8/2023 Dangerous Goods Report for WH7 from Riskcon, 27/4/2022, Rev.1 Preliminary Hazards Analysis for WH7 from Riskcon, 11/10/2022, Rev.1	Refer to MPES2 B114 Dangerous Goods Tracking folder	Outstanding Information Required - Tentant to provide DG Monthly checklist from June, July and Aug. Sep, Oct, Nov/ 24 DG Volumes from Aug, Sep, Oct, Nov 24 Also to confirm with ESR on the dangerous goods tracking plan. 17/03/2025 - Per ESR, tracking to be simplified for tenants	ESR/ QUBE	Knight Frank	Mainfreight	Tactical	Compliance	Other	Monthly	Ongoing
B114A	The Applicant must prepare the studies set out under subsections (a) and (b). Storage of Dangerous Goods in Warehouse 7, must not commence until study recommendations have been considered and, where appropriate, acted upon. The Applicant must submit the studies to the Planning Secretary no later than one month prior to the commencement of the storage of Dangerous Goods in Warehouse 7, or within such further period as the Planning Secretary may agree. (a) FIRE SAFETY STUDY A Fire Safety Study for Warehouse 7. The study must cover the relevant aspects of the Department's Hazardous Industry Planning Advisory Paper No. 2, 'Fire Safety Study' and the New South Wales Government's Best Practice Guidelines for Contaminated Water Retention and Treatment Systems. The study must also satisfy the operational requirements of Fire and Rescue NSW, and include documentary evidence that a suitably qualified and experienced person is satisfied that the Applicant constructed Warehouse 7 in accordance with the fire safety systems and proposed designs assessed in the Fire Safety Study. (b) FINAL HAZARD ANALYSIS A Final Hazard Analysis for Warehouse 7 with the Department's Hazardous Industry Planning Advisory Paper No. 6, 'Hazard Analysis'.	Operation	Compliant	Fire Safety Study and Hazard Analysis	Fire Safety Study for Warehouse 7/ Final Hazard Analysis for Warehouse 7.	Interview with auditees 8-9/05/24 Site inspection 8/05/24 Standard Dangerous Good Register current to May 2024 DG Coordinator Monthly Checklist for 10/5/2024 and 18/04/2024 Dangerous Goods Report for WH7 from Riskcon, 27/4/2022, Rev.1 Preliminary Hazards Analysis for WH7 from Riskcon, 11/10/2022, Rev.1 Emergency Response Plan for WH7 from Riskcon Engineering, 16/8/2023 Fire Safety Study from WH7 from Riskcon Engineering, 12/12/2023 Letter from NSW Fire and Rescue to Mainfreight Distribution, 21/12/2023 re. Review of Fire Safety Study (FSS) for MPE Warehouse 7	Document Name: RCE-23150_Mainfreight_FIRE SAFETY STUDY DPHI Receipt: Approval of Plan Strategy or Study_FIRE SAFETY STUDY Document Name: RCE-23150_Mainfreight_FINAL HAZARD ANALYSIS DPHI Receipt: Approval of Plan Strategy or Study_FINAL HAZARD ANALYSIS	Outstanding Information Required - Nil	ESR	Knight Frank	Mainfreight	Aspect	Compliance	Other	Annual	Open
B114B	Prior to the storage of Dangerous Goods in Warehouse 7, the Applicant must develop and implement the plans and systems set out under subsections (a) and (b). The Applicant must submit to the Planning Secretary documentation describing the plans and systems no later than two months prior to the commencement of the storage of Dangerous Goods in Warehouse 7, or within such further period as the Planning Secretary may agree. (a) EMERGENCY PLAN A comprehensive Emergency Plan and detailed emergency procedures for Warehouse 7. This plan must include consideration of the safety of all people outside of the development who may be at risk from the development. The plan must be consistent with the Department's Hazardous Industry Planning Advisory Paper No. 1, 'Emergency Planning'. (b) SAFETY MANAGEMENT PLAN A document setting out a comprehensive Safety Management System, covering all on-site operations and associated transport activities involving hazardous materials for Warehouse 7. The document must clearly specify all safety related procedures, responsibilities and policies, along with details of mechanisms for ensuring adherence to the procedures. Records must be kept on-site and must be available for inspection by the Planning Secretary upon request. The Safety Management System must be consistent with the Department's Hazardous Industry Planning Advisory Paper No. 9, 'Safety Management'.	Operation	Compliant	Emergency Plan	Develop and implement the plans and systems set out under subsections (a) and (b). The Applicant must submit to the Planning Secretary	Interview with auditees 8-9/05/24 Site inspection 8/05/24 Dangerous Goods Report for WH7 from Riskcon, 27/4/2022, Rev.1 Preliminary Hazards Analysis for WH7 from Riskcon, 11/10/2022, Rev.1 Emergency Response Plan for WH7 from Riskcon Engineering, 16/8/2023	Document Name: RCE-23150_Mainfreight_EMERGENCY RESPONSE PLAN DPHI Receipt: Approval of Plan Strategy or Study_Emergency Response Plan and SMS Document Name: Warehouse 7 - Safety Management System DPHI Receipt: Approval of Plan Strategy or Study_Emergency Response Plan and SMS	Outstanding Information Required - Nil	ESR	Knight Frank	Mainfreight	Aspect	Compliance	Emergency Response	Annual	Open
B114C	HAZARD AUDIT Twelve months after the commencement of operations of Warehouse 7 and every five years thereafter, or at such intervals as the Planning Secretary may agree, the Applicant must carry out a comprehensive Hazard Audit of Warehouse 7 and within one month of each audit submit a report to the Planning Secretary. The audits must be carried out at the Applicant's expense by a qualified person or team, independent of the development, approved by the Planning Secretary prior to commencement of each audit. Hazard Audits must be consistent with the Department's Hazardous Industry Planning Advisory Paper No. 5, 'Hazard Audit'. The audit report must be accompanied by a program for the implementation of all recommendations made in the audit report. If the Applicant intends to defer the implementation of a recommendation, reasons must be documented.	Operation	Compliant	Hazard Audit	Hazard Audit of Warehouse 7 and within one month of each audit submit a report to the Planning Secretary.	Interview with auditees 8-9/05/24 Site inspection 8/05/24 26/06/2025 - Tenant currently compliant, ongoing audit as twelve months of operations has occurred. This audit will be submitted to the secretary within month of completion.	N/A	Outstanding Information Required - Nil	ESR	Knight Frank	Mainfreight	Tactical	Compliance	Other	12 months after commencement of the operations and every 5 years	Open
B114D	FURTHER REQUIREMENTS The Applicant must comply with all reasonable requirements of the Planning Secretary in respect of the implementation of any measures arising from the reports submitted in respect of conditions 114A to 114D inclusive, within such time as the Planning Secretary may agree.	Operation	Compliant	Hazard Audit	Comply with all reasonable requirements of the Planning Secretary.	Interview with auditees 8-9/05/24 Site inspection 8/05/24 26/06/2025 - Tenant currently compliant, ongoing audit as twelve months of operations has occurred. This audit will be submitted to the secretary within month of completion.	N/A	Outstanding Information Required - Nil	ESR	Knight Frank	Mainfreight	Tactical	Monitoring Reporting	Other	12 months after commencement of the operations and every 5 years	Open

Condition of Consent	COMPLIANCE REQUIREMENT	DEVELOPMENT PHASE	COMPLIANCE STATUS	MONITORING REQUIREMENT METHODOLOGY (See condition and management plan)	ONGOING ACTIVITIES AND IMPLEMENTATION	EVIDENCE AND COMMENTS [Received to date from tenants and consultants]	DPHI Receipt / Consultant Document Name	OUTSTANDING INFORMATION / ACTIONS (Required from tenants and consultants)	PRIMARY RESPONSIBLE	RESPONSIBLE FOR IMPLEMENTATION	RESPONSIBLE FOR REPORTS	RESPONSIBLE FOR LODGING W/ DEPARTMENT	TYPE	CATEGORY	FREQUENCY	Status
B115	Prior to occupation of each premises and in each instance of occupation by a new occupant, a report must be submitted to the Secretary confirming that the premises will be operated so as to comply with the requirements of conditions B112 and B114.	Pre-operation	Compliant	WOEMP	This will be addressed by a WOEMP which must be prepared and approved by the Secretary prior to operation of the warehouse	26/06/2025 - All letters have been submitted to the department from 2021 to 2024 for all warehouse currently operating	Warehouse 3B Warehouse Operational Environmental Management Plan – Federal Hospitality Equipment Environmental Management Plan, 08/03/21 Letter DPIE to Qube, 22/03/21 (approval of Warehouse 3B WOEMP) Warehouse Operation Environmental Management Plan (WOEMP) for Warehouse 5, 15/12/20 Letter DPIE to Qube, 12/01/21 (approval of Warehouse 5 WOEMP) Warehouse Operational Environmental Management Plan (Warehouse 4A, PCA Express), 5/05/21 Letter DPIE to Qube, 21/05/21 (approval of Warehouse 4A WOEMP) Warehouse Operational Environmental Management Plan (Warehouse 6), Rev.2, 4/8/2023 Letter DPHI to Tactical, 26/9/23 (approval of Warehouse 6 WOEMP, Rev.2) Warehouse Operational Environmental Management Plan (Warehouse 7), Rev.0 14/12/2022 updated Rev.2, 14/9/2023 Letter DPHI to Tactical, 28/06/23 (approval of Warehouse 7 WOEMP Rev.0) Letter DPHI to Tactical, 1/05/24 (approval of Warehouse 7 WOEMP Rev.2) 24/02/2024 - Version 1.3 of WOEMP for Warehouse 4B received	Outstanding Information Required - Nil	ESR	Knight Frank/ QUBE	Tenant	Tactical	Plan	Warehouse	Prior operation	Open
B116	Six months prior to operation, the Applicant must prepare an **Emergency Response Plan**, in consultation with FRNSW and NSW Police Force. The Emergency Response Plan must include, but not be limited to: (a) protocols and procedures to be followed during emergency situations associated with the operation of the project (including fires and explosions). The protocols and procedures are to take into account the needs of people with a disability or who may experience access problems in emergency situations; (b) details of traffic management measures to be implemented during emergencies, where appropriate, to minimise the potential for escalation of the emergency; (c) design and management measures to address the potential environmental impacts of an emergency situation, including measures for containment of contaminated fire-fighting water, fuel spills and gaseous combustion products; and (d) details of a training and testing program to ensure that all operational staff are familiar with the Emergency Response Plan.	Pre-operation	Compliant	Emergency Response Plan	An Emergency Response Plan has been prepared to address the requirements of this condition.	Operational Emergency Response Plan Rev.15, SIMTA, 24/01/23 (the OERP) Post Approval Submission (DPHI portal) undated re: submission of OERP Rev 15 to DPHI Letter DPHI to ESR, 7/9/23 (approval of OMPs) OERP Rev 16 - 13/08/2024 - Updated for approval of Modifications 5 and 6 and MIP name change 12/02/2025 - Revision 16 of the ERP (PREC-QPMS-EN-PLN-0002 ERP_Rev16_compiled_Nov2024) received and filed on 4/02/2025. Lodged onto Major Projects website 12/02/2025.	Document Name: PREC-QPMS-EN-PLN-0002 ERP_Rev16_compiled_Nov2024 DPHI Receipt: Post Approval Form_20250212041958	Outstanding Information Required - Nil	ESR	ESR			Plan	Emergency Response	Prior to operation	Open
B120	Prior to the commencement of operation, the Applicant must prepare a **Waste Management Plan** for the development to the satisfaction of the Secretary. The Waste Management Plan must form part of the OEMP required by condition C3 and be prepared in accordance with condition C7. The Plan must: (a) detail the type and quantity of waste to be generated during operation of the development; (b) describe the handling, storage and disposal of all waste streams generated on site, consistent with the Protection of the Environment Operations Act 1997, Protection of the Environment Operations (Waste) Regulation 2014 and the Waste Classification Guidelines Part 1: Classifying Waste (EPA, 2014) (as may be updated or replaced from time to time); (c) detail the materials to be reused or recycled, either on or off site; and (d) include the Management and Mitigation Measures included in APPENDIX B.	Pre-operation	Compliant	Waste Management Plan	A Waste Management Plan has been prepared to address the requirements of this condition.	Operational Waste and Resources Management Plan Rev.11, SIMTA, 23/01/23 (the OWRMP) Post Approval Submission (DPHI portal) undated re: submission of OWRMP Rev 11 to DPHI Letter DPHI to ESR, 7/9/23 (approval of OMPs) - OWRMP Rev 12 issued on 13th August 2024 - Updated for approval of Modifications 5 and 6 and MIP name change 13/02/2025 - Revision 12 of report received and filed on 4/02/2025. Lodged onto Major Projects website 13/02/2025. 17/03/2025 - Pending contracts and tenant to demonstrate at least one example of how their waste management strategies are being implemented.	Document Name: OWRMP_V12_compiled_Nov2024 DPHI Receipt: Post Approval Form_20250213004030	Outstanding Information Required - Nil	ESR	ESR	ESR	Not Applicable	Plan	Waste and Resource	Prior to operation	Open
B121	Waste must be secured and maintained within designated waste storage areas at all times and must not leave the site or be deposited on or otherwise enter neighbouring public or private properties.	Operation	Compliant	Waste Management Strategy	A Waste Management Plan has been prepared to address the requirements of this condition.	Operational Waste and Resources Management Plan Rev.11, SIMTA, 23/01/23 (the OWRMP) Warehouse Operational Environmental Management Plans (various) (WOEMP) Site inspection 8/05/24 Mainfreight (WH7) Waste Report April 2024 Caesarstone (WH3) Waste Register for 2021, 2022 and from Jan to Apr 2023	Document Name: OWRMP_V12_compiled_Nov2024 DPHI Receipt: Post Approval Form_20250213004030	17/02/2025 - Pending contracts and tenant to demonstrate at least one example of how their waste management strategies are being implemented. 17/03/2025 - Per ESR, tracking to be simplified for tenants	ESR	Arcadis	Senversa	Not Applicable	Plan	Waste and Resource	3 months	Ongoing
B122	All waste materials removed from the site must only be directed to a waste management facility or premises lawfully permitted to accept the materials.	All	Compliant	Waste Management Strategy	A Waste Management Plan has been prepared to address the requirements of this condition.	Operational Waste and Resources Management Plan Rev.11, SIMTA, 23/01/23 (the OWRMP) Warehouse Operational Environmental Management Plans (various) (WOEMP) Wasteflex EPL 20572 Mainfreight (WH7) Waste Report April 2024 Caesarstone (WH3) Waste Register for 2021, 2022 and from Jan to Apr 2023	Document Name: OWRMP_V12_compiled_Nov2024 DPHI Receipt: Post Approval Form_20250213004030	17/03/2025 - Pending contracts and tenant to demonstrate at least one example of how their waste management strategies are being implemented. 17/03/2025 - Per ESR, tracking to be simplified for tenants	ESR	CARAS			Monitoring Reporting	Waste and Resource	During construction	Ongoing
B123	The Applicant must assess and classify all liquid and non-liquid wastes to be taken off site in accordance with the latest version of EPA's *Waste Classification Guidelines Part 1: Classifying Waste* (EPA, 2014).	All	Compliant	Waste Management Strategy	A Waste Management Plan has been prepared to address the requirements of this condition.	Operational Waste and Resources Management Plan Rev.11, SIMTA, 23/01/23 (the OWRMP) Warehouse Operational Environmental Management Plans (various) (WOEMP) Wasteflex EPL 20572 Mainfreight (WH7) Waste Report April 2024 Caesarstone (WH3) Waste Register for 2021, 2022 and from Jan to Apr 2023	Document Name: OWRMP_V12_compiled_Nov2024 DPHI Receipt: Post Approval Form_20250213004030	17/03/2025 - Pending contracts and tenant to demonstrate at least one example of how their waste management strategies are being implemented. 17/03/2025 - Per ESR, tracking to be simplified for tenants	ESR	CARAS			Monitoring Reporting	Waste and Resource	During construction	Ongoing
B124	Waste generated outside the site must not be received at the site for storage, treatment, processing, reprocessing, or disposal unless it satisfies these conditions.	All	Compliant	Waste Management Strategy	A Waste Management Plan has been prepared to address the requirements of this condition.	Operational Waste and Resources Management Plan Rev.11, SIMTA, 23/01/23 (the OWRMP) Warehouse Operational Environmental Management Plans (various) (WOEMP) Site inspection 8/05/24	Document Name: OWRMP_V12_compiled_Nov2024 DPHI Receipt: Post Approval Form_20250213004030	17/03/2025 - Pending contracts and tenant to demonstrate at least one example of how their waste management strategies are being implemented. 17/03/2025 - Per ESR, tracking to be simplified for tenants	ESR	CARAS			Monitoring Reporting	Waste and Resource	During construction	Ongoing
B125	The Applicant must retain all sampling and waste classification data for the life of the development in accordance with the requirements of EPA.	All	Compliant	Waste Management Strategy	A Waste Management Plan has been prepared to address the requirements of this condition.	WHT Certificates of Destruction issued to Mainfreight were sighted from Recycle Waste Management as follows: - Certificate No. 492/431 dated 29/3/2024 - Certificate No. 520/442 dated 29/4/2024 - Certificate No. 511/436 dated 29/3/2024 - Certificate No. 525/444 dated 29/4/2024	Document Name: OWRMP_V12_compiled_Nov2024 DPHI Receipt: Post Approval Form_20250213004030	17/03/2025 - Pending contracts and tenant to demonstrate at least one example of how their waste management strategies are being implemented.	ESR	Prensa			Monitoring Reporting	Waste and Resource	During construction	Ongoing
B126	The collection of waste generated during operation of the development must be undertaken between 7 am to 10 pm Monday to Friday	Operation	Compliant	Waste Management Strategy	A Waste Management Plan has been prepared to address the requirements of this condition.	Operational Waste and Resources Management Plan Rev.11, SIMTA, 23/01/23 (the OWRMP) Warehouse Operational Environmental Management Plans (various) (WOEMP) Complaints Register current to 31 May 2024	Document Name: OWRMP_V12_compiled_Nov2024 DPHI Receipt: Post Approval Form_20250213004030	17/02/2025 - Pending contracts and tenant to demonstrate at least one example of how their waste management strategies are being implemented.	ESR	Arcadis	Senversa	Not Applicable	Plan	Waste and Resource	As required	Ongoing
B127	The Applicant must: (a) take all reasonable steps to manage pests and vermin on the site; (b) manage declared noxious weeds on the site in accordance with the requirements of the Noxious Weeds Act 1993; and (c) inspect the site on a regular basis, no less than every 3 months, to ensure that these measures are working effectively, and that pests, vermin or noxious weeds are not present on site in sufficient numbers to pose an environmental hazard, or cause the loss of amenity in the surrounding area. Note: For the purposes of this condition, noxious weeds are those species subject to an order declared under the Noxious Weed Act 1993.	Operation	Compliant	Operational Flora and Fauna Management Plan	An Operational Flora and Fauna Management Plan has been prepared to address the requirements of this condition.	Operational Waste and Resources Management Plan Rev.11, SIMTA, 23/01/23 (the OWRMP) Arcadis reports for 2022 and 2023 Weeding Reports for: - April to 2021 - for Jan and Feb 2024 MPE Operational – Weed Monitoring Report February 2021, Arcadis, 26/02/21 MPE Operational – Weed Monitoring Report April 2021, Arcadis, 11/05/21 Site inspection 8/05/24 20/05/2025 - Latest annual monitoring report, revision 1B, received and filed (MIP_Operational_AMR_Arcadis_2024-2025_Final_v1)	Document Name: OFFMP_V10_compiled_Nov2024 DPHI Receipt: Post Approval Form_20250213000310	Outstanding Information Required - Nil	ESR	ESR	Arcadis	Not Applicable	Plan	Waste and Resource	3 months	Ongoing
B130	Prior to an occupation certificate being issued, the Applicant must submit to the Secretary a Site Audit Statement, prepared in accordance with the NSW Contaminated Land Management – Guidelines for the NSW Site Auditor Scheme (3rd edition, 2017), which demonstrates that the site is suitable for its intended land use (i.e. Section 'A'). The Site Auditor must consider the most up to date PFAS guidance.	Pre-operation	Compliant	Site Audit Statement	Evidence of submission of SAS (Site Audit Statement - p) to the department	Audit Boundaries Drawing from JBS&G Interim Occupation Certificates from Mckenzie Group for: - No. 19/124520-5 (whole of Warehouse 1), 21/06/19 - No. 20/125115-4 (Warehouse 4A and 4B including ancillary offices, landscaping and on-grade car parking), 22/05/20 - No. 20/125116-5 (Warehouse 3 and offices), 20/03/20 - No. J/78230/04 (Warehouse 5), 04/12/20 Occupation Certificates from Mckenzie Group: - No. 211790/12 (Warehouse 6, excluding 1st floor), 31/01/2018 - No. 211790/14 (Warehouse 6, including 1st floor offices), 31/01/2018 - No. 211790/08 (Warehouse 7 and Main office Stage 1 only), 31/01/2018 - No. 211790/09 (Racking Warehouse 7), 31/01/2018 - No. 211790/010 (For complete Warehouse 7 excluding mezzanine floor), 31/01/2018 - No. 211790/11 (Mezzanine floor in Warehouse 7 only), 31/01/2018 - No. 211790/13 (The reminder of racking storage in Warehouse 7), 31/01/2018 - No. 211790/15 (Warehouse 5 and 7b), 31/01/2018 Sighted Site Audit Statement (SAS) from NSW EPA for: - IMEX, 15/8/2019 - Lot 22, 15/10/2019 - Lot 23, 21/07/2020 - Lot 24, 20/5/2019 Sighted Site Audit Report (SAR) from Enviroview for: - IMEX, 15/8/2019, Rev. Final - Lot 22, 15/10/2019, Rev. Final - Lot 22, 27/07/2020, Re. Final SAS for Lot 23 was acknowledged from DPHI on the 22/7/2020. SAS for Lot 24 was submitted to DPHI on the 20/5/2019.	DPHI Receipt: Post Approval Form_20230209010742	Outstanding Information Required - Nil	ESR	Tactical Group			Certificate	Audit	Only Once	Closed

Condition of Consent	COMPLIANCE REQUIREMENT	DEVELOPMENT PHASE	COMPLIANCE STATUS	MONITORING REQUIREMENT METHODOLOGY (See condition and management plan)	ONGOING ACTIVITIES AND IMPLEMENTATION	EVIDENCE AND COMMENTS (Received to date from tenants and consultants)	DPHI Receipt / Consultant Document Name	OUTSTANDING INFORMATION / ACTIONS (Required from tenants and consultants)	PRIMARY RESPONSIBLE	RESPONSIBLE FOR IMPLEMENTATION	RESPONSIBLE FOR REPORTS	RESPONSIBLE FOR LODGING W/ DEPARTMENT	TYPE	CATEGORY	FREQUENCY	Status
B145	Public road access must comply with section 4.1.3(1) of *Planning for Bush Fire Protection 2006* except for the requirement for through-access.	All	**Compliant**	Operational Emergency Response Plan	A Bushfire Management Strategy has been prepared to address the requirements of this condition.	Operational Emergency Response Plan Rev.15, SIMTA, 24/01/23 (the OERP) Bushfire Emergency and Evacuation Plan Moorebank Precinct East Stage 2, SIMTA, 19/03/21 (the BEEMP) Letter DPIE to Qube, 10/08/20 (approval of revised BEEMP) Letter Blackash to Arcadis, 27/01/21 (review of APZs) 25/03/2025 - Revision 16 of the ERP (PREC-QPMS-EN-PLN-0002 ERP_Rev16_compiled_Nov2024) received and filed on 4/02/2025. Lodged onto Major Projects website 12/02/2025.	Document Name: PREC-QPMS-EN-PLN-0002 ERP_Rev16_compiled_Nov2024 DPHI Receipt: Post Approval Form_20250212041958	Outstanding Information Required - Nil	ESR	Arcadis			Monitoring Reporting	Traffic and Access	During construction	**Closed**
B146	The provision of water, electricity and gas must comply with section 4.1.3 of *Planning for Bush Fire Protection 2006.*	All	**Compliant**	OEMP	A Bushfire Management Strategy has been prepared to address the requirements of this condition.	Operational Emergency Response Plan Rev.15, SIMTA, 24/01/23 (the OERP) Letter DPIE to Qube, 10/08/20 (approval of revised BEEMP) Letter Blackash to Arcadis, 27/01/21 (review of APZs) 25/03/2025 - Revision 16 of the ERP (PREC-QPMS-EN-PLN-0002 ERP_Rev16_compiled_Nov2024) received and filed on 4/02/2025. Lodged onto Major Projects website 12/02/2025.	Document Name: PREC-QPMS-EN-PLN-0002 ERP_Rev16_compiled_Nov2024 DPHI Receipt: Post Approval Form_20250212041958	Outstanding Information Required - Nil	ESR	Arcadis			Monitoring Reporting	Other	During construction	**Closed**
B153	The Applicant must obtain a certificate from a suitable qualified tradesperson, certifying that kitchen, food storage and food preparation areas have been fitted in accordance with Australian Standard AS4674. The Applicant must provide evidence of receipt of the certificate to the satisfaction of the Certifying Authority prior to occupation.	Operation	**Not triggered**	Certificate from a suitable qualified tradesperson	DPE Receipt	Interview with auditees 8-9/05/24 Site inspection 8/05/24 27/06/2025 - Currently there are no food on the premises	Refer to condition B153 folder for certificates	Outstanding Information Required - Nil	ESR	Knight Frank/ QUBE	Tenant	Tactical	Plan	Warehouse	Prior operation	**Closed**
B155	No later than one month before early works and fill importation, a **Community Communication Strategy** must be prepared and submitted to the Secretary for approval. The Community Communication Strategy is to provide mechanisms to facilitate communication between the Applicant, the Council and the community (including adjoining affected landowners and businesses, and others directly impacted by the development), during the design and construction of the development. The Community Communication Strategy must: (a) assign a central contact person to keep the nearby sensitive receivers regularly informed throughout the development; (a) detail the mechanisms for regularly consulting with the local community throughout the development, such as holding regular meetings to inform the community of the progress of the development and report on environmental monitoring results; (b) detail a procedure for consulting with nearby sensitive receivers to schedule high noise generating works or manage traffic disruptions; (c) include contact details for key community groups, relevant regulatory authorities, Registered Aboriginal Parties and other interested stakeholders; and (d) include a complaints procedure for recording, responding to and managing complaints, including: (i) email, toll-free telephone number and postal address for receiving complaints; (ii) advertising the contact details for complaints prior to and during operation, via the local newspaper and through on-site signage; (iii) a complaints register to record the date, time and nature of the complaint, details of the complainant and any actions taken to address the complaint; and (iv) procedures for the resolution of any disputes that may arise during the course of the development.	Pre-operation	**Compliant**	Community Communication Strategy	The Community Construction Strategy has been updated to address the requirements of community consultation during operation	Operation Community Communication Strategy, Moorebank Logistics Park – East Precinct, 23/01/2023 Rev.6 (the OCCS) Post Approval Form 27/03/2023. Letter DPHI to Qube, 08/04/20 (MPE S1 and S2 operational document approval) Letter DPHI to Qube, 10/05/21 (acknowledgment of updated OEMP and OCCS) https://moorebankintermodalprecinct.com.au/community/ OCCS Rev 7 - 13 August 2024_Updated following approval of Modifications 5 and 6 and MIP name change 12/02/2025 - Revision 7 of OCCS (PREC-QPMS-EN-PLN-0010_OCCS_Rev 007_clean_Nov2024) received and filed on 4/02/2025. Lodged onto Major Projects website 12/02/2025.	Document Name: PREC-QPMS-EN-PLN-0010_OCCS_Rev 007_clean_Nov2024 DPHI Receipt: Post Approval Form_20250212054518	Outstanding Information Required - Nil	ESR	TSA	ESR	Not Applicable	Plan	Other	Prior to operation	**Open**
B156	The Applicant must: (a) not commence construction until the Community Communication Strategy is approved by the Secretary; (b) implement the approved Community Communication Strategy for the duration of the development and for 24 months following the completion of operation.	Operation	**Compliant**	Community Communication Strategy	The Community Construction Strategy has been updated to address the requirements of community consultation during operation	Operation Community Communication Strategy, Moorebank Logistics Park – East Precinct, 23/01/2023 Rev.6 (the OCCS) Post Approval Form 27/03/2023 Letter DPHI to Qube, 08/04/20 (MPE S1 and S2 operational document approval) Letter DPHI to Qube, 10/05/21 (acknowledgment of updated OEMP and OCCS) Letter DPHI to ESR, 7/9/23 (approval of OMPs) https://moorebankintermodalprecinct.com.au/community/ 12/02/2025 - Revision 7 of OCCS (PREC-QPMS-EN-PLN-0010_OCCS_Rev 007_clean_Nov2024) received and filed on 4/02/2025. Lodged onto Major Projects website 12/02/2025.	Document Name: PREC-QPMS-EN-PLN-0010_OCCS_Rev 007_clean_Nov2024 DPHI Receipt: Post Approval Form_20250212054518	Outstanding Information Required - Nil	ESR	Arcadis	Arcadis	Tactical	Plan	Other	Operation	**Open**
B157	The Complaints Register must be provided to the Secretary within 7 days upon request, for the period detailed within the request.	Operation	**Compliant**	Complaints Register	The Community Construction Strategy has been updated to address the requirements of community consultation during operation	27/05/2025 - Latest complaints register received and filed	Document Name: Moorebank-Intermodal-Precinct-Online-Complaints-document-to 19 May 25	Outstanding Information Required - Nil	ESR	ESR	TSA	Not Applicable	Monitoring Reporting	Other	3 months	**Open**
C3	Before the commencement of operations, a **Precinct Operational Environmental Management Plan (OEMP)** must be prepared to the satisfaction of the Secretary. The OEMP must: (a) be prepared by a suitably qualified and experienced expert; (b) provide the strategic framework for environmental management of the development; (c) identify the statutory approvals required to carry out the development; (d) identify the infrastructure to be managed under the Precinct OEMP which is to include pavements, stormwater detention and water quality treatment structures and devices; and landscaping; (e) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the development including the overall responsibility for the operational environmental management of the freight village; (f) describe the procedures to be implemented to: (i) keep the local community and relevant agencies informed about the operation and environmental performance of the development; (ii) receive, handle, respond to, and record complaints; (iii) resolve any disputes that may arise; (iv) respond to any non-compliance; (v) respond to emergencies; and (g) include the management plans required under this approval, including: **(i) Operational Traffic and Access Management Plan;** **(ii) Workplace Travel Plan;** **(iii) Stormwater Infrastructure Operation and Maintenance Plan;** **(iv) Flood Emergency Response Plan;** **(v) Operational Air Quality Management Plan;** **(vi) Operational Noise and Vibration Management Plan;** **(vii) Heritage Interpretation Plan;** **(viii) Operational Flora and Fauna Management Plan;** **(ix) Waste Management Plan;** **(x) Long-term Contamination Management Plan; and** **(xi) Bushfire Emergency and Evacuation Plan.**	Pre-operation	**Compliant**	Precinct Operational Environmental Management Plan (OEMP)	This OEMP has been prepared to meet the Facilities regulatory and policy requirements in a systematic manner and to continually improve the environmental performance of the operational facility. The nominated sub-plans have been prepared in accordance with the applicable CoC.	Operational Environmental Management Plan Moorebank Logistics Park – East Precinct Rev.18, 13/01/23, SIMTA (the OEMP) Post Approval Submission (DPHI portal) updated re: submission of OEMP Rev 18 to DPHI Letter DPHI to Tactical/ESR, 7/9/23 (approval of OMPs) Stormwater Infrastructure Operation and Maintenance Plan Moorebank Logistics Park – East Precinct, 23/01/23, SIMTA (the SIOMP), Rev.8 Operational Air Quality Management Plan, SIMTA, 23/01/23 (OAQMP), Rev. 12 Operational Noise and Vibration Management Plan, SIMTA, 27/03/20 (the ONVMP) Rev.12 (no changes) Heritage Interpretation Plan, 27/06/19 (the HIP) Operational Flora and Fauna Management Plan, SIMTA, 13/01/23 (OTAMP), Rev. 09 Operational Waste and Resources Management Plan, SIMTA, 23/01/23 (OTAMP), Rev. 11 Operational Emergency Response Plan, SIMTA, 24 January 2023 (the OERP) Rev.15 Bushfire Emergency and Evacuation Plan Moorebank Precinct East Stage 2, SIMTA, 19 March 2021 (the BEEMP) Post Approval Submission (DPHI portal) updated re: submission of OEMP Rev 18 and sub-plans - POAQMP Rev 15 & OEMP REV 19 - 13/08/2024. Updated for approval of Modifications 5 and 6 and MIP name change	Document Name: OEMP_Rev_19_Compiled_Nov2024 DPHI Receipt: Post Approval Form_20250212040719	Tactical to review management plans. Lodge with the department and TSA consultancy will redact management plans and upload on company website. Outstanding Information Required - Nil	ESR	ESR	Arcadis	Not Applicable	Plan	Other	Prior to operation	**Open**
C4	The Applicant must: (a) not commence operation of the development until the OEMP is approved be the Secretary; and (b) operate the development in accordance with the most recent version of the OEMP approved by the Secretary, unless otherwise agreed by the Secretary.	Pre-operation	**Compliant**	Precinct Operational Environmental Management Plan (OEMP)	This OEMP has been prepared and approved by the secretary.	Refer evidence in Condition C3 above. Operational Environmental Management Plan Moorebank Logistics Park – East Precinct Rev 18, 13/01/23, SIMTA (the OEMP) Post Approval Submission (DPHI portal) updated re: submission of OEMP Rev 18 to DPHI Letter DPHI to ESR, 7/9/23 (approval of OMPs) Email from Tactical re. latest OEMPs, 28/3/2023 Email Knight Frank to Tenants re. latest OEMPs and sub-plans, no date 12/02/2025 - Report revision 19 received and filed on 4/02/2025. Lodged onto Major Projects website 12/02/2025. 31/03/2025 - DPHI receipt filed	Document Name: OEMP_Rev_19_Compiled_Nov2024 DPHI Receipt: Post Approval Form_20250212040719	Outstanding Information Required - Nil	ESR	ESR	Arcadis	Tactical	Plan	Other	Prior to operation	**Open**
C5	Overall responsibility of the development, including the freight village environmental management during operation, must be by the entity responsible for the Precinct environmental management.	Operation	**Compliant**	Precinct Operational Environmental Management Plan (OEMP)	OEMP and associated sub-plans are reviewed annually ensuring that: • Any changes to Government Agencies and legislation are captured • Management practices are updated to respond to any incidents (whether they are minor or major) or as a result of complaints from the local community	Site inspection 8/05/24 Operational Environmental Management Plan Moorebank Logistics Park – East Precinct Rev.18, 13/01/23, SIMTA (the OEMP) 12/02/2025 - Report revision 19 received and filed on 4/02/2025. Lodged onto Major Projects website 12/02/2025. 17/06/2025 - Email from KF sent out to tenants to implement OEMP and sub plans	Document Name: OEMP_Rev_19_Compiled_Nov2024 DPHI Receipt: Post Approval Form_20250212040719	Outstanding Information Required - Nil	ESR	ESR	Arcadis	Not Applicable	Monitoring and Reporting	Air Quality Flora and Fauna Aquatic Biodiversity	Annual	**Open**
C6	Prior to occupation of individual warehouses, a **Warehouse OEMP** must be submitted to the Secretary for approval and must: (a) be generally in accordance with the precinct OEMP required under condition C3; (b) demonstrate compliance with condition B113 regarding maintenance of quantities of dangerous goods below the screening threshold; and (c) include auditing requirements.	Pre-operation	**Compliant**	Warehouse OEMP	A template for a WOEMP is included in Appendix D. Each Warehouse tenant will prepare a WOEMP prior to occupation.	Warehouse 1 Occupation Environmental Management Plan for Catch Rev 1, 16/03/22 Email 7/03/22 DPHI-Tactical Group re submission of WOEMP WH5A to DPHI Email 31/03/22 DPHI-Tactical Group re assessment completion of WOEMP WH5A Environmental Management Plan WH5A Caesar Stone Rev 6, 26/05/20 by HBS Letter 23/04/20 DPHI-Tactical Group re: RFI - Warehouse OEMP 3A Target Australia Pty Ltd Warehouse Occupation Environmental Management Plan, SIMTA, 19/08/19 Warehouse 3B Warehouse Operational Environmental Management Plan – Federal Hospitality Equipment Environmental Management Plan, 08/03/21 Letter DPIE to Qube, 22/03/21 (approval of Warehouse 3B WOEMP) Warehouse Operation Environmental Management Plan (WOEMP) for Warehouse 4a (PCA Express), Rev 1.2, 11/05/21 by Tactical Group Letter DPIE to Michael Yiend, Development Director, 04/05/21 RFI Warehouse 4A WOEMP) Warehouse Operation Environmental Management Plan (WOEMP) for Warehouse 4B, 15/10/20 Letter DPIE to Qube, 21/10/20 (approval of Warehouse 4B WOEMP) Warehouse Operation Environmental Management Plan (WOEMP) for Warehouse 5, 15/12/20 Letter DPIE to Qube, 12/01/21 (approval of	Refer to condition folder MPES2 C6 WOEMP for documents	Outstanding Information Required - Nil	ESR	ESR	ESR	Not Applicable	Plan	Other	Prior to operation	**Open**
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; (b) a description of: (i) the relevant statutory requirements (including any relevant approval, licence or lease conditions); (ii) any relevant limits or performance measures/criteria; and (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; (c) a description of the management measures to be implemented to comply with the relevant statutory requirements, limits or performance measures/criteria; (d) a program to monitor and report on the: (i) impacts and environmental performance of the development; and (ii) effectiveness of any management measures (see (c) above); (e) a contingency plan to manage any unpredicted impacts and their consequences; (f) a program to investigate and implement ways to improve the environmental performance of the development over time; (g) a protocol for managing and reporting any: (i) incidents and non-compliances; (ii) complaints; (iii) non-compliances with statutory requirements; and (h) a protocol for periodic review of the plan. Note: The Secretary may waive some of these requirements if they are unnecessary or unwarranted for a particular management plan.	All	**Compliant**	OEMP	(a) Baseline data is included in aspect-specific sub-plans where applicable (b) Section 3 and Section 6.1 (c) Applicable management measures are included in aspect-specific sub-plans. (d) Monitoring and reporting requirements are addressed in Section 6. (e) Where appropriate, unexpected finds procedures are included in aspect-specific sub-plans. (f) Section 6.2.1 describes the review process for the OEMP and environmental management of the Facility. (g) Section 4.5, Section 8.3.2 and CC8	Operational Environmental Management Plan Moorebank Logistics Park – East Precinct Rev.18, 13/01/23, SIMTA (the OEMP), Operational Traffic and Access Management Plan Moorebank Logistics Park – East Precinct, Rev.14, SIMTA, 20/01/23. Workplace Travel Plan, SIMTA, 13/11/19 and 26/03/20 (the WTP) Stormwater Infrastructure Operation and Maintenance Plan Rev.8, SIMTA, 23/01/23 (the SIOMP) Operational Emergency Response Plan Rev 15, SIMTA, 24/01/23 (the OERP) Operational Waste and Resources Management Plan Rev 11, SIMTA, 23/01/23 (the OWRMP) Operational Noise and Vibration Management Plan Rev 13, SIMTA, 24/01/23 (ONVMP) Operational Air Quality Management Plan, SIMTA, 23/01/23 (OAQMP), Rev. 12 Heritage Interpretation Plan, 27/06/19 (the HIP) Operational Flora and Fauna Management Plan, SIMTA, (the OFFMP) updated 13/1/23 Rev.9 Bushfire Emergency and Evacuation Plan Moorebank Precinct East Stage 2, SIMTA, 19 March 2021 (the BEEMP) Post Approval Submission (DPHI portal) undated re: submission of OEMP Rev 18 to DPHI Letter DPHI to ESR, 7/9/23 (approval of OMPs) Warehouse Operational Environmental Management Plans (various) (WOEMP)	Refer to respective OEMP and sub plan condition folders for documents	Outstanding Information Required - Nil	ESR	ESR	ESR	Not Applicable	Plan	Other	Prior operations	**Open**

Condition of Consent	COMPLIANCE REQUIREMENT	DEVELOPMENT PHASE	COMPLIANCE STATUS	MONITORING REQUIREMENT METHODOLOGY (See condition and management plan)	ONGOING ACTIVITIES AND IMPLEMENTATION	EVIDENCE AND COMMENTS (Received to date from tenants and consultants)	DPHI Receipt / Consultant Document Name	OUTSTANDING INFORMATION / ACTIONS (Required from tenants and consultants)	PRIMARY RESPONSIBLE	RESPONSIBLE FOR IMPLEMENTATION	RESPONSIBLE FOR REPORTS	RESPONSIBLE FOR LODGING W/ DEPARTMENT	TYPE	CATEGORY	FREQUENCY	Status
C8	At least one month prior to the commencement of a new phase of the development, the CEMP or OEMP and applicable subplans must be reviewed and submitted to the Secretary for approval.	Operation	Compliant	CEMP / OEMP	This OEMP has been prepared and approved by the secretary.	12/02/2025 - Revision 19 of the OEMP (OEMP_Rev_19_Compiled_Nov2024) received and filed on 4/02/2025. Lodged onto Major Projects website 12/02/2025.	Document Name: OEMP_Rev_19_Compiled_Nov2024 DPHI Receipt: Post Approval Form_20250212040719	Outstanding Information Required - Nil	ESR	Several consultants			Plan	Other	Annually or as triggered	Open
C9	Within three months of: (a) the submission of an annual review under condition C10; (b) the submission of an incident or non-compliance notification under condition C13; (c) the submission of an audit under condition C18; (d) the approval of any modification of the conditions of this consent; or (e) the issue of a direction of the Secretary under condition A2; the strategies, plans and programs required under this consent must be reviewed, and if necessary to either improve the environmental performance of the development, cater for a modification or comply with a direction, must be revised, to the satisfaction of the Secretary. Where revisions are required, the revised document must be submitted to the Secretary for approval within six weeks of the review. Note: The purpose of this condition is to ensure that strategies, plans and programs are regularly updated to incorporate any measures recommended to improve the environmental performance of the development.	Operation	Compliant	OEMP	The review and submission process for the OEMP will be undertaken in accordance with this condition, as described in Section 6.2.2.	Moorebank Precinct East (SSD 7628) Stage 2: Annual Review #04 January – December 2021 Post Approval Form re. Submission of Annual Review #4 (Jan to Dec 2021) for SSD 7628, 7/6/2022 Email from Aspect to LCC re. submission of Annual Review #04, 9/6/2022 Moorebank Precinct East (SSD 7628) Stage 2: Annual Review #05 January – December 2022, 31/08/23 Post Approval Form re. Submission of Annual Review #5 (Jan to Dec 2021) for SSD 7628, 31/8/2023 Letter from DPHI to Aspect re. approval of Annual Review #05, 17/10/2023 Email from Aspect to LCC re. submission of Annual Review #05, 1/9/2023 Interview with auditees 8-9/05/24 This audit Modification 5, approved 4/9/2023 Modification 6, approved 22/2/2024 Operational Environmental Management Plan Moorebank Logistics Park – East Precinct Rev.18, 13/01/23, SIMTA (the OEMP). Post Approval Submission (DPHI portal) undated re: submission of OEMP Rev 18 to DPHI Letter DPHI to Tactical/ESR, 7/9/23 (approval of OMPs) 12/02/2025 - Report revision 19 received and filed on 4/02/2025. Lodged onto Major Projects website 12/02/2025. 26/03/2025 - All management plans have been approved by the DPHI. Receipts received and filed.	Document Name: OEMP_Rev_19_Compiled_Nov2024 DPHI Receipt: Post Approval Form_20250212040719	Outstanding Information Required - Nil	ESR	ESR	Aspect	Aspect	Monitoring Reporting	General Operation	Annually or as triggered	Ongoing
C10	Each year, the Applicant must submit a **review the environmental performance** of the development (including all tenants and occupants) to the to the Department. The review must: (a) describe the development that was carried out in the previous calendar year, and the development that is proposed to be carried out over the next year; (b) include a comprehensive review of the monitoring results and complaints records from the previous year, including a comparison of these against the: (i) the relevant statutory requirements, limits or performance measures/criteria; (ii) requirements of any plan or program required under this consent; (iii) the monitoring results of previous years; and (iv) the relevant predictions in the EIS, Submissions Report, Consolidated assessment clarification responses; Modification Assessment, or conditions of this consent; (c) identify any non-compliance over the previous year, and describe what actions were (or are being) taken to ensure compliance; (d) identify any trends in the monitoring data over the life of the development; (e) identify any discrepancies between the predicted and actual impacts of the development, and analyse the potential cause of any significant discrepancies; and (f) describe what measures will be implemented over the next year to improve the environmental performance of the development. The Applicant must ensure that copies of the Annual Review are submitted to Council and are available to the CCC and any interested person upon request.	All	Compliant	Environmental Performance Review	A review of the environmental performance of the development will be submitted to DP&E, in accordance with this condition.	Moorebank Precinct East (SSD 7628) Stage 2: Annual Review #04 January – December 2021, 7/6/2022, Rev.2. Post Approval Form re. Submission of Annual Review #4 (Jan to Dec 2021) for SSD 7628, 7/6/2022 Email from Aspect to LCC re. submission of Annual Review #04, 9/6/2022 Moorebank Precinct East (SSD 7628) Stage 2: Annual Review #05 January – December 2022, 30/08/23, Rev.2 Post Approval Form re. Submission of Annual Review #5 (Jan to Dec 2021) for SSD 7628, 31/8/2023 Letter from DPHI to Aspect re. approval of Annual Review #05, 17/10/2023 Email from Aspect to LCC re. submission of Annual Review #05, 1/9/2023 Annual Review #6, 31/03/2025 https://moorebankintermodalprecinct.com.au/precincts/moorebank-precinct-east/	Document Name: Annual-Review_Rev02__Redacted	Outstanding Information Required - Nil	ESR	ESR	Aspect	Aspect	Monitoring Reporting	Other	Annually	Ongoing
C11	The Department must be notified in writing to compliance@planning.nsw.gov.au immediately after the Applicant becomes aware of an incident. The notification must identify the development (including the development application number and the name of the development if it has one), and set out the location and nature of the incident.	Operation	Compliant		Written notification to the Department will occur immediately, as required.	Operational Environmental Management Plan Moorebank Logistics Park – East Precinct Rev.18, 13/01/23, SIMTA (the OEMP) Warehouse Operational Environmental Management Plans (various) (WOEMP) Interview with auditees 8-9/05/24 6/05/2025 - Incidents backdated to April 2025 provided by Knight Frank filed.	Document Name: KF Incidents - Backdated to 01 Apr 25	Outstanding Information Required - Continuous updates to the incident tracker	ESR/ QUBE	Knight Frank	Tenant	Tactical	Compliance	Warehouse	Monthly or as required	Ongoing
C12	A written incident notification addressing all requirements for such notification set out in Appendix D of this consent, must also be emailed to the Department at the following address: compliance@planning.nsw.gov.au within 7 days after the Applicant becomes aware of an incident. Notification is required to be given under this condition even if the Applicant fails to give the notification required under condition or, having given such notification, subsequently forms the view that an incident has not occurred.	Operation	Not triggered		Written notification to the Department will occur immediately, as required.	As above. Interview with auditees 8-9/05/24	N/A	Outstanding Information Required - Pending tenant to demonstrate example(s) of incident reporting or that no incidents have occurred	ESR/ QUBE	Knight Frank	Tenant	Tactical	Compliance	Warehouse	7 days after the Applicant becomes aware of an incident	Ongoing
C13	Within 30 days of the date on which the incident occurred or as otherwise agreed to by the Secretary the Applicant must provide the Secretary and any relevant public authorities (as determined by the Secretary) with a detailed report on the incident addressing all requirements for such reporting set out in Appendix D of this consent, and such further reports as may be requested.	Operation	Not triggered		A detailed report of an incident addressing the requirements set out in Appendix C of the Development Consent will be provided to the Secretary within 30 days, or as otherwise agreed with the Secretary.	As above. Interview with auditees 8-9/05/24	N/A	Outstanding Information Required - Pending tenant to demonstrate example(s) of incident reporting or that no incidents have occurred	ESR/ QUBE	Knight Frank	Tenant	Tactical	Compliance	Warehouse	Within 30 days of the date on which the incident occurred	Ongoing
C14	Any written requirements of the Secretary or relevant public authority (as determined by the Secretary) which may be given at any point in time, to address the cause or impact of an incident must be complied with and within any timeframe specified by the Secretary or relevant public authority.	Operation	Not triggered		Any written requirements of the Secretary (or relevant public authority) that may be given to address the cause or impact of an incident will be complied within any timeframe specified by the Secretary or relevant public authority.	As above. Interview with auditees 8-9/05/24	N/A	Outstanding Information Required - Pending tenant to demonstrate example(s) of incident reporting or that no incidents have occurred	ESR/ QUBE	Knight Frank	Tenant	Tactical	Compliance	Warehouse	Monthly/ as required	Ongoing
C15	If statutory notification is provided to EPA as required under the POEO Act in relation to the development, such notification must also be provided to the Secretary within 24 hours after the notification was provided to EPA.	Operation	Not triggered		Notification will be provided to the Secretary within 24 hours after notification was provided to the EPA.	As above. Interview with auditees 8-9/05/24	N/A	Outstanding Information Required - Pending tenant to demonstrate example(s) of incident reporting or that no incidents have occurred	ESR/ QUBE	Knight Frank	Tenant	Tactical	Compliance	Warehouse	within 24 hours after the notification was provided to EPA.	Ongoing
C16	The Department must be notified in writing to compliance@planning.nsw.gov.au within 7 days after the Applicant becomes aware of any non-compliance.	Operation	Compliant	Email to Department	DP&E will be notified in writing to compliance@planning.nsw.gov.au within 7 days after the Facility becomes aware of any non-compliance.	Interview with auditees 8-9/05/24 First Operational Independent Audit, WolfPeak, 21/6/2021 27/6/2025 - Any non compliance after the next annual audit will be notified to the Department within 7 days.	N/A	Outstanding Information Required - Nil	ESR/ QUBE	Knight Frank/ QUBE	Tenants	Tactical	Compliance	Warehouse	7 days after the Applicant becomes aware of any non-compliance.	Ongoing
C17	The notification must identify the development and the application number for it, set out the condition of consent that the development is non-compliant with, the way in which it does not comply, the reasons for the non-compliance (if known), and what actions have been, or will be, undertaken to address the non-compliance.	Operation	Compliant	Email to Department	Section 4.6.4 outlines the requirements for the notification of the non-compliance, in accordance with this condition.	Interview with auditees 8-9/05/24 First Operational Independent Audit, WolfPeak, 21/6/2021 27/6/2025 - Any non compliance after the next annual audit will be notified to the Department with the reasons for non-compliance, and the actions that will be taken to address this non-compliance.	N/A	Outstanding Information Required - Nil	ESR/ QUBE	Knight Frank/ QUBE	Tenants	Tactical	Compliance	Warehouse	As required	Ongoing
C18	Within one year of the commencement of any development under this consent, and every three years thereafter, unless the Secretary directs otherwise, the Applicant must commission and pay the full cost of an **Independent Environmental Audit (Audit)** of the development. Audits must: (a) be led and conducted by a suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary; (b) be carried out in consultation with the relevant agencies and the CCC; (c) assess the environmental performance of the development (and tenancies)and assess whether it is complying with the relevant requirements in this consent, and any strategy, plan or program required under this consent; and (d) review the adequacy of any approved strategy, plan or program required under this consent; and (e) recommend appropriate measures or actions to improve the environmental performance of the development, and/or any strategy, plan or program required under this consent.	All	Compliant	Independent Environmental Audit (Audit)	Within one year of the commencement of any development and every three years, an Independent Environmental Audit will be undertaken by a suitably qualified, experienced	Moorebank Precinct East Operations Independent Audit Program, WolfPeak, 24/02/20, updated 25/06/2024 Email, Tactical to WolfPeak, 12/10/2023 (commissioning of audit) Interview with auditees 8-9/05/24 Letter DPHI to Tactical, 22/4/2024 (approval of audit team) Consultation records (attached to this audit report) 27/6/2025 - Next audit will take place in 2027.	N/A	Outstanding Information Required - Nil	ESR	ESR	Arcadis	Tactical	Monitoring Reporting	compliance	Every three years	Ongoing
C19	Within three months of commencing an Independent Environmental Audit, or unless otherwise agreed by the Secretary, a copy of the audit report must be submitted to the Secretary, and any other NSW agency that requests it, together with a response to any recommendations contained in the audit report, and a timetable for the implementation of the recommendations. The recommendations must be implemented to the satisfaction of the Secretary.	All	Compliant	Independent Environmental Audit	A copy of the audit report must be submitted to the Secretary, and any other NSW agency that requests it, with a response to any recommendations contained in the audit report, and a timetable for the implementation of the recommendations. The recommendations will be implemented to the satisfaction of the Secretary.	Interview with auditees 8-9/05/24 Independent Audit, 21/6/2021 WolfPeak MPE Submission of Response to June 2021 Independent Audit Report, Tactical Group, no date 27/6/2025 - Next audit will take place in 2027.	N/A	Outstanding Information Required - Nil	ESR	ESR	Arcadis	Tactical	Monitoring Reporting	compliance	Within three months of commencing an Independent Environmental Audit	Ongoing
C21	The Proponent must prepare and implement a **Compliance Tracking Program** to track compliance with the requirements of this approval. The **Compliance Tracking Program** must be submitted to the Secretary for approval prior to the commencement of construction. The Compliance Tracking Program must include, but not be limited to: (a) provision for the notification of the Secretary prior to the commencement of construction and prior to the commencement of operation of the development (including prior to each stage, where works are being staged); (b) provision for periodic review of the compliance status of the development against the requirements of this approval and the environmental management measures committed to in the documents referred to in condition A2; (c) provision for periodic reporting of compliance status to the Secretary, including but not limited to: (i) a **Pre-Construction Compliance Report** prior to the commencement of construction, (ii) quarterly Construction Compliance Reports, for the duration of construction, and (iii) a **Pre-Operation Compliance Report** prior to the commencement of operation, and **six monthly operational compliance reports**; (d) a program for independent environmental auditing; (e) mechanisms for recording environmental incidents during construction and actions taken in response to those incidents; (f) provision for reporting environmental incidents to the Secretary during construction; (g) procedures for rectifying any non-compliance identified during environmental auditing, review of compliance or incident management; and (h) provision for ensuring all employees, contractors and sub-contractors are aware of, and comply with, the conditions of this approval relevant to their respective activities.	Operation	Compliant	OEMP and subplans	In accordance with SSD 7628 Condition of Consent (CoC) C21(c)(iii), a Six-monthly operational compliance report (OCR) must be prepared. The Department approved the Program for Operational Phase Delivery (POPD) on 21 May 2019 which outlined the staged submission of operational documents under condition A14 of SSD 7628. The Department also considered the combining of strategies, plans or programs to be acceptable, provided that all relevant conditions across both SSD 6766, and SSD 7628 are met. Regular reviews of compliance against the Environmental Protection and Biodiversity Conservation Act 1999 (EPBC 2011/6229) Conditions of Approval are undertaken but are not the subject of this compliance report.	Compliance Tracking Program Moorebank Precinct East Stage 2, 24/05/18 Program for Operational Phase Documentation (POPD), 22/3/2019 Pre-Operational Compliance report, 13/7/2020 Rev.06 (Area 1 – WH1 and IMEX) Pre-Operational Compliance report, 25/6/2021 Rev.04 (Area 2 – WH3, WH4, and WH5) Pre-Operational Compliance report, 9/8/2023 Rev.03 (Area 3 – WH6 and WH7) Moorebank Logistics Park, MPE Six-monthly Operations Compliance Report: - No.1 – May to Nov 2020, 30/3/2021. Post Approval Form, 5/4/2021 - No.2 – Nov 2020 to May 2021, 15/06/2021. - No.3 – May to Nov 2021, 20/12/2021. Post Approval Form, 22/12/2021 - No.4 – Nov 2021 to May 2022, 1/6/2022 (ANRR not included) - No.5 - May to Nov 2022, 16/02/2023. Post Approval Form, 27/2/2023. - No. 6 – Nov 2022 to May 2023, 8/9/2023. - No.7 - Jun to Oct 2023, 3/4/2024. No.8 - Nov 2023 to Apr 2024, 3/4/2024Independent Audit Program, WolfPeak 2020, updated version 25/6/2024. Compliance Tracker, current to 30/4/2024 Letter DPHI to ESR, 7/9/23 (approval of OMPs) Email from Tactical re. latest OEMPs, 28/3/2023 Email Knight Frank to Tenants re. latest OEMPs and sub-plans, no date	Document Name: MPE Ops Tracker_May 2025_00.XLSX	Outstanding Information Required - Nil	ESR	ESR	Arcadis	Tactical	Monitoring Reporting	General Operation	6 monthly	Ongoing

APPENDIX C – AIR QUALITY MONITORING COMPLIANCE REPORT

MOOREBANK INTERMODAL PRECINCT – EAST AND WEST PRECINCTS

Operational Air Quality Six Monthly Compliance Report #10

November 2024 – April 2025

23 MAY 2025

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MOOREBANK INTERMODAL PRECINCT – EAST AND WEST PRECINCTS

Operational Air Quality Six Monthly Compliance Report #10

November 2024 – April 2025

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Report No	PREC-ARC-EN-RPT-0014
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Revision Text	002

REVISIONS

Revision	Date	Description	Prepared by	Approved by
001	19/05/2025	Submitted draft to client for review	SB	HT
002	23/05/2025	Updated with data received after initial submission. Resubmitted to client for review	SB	HT

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1 INTRODUCTION

1.1 Background

The Moorebank Logistics Park[1] – Precinct East Operational Air Quality Monitoring Programme Framework (OAQMPF - dated 19 March 2020) provided a framework to monitor air quality during operation of the Moorebank Intermodal Precinct (MIP) East Precinct and was developed to support the implementation of the monitoring and reporting requirements identified in the Operational Air Quality Management Plan (OAQMP - Revision 18 dated 20 January 2023). MIP East Precinct (MPE) commenced operation in May 2020.

Operation of the first warehouses at MIP West Precinct (MPW) commenced in April 2024. To support the commencement of operation at MPW, under SSD 7709 CoC B47A a precinct wide OAQMP (POAQMP) that covers both MPE and MPW was prepared and approved by the Department on 20 December 2023.

The POAQMP (November 2024) now supersedes the OAQMPF (dated 19 March 2020) as per mitigation measure 2B of the Final Compilation of Mitigation Measures (MPE Stage 1). This Operational Air Quality Six Monthly Compliance Report #10 (this report and Compliance Report #9) covers the entire MIP (East and West Precincts). Compliance Reports #1 to #8 only covered MPE.

MIP (East and West Precincts) is managed in accordance with two Operational Environmental Management Plans (OEMP) and sub-plans:

- *Operational Environmental Management Plan Moorebank Logistics Park – East Precinct* (OEMP MPE) Revision 18 dated 20 January 2023 applies to MPE
- *OEMP Moorebank Intermodal Precinct - West Precinct Stage 2* (OEMP MPW) dated 6 May 2024 applies to MPW.

The POAQMP includes requirements from the following approvals:

- **EPBC Act Approval (2011/6229)** Condition of Approval (CoA) 8(f) which requires the implementation of a comprehensive air quality monitoring program (including locations, frequency, and duration)
- **Moorebank East Precinct Stage 1 (SSD 6766)**:
  - Condition of Consent (CoC) F4(f)(iv) which requires measurement of air emissions generated by the Facility.
  - Final Compilation of Mitigation Measures (FCMM) 2C which requires the implementation of an air quality monitoring programme during operation for nuisance dust and air emissions [PM_{10}[2] and nitrogen dioxide (NO_2)].
- **Moorebank East Precinct Stage 2 (SSD 7628)**:
  - CoC C21(c)(iii) which requires the submission of six-monthly operational compliance reports for the life of the project.
  - CoC B59(d)(i), (ii), (iii), (iv) and (vii) which require the identification of air quality monitoring methods and implementation of compliance monitoring for all emissions associated with operations of the Facility.
  - FCMM 3C which requires real-time boundary monitoring be undertaken during operation of the Facility.

[1] With LOGOS purchasing the MLP, the MLP will now be referred to as Moorebank Intermodal Precinct (MIP).

[2] PM_{10} - Particles with a diameter of 10 micrometres or less, which are small enough to pass through the throat and nose and enter the lungs.

- **Moorebank West Precinct Stage 2 (SSD 7709)**:
  - CoC B47A requires the development of an OAQMP, that covers both MPE and MPW.

In 2022, LOGOS Property took over the management of the warehouse and distribution facilities, as well as the overall management of MPE and MPW. In July 2024, ESR Group acquired the remaining interest in LOGOS, and overall management of the MIP East and West Precinct, is now the responsibility of ESR Australia & NZ (ESR). Qube Logistics will continue to maintain responsibility for the IMEX (Import Export Rail Terminal) and the Rail Link for MPE. This change in ownership does not impact the current reporting period or the current reporting requirements.

1.2 MIP (East and West Precincts) Site operation

1.2.1 MPE

MPE operates 24 hours, 7 days a week (24/7). This currently includes operation of the IMEX terminal, Rail Link, Warehouse 1, Warehouse 3, Warehouse 4, Warehouse 5, Warehouse 6 and Warehouse 7a and 7b. No major construction related activities are expected to occur during 2025. Warehouse 2 (Area 5) and the freight village (Area 6) are the last of the areas to be constructed. These are scheduled to be operational by Q4 2026. Construction activities would be undertaken during standard working hours, unless stated otherwise.

1.2.2 MPW

The MPW Stage 2 development is located west of Moorebank Avenue and involves the construction and operation of a multi-purpose Intermodal (freight) Terminal (IMT) facility, which includes:

- A rail link connection
- Warehousing
- Freight village
- Upgrades to the Moorebank Avenue and Anzac Road intersection and the subdivision of site including ancillary works.

Operation of the IMT facility includes:

- Operation of the rail link to the Southern Sydney Freight Line (SSFL) and container freight movement by truck to and from the MPE Site (included as part of MPE Stage 1 (SSD 6766)).
- A warehousing estate on the northern part of the site servicing the IMT facility, including:
  - six warehouses and associated infrastructure and amenities and
  - a freight village (operating from 7am to 6pm, 7 days/ week) including staff/ visitor amenities.

Currently Warehouses N1, N2, NDC and JN are operational, with the rest of the development still under construction.

MPW Stage 2 has been granted approval to receive imported material outside of standard construction hours, along with specific types of work.

1.2.3 MIP Wide

There are also works and activities that occur outside of standard construction hours under specific approvals processes from time-to-time. These can include construction works and activities associated with both MPE and MPW.

Table 1-1 summarises the works, activities and material importation undertaken outside of standard construction hours during the six-monthly reporting period.

Table 1-1: Summary of works outside of standard construction hours

Dates	Activities undertaken
17 December 2024	Moorebank Avenue upgrade (Including Anzac Road)
6 January 2025 to 31 March 2025	Moorebank Avenue upgrade and Moorebank Avenue and Anzac Road intersection upgrade
1 April 2025 to 30 June 2025	Moorebank Avenue upgrade and Moorebank Avenue and Anzac Road intersection upgrade

1.1 Purpose of the report

This six-monthly air quality report has been prepared to meet reporting requirements of SSD 7709 CoC B47A and as detailed in Section 5 of the OAQMPF (March 2020) and Section 4.3 of the POAQMP (November 2024).

This six-monthly air quality report includes:

- A background to the air quality monitors and their locations (Section 2)
- Weather data and regional air quality (Section 3)
- Analysis of the raw data and comparison against identified criteria / trigger level, identification of exceedances, complaints or ad hoc monitoring undertaken (Section 4)
- An overview of any investigations undertaken to determine the cause of the exceedance or complaint (Sections 4.2, 4.3, 4.4 and 4.5).
- A high-level overview of the dust deposition data (Section 4.2).
- Conclusions and recommendations based on the 6-month's data (Section 5)
- Summarised data in graphs and tables (Appendix A).

1.2 Reporting period

MPE commenced operations on 13 May 2020 and MPW commenced operations in April 2024.

This six-monthly air quality report has been prepared to provide an overview of operational air quality results for the six-month operational period from 1 November 2024 to 30 April 2025 (inclusive) to inform the six-monthly operational compliance reports required for the life of the project.

This report will be the tenth report since MPE operations began in May 2020. Reports 1-8 were for MPE only, with Reports 9 and 10 (this report) combining the operations of MPE and MPW.

1.3 Limitations

All findings contained in this report are based on downloaded monitoring data at the time of writing the monthly reports and information relating to air quality provided by Tactical Group, Envirosuite (Omnis), NEON system (weather monitor), Bureau of Meteorology (BOM) and Site Environmental and Remediation Services (SERS) who manage the dust deposition gauges (DDG). Arcadis do not take responsibility for the accuracy or limitations of the downloaded and provided DDG data.

2 OVERVIEW OF AIR QUALITY MONITORING

2.1 Air quality monitors

The dust and air quality monitoring system installed across the MIP Precincts comprises four Kunak AIR Lite units integrated with Omnis™ software, which is hosted in the cloud.

The Kunak AIR Lite units measure the following dust and air quality parameters:

- NO_2 (range: 0-25 ppb)
- PM_{10} (particles with have a diameter less than 10 microns)
- $PM_{2.5}$ (range: 0-1000 µg/m^3)
- CO (installed since March 2020).

The original air quality monitors installed at the start of the MPE operations were replaced in mid-April 2024 with the Kunak AIR Lite sensors. The Kunak system also measures PM_1 i.e. particulates of less than one micron in size.

2.2 Dust deposition gauges

Seven DDGs were installed in May 2021. Another three DDG's were added to the Precinct in November 2024, bringing the total to ten across the Precinct. However, Stage 1 DDG 1 was removed in the first quarter of 2025, for a total of nine DDGs across the Precinct as of April 2025. The DDG's are currently managed and monitored by Site Environmental and Remediation Services (SERS). SERS provide monthly to quarterly DDG reports which are used to inform the monthly Air Quality Reports.

The gauges consist of 5-litre glass bottles with 150 mm diameter glass funnels and silicone bungs. The purpose of this sampling is to determine which particles settle from the ambient air over an approximate 31-day sampling period. This equipment is compliant with the Australian Standard AS/NZS 3580.10.1:2016.

2.3 Monitoring locations

The locations of the continuous air quality monitoring stations are identified on Figure 2-1 and the DDG locations are shown on Figure 2-2.

The site boundary is considered representative of the closest receptors (including the adjacent commercial premises). The locations of the continuous air quality monitors means that the construction and operation activities for both MPE and MPW Stage 2 have been captured.

DDG locations were also chosen so that a true representation of dust generated from operational activities at MPE could be established. The additional three DDGs capture construction activities occurring at MPW Stage 2 (see Figure 2-2).

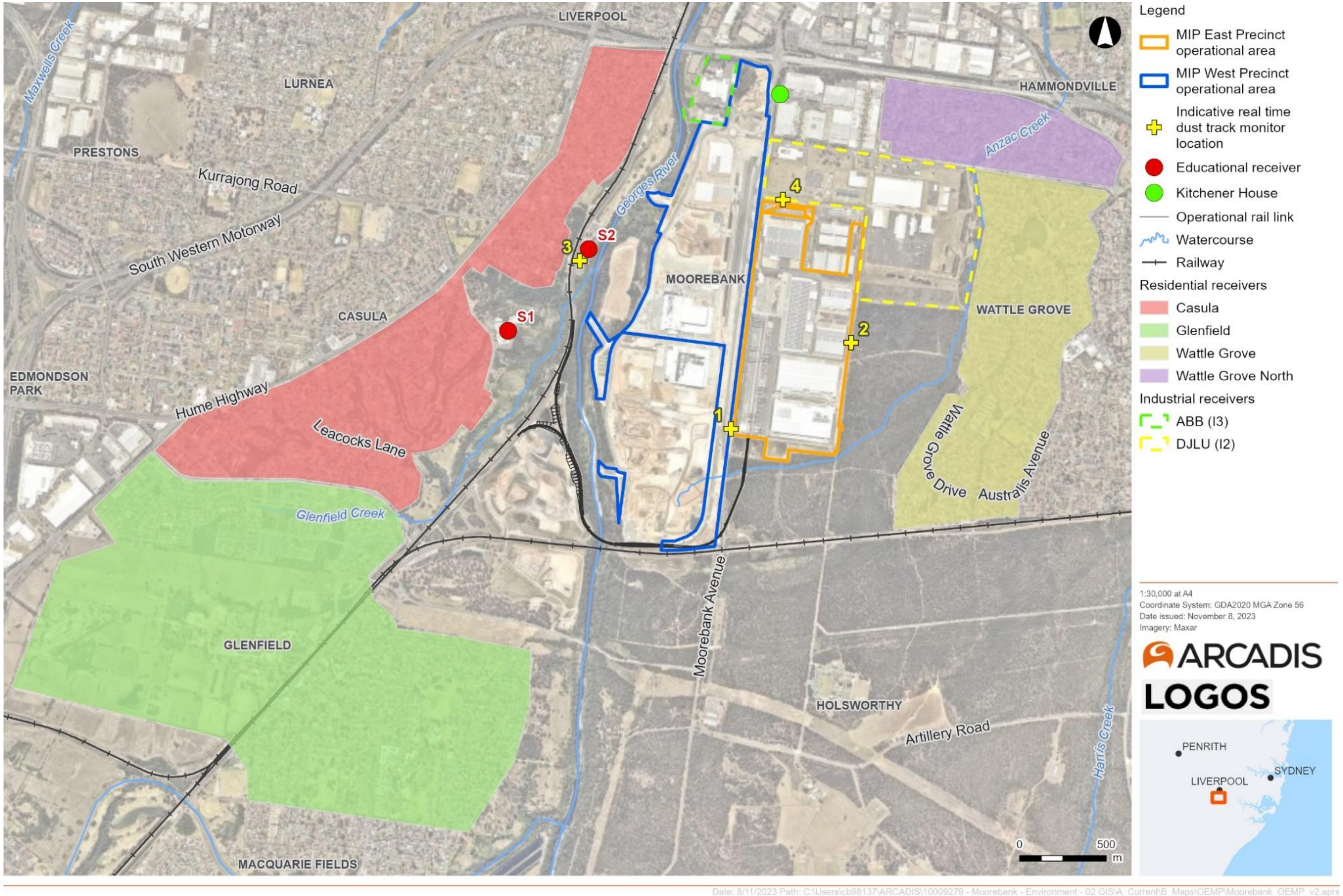


Figure 2-1: Continuous real-time air quality monitors (Source: Arcadis, 2023)

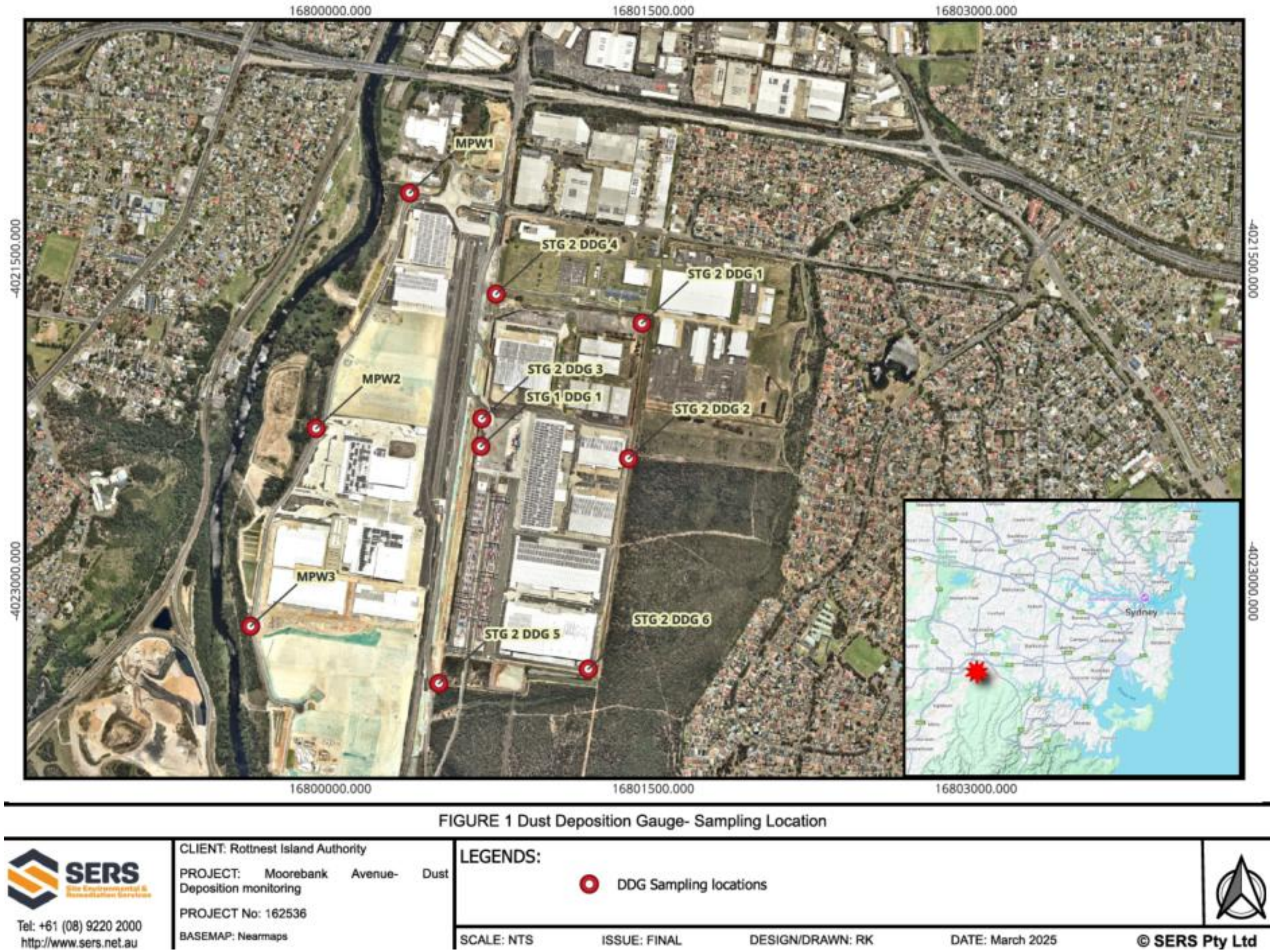


Figure 2-2: Location of Dust Deposition Gauges (Source: SERS, May 2025). Stage 1 DDG1 was removed in the first quarter of 2025.

Stage 1 (STG 1) refers to MPE Stage 1 and Stage 2 (STG 2) refers to MPE Stage 2

2.4 Air quality monitoring station availability

A summary of availability (time of operation) of the continuous air quality monitoring stations for this reporting period is summarised in Table 2-1, with the most recent calibration date also stated.

Table 2-1: Monitoring station availability (%)

Monitoring station	Nov 2024	Dec 2024	Jan 2025	Feb 2025	Mar 2025	Apr 2025	Average %	Latest calibration date
	% availability each month							
AQM01	99	100	100	100	97	100	99	March 2024
AQM02	99	100	100	100	97	100	99	March 2024
AQM03	99	100	100	100	97	100	99	March 2024
AQM04	99	100	100	100	97	100	99	March 2024

All monitors were replaced around mid-April 2024. The older existing monitoring system (Sentinel) was also replaced with Omnis to support operations of the new monitors.

All monitors had an average of 99% availability throughout the reporting period.

3 WEATHER

3.1 Meteorological Conditions

3.1.1 Prevailing wind conditions

Prevailing winds influence the dispersion of dust, and other air emissions potentially generated by the Facility. A weather station is located adjacent to Moorebank Avenue at MPW to capture representative conditions at the site. The prevailing wind speed and direction is discussed in more detail below.

3.1.2 Observed wind data

3.1.2.1 Site weather station

The average wind speed and direction data from the site weather monitor from November 2024 to April 2025 is summarised below in Table 3-1.

Table 3-1: Site weather station average wind speed and direction for November 2024 to April 2025

Month	Wind speed (m/s)	Beaufort Wind scale category[3]	Wind direction
November 2024	1.81	Light breeze	South (175°)
December 2024	2.02	Light breeze	South (184°)
January 2025	2.42	Light breeze	South (192°)
February 2025	1.85	Light breeze	South (184°)
March 2025	1.77	Light breeze	South-southwest (201°)
April 2025	1.39	Light air	Southwest (223°)

3.1.3 Ambient temperature and rainfall

Ambient temperature and rainfall are recorded at the Bankstown Airport AWS due to the availability of long-term averages for ambient temperature and rainfall which can compared to the reporting period data. Based on the AWS, the monthly mean temperatures (minimum and maximum) and rainfall (long-term monthly average and total) for the reporting period are summarised in Table 3-2.

Table 3-2: Temperature and rainfall recorded at the Bankstown Airport AWS for the reporting period

Month	Mean minimum temperature (°C)	Mean maximum temperature (°C)	Total rainfall (mm)	Long-term monthly average rainfall (mm)
Nov 2024	17.2	27.8	52.8	76.0
Dec 2024	18.5	30.3	56.0	66.9
Jan 2025	18.8	28.7	163.0	92.5
Feb 2025	18.7	28.8	68.8	109.2

[3] Based on the Beaufort wind force scale which is an empirical measure that relates wind speed to observed conditions at sea or on land (https://en.wikipedia.org/wiki/Beaufort_scale)

Month	Mean minimum temperature (°C)	Mean maximum temperature (°C)	Total rainfall (mm)	Long-term monthly average rainfall (mm)
Mar 2025	18.8	27.8	105.6	111.6
Apr 2025	14.3	25.6	78.6	85.5

Source: Bankstown, NSW - April 2025 - Daily Weather Observations

Rainfall for the reporting period was mixed throughout the 6-month period. However, January 2025 was well above the long-term monthly average rainfall and February was well below the long-term monthly average.

3.2 Ambient Air Quality

The NSW Department of Climate Change, Energy, the Environment and Water (NSW DCCEEW) uses air quality categories (AQC) for NSW. These categories are based on air quality data readings which are taken continuously from the various monitoring sites throughout NSW and are averaged to give hourly and daily air quality information. NSW DCCEEW use minute data, and report concentrations as hourly and daily averages. All averages are arithmetic means. Air quality data is updated hourly, and a daily air quality forecast is made for the Greater Sydney Metropolitan Region at 4 pm each day.

The AQC is generally used by government agencies to communicate to the public how polluted the air currently is or how polluted it is forecast to become. The AQC ranges from 'Good' to 'Extremely Poor' and is summarised in Figure 3-1[4].

			Air quality categories (AQC)				
Air pollutant	Averaging period	Units	GOOD	FAIR	POOR	VERY POOR	EXTREMELY POOR
Ozone O_3	1-hour	pphm	<6.7	6.7–10.0	10.0–15.0	15.0–20.0	20.0 and above
	4-hour rolling	pphm	<5.4	5.4–8.0	8.0–12.0	12.0–16.0	16.0 and above
Nitrogen dioxide NO_2	1-hour	pphm	<8	8–12	12–18	18–24	24 and above
Visibility Neph	1-hour	bsp	<1.5	1.5–3.0	3.0–6.0	6.0–18.0	18.0 and above
Carbon monoxide CO	8-hour rolling	ppm	<6.0	6.0–9.0	9.0–13.5	13.5–18.0	18.0 and above
Sulfur dioxide SO_2	1-hour	pphm	<13.3	13.3–20.0	20.0–30.0	30.0–40.0	40.0 and above
Particulate matter < 10 µm PM_{10}	1-hour	$\mu g/m^3$	<50	50–100	100–200	200–600	600 and above
Particulate matter < 2.5 µm $PM_{2.5}$	1-hour	$\mu g/m^3$	<25	25–50	50–100	100–300	300 and above

Figure 3-1: Air quality categories

[4] https://www.environment.nsw.gov.au/topics/air/understanding-air-quality-data/air-quality-categories

The PM_{10}, $PM_{2.5}$, NO_2, Visibility and CO air quality data from the Liverpool[5] monitoring station is reviewed monthly and is summarised for the six-month reporting period in Table 3-3.

Table 3-3: Summary of AQC from the Liverpool monitoring station for the reporting period

Month	Average for Reporting Period	Comment for reporting period
NO_2 (ppm) maximum 1 hourly average	Good	Good every day
CO (ppm) maximum rolling 8 hourly averages	Good	Good every day
PM_{10} 24-hour average	Mostly good, with 1 day fair.	'Good' every day except for: • Saturday 1 March 2025 which had 'fair' PM10 (36.2µg/m^3).
$PM_{2.5}$ 24-hour average	Mostly good, with 1 day fair.	'Good' every day except for: • Saturday 12 April 2025 which had 'fair' PM2.5 (20.1 µg/m^3).
Visibility[6],	Mostly good, with 4 days fair.	• 'Good' every day except for: • Saturday 1 March 2025 which had 'fair' Visibility (1.57 $10^{-4}m^{-1}$). • Thursday 10 April 2025 which had 'fair' Visibility (1.82 $10^{-4}m^{-1}$). • Friday 11 April 2025 which had 'fair' Visibility (2.27 $10^{-4}m^{-1}$). • Saturday 12 April 2025 which had 'fair' Visibility (2.31 $10^{-4}m^{-1}$).

[5] Data download facility | NSW Dept of Planning, Industry and Environment

[6] In NSW, visibility (or NEPH) is reported in units of 10^{-4} m^{-1}. This means that a NEPH value of 1.5 should be read as 1.5×10^{-4} m^{-1}. NSW has adopted a 1-hour visibility standard of 2.1×10^{-4} m^{-1}, which corresponds to a visual distance of approximately 18.6 km. This means that NEPH > 2.1 will trigger 'POOR' (or worse) air quality due to reduced visual range (<18.6 km)

4 MONITORING RESULTS

4.1 Air quality criteria

4.1.1 Criteria for $PM_{2.5}$, PM_{10}, NO_2 and CO

The National Environment Protection Measure for Ambient Air (Air NEPM)[7] has established new national standards for assessment of air quality for NO_2 and CO, which came into effect 13 May 2021. These criteria are detailed in Table 4-1. The air quality data at MIP was assessed against the new criteria from June 2021.

Table 4-1: Monitoring criteria (January 2025 for $PM_{2.5}$ and the remaining criteria applied from June 2021)

Monitoring focus	Averaging period	Criteria / Trigger / Goal
$PM_{2.5}$*	24-hour average	20 µg/m^3
	Annual average	7 µg/m^3
PM_{10}	24-hour average	50 µg/m^3
	Annual average	25 µg/m^3
NO_2	1-hour average	0.12 ppm
	Annual average	0.03 ppm
CO	1-hour average	NA
	8 -hour average	9.0 ppm

*The criteria for $PM_{2.5}$ changed from 25 µg/m^3 to 20 µg/m^3 for the 24-hour averaging period and from 8 µg/m^3 to 7 µg/m^3 for the annual average on 1 January 2025. The standards for $PM_{2.5}$ have not changed, only the goal has changed

4.1.2 Dust deposition

Dust deposition data from ten DDGs located around MIP is provided by SERS. Seven DDGs have been operational since May 2021 and another three were added in November 2024 to provide representative dust deposition across the entire MIP.

NSW DCCEEW has set the criteria for dust deposition rates, and these are provided in Table 4-2.

Table 4-2: Dust deposition criteria

Averaging Period	Maximum increase in deposited dust* level	Maximum total deposited dust level
Annual	2 g/m^2/month (incremental)	4 g/m^2/month (cumulative)

* Deposited dust is assessed as insoluble solids. This is the mass of the insoluble portion of the deposited matter, as defined under AS 3580.10.1: 2016.

[7] https://www.environment.nsw.gov.au/topics/air/understanding-air-quality-data/standards-and-goals

4.2 Dust deposition gauge results

The results of the collection period 24 October 2024 to 29 April 2025 as provided by SERS is shown in Table 4-3.

Table 4-3: Dust deposition (insoluble solids g/m²/month) results from 24 October 2024 to 29 April 2025

Date	Stage 1 DDG 1	Stage 2 DDG 1	Stage 2 DDG 2	Stage 2 DDG 3	Stage 2 DDG 4	Stage 2 DDG 5	Stage 2 DDG 6	MPW1	MPW2	MPW3	Average
November 2024	2.2	1.1	0.8	1.1	0.9	0.8	0.5	3.6	**9.7**	3.7	2.4
December 2024	3.0	1.3	1.1	2.0	1.6	0.7	**5.5**	**4.2**	**13.0**	3.4	3.6
January 2025	N/A*	0.2	1.3	3.2	0.7	0.8	2.0	1.8	1.3	0.9	1.4
February 2025	2.7	0.2	0.3	1.4	0.4	0.5	<0.1	2	**8.7**	1.3	1.8
March# 2025	N/A**	0.1	0.3	0.2	0.3	<0.1	0.2	1.5	**4.2**	1.1	0.9
April 2025	N/A**	1.6	0.9	0.8	0.3	<0.1	1.0	2.9	3.0	1.1	1.3

NOTE: Bold/grey indicates an exceedance of the criteria.

* Stage 1 DDG 1 was unable to be collected during the reporting period.

** Stage 1 DDG 1 was removed from site and is no longer providing data.

Two reports were used to capture the entire month of March

As shown in Table 4-3, there were six individual gauge exceedances between November 2024 and April 2025. The majority of these occurred at MPW2, which is located adjacent to an area of the site that is still under construction. These results may have been impacted by construction activities.

4.3 Continuous monitor results

Monitoring data for $PM_{2.5}$, PM_{10}, NO_2 and CO for the reporting period have been summarised into tables and graphs and are provided in Appendix A. The following sections summarise the results for this 6-month reporting period.

4.3.1 Annual exceedances

Twelve months of air quality monitoring are provided graphically and in table form in Appendix A.

AQM04 only had 58% availability for $PM_{2.5}$ and PM_{10} in July 2024 and 85% availability for $PM_{2.5}$ and PM_{10} in August 2024, however, the monitor had 100% availability for NO_2 and CO during these months and high availability for the remaining 12 months. All other monitors had an average availability of 99% during the reporting period.

See Table 2-1 for the monitoring station availability (%) over a 12-month period.

4.3.1.1 $PM_{2.5}$ and PM_{10} Monitoring

The 12-month rolling annual average for the period May 2024 to April 2025 for all four monitors combined was below the annual average criteria (i.e. 7.0 µg/m³ for $PM_{2.5}$ and 25.0 µg/m³ for PM_{10}) for each month.

As of April 2025, the 12-month rolling annual average for all four monitors was 4.7 µg/m^3 for $PM_{2.5}$ and 12.3 µg/m^3 for PM_{10}.

See Appendix A.1 and Appendix A.2 for more details.

4.3.1.2 NO_2 Monitoring

The 12-month rolling annual average for all four monitors for the period May 2024 to April 2025 was below the annual average criteria (0.03 ppm) for each month.

As of April 2025, the 12-month rolling annual average for NO_2 for all four monitors is 0.007 ppm, well below the annual average criteria of 0.03 ppm.

4.3.1.3 CO

CO does not require annual reporting.

4.3.2 24-hour exceedances

4.3.2.1 $PM_{2.5}$ Monitoring

A review of the data for the reporting period (November 2024 to April 2025) did not identify any exceedance of the 24-hour average criteria (20 µg/m^3) for $PM_{2.5}$ for the 6-month reporting period.

4.3.2.2 PM_{10} Monitoring

A review of the data for the reporting period (November 2024 to April 2025) did not identify any exceedance of the 24-hour average criteria (50 µg/m^3) for PM_{10} for the 6-month reporting period.

4.3.3 NO_2 1-hour exceedances

No exceedance of NO_2 1-hour criteria (0.12 ppm / 120 ppb) were observed during the 6-month reporting period.

4.3.4 CO 8-hour exceedances

No 8-hour criteria exceedances for CO occurred during the 6-month reporting period.

4.4 Complaints

One complaint was made relating to air quality in December 2024. The complaint related to dust and an increase in the complainant’s pool cleaning. No other formal complaints were received during the reporting period relating to air quality.

4.5 Ad-hoc monitoring

No ad-hoc monitoring was undertaken during this reporting period.

5 CONCLUSION

This six-monthly operational air quality report covers the period November 2024 to April 2025 (inclusive).

The following summarises the monitoring results for this reporting period:

Data summary

- The criteria for $PM_{2.5}$ changed from 25 µg/m^3 to 20 µg/m^3 for the 24-hour averaging period and from 8 µg/m^3 to 7 µg/m^3 for the annual average on 1 January 2025. It should be noted that the standards for $PM_{2.5}$ have not changed, only the goal has changed.
- The rolling annual average for all four monitors combined was below the annual average criteria (7.0 µg/m^3 for $PM_{2.5}$ and 25.0 µg/m^3 for PM_{10}) for each month during the reporting period.
- There were no exceedances of the $PM_{2.5}$ 24-hour average criteria (20 µg/m^3) during the 6-month reporting period.
- There were no exceedances of the PM_{10} 24-hour average criteria (50 µg/m^3) during the 6-month reporting period.
- There were no exceedances of NO_2 1-hour criteria (0.12 ppm / 120 ppb) during the 6-month reporting period.
- There were no exceedances of the CO criteria (9.0 ppm) during the 6-month reporting period.
- Seven DDGs were installed in May 2021 and another three DDG's were added in November 2024 to the MPW. However, Stage 1 DDG 1 was removed in the first quarter of 2025 resulting in nine DDGs across the MIP as of April 2025.

Exceedances

There were six individual gauge exceedances of the dust deposition (insoluble solids) 2 g/m^2/month (incremental) criteria between November 2024 to April 2025. The majority of these occurred at MPW2, which is located adjacent to an area of the site that is still under construction. These may have impacted by construction activities. To prevent further exceedances the following measures (but not limited to) could be applied, if not already:

- Reduce areas of exposed soil
- Use of water suppression if earthworks or dust generating activities are occurring e.g. watercarts, water misters
- Staging of works to be intermittent, particularly during periods of high wind and dry conditions.

Complaints

One complaint relating to air quality was received during the reporting period (December 2024). The complaint was addressed promptly and the matter closed. No other complaints relating to air quality were received during the reporting period.

Recommendation

It is recommended that monitors continue to be calibrated annually as per operational requirements and device specifications. The monitors were last calibrated in March 2024, over a year ago. Calibration should occur as soon as possible.

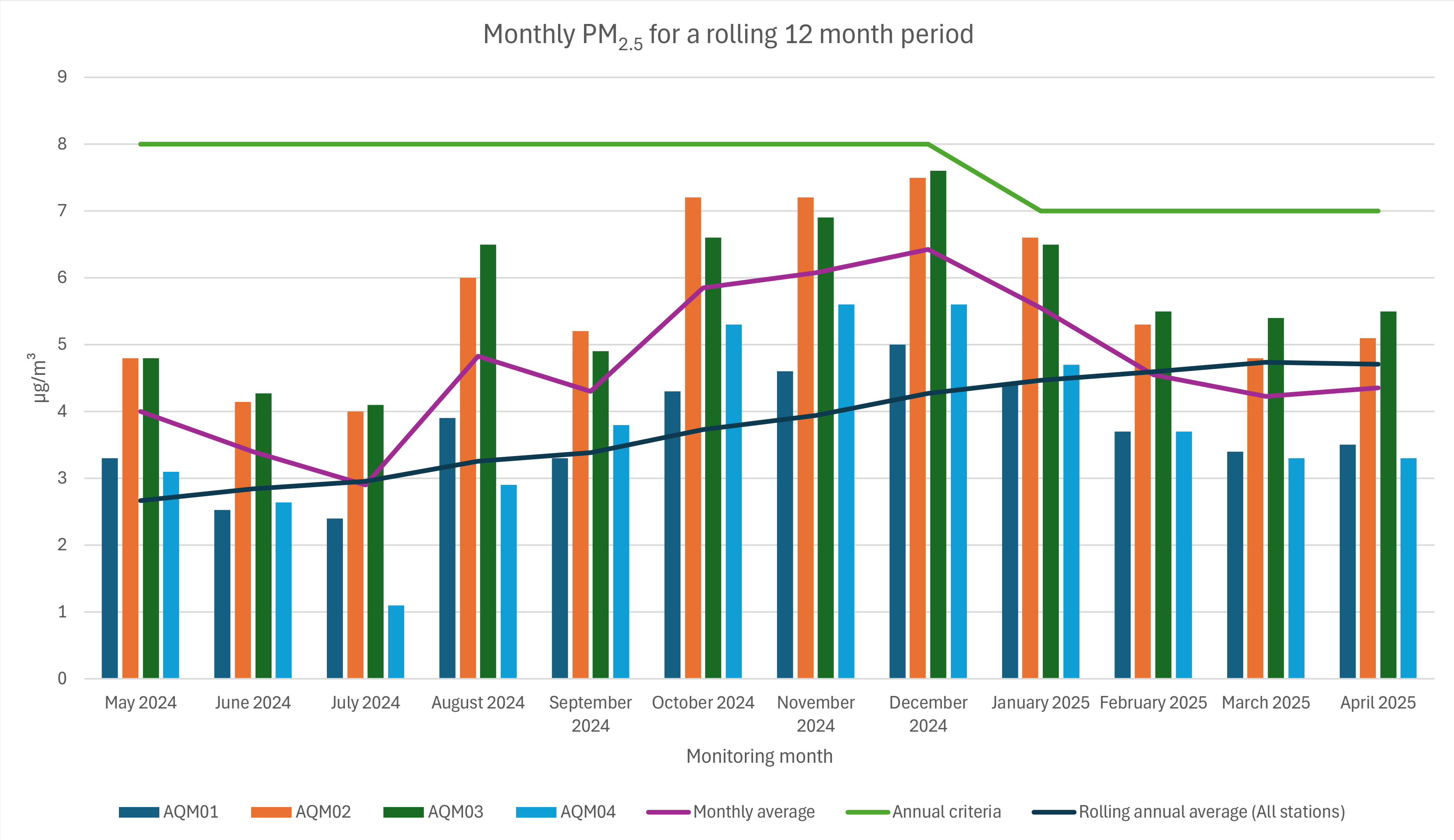
APPENDIX A MONITORING DATA

Appendix A.1: Rolling 12-month particulate data ($PM_{2.5}$)

Month	Average AQM01	Average AQM02	Average AQM03	Average AQM04	Months Average All stations	Rolling annual average All stations	Annual average criteria	Comments
	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	
May 2024	3.3	4.8	4.8	3.1	4.0	2.7	8.0	No exceedance of annual average criteria.
June 2024	2.5	4.1	4.3	2.6	3.4	2.8	8.0	No exceedance of annual average criteria.
July 2024	2.4	4.0	4.1	1.1	2.9	3.0	8.0	No exceedance of annual average criteria.
August 2024	3.9	6.0	6.5	2.9	4.8	3.3	8.0	No exceedance of annual average criteria.
September 2024	3.3	5.2	4.9	3.8	4.3	3.4	8.0	No exceedance of annual average criteria.
October 2024	4.3	7.2	6.6	5.3	5.9	3.7	8.0	No exceedance of annual average criteria.
November 2024	4.6	7.2	6.9	5.6	6.1	3.9	8.0	No exceedance of annual average criteria.
December 2024	5.0	7.5	7.6	5.6	6.4	4.3	8.0	No exceedance of annual average criteria.
January 2025	4.4	6.6	6.5	4.7	5.6	4.5	7.0	No exceedance of annual average criteria. The annual criteria/goal for $PM_{2.5}$ changed from 8 µg/m³ to 7 µg/m³ from 1 January 2025.
February 2025	3.7	5.3	5.5	3.7	4.6	4.6	7.0	No exceedance of annual average criteria.
March 2025	3.4	4.8	5.4	3.3	4.2	4.7	7.0	No exceedance of annual average criteria.
April 2025	3.5	5.1	5.5	3.3	4.4	4.7	7.0	No exceedance of annual average criteria.
Rolling 12 month average	3.7	5.7	5.7	3.8	-	-	8.0	No exceedance of annual average criteria.
All months^	1.3	3.6	6.6	2.9	3.5	-	8.0	No exceedance of annual average criteria.

Bold/grey indicates an exceedance of the criteria.

^ All months since May 2020

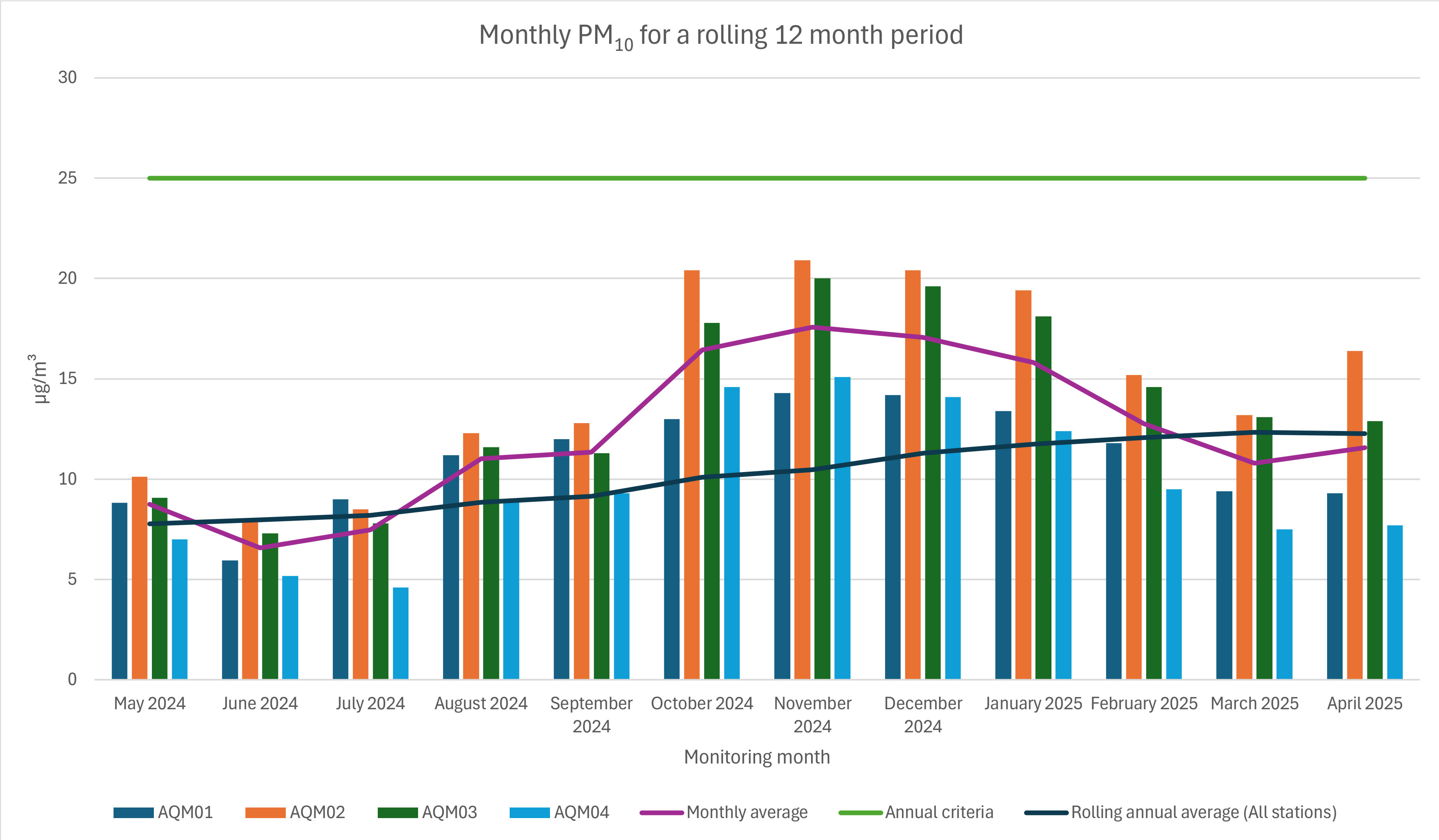


Monthly $PM_{2.5}$ over 12 months including the 6-months for this report

Appendix A.2: Rolling 12-month particulate data (PM_{10})

Month	Average AQM01	Average AQM02	Average AQM03	Average AQM04	Months Average All stations	Rolling annual average All stations	Annual average criteria	Comments
	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	
May 2024	8.8	10.1	9.1	7.0	8.7	7.8	25.0	No exceedance of annual average criteria.
June 2024	5.9	7.9	7.3	5.2	6.6	8.0	25.0	No exceedance of annual average criteria.
July 2024	9.0	8.5	7.8	4.6	7.5	8.2	25.0	No exceedance of annual average criteria.
August 2024	11.2	12.3	11.6	9.0	11.0	8.9	25.0	No exceedance of annual average criteria.
September 2024	12.0	12.8	11.3	9.3	11.4	9.1	25.0	No exceedance of annual average criteria.
October 2024	13.0	20.4	17.8	14.6	16.5	10.1	25.0	No exceedance of annual average criteria.
November 2024	14.3	20.9	20.0	15.1	17.6	10.5	25.0	No exceedance of annual average criteria.
December 2024	14.2	20.4	19.6	14.1	17.1	11.3	25.0	No exceedance of annual average criteria.
January 2025	13.4	19.4	18.1	12.4	15.8	11.7	25.0	No exceedance of annual average criteria.
February 2025	11.8	15.2	14.6	9.5	12.8	12.1	25.0	No exceedance of annual average criteria.
March 2025	9.4	13.2	13.1	7.5	10.8	12.3	25.0	No exceedance of annual average criteria.
April 2025	9.3	16.4	12.9	7.7	11.6	12.3	25.0	No exceedance of annual average criteria.
Rolling 12 month average	11.0	14.8	13.6	9.7	-	-	25.0	No exceedance of annual average criteria.
All months^	3.8	10.5	21.5	6.5	10.4	-	25.0	No exceedance of annual average criteria.

Bold/grey indicates an exceedance of the criteria, ^ All months since May 2020



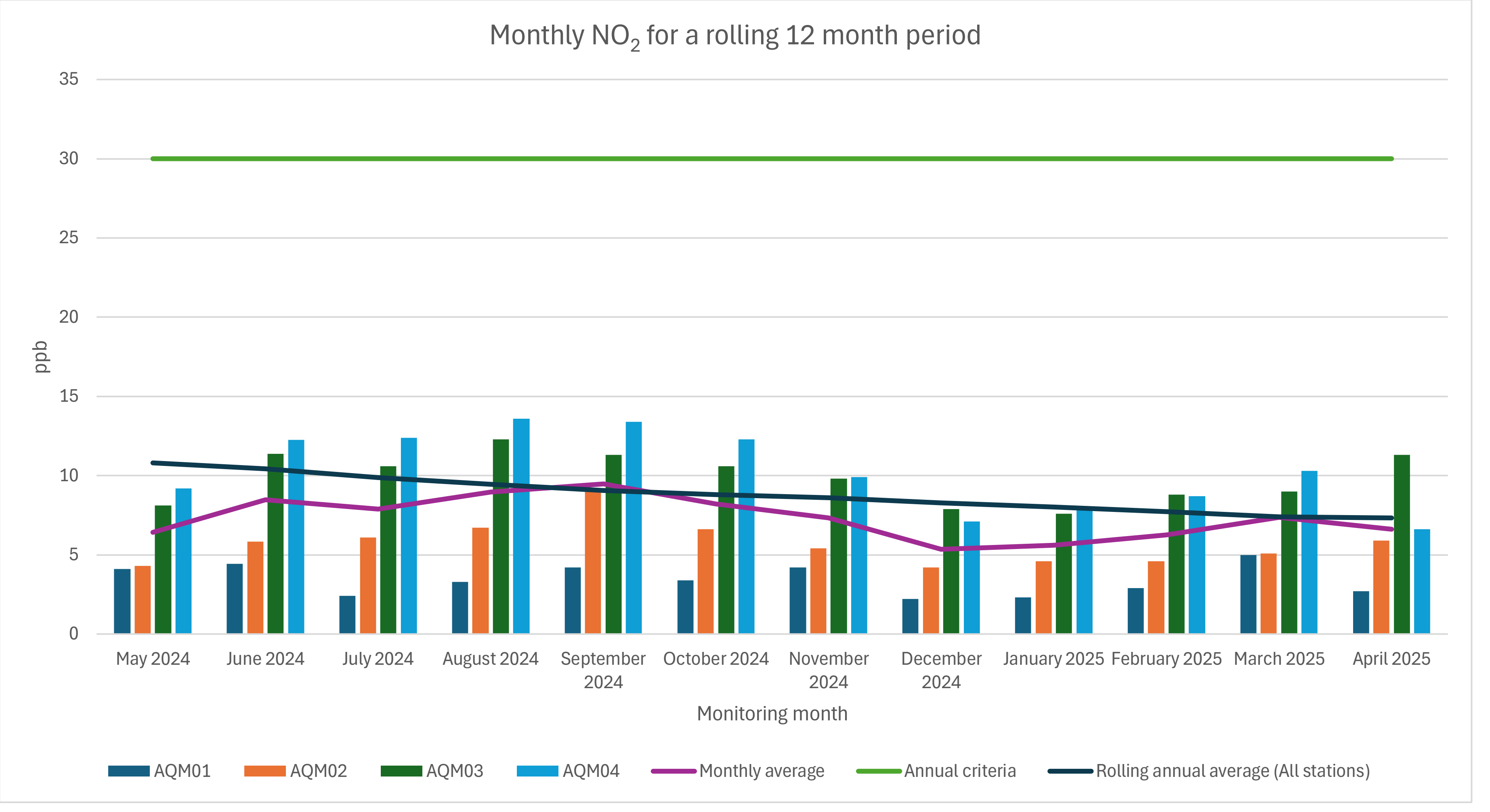
Monthly PM_{10} over 12 months including the 6-months for this report

Appendix A.3: Rolling monthly and annual particulate data (NO_2)

Month	Average AQM01	Average AQM02	Average AQM03	Average AQM04	Months Average All stations	Rolling annual average All stations	Annual average criteria	Comments
	ppb	ppb	ppb	ppb	ppb	ppb	ppm / ppb*	
May 2024	4.1	4.3	8.1	9.2	6.4	10.8	0.03 / 30.0	No exceedance of annual average criteria.
June 2024	4.4	5.8	11.4	12.2	8.5	10.4	0.03 / 30.0	No exceedance of annual average criteria.
July 2024	2.4	6.1	10.6	12.4	7.9	9.9	0.03 / 30.0	No exceedance of annual average criteria.
August 2024	3.3	6.7	12.3	13.6	9.0	9.5	0.03 / 30.0	No exceedance of annual average criteria.
September 2024	4.2	9.0	11.3	13.4	9.5	9.1	0.03 / 30.0	No exceedance of annual average criteria.
October 2024	3.4	6.6	10.6	12.3	8.2	8.8	0.03 / 30.0	No exceedance of annual average criteria.
November 2024	4.2	5.4	9.8	9.9	7.3	8.6	0.03 / 30.0	No exceedance of annual average criteria.
December 2024	2.2	4.2	7.9	7.1	5.4	8.3	0.03 / 30.0	No exceedance of annual average criteria.
January 2025	2.3	4.6	7.6	7.9	5.6	8.0	0.03 / 30.0	No exceedance of annual average criteria.
February 2025	2.9	4.6	8.8	8.7	6.3	7.7	0.03 / 30.0	No exceedance of annual average criteria.
March 2025	5.0	5.1	9.0	10.3	7.4	7.4	0.03 / 30.0	No exceedance of annual average criteria.
April 2025	2.7	5.9	11.3	6.6	6.6	7.3	0.03 / 30.0	No exceedance of annual average criteria.
Rolling 12 month average	0.003 ppm / 3.4 ppb	0.006 ppm / 5.7 ppb	0.010 ppm / 9.9 ppb	0.010 ppm / 10.3 ppb	-	-	0.03 / 30.0	No exceedance of annual average criteria.
All months^	0.007 ppm / 6.8 ppb	0.006 ppm / 5.9 ppb	**0.036 ppm / 36.3 ppb**	0.011 ppm / 10.9 ppb	0.014 ppm / 14.4 ppb	-	0.03 ppm / 30.0 ppb	No exceedance of average criteria for all sites for all months. However, AQM03 has exceeded the annual average for the period since monitoring began.

Bold/grey indicates an exceedance of the criteria.

*Results are shown in ppb due to reporting output, however the criteria is set in ppm and therefore the equivalent criteria in ppb is also shown. ^ All months since May 2020



Monthly NO_2 over 12 months including the 6-months for this report

Moorebank Intermodal Precinct

APPENDIX D – NOISE MONITORING REPORTS

RENZO TONIN & ASSOCIATES
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Acoustics
Vibration
Structural Dynamics

MOOREBANK INTERMODAL PRECINCT EAST

Annual Noise Review - May 2024 to May 2025

15 June 2025

The Trust Company (Australia) Limited (ACN 000 000 993) As Trustee of The Moorebank Industrial Warehouse Trust (ABN 51 402 161 047) c/- ESR Developments (Australia) Pty Ltd

TM306-24-02F03 MPE Annual Review 2025 (r2).docx

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04.06.2025	Initial issue - Draft	0	1	S. Dixit / A.Leslie	-	C. Weber
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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 and SSD 7628 respectively), which together comprise the two stages of development under the MPE Concept Approval (MP10_0193). The Trust Company (Australia) Limited (ACN 000 000 993) As Trustee of The Moorebank Industrial Warehouse Trust (ABN 51 402 161 047), care of ESR Developments (Australia) Pty Ltd (ESR), is now the proponent for the MPE projects.

This **Annual Noise Review** report **for Year 5 Operations (May 2024 to May 2025)** has been prepared to address the requirements of Condition of Consent (CoC) B90 of SSD 7628 as follows:

> *For the duration of operation, the Applicant must:*
>
> *a) continue to implement all reasonable and feasible best practice noise mitigation measures;*
>
> *b) continue to investigate ways to reduce noise generated by the development, including maximum noise levels which may result in sleep disturbance; and*
>
> *c) report on these investigations and the implementation and effectiveness of these measures in the Annual Review to the satisfaction of the Secretary.*

Table 1 provides a summary of the noise-related Approval Conditions and how these are addressed in this Annual Noise Review.

Appendix A contains a glossary of acoustic terms used in this report.

Appendix B contains a copy of the reports referred to in this report that are not publicly available on the SIMTA website.

2 Compliance Matrix

Table 1 provides a summary of the Approval Conditions which relate to operational noise emission monitoring for Year 5 operations, and a discussion of the operational noise monitoring results. Where required, additional information is provided in later sections of this report or the appendices.

Table 2-1 Compliance matrix

Condition ID	Condition	Comments on compliance	Reference for further information
SSD 6766			
G7	The Applicant shall install and maintain a rail noise monitoring system on the rail link at the commencement of operation to continuously monitor the noise from rail operations on the rail link. The system shall capture the noise from each individual train passby noise generation event, and include information to identify: a) Time and date of freight train passbys; b) Imagery or video to enable identification of the rolling stock during day and night; c) $L_{Aeq(15hour)}$ and $L_{Aeq(9hour)}$ from rail operations; and d) $L_{AF(max)}$ and SEL of individual train passbys, measured in accordance with ISO3095; or e) Other alternative information as agreed with, or required by, the Secretary. The results from the noise monitoring system, shall be publicly accessible from a website maintained by the Applicant. The noise results from each train shall be available on the website within 24 hours of it passing the monitor, unless unforeseen circumstances (i.e. a system malfunction) have occurred. The $L_{Aeq(15hour)}$ and $L_{Aeq(9hour)}$ results from each day shall be available on the website within 24 hours of the period ending. Prior to the commencement of operation, the Applicant shall submit for the approval of the Secretary, justification supporting the appropriateness of the location for rail noise monitoring, including details of any alternative options considered and reasons for these being dismissed. The rail noise monitoring system shall not operate until the Secretary has approved the proposed monitoring location. The Applicant shall provide an annual report to the Secretary with the results of monitoring for a period of 5 years, or as otherwise agreed with the Secretary, from the commencement of operation of the IMEX terminal. The Secretary shall consider the need for further reporting following a review of the results for year 5.	The commencement of IMT operations occurred in May 2020. The new rail link was commissioned in November 2019. A description of the noise monitoring systems are provided in Section 5 and capture the information required by this approval. A Functional and Performance Specification for the permanent noise monitoring system and angle of attack monitoring system was prepared for approval by the Secretary before the rail link commissioning. A summary of the noise monitoring results for Year 5 operations is provided in Section 5.1.	https://moorebankintermodalprecinct.com.au/wp-content/uploads/2023/04/TJ741-04F04-AoA-and-Functional-Spec-for-Permanent-Noise-Monitor-r9_redacted.pdf https://moorebanknoisemonitor-emsbk.trackiq.net/NoiseMonitor/ Section 5

Condition ID	Condition	Comments on compliance	Reference for further information
G7A	The applicant shall install and maintain a wayside angle of attack monitoring system on the rail link at the commencement of operation to continuously monitor the angle of attack to the rail of rolling stock wheels. The system shall capture the angle of attack from a wheel on each axle of every train, and include information to identify: a) Time and date of each axle passby; and b) The identification number of each item of rolling stock. The results from the angle of attack monitoring system shall be: • accessible by train operators from a website maintained by the Applicant. Angle of attack results from each train shall be available on the website within 24 hours of it passing the monitor, unless unforeseen circumstances have occurred. • included in a six-monthly report to the Secretary. The report should at least identify the number of wagons with wheels that exceed the ASA standard angle of attack and the action taken by operators to improve steering performance. Prior to the commencement of operation, the Applicant shall submit for the approval of the Secretary, justification supporting the appropriateness of the location for angle of attack monitoring, the format of the information to be accessible to operators and the format of the public report. The angle of attack monitoring system shall not operate until the Secretary has approved the proposed monitoring location and reporting arrangements.	An Angle of Attack (AoA) monitoring system was installed on the new rail link in May 2020. The monitoring system captures the AoA of each axle passby and compares the measured values with the acceptable value in the applicable Asset Standards Authority minimum operating standard. The AoA values for each axle are available to operators in accordance with the approval condition. A Functional and Performance Specification for the permanent noise monitoring system and angle of attack monitoring system was prepared for approval by the Secretary before the rail link commissioning. A summary of the AoA noise monitoring results of the Year 5 operations is provided in Section 6.1. For Year 5 operations, the monitoring identified 40 trains out of 3,343 events where the maximum AoA value exceeded the alarm level (representing 1.2% of passbys). Three of the 40 passby events with AoA alarm levels resulted in elevated noise levels at the permanent noise monitoring location. Exceedances of the AoA alarm levels were viewed as one-off instances, occurring irregularly.	Section 6
G8	The following measures must be implemented during operation: a) The use of automatic rail lubrication equipment in accordance with ASA Standard T HR TR 00111 ST Rail Lubrication and top of rail friction modifiers, where required; and b) Measures to ensure the rail cross sectional profile is maintained in accordance with ETN–01-02 Rail Grinding Manual for Plain Track to ensure the correct wheel / rail contact position and hence to encourage proper rolling stock steering.	Two rail friction modifier systems were installed on the rail link on 22 November 2019 per ASA Standard. These are positioned on the MIMT North Track at Chainage 39.739 km and the MIMT South Track at Chainage 39.860 km. Monthly track inspections and maintenance is undertaken by Qube's maintenance contractor, Taylor Rail, to ensure alignment with maintenance standards. Rail grinding has been performed so that the rail profile is consistent with maintenance standards.	FCMM 3B

<table>
<tr><th>Condition ID</th><th>Condition</th><th>Comments on compliance</th><th>Reference for further information</th></tr>
<tr><td colspan="4">SSD 7628</td></tr>
<tr><td>B79</td><td>The permitted hours of warehouse and distribution operation as detailed in Table 4.
Table 4: Hours of Operation
<table><tr><th>Activity</th><th>Day</th><th>Time</th></tr><tr><td>Operation</td><td>Monday to Sunday</td><td>24 hours</td></tr></table></td><td>MPE operates 24 hours per day, 365 days per year, consistent with the permitted hours of operation.</td><td>n/a</td></tr>
<tr><td>B80</td><td>B80. Noise generated by operation of the development inclusive of MPE Stage 1 operations must not exceed the noise limits in Table 5.
Table 5: Noise Limits dB(A)
<table><tr><th>Location (residential receivers)</th><th>Day ($L_{Aeq(15min)}$)</th><th>Evening ($L_{Aeq(15min)}$)</th><th>Night ($L_{Aeq(15min)}$)</th><th>Night ($L_{A1(1min)}$)</th></tr><tr><td>Casula</td><td>35 dB</td><td>35 dB</td><td>35 dB</td><td>52 dB</td></tr><tr><td>Wattle Grove (NCA 2)</td><td>35 dB</td><td>35 dB</td><td>35 dB</td><td>52 dB</td></tr><tr><td>Glenfield (NCA 4)</td><td>35 dB</td><td>35 dB</td><td>35 dB</td><td>52 dB</td></tr></table>Notes:
To determine compliance with the LAeq,15 minute noise limits, noise from the development is to be measured at the most affected point within the residential boundary, or at the most affected point within 30 metres of a dwelling where the dwelling is more than 30 metres from the boundary. Where it can be demonstrated that direct measurement of noise from the project is impractical, the EPA may accept alternative means of determining compliance (see Chapter 11 of the NSW Industrial Noise Policy). The modification factors in Section 4 of the NSW Industrial Noise Policy must also be applied to the measured noise levels where applicable.
To determine compliance with the LA1,1 minute noise limits, noise from the project is to be measured at 1 metre from the dwelling façade. Where it can be demonstrated that direct measurement of noise from the project is impractical, the EPA may accept alternative means of determining compliance (see Chapter 11 of the NSW Industrial Noise Policy).
The noise emission limits identified above apply under meteorological conditions of:
(i) wind speeds of up to 3 m/s at 10 metres above ground level; or
(ii) 'F' atmospheric stability class.</td><td>This condition specifies the operational noise limits for MPE operations.
However, when undertaking any compliance assessment, it is noted that the SSD 7628 B80 noise limit table states "…inclusive of MPE Stage 1 operations" therefore was intended to apply to the cumulative noise emissions of noise generating activities in SSD 6766 and SSD 7628. However, MPE Stage 1, has specific noise limits included in SSD 6766, approved as part of L&EC Proceedings (No 2017/81889) which are higher than these levels. This requirement presents a consistency issue, as the requirement is inconsistent with the EIS derived noise limits in accordance with NSW EPA policy, the expected noise emission performance from MPE, and previous approvals. As part of Modification 1 to SSD 7709 (MPW Stage 2), which identifies cumulative noise limits for MPW + MPE, EPA agreed there was an inconsistency issue. Following which, it was agreed that MPW + MPE should achieve the cumulative noise limits in SSD 7709 B131.</td><td>Section 3 – Warehouse noise monitoring
Section 7 - Noise monitoring in response to complaints</td></tr>
</table>

Condition ID	Condition	Comments on compliance	Reference for further information
B85	The Applicant must carry out noise monitoring of mechanical plant and other noisy equipment for a minimum period of one week where valid data is collected following occupation of each warehouse. The monitoring program must be carried out by a suitably qualified and experienced person(s) and a Monitoring Report for Mechanical Plan must be submitted to the Secretary within two months of occupation or each tenancy to verify predicted mechanical plant and equipment noise levels.	Warehouse noise monitoring is required to be undertaken following the occupation of each warehouse. Noise monitoring of warehouse mechanical plant and other noisy equipment was performed on two occasions during the 2024-2025 review period for MPE Warehouse E6. A summary of this noise monitoring is provided in Section 3. For the 2024-2025 review period, for all monitored warehouses, the warehouse mechanical plant and equipment noise emission levels achieved the overall noise levels presented in Table 5 of CoC B80 during all time periods. An outcome from this monitoring is that further acoustic mitigation measures are currently being installed for warehouse E7 to assist ESR with managing the cumulative noise emissions from the Moorebank Intermodal Precinct (MIP).	Section 3
B88	To ensure the operational noise impacts are appropriately managed, the following measures apply: a) use of best practice plant; and b) preparation of a risk assessment to determine if non-tonal reversing alarms can be fitted as a condition of site entry. Alternatively, site design may include traffic flow that does not require or precludes reversing of vehicles.	A range of best practice plant / measures have been implemented during previous monitoring periods, and continue to operate with these during the 2024-2025 noise monitoring period. These include: 1. The use of electric cranes with broadband movement alarms for all rail loading and container stacking, with reach stackers now only required for truck loading and combi-lifts and straddle carriers used for warehouse container movements. 2. 'Quackers' or broadband reversing alarms were fitted to all reach stackers and combi-lifts. 3. IMEX staff briefings were undertaken, reminding staff and drivers of noise management obligations and will be ongoing as part of regular reminders. The risk assessment relating to the use of non-tonal reversing alarms is addressed in the Table 2-3 B88 of the ONVMP. Further measures are identified in the F5A management plan, which include both mitigation and management measures, including container handling and truck operations and are being implemented as part of operations.	Operational Noise and Vibration Management Plan (Rev 013, 24/01/2023) (ONVMP) https://moorebankintermodalprecinct.com.au/wp-content/uploads/2023/09/ONVMP_V13_clean_compiled_Redacted-compressed.pdf F5A Management Plan Moorebank Intermodal Precinct– East Precinct (Rev 08, 22/11/2023) https://moorebankintermodalprecinct.com.au/wp-content/uploads/2024/08/Condition-F5A-MP_-Rev8_Redacted10.pdf Section 7 and 8

Condition ID	Condition	Comments on compliance	Reference for further information
B90	For the duration of operation, the Applicant must: a) continue to implement all reasonable and feasible best practice noise mitigation measures; b) continue to investigate ways to reduce noise generated by the development, including maximum noise levels which may result in sleep disturbance; and c) report on these investigations and the implementation and effectiveness of these measures in the Annual Review to the satisfaction of the Secretary.	The following additional best practice plant / measures are continuing to be implemented within the current reporting period, including through the F5A management plan for the IMEX terminal: 1. The use of electric cranes commenced so that all rail loading and container stacking is performed by the electric cranes, with reach stackers now only required for truck loading. 2. 'Quackers' or broadband reversing alarms were fitted to all reach stackers and combi lifts. 3. IMEX staff briefings were undertaken, reminding staff and drivers of noise management obligations and will be ongoing as part of regular reminders. The permanent rail noise monitoring results (Section 5) for Year 5 operations indicate similar passby noise levels to Year 4 operations and increased L_{Aeq} noise levels consistent with the rail link usage. The AoA monitoring data for train axles is reviewed by operators to identify wagons that may require maintenance to improve steering performance. An outcome from the Warehouse E7 B85 warehouse mechanical plant noise monitoring was that, even though noise levels were below the B80 noise limits, further acoustic mitigation measures were recommended and are currently being installed for a fan at warehouse E7 as noise levels were identified as louder than expected (Section 3) to assist ESR with managing the cumulative noise emissions from the MIP. Noise monitoring being undertaken for Moorebank Precinct West (MPW) is also being used to provide feedback on MPE noise emissions as the MPW noise requirements are cumulative of MPE, to assist with reviewing the effectiveness of ongoing noise management.	Sections 3, 4, 5, 6, 7 and 8 F5A Management Plan Moorebank Intermodal Precinct– East Precinct (Rev 08, 22/11/2023) https://moorebankintermodalprecinct.com.au/wp-content/uploads/2024/08/Condition-F5A-MP_-Rev8_Redacted10.pdf
Final Compilation of Mitigation Measures (FCMM) for MPE Stage 1 and Stage 2			
Stage 2 2D	In the event of any noise or vibration related complaint or adverse comment from the community, noise and ground vibration levels (as relevant) would be investigated. Remedial action would be implemented where feasible and reasonable. The procedures for managing complaints would be provided within the Community Information and Awareness Strategy.	11 noise complaints were received during the period of 30 April 2024 to 1 May 2025. Of these 11 complaints, 3 did not relate to operations, and were either related to construction noise or non-MIP noise. These complaints were investigated and responses including advising the relevant MIP teams for further investigation, or noise mitigation strategies currently being implemented were communicated to the complaints.	Section 7

Condition ID	Condition	Comments on compliance	Reference for further information
Operational Noise and Vibration Management Plan – Section 4.1.1 Summary of Monitoring Requirements			
Table 4.1 Rail noise monitoring	Continuous rail noise monitoring will be undertaken from the commencement of operations of the IMEX terminal. The monitoring system will capture the following information: • Noise from each train passby • Time and date of each train passby • Imagery or video recording to identify rolling stock • $L_{AF(max)}$ and Sound Exposure Level (SEL) of individual train passbys, measured in accordance with ISO 3095:2013 • $L_{Aeq(15hour)}$ and $L_{Aeq(9hour)}$ noise levels for each 24-hour period, which will be calculated based on the number of train passbys during the day and night periods and the corresponding SEL noise levels, consistent with the procedure in Clause 3.4.1.1 of the Rail Infrastructure Noise Guideline (EPA, 2013). • Other information as required by the Secretary	Refer comments related to SSD 6766 G7	SSD 6766 G7
Wayside Angle of Attack Monitoring	Continuous wayside angle of attack monitoring will be undertaken from the commencement of operations of the IMEX terminal. The monitoring system will capture the following information: • Angle of attack from a wheel on each axle of every train • Time and date of each axle passby • Identification number of each item of rolling stock	Refer comments related to SSD 6766 G7A	SSD 6766 G7A
Brake Squeal Noise	Continuous (unattended monitoring system) from the commencement of operations of the IMEX terminal – to assess potential noise impacts of rail link at western receivers	Refer comments related to SSD 6766 G7. The permanent noise monitoring system is positioned at a location on the rail link where it can capture noise levels associated with curve brake squeal should this occur.	SSD 6766 G7
Operational Noise Monitoring	Noise monitoring to compare actual noise performance of the MIP East Precinct against the noise management levels will be undertaken as follows: • Regular performance monitoring • Within 12 months of the commencement of operation of the IMEX terminal and Warehouse 1 Precinct • Within 12 months of occupation of the first warehouse, 50% occupation of the site and 100% occupation of the site, or as otherwise agreed by the Secretary • For a minimum of 12 months following occupation of the entire site	Sections 3, 4, 5, 6 and 7	Sections 3, 4, 5, 6 and 7

Condition ID	Condition	Comments on compliance	Reference for further information
Operational Noise Monitoring	Attended noise monitoring will be undertaken to determine compliance against the noise management levels upon receipt of a noise complaint	Noise complaints received during the 2024-2025 review period relating to operational noise referenced container handling activities, and general concerns about MIP noise generating activities (Section 7). Noise monitoring (attended and unattended) being undertaken for Moorebank Precinct West (MPW) has been used to provide feedback on MPE noise emissions as the MPW noise requirements are cumulative of MPE, to assist with reviewing the effectiveness of ongoing noise management. This included recommendations for managing container handling activity noise.	Section 7
Noise Assessment of Mechanical Plant and other equipment	Conducted for the freight village and each warehouse for a period of 1 week after construction and submitted to secretary within 2 weeks of occupation. Compliance against the noise management levels.	Refer comments related to SSD 7628 B85	SSD 7628 B85
Continuous Unattended Noise Monitoring	Continuous noise monitoring will be conducted at the following locations for a period of twelve months following the occupation of the entire site: • CM1: 10 Talbot Court, Wattle Grove • CM2: 24 Glenelg Court, Wattle Grove North • CM3: 14 Dunmore Crescent, Casula • CM4: 26 Goodenough Street, Glenfield	Refer comments related to SSD 7628 B64 (refer Section 4)	SSD 7628 B64 Section 4

3 Warehouse mechanical plant and other noisy equipment noise monitoring

Warehouse mechanical plant and other noisy equipment noise monitoring is required following the occupation of each warehouse in accordance with SSD 7628 CoC B85.

Noise monitoring of warehouse mechanical plant and other noisy equipment was performed on two occasions during the 2024-2025 review period to address SSD 7628 CoC B85 and the MPE Operational Noise and Vibration Management Plan (Rev 013, 24/01/2023) (ONVMP) requirements. A summary of the monitoring periods and reporting is provided in Table 3-1.

Table 3-1 Summary of CoC B85 warehouse mechanical plant and other noisy equipment noise monitoring

Noise monitoring period	Warehouse	Report reference
14 May - 24 May 2024	E7 (Mainfreight)	TM306-05F02 E7 Warehouse B85 Operational Noise Monitoring (r1)
28 March – 11 April 2025	E6A (QUBE) / E6B (CEVA)	TM306-05F03 E6 Warehouse B85 Operational Noise Monitoring (r1)

For warehouse operations, the SSD 7628 CoC B80 operational noise limits during the daytime, evening and night-time periods are 35 dB(A) $L_{Aeq(15minute}$ at the nearest residential receivers. This level of 35 dB(A) $L_{Aeq(15minute)}$ is below the existing ambient noise levels in the nearby residential areas, which are controlled by road traffic noise, rail traffic noise and other natural sources.

During each monitoring period noise measurement at the nearby residential areas were also undertaken and confirmed warehouse mechanical plant noise emissions were not audible and quantifiable within the residential areas.

As it was not possible to quantify the noise contribution from industrial noise sources at the nearest residential receivers, the procedure in the *Noise Policy for Industry* (NPfI) was followed to assess compliance. During each measurement campaign, a combination of on-site noise measurements, intermediate locations between the warehouse and residences, unattended noise monitoring, in combination with the use of a calibrated noise model, were used to quantify the warehouse mechanical plant noise levels associated with reasonable worst-case operations at the nearby residential receivers for comparison against the noise requirements.

This approach is consistent with Section 7.1.1 of the NPfI to review the performance of an industrial operation that is co-located with separate but noise-generating industrial sites impacting the same receiver.

Table 3-2 summaries the outcomes for the two assessments undertaken during the 2024-2025 review period.

Table 3-2 Summary of CoC B85 warehouse mechanical plant and other noisy equipment noise monitoring outcomes

Warehouse	Outcome summary
WH7 (Mainfreight)	Warehouse mechanical plant and equipment noise emission levels achieve the overall noise levels presented in Table 5 of CoC B80 during all time periods. However, to assist ESR with managing the cumulative noise emissions from the MIP further acoustic mitigation measures are currently being installed as it was identified during the monitoring that one was operating at noise levels louder than would be expected to manage cumulative noise emissions from the warehouse. Following these mitigation measures, noise level contributions are expected to further reduce at nearby residences from those presented in the assessment. This will be confirmed through monitoring following the implementation of these acoustic mitigation measures.
WH6A (QUBE) / WH6B (CEVA)	Warehouse mechanical plant and equipment noise emission levels achieve the overall noise levels presented in Table 5 of CoC B80 during all time periods.

For the 2024-2025 review period, for all monitored warehouses, the warehouse mechanical plant and equipment noise emission levels achieve the overall noise levels presented in Table 5 of CoC B80 during all time periods.

4 Continuous noise monitoring in residential areas

Continuous noise monitoring at sensitive receivers is required to be undertaken at sensitive receivers in accordance with the approval conditions for MPE Stage 2 (SSD 7628 CoC B64).

The primary purpose of the permanent noise monitoring systems is to measure construction-related noise in accordance with the requirements of SSD 7628 Condition B64. Whilst this condition relates to construction noise, the noise monitoring results can also be utilised for operational noise reviews/assessments and to investigate noise complaints (if required).

Details of the continuous noise monitoring and measurement locations (CM1 to CM4) are provided in Section 3.1.1 (Figure 3-1) of the MPE ONVMP (Rev 13, 24/01/2023). The measurement systems comprise four Envirosuite permanent noise monitors. The monitoring locations are:

- CM1: 10 Talbot Court, Wattle Grove
- CM2: 24 Glenelg Court, Wattle Grove North
- CM3: 14 Dunmore Crescent, Casula
- CM4: 26 Goodenough Street, Glenfield

During November 2024 the noise monitoring equipment of these monitoring terminals was upgraded with new sound level meters and shade cloth implemented to minimise any downtime in the case that the unit temperature limits are exceeded.

The monitor at location CM2 was offline for a period from 19/08/2024 to 10/09/2024. This was due to the power disconnection at their property. All other monitoring locations were fully operational during the period.

This noise monitoring is ongoing.

5 Continuous rail link noise monitoring

The commencement of the Moorebank Import/Export Terminal (IMEX) operations occurred in May 2020. The new rail link was commissioned earlier in November 2019. In conjunction with the rail link commissioning, a temporary rail noise monitoring system (RNMS) was established to quantify the passby noise levels in accordance with the requirements of SSD6766 Condition G7.

The temporary RNMS was positioned at a location near one of the small radius curves and where freight trains are likely to be braking. The microphone of the RNMS monitoring system was positioned on the western side of rail link at a distance of 10.5 m from the near track centreline (Up track) and 15.5 m from the far track centreline (Down track).

The temporary RNMS was operational between 1 November 2019 and 8 July 2020. During this period, procurement of a permanent noise monitoring system occurred, compliant with the requirements of the *Functional and Performance Specification for Permanent Noise Monitor and Proposed Noise and AoA Monitoring Locations*. This functional specification provided justification supporting the appropriateness of the proposed monitoring location and was approved by the Secretary.

The permanent noise monitoring system was commissioned on 9 July 2020 at the same location as the temporary RNMS. The permanent system incorporates two microphones, one adjacent to each track, at a distance of 7.5 m from the track centreline. Noise measurement results of all passbys are provided here[1].

Below is a summary of the noise monitoring results for Year 5 operations.

5.1 Year 5 rail operations noise monitoring report

This report covers rail movements between 1 May 2024 and 1 May 2025. A summary of the key statistics are provided below:

- Number of days in monitoring period - 365 days.
- Number of valid train passby events – 2,269 (day), 1,074 (night), 3,343 (day + night)
- Number of days that included one or more train events – 359, representing 98% of days
- Number of nights that included one or more train events – 350, representing 96% of nights

For each train passby, the noise monitoring system recorded the L_{AFmax} and SEL[2] noise levels at a measurement distance of 7.5 m from the track centreline. The SEL noise levels are utilised to calculate the $L_{Aeq(15hour)}$ daytime and $L_{Aeq(9hour)}$ noise levels each day. A summary of the measured $L_{Aeq(15hour)}$ daytime

[1] Available https://moorebanknoisemonitor-emsbk.trackiq.net/NoiseMonitor/

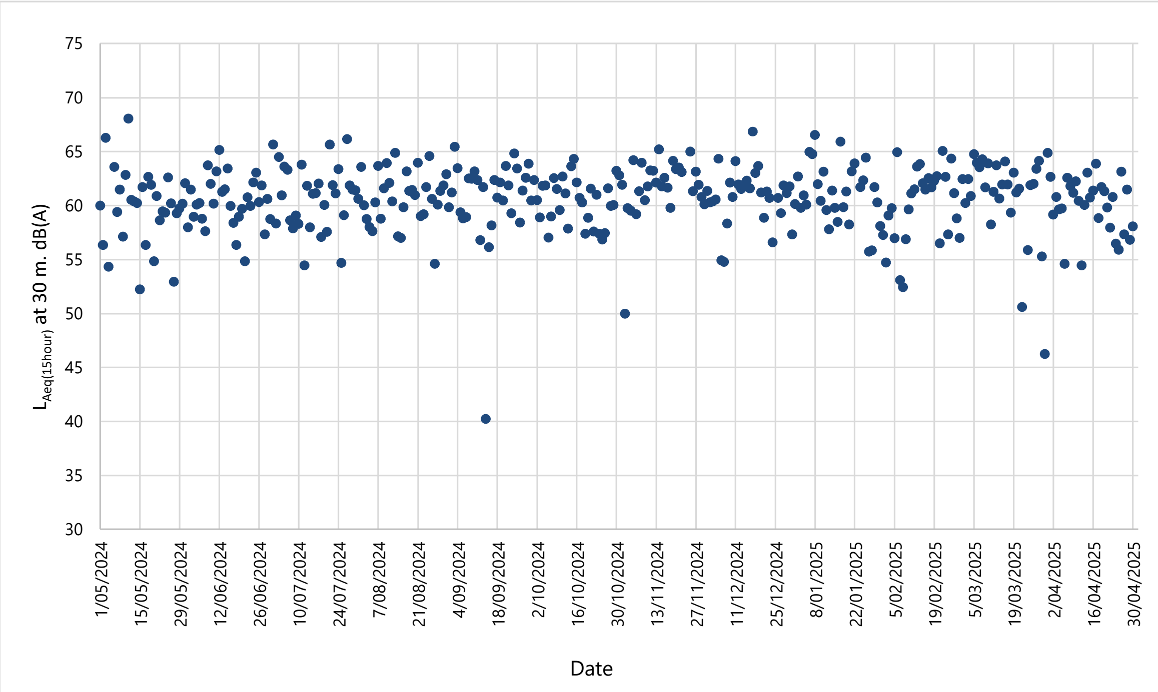
[2] SEL represents the single-event Sound Exposure Level of the train passby. This represents the total noise energy of the train passby event, normalised to a measurement interval of one second. The SEL is expressed as a dB(A) noise level.

noise levels, normalised to a measurement distance of 30 m is provided in Figure 5-1. The corresponding noise levels for the night-time period are provided in Figure 5-2.

It is noted that the nearest residential receiver (Glenfield Farm) is approximately 400 m from the rail link at the closest point and approximately 850 m from the noise monitoring system. The noise levels at Glenfield Farm are estimated to be approximately 14 dB(A) or more below the values in Figure 5-1 and Figure 5-2.

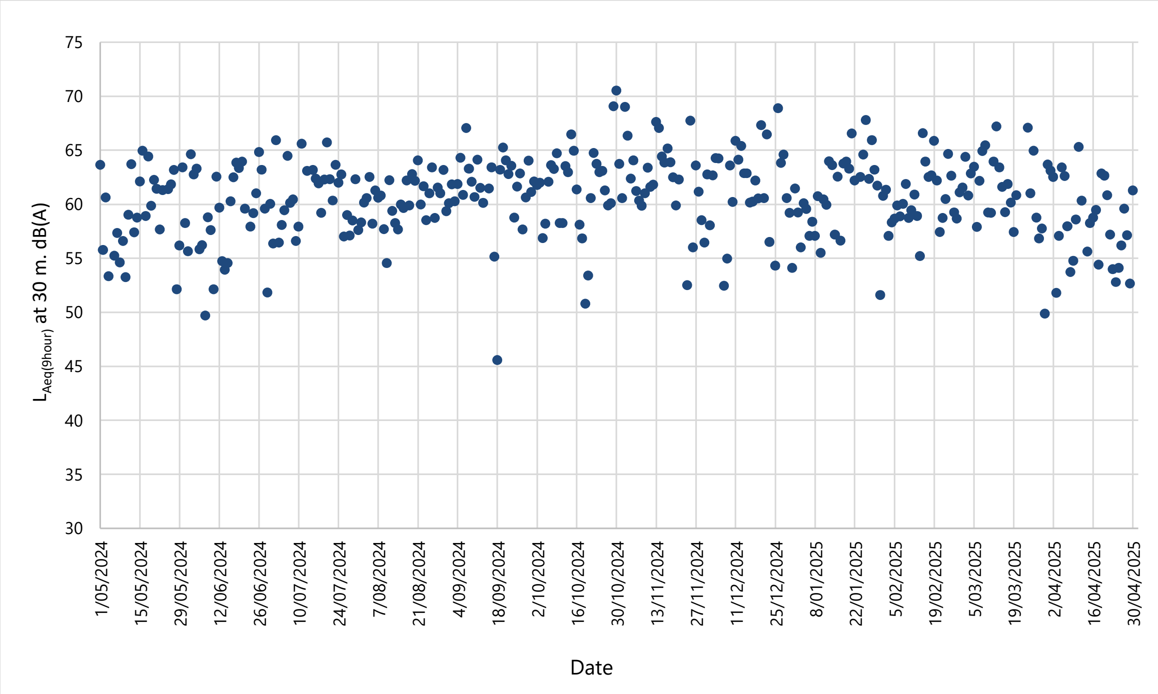
Based on the results in Figure 5-1 and Figure 5-2, the measured $L_{Aeq(15hour)}$ and $L_{Aeq(9hour)}$ noise levels appear to be approximately 3 dB(A) higher during daytime and 2 dB(A) higher at night compared to Year 4 noise monitoring results (see Reference 3). This increase is primarily attributed to greater rail link usage between Year 4 and Year 5 (i.e. additional train services) and may also be influenced by an increase in the average length of train consists.

Figure 5-1 Measured $L_{Aeq(15hour)}$ daytime noise levels at 30 m from track centreline



3 Moorebank Intermodal Terminal Annual Noise Review – July 2024, Renzo Tonin & Associates Report TL116-05F23 Annual Review May 2024 (r4) dated 17 July 2024.

Figure 5-2 Measured $L_{Aeq(9hour)}$ night-time noise levels at 30 m from track centreline



A summary of the measured L_{AFmax} daytime noise levels at a measurement distance of 7.5 m is provided in Figure 5-3. The corresponding noise levels for the night-time period are provided in Figure 5-4.

Figure 5-3 Measured L_{AFmax} daytime noise levels at 7.5 m from track centreline

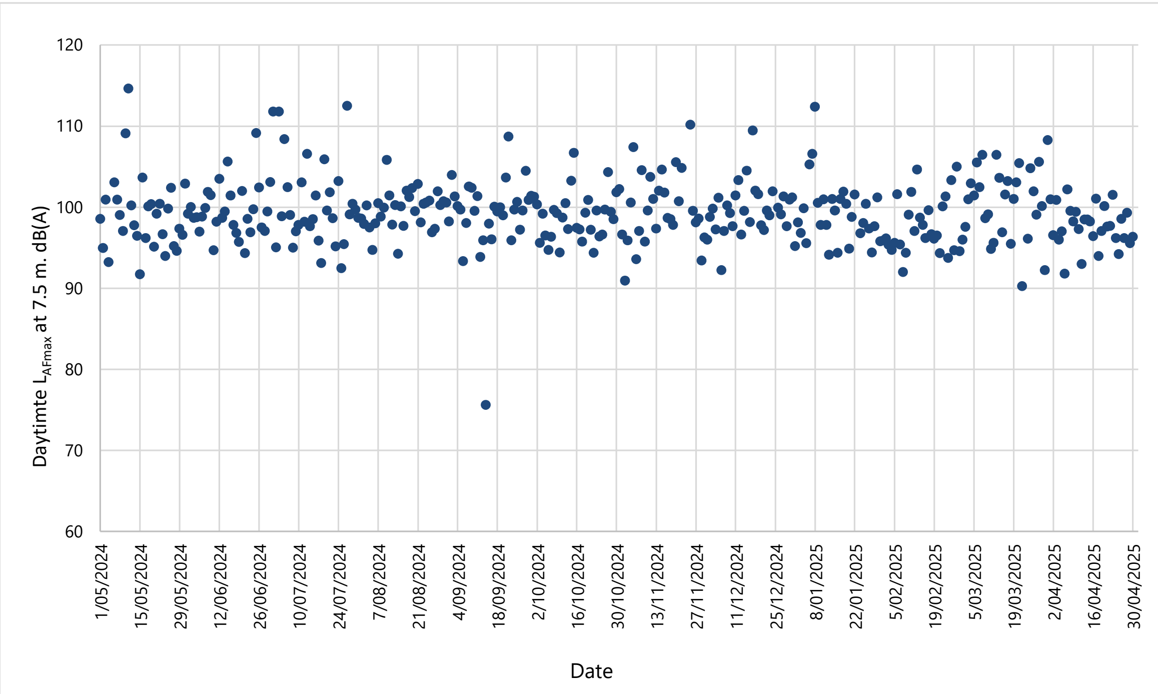
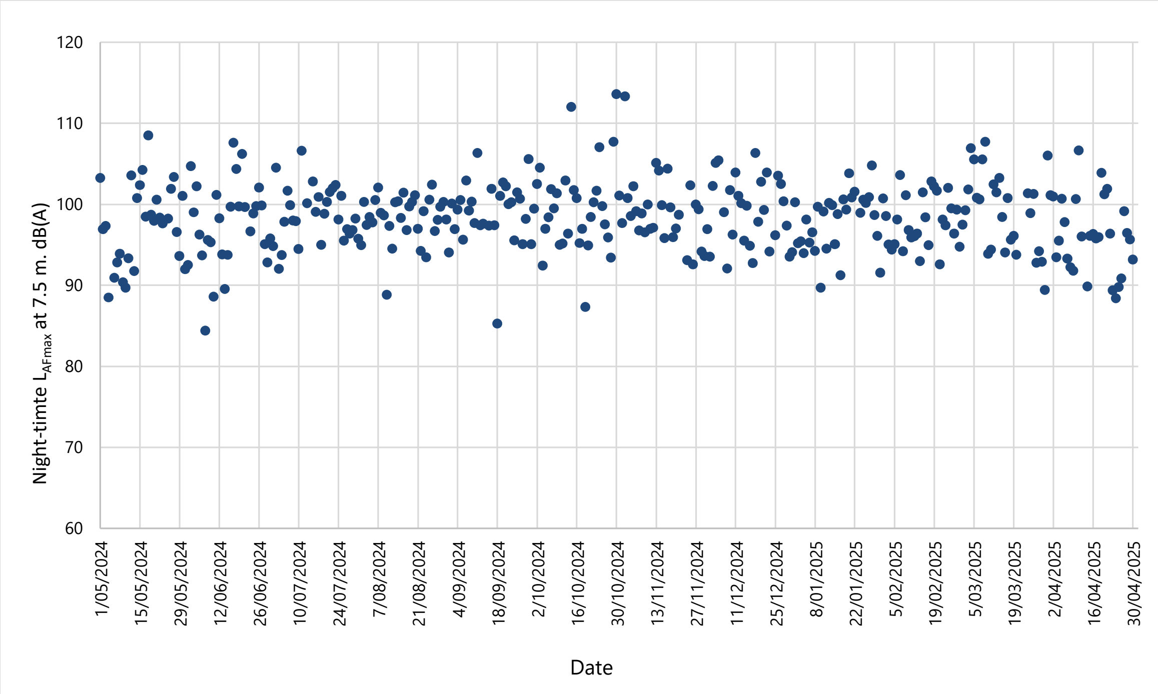


Figure 5-4 Measured L_{AFmax} night-time noise levels at 7.5 m from track centreline



Based on the results in Figure 5-3 and Figure 5-4, there does not appear to be any obvious trend in the measured L_{AFmax} noise levels during the monitoring period. The maximum noise levels are consistent with the Year 4 noise monitoring results (see Reference 3).

6 Rail link angle of attack (AoA) monitoring

The performance of wagon bogies and their ability to negotiate small radius curves without generating curve squeal, is assessed in terms of the angle of attack (AoA) of the wheelset. Acceptable AoA values are defined in Section 2.7.1 of Asset Standards Authority Standard T HR RS 00400 ST[4] and are a function of the curve radius and wheel base.

An AoA measurement system was installed on the rail link and partially commissioned on 13 May 2020. The system was fully commissioned on 9 July 2020 at the same time as the permanent noise monitoring system. The AoA system is installed on the eastern track.

Justification supporting the appropriateness of the proposed monitoring location is provided in the *Functional and Performance Specification for Permanent Noise Monitor and Proposed Noise and AoA Monitoring Locations*[5], and was approved by the Secretary.

AoA measurement data for Year 5 operations is available in the following six monthly report:

- Moorebank Intermodal Terminal - Six Monthly Review of AoA – November 2024 (rail movements between 1 May 2024 and 1 November 2024) – Refer Section B.1.
- Moorebank Intermodal Terminal - Six Monthly Review of AoA – May 2025 (rail movements between 1 November 2024 and 1 May 2025) – Refer Section B.2.

In accordance with the requirements of the SSD 6766 Condition G7A, the AoA of a wheel of each axle of each train is captured by the measurement system. This data is accessible by train operators on a website maintained by QUBE.

Below is a summary of the noise monitoring results for the two 6-montly AoA monitoring periods (during Year 5 operations).

6.1 Year 5 rail operations AoA monitoring

A summary of the key statistics are provided below:

- 1 May 2024 and 1 May 2025
  - Number of valid train passby events – 3343
  - Number of train passby events where the measure AoA values on one or more axles were above the acceptable level defined in Section 2.7.1 of Asset Standards Authority Standard T HR RS 00400 ST – 40, representing less than 1% of passbys.

[4] Transport for NSW Asset Standards Authority T HR RS 00400 ST *RSU 400 Series – Minimum Operating Standards for Rolling Stock – Freight Vehicle Specific Interface Requirements* Version 2.0 dated 24 August 2017

[5] Renzo Tonin & Associates Report TJ741-04F04 AoA and Functional Spec for Permanent Noise Monitor (r8)

A summary of the maximum AoA value measured for each train is provided in Figure 6-1. The results show that the maximum AoA value is typically less than 12 mrad, except for 19 train passbys that had maximum AoA value greater than the established alarm level.

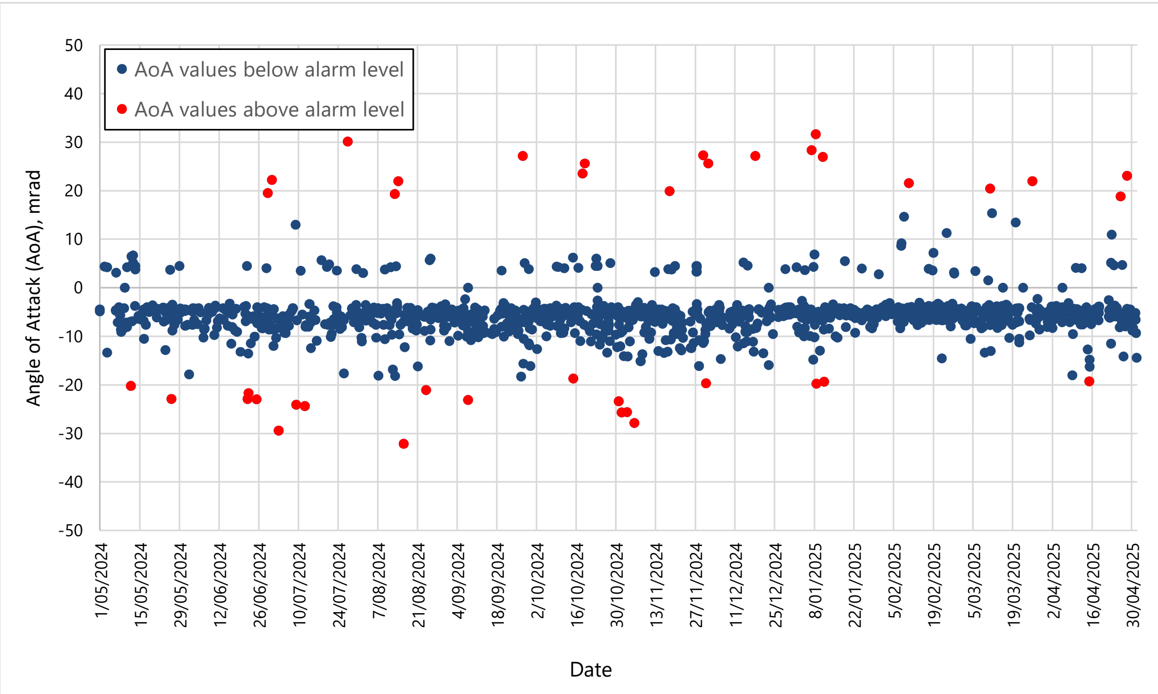
A detailed review of the Angle of Attack (AoA) exceedances identified three wagons that repeatedly triggered AoA alarms. Wagon CQMY 003013 and CQMY 003058, each exceeded the AoA alarm threshold on four occasions. Wagon CQMY 003099 triggered the AoA alarm on two occasions.

It is the same Wagon ID (CQMY 003099) that exceeded the AoA alarm level on ten occasions during 1 May 2024 and 1 November 2024. The owner of Wagon ID (CQMY 003099) was notified of the exceedances and were in the process of determining the required rectification works. Following rectification works undertaken during November 2024 this wagon has not been identified as exceeding the AoA alarm level.

As of 04/06/2025, the owner of these two further wagons had been notified of the exceedances and were in the process of determining the required rectification works.

Three of the 40 passby events with AoA alarm levels resulted in elevated noise levels at the permanent noise monitoring location [i.e. where the calculated $L_{Aeq(9hour)}$ noise levels at 30 m were above 60 dB(A)]. Exceedances of the AoA alarm levels were viewed as one-off instances, occurring irregularly.

Figure 6-1 Maximum AoA value for each train - 1 May 2024 to 1 May 2025



7 Noise monitoring in response to complaints

In the current reporting period, there were 11 complaints relating to noise levels that were reported by residents. Of these 11 complaints, 3 did not relate to operations, and were either related to construction noise or non-MIP noise.

The complaints referenced container handling activities, and general concerns about MIP noise generating activities. These complaints were received generally during mid-2024. Some complaint periods were confirmed to correlate with periods when Holsworthy Military Area activities were being undertaken. Complaints during 2025 have generally related to concerns regarding overnight construction activities. There was also a complaint about general MIP noise generating activities, and noise from an adjacent industrial site.

Responses to container handling noise complaints have included advising the QUBE team to undertake further investigation and sharing the noise mitigation strategies developed by the project with the complaints that are being implemented.

The number of operational noise-related complaints (confirmed construction or non-MIP complaints excluded) each month is summarised in the below table, for the period between 30 April 2024 to 1 May 2025. The number of noise complaints were highest in June 2024.

Period	Number of operational noise-related complaints
May 2024	1
June 2024	4
July 2024	0
August 2024	1
September 2024	0
October 2024	0
November 2024	0
December 2024	0
January 2025	0
February 2025	0
March 2025	0
April 2025	2

No specific noise monitoring for complaints was undertaken during the period between 30 April 2024 to 1 May 2025. Noise monitoring (attended and unattended) was undertaken for Moorebank Precinct West (MPW). This has been used to provide feedback on MPE noise emissions as the MPW noise requirements are cumulative of MPE, to assist with reviewing the effectiveness of ongoing noise management. This included recommendations for managing container handling activity noise.

8 Other noise-related tasks

8.1 Other relevant consent monitoring

Noise monitoring was undertaken during February 2025 for Moorebank Precinct West (MPW) to address SSD 7709 CoC B140A. As the MPW noise requirements are cumulative this monitoring also considered MPE noise emissions.

The noise monitoring surveys determined that the noise emissions from MIP operations were less than the SSD 7709 Conditions of Consent (CoC) $L_{Aeq15min}$ noise limits at all surrounding receiver locations, and that typically, the maximum noise levels from MIP operations were generally compliant with the L_{Amax} noise, however, a number of periods were identified where the L_{Amax} noise levels were above the L_{Amax} noise limit for residences in Casula, which were on occasions from MPE activities.

As such, mitigation and management measure recommendations were included to address this noise and further improve noise performance from the MIP noise emissions. The implementation of these measures are under investigation.

8.2 Moorebank Cumulative Noise Management

Planning work is continuing for the management of cumulative noise from the Moorebank Intermodal Precinct (MIP). This work currently aims to manage cumulative noise emissions from the various noise generating components (eg. warehouse and IMEX operations), to manage overall cumulative noise emissions against the applicable consent requirements.

9 Conclusion

This **Annual Noise Review** report **for Year 5 Operations** has been prepared to address the requirements of Approval Condition B90 of SSD 7628.

The following operational noise monitoring has been performed in accordance the Approval Conditions in SSD 6766 and 7628:

- Continuous rail noise and angle of attack (AoA) monitoring on the rail link to monitoring rail traffic noise and to assist in identifying potential high noise events (e.g. excessive locomotive noise, brake squeal or curve squeal).

- Warehouse mechanical equipment noise monitoring and reporting was undertaken for MPE Warehouse E6 and E7 during periods when valid data could be obtained. For the 2024-2025 review period, for all monitored warehouses, the warehouse mechanical plant and equipment noise emission levels achieved the overall noise limits presented in SSD 7628 CoC B80 during all time periods.

APPENDIX A Glossary of terminology

The following is a brief description of the technical terms used to describe noise to assist in understanding the technical issues presented.

Absorption Coefficient α	The absorption coefficient of a material, usually measured for each octave or third-octave band and ranging between zero and one. For example, a value of 0.85 for an octave band means that 85% of the sound energy within that octave band is absorbed on coming into contact with the material. Conversely, a low value below about 0.1 means the material is acoustically reflective.
Adverse weather	Weather effects that enhance noise (particularly wind and temperature inversions) occurring at a site for a significant period of time. In the NSW INP this occurs when wind occurs for more than 30% of the time in any assessment period in any season and/or temperature inversions occurring more than 30% of nights in winter.
Air-borne noise	Noise which is fundamentally transmitted by way of the air and can be attenuated by the use of barriers and walls placed physically between the noise source and receiver.
Ambient noise	The all-encompassing noise associated within a given environment at a given time, usually composed of sound from all sources near and far.
AoA	Angle of Attack - As the wheels on a bogie negotiate a tight curve, the leading wheelset typically presents an Angle-of-Attack (AoA) to the rail. The AoA of a leading wheelset with good steering performance can be calculated from AoA = wheelbase (m) / curve radius (m). AoA is normally measured in milliradian (mrad).
Amenity	A desirable or useful feature or facility of a building or place.
AS	Australian Standard
ASA	Asset Standards Authority
Assessment period	The time period in which an assessment is made. e.g. Day 7am-10pm & Night 10pm-7am.
Assessment Point	A location at which a noise or vibration measurement is taken or estimated.
Attenuation	The reduction in the level of sound or vibration.
Audible Range	The limits of frequency which are audible or heard as sound. The normal hearing in young adults detects ranges from 20 Hz to 20 kHz, although some people can detect sound with frequencies outside these limits.
A-weighting	A filter applied to the sound recording made by a microphone to approximate the response of the human ear.
Background noise	Background noise is the term used to describe the underlying level of noise present in the ambient noise, measured in the absence of the noise under investigation. It is described as the average of the minimum noise levels measured on a sound level meter and is measured statistically as the A-weighted noise level exceeded for ninety percent of a sample period. This is represented as the LA90 noise level if measured as an overall level or an L90 noise level when measured in octave or third-octave bands.
Barrier (Noise)	A natural or constructed physical barrier which impedes the propagation of sound and includes fences, walls, earth mounds or berms and buildings.
Berm	Earth or overburden mound.
Buffer	An area of land between a source and a noise-sensitive receiver and may be an open space or a noise-tolerant land use.
Bund	A bund is an embankment or wall of brick, stone, concrete or other impervious material, which may form part or all of the perimeter of a compound.
BS	British Standard

CoRTN	United Kingdom Department of Environment entitled "Calculation of Road Traffic Noise (1988)"		
Decibel [dB]	The units that sound is measured in. The following are examples of the decibel readings of common sounds in our environment:		
	threshold of hearing	0 dB	The faintest sound we can hear, defined as 20 micro Pascal
		10 dB	Human breathing
	almost silent	20 dB	
		30 dB	Quiet bedroom or in a quiet national park location
	generally quiet	40 dB	Library
		50 dB	Typical office space or ambience in the city at night
	moderately loud	60 dB	CBD mall at lunch time
		70 dB	The sound of a car passing on the street
	loud	80 dB	Loud music played at home
		90 dB	The sound of a truck passing on the street
	very loud	100 dB	Indoor rock band concert
		110 dB	Operating a chainsaw or jackhammer
	extremely loud	120 dB	Jet plane take-off at 100m away
	threshold of pain	130 dB	
		140 dB	Military jet take-off at 25m away
dB(A)	A-weighted decibel. The A- weighting noise filter simulates the response of the human ear at relatively low levels, where the ear is not as effective in hearing low frequency sounds as it is in hearing high frequency sounds. That is, low frequency sounds of the same dB level are not heard as loud as high frequency sounds. The sound level meter replicates the human response of the ear by using an electronic filter which is called the "A" filter. A sound level measured with this filter is denoted as dB(A). Practically all noise is measured using the A filter.		
dB(C)	C-weighted decibels. The C-weighting noise filter simulates the response of the human ear at relatively high levels, where the human ear is nearly equally effective at hearing from mid-low frequency (63Hz) to mid-high frequency (4kHz), but is less effective outside these frequencies. The dB(C) level is not widely used but has some applications.		
Diffraction	The distortion of sound waves caused when passing tangentially around solid objects.		
DIN	German Standard		
ECRTN	Environmental Criteria for Road Traffic Noise, NSW, 1999		
ENMM	Environmental Noise Management Manual, Roads and Maritime Services (Transport for NSW)		
EPA	Environment Protection Authority		
Field Test	A test of the sound insulation performance in-situ. See also 'Laboratory Test' The sound insulation performance between building spaces can be measured by conducting a field test, for example, early during the construction stage or on completion. A field test is conducted in a non-ideal acoustic environment. It is generally not possible to measure the performance of an individual building element accurately as the results can be affected by numerous field conditions.		
Fluctuating Noise	Noise that varies continuously to an appreciable extent over the period of observation.		
Free-field	An environment in which there are no acoustic reflective surfaces. Free field noise measurements are carried out outdoors at least 3.5m from any acoustic reflecting structures other than the ground.		
Frequency	Frequency is synonymous to pitch. Sounds have a pitch which is peculiar to the nature of the sound generator. For example, the sound of a tiny bell has a high pitch and the sound of a bass drum has a low pitch. Frequency or pitch can be measured on a scale in units of Hertz or Hz.		

Ground-borne noise	Vibration propagated through the ground and then radiated as noise by vibrating building elements such as wall and floor surfaces. This noise is more noticeable in rooms that are well insulated from other airborne noise. An example would be vibration transmitted from an underground rail line radiating as sound in a bedroom of a building located above.
Habitable Area	Includes a bedroom, living room, lounge room, music room, television room, kitchen, dining room, sewing room, study, playroom, family room, home theatre and sunroom. Excludes a bathroom, laundry, water closet, pantry, walk-in wardrobe, corridor, hallway, lobby, photographic darkroom, clothes drying room, and other spaces of a specialised nature occupied neither frequently nor for extended periods.
Heavy Vehicle	A truck, transporter or other vehicle with a gross weight above a specified level (for example: over 8 tonnes).
IGANRIP	Interim Guideline for the Assessment of Noise from Rail Infrastructure Projects, NSW DEC 2007
Impulsive noise	Having a high peak of short duration or a sequence of such peaks. A sequence of impulses in rapid succession is termed repetitive impulsive noise.
INP	NSW Industrial Noise Policy, EPA 1999
Intermittent noise	The level suddenly drops to that of the background noise several times during the period of observation. The time during which the noise remains at levels different from that of the ambient is one second or more.
Intrusive noise	Refers to noise that intrudes above the background level by more than 5 dB(A).
ISEPP	State Environmental Planning Policy (Infrastructure), NSW, 2007
ISEPP Guideline	Development Near Rail Corridors and Busy Roads - Interim Guideline, NSW Department of Planning, December 2008
L_1	The sound pressure level that is exceeded for 1% of the time for which the given sound is measured.
L_{10}	The sound pressure level that is exceeded for 10% of the time for which the given sound is measured.
$L_{10(1hour)}$	The L_{10} level measured over a 1 hour period.
$L_{10(18hour)}$	The arithmetic average of the $L_{10(1hour)}$ levels for the 18 hour period between 6am and 12 midnight on a normal working day.
L_{90}	The level of noise exceeded for 90% of the time. The bottom 10% of the sample is the L_{90} noise level expressed in units of dB(A).
L_{Aeq} or L_{eq}	The "equivalent noise level" is the summation of noise events and integrated over a selected period of time, which would produce the same energy as a fluctuating sound level. When A-weighted, this is written as the L_{Aeq}.
$L_{Aeq(1hour)}$	The L_{Aeq} noise level for a one-hour period. In the context of the NSW EPA's Road Noise Policy it represents the highest tenth percentile hourly A-weighted L_{eq} during the period 7am to 10pm, or 10pm to 7am (whichever is relevant).
$L_{Aeq(8hour)}$	The L_{Aeq} noise level for the period 10pm to 6am.
$L_{Aeq(9hour)}$	The L_{Aeq} noise level for the period 10pm to 7am.
$L_{Aeq(15hour)}$	The L_{Aeq} noise level for the period 7am to 10pm.
$L_{Aeq\ (24hour)}$	The L_{Aeq} noise level during a 24 hour period, usually from midnight to midnight.
L_{max}	The maximum sound pressure level measured over a given period. When A-weighted, this is usually written as the L_{Amax}.
L_{min}	The minimum sound pressure level measured over a given period. When A-weighted, this is usually written as the L_{Amin}.
Loudness	A rise of 10 dB in sound level corresponds approximately to a doubling of subjective loudness. That is, a sound of 85 dB is twice as loud as a sound of 75 dB which is twice as loud as a sound of 65 dB and so on. That is, the sound of 85 dB is four times or 400% the loudness of a sound of 65 dB.

Microphone	An electro-acoustic transducer which receives an acoustic signal and delivers a corresponding electric signal.
MPE	Moorebank Precinct East
NCA	Noise Catchment Area. An area of study within which the noise environment is substantially constant.
NCG	Noise Criteria Guideline, Roads and Maritime Services (Transport for NSW)
NMG	Noise Mitigation Guideline, Roads and Maritime Services (Transport for NSW)
Noise	Unwanted sound
Pre-construction	Work in respect of the proposed project that includes design, survey, acquisitions, fencing, investigative drilling or excavation, building/road dilapidation surveys, minor clearing (except where threatened species, populations or ecological communities would be affected), establishing ancillary facilities such as site compounds, or other relevant activities determined to have minimal environmental impact (e.g. minor access roads).
Reflection	Sound wave reflected from a solid object obscuring its path.
RING	Rail Infrastructure Noise Guideline, NSW, May 2013
RMS	Root Mean Square value representing the average value of a signal.
Rw	Weighted Sound Reduction Index A measure of the sound insulation performance of a building element. It is measured in very controlled conditions in a laboratory. The term supersedes the value STC which was used in older versions of the Building Code of Australia. Rw is measured and calculated using the procedure in ISO 717-1. The related field measurement is the DnT,w. The higher the value the better the acoustic performance of the building element.
R'w	Weighted Apparent Sound Reduction Index. As for Rw but measured in-situ and therefore subject to the inherent accuracies involved in such a measurement. The higher the value the better the acoustic performance of the building element.
RNP	Road Noise Policy, NSW, March 2011
Sabine	A measure of the total acoustic absorption provided by a material. It is the product of the Absorption Coefficient (alpha) and the surface area of the material (m2). For example, a material with alpha = 0.65 and a surface area of 8.2m2 would have 0.65 x 8.2 = 5.33 Sabine. Sabine is usually calculated for each individual octave band (or third-octave).
SEL	Sound Exposure Level (SEL) is the constant sound level which, if maintained for a period of 1 second would have the same acoustic energy as the measured noise event. SEL noise measurements are useful as they can be converted to obtain Leq sound levels over any period of time and can be used for predicting noise at various locations.
Sound	A fluctuation of air pressure which is propagated as a wave through air.
Sound absorption	The ability of a material to absorb sound energy by conversion to thermal energy.
Sound Insulation	Sound insulation refers to the ability of a construction or building element to limit noise transmission through the building element. The sound insulation of a material can be described by the Rw and the sound insulation between two rooms can be described by the DnT,w.
Sound level meter	An instrument consisting of a microphone, amplifier and indicating device, having a declared performance and designed to measure sound pressure levels.
Sound power level	Ten times the logarithm to the base 10 of the ratio of the sound power of the source to the reference sound power of 1 pico watt.
Sound pressure level	The level of noise, usually expressed in decibels, as measured by a standard sound level meter with a microphone referenced to 20 mico Pascal.
Spoil	Soil or materials arising from excavation activities.

SSFL	Southern Sydney Freight Line
STC	Sound Transmission Class A measure of the sound insulation performance of a building element. It is measured in controlled conditions in a laboratory. The term has been superseded by Rw.
Structure-borne Noise	Audible noise generated by vibration induced in the ground and/or a structure. Vibration can be generated by impact or by solid contact with a vibrating machine. Structure-borne noise cannot be attenuated by barriers or walls but requires the isolation of the vibration source itself. This can be achieved using a resilient element placed between the vibration source and its support such as rubber, neoprene or springs or by physical separation (using an air gap for example). Examples of structure-borne noise include the noise of trains in underground tunnels heard to a listener above the ground, the sound of footsteps on the floor above a listener and the sound of a lift car passing in a shaft. See also 'Impact Noise'.
Tonal Noise	Sound containing a prominent frequency and characterised by a definite pitch.
Transmission Loss	The sound level difference between one room or area and another, usually of sound transmitted through an intervening partition or wall. Also the vibration level difference between one point and another. For example, if the sound level on one side of a wall is 100dB and 65dB on the other side, it is said that the transmission loss of the wall is 35dB. If the transmission loss is normalised or standardised, it then becomes the Rw or R'w or DnT,w.
Wheelbase	The wheelbase is the distance between the centres of the front and rear wheels on a 2-axle bogie.

APPENDIX B Detailed noise monitoring/ assessment/ management reports

B.1 Angle of Attack Monitoring Report - 1 May 2024 and 1 November 2024

Renzo Tonin Report TL116-05D24 AoA Report November 2024 (r2)

Acoustics
Vibration
Structural Dynamics

MOOREBANK INTERMODAL TERMINAL

Six Monthly Review of AoA - November 2024

17 December 2024

Tactical Group

TL116-05D24 AoA Report November 2024 (r2)

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1 Introduction

1.1 Project overview

Renzo Tonin & Associates (RTA) was engaged by The Trust Company (Australia) Limited (ACN 000 000 993) as trustee of the Moorebank Industrial Warehouse Trust, to provide a report that addresses the requirements of Approval Condition G7A of SSD 6766.

The Sydney Intermodal Terminal Alliance (SIMTA) received the initial approval for the construction and operation of Stages 1 and 2 of the Moorebank Precinct East (MPE) Project (SSD 6766 and SSD 7628 respectively), which together comprise the two stages of development under the MPE Concept Approval (MP10_0193). The Trust Company (Australia) Limited is now the proponent for the MPE projects.

This report has been prepared to address the requirements of Approval Condition G7A of SSD 6766, which requires the submission of a six-monthly report to the Secretary, which identifies the number of wagons with wheels that exceed the ASA standard angle of attack and the action taken by operators to improve steering performance.

Appendix A contains a glossary of acoustic terms used in this report.

2 Compliance Matrix

Table 1 provides a summary of the Approval Conditions which relate to this report.

Table 1 Compliance matrix

Condition ID	Condition	Comments on compliance	Reference for further information
SSD 6766			
G7	The Applicant shall install and maintain a rail noise monitoring system on the rail link at the commencement of operation to continuously monitor the noise from rail operations on the rail link. The system shall capture the noise from each individual train passby noise generation event, and include information to identify: a) Time and date of freight train passbys; b) Imagery or video to enable identification of the rolling stock during day and night; c) $L_{Aeq(15hour)}$ and $L_{Aeq(9hour)}$ from rail operations; and d) $L_{AF(max)}$ and SEL of individual train passbys, measured in accordance with ISO3095; or e) Other alternative information as agreed with, or required by, the Secretary. The results from the noise monitoring system, shall be publicly accessible from a website maintained by the Applicant. The noise results from each train shall be available on the website within 24 hours of it passing the monitor, unless unforeseen circumstances (i.e a system malfunction) have occurred. The $L_{Aeq(15hour)}$ and $L_{Aeq(9hr)}$ results from each day shall be available on the website within 24 hours of the period ending. Prior to the commencement of operation, the Applicant shall submit for the approval of the Secretary, justification supporting the appropriateness of the location for rail noise monitoring, including details of any alternative options considered and reasons for these being dismissed. The rail noise monitoring system shall not operate until the Secretary has approved the proposed monitoring location. The Applicant shall provide an annual report to the Secretary with the results of monitoring for a period of 5 years, or as otherwise agreed with the Secretary, from the commencement of operation of the IMEX terminal. The Secretary shall consider the need for further reporting following a review of the results for year 5.	This condition is not directly related to this report. It is referenced herein on the basis that noise levels from the rail noise monitoring system provides information that may correlate with the Angle of Attack measurement results.	https://moorebankintermodalprecinct.com.au/wp-content/uploads/2023/04/TJ741-04F04-AoA-and-Functional-Spec-for-Permanent-Noise-Monitor-r9_redacted.pdf https://moorebanknoisemonitor-emsbk.trackiq.net/NoiseMonitor/

Condition ID	Condition	Comments on compliance	Reference for further information
G7A	The applicant shall install and maintain a wayside angle of attack monitoring system on the rail link at the commencement of operation to continuously monitor the angle of attack to the rail of rolling stock wheels. The system shall capture the angle of attack from a wheel on each axle of every train, and include information to identify: a) Time and date of each axle passby; and b) The identification number of each item of rolling stock. The results from the angle of attack monitoring system shall be: • accessible by train operators from a website maintained by the Applicant. Angle of attack results from each train shall be available on the website within 24 hours of it passing the monitor, unless unforeseen circumstances have occurred. • included in a six-monthly report to the Secretary. The report should at least identify the number of wagons with wheels that exceed the ASA standard angle of attack and the action taken by operators to improve steering performance. Prior to the commencement of operation, the Applicant shall submit for the approval of the Secretary, justification supporting the appropriateness of the location for angle of attack monitoring, the format of the information to be accessible to operators and the format of the public report. The angle of attack monitoring system shall not operate until the Secretary has approved the proposed monitoring location and reporting arrangements.	An Angle of Attack (AoA) monitoring system was installed on the new rail link in May 2020. The monitoring system captures the AoA of each axle passby and compares the measured values with the acceptable value in the applicable Asset Standards Authority minimum operating standard. The AoA values for each axle are available to operators in accordance with the approval condition. A Functional and Performance Specification for the permanent noise monitoring system and angle of attack monitoring system was prepared for approval by the Secretary before the rail link commissioning. A summary of the AoA noise monitoring results for the current six month period is provided in Section 3.1. The monitoring identified 22 train passbys where the maximum AoA value exceeded the ASA standard alarm level during the 6-month monitoring period. One of these AoA exceedance events caused elevated noise levels above $L_{Aeq(9hour)}$ 60 dB(A) at the permanent noise monitoring location.	Section 3

3 Rail link angle of attack (AoA) monitoring

The performance of wagon bogies and their ability to negotiate small radius curves without generating curve squeal, is assessed in terms of the angle of attack (AoA) of the wheelset. Acceptable AoA values are defined in Section 2.7.1 of Asset Standards Authority Standard T HR RS 00400 ST[1] and are a function of the curve radius and wheelbase.

An AoA measurement system was installed on the rail link and partially commissioned on 13 May 2020. The system was fully commissioned on 9 July 2020 at the same time as the permanent noise monitoring system. The AoA system is installed on the eastern track.

Justification supporting the appropriateness of the proposed monitoring location is provided in the *Functional and Performance Specification for Permanent Noise Monitor and Proposed Noise and AoA Monitoring Locations*[2], and was approved by the Secretary.

This report provides a summary of the AoA measurement data for the period between 1 May 2024 and 1 November 2024. In accordance with the requirements of the SSD 6766 Condition G7A, the AoA of a wheel of each axle of each train is captured by the measurement system. This data is accessible by train operators on a website maintained by QUBE.

Below is a summary of the monitoring results.

3.1 AoA monitoring results for current six-month period

This report covers rail movements between 1 May 2024 and 1 November 2024. A summary of the key statistics is provided below:

- Number of valid train passby events – **545**
- Number of train passby events where the measure AoA values on one or more axles were above the acceptable level defined in Section 2.7.1 of Asset Standards Authority Standard T HR RS 00400 ST – **22** (representing 4% of passbys).

A summary of the maximum AoA value measured for each train is provided in Figure 1. The results show that the maximum AoA value is typically less than 10 mrad. 22 train passbys had maximum AoA values greater than the established alarm level of approximately 19 mrad.

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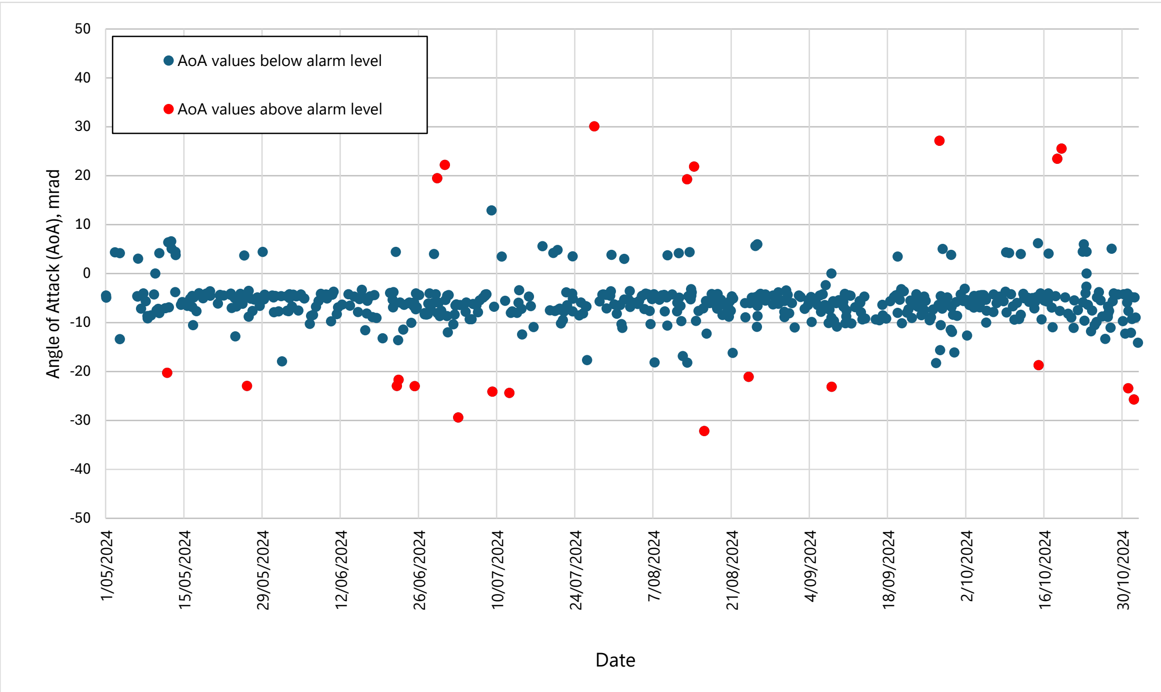
[1] Transport for NSW Asset Standards Authority T HR RS 00400 ST *RSU 400 Series – Minimum Operating Standards for Rolling Stock – Freight Vehicle Specific Interface Requirements* Version 2.0 dated 24 August 2017

[2] Renzo Tonin & Associates Report TJ741-04F04 AoA and Functional Spec for Permanent Noise Monitor (r8) – available https://moorebankintermodalprecinct.com.au/wp-content/uploads/2023/04/TJ741-04F04-AoA-and-Functional-Spec-for-Permanent-Noise-Monitor-r9_redacted.pdf

A detailed review of the AoA exceedances identified that Wagon ID CQMY 003099 exceeded the AoA alarm level on ten occasions. The owner of this wagon has been notified of these exceedances and is in the process of determining the required rectification works. It is the same Wagon ID (CQMY 003099) that exceeded the AoA alarm level on seven occasions during 1 May 2023 and 31 October 2023.

One of the 22 passby events with AoA alarm levels resulted in elevated noise levels at the permanent noise monitoring location [i.e. where the calculated $L_{Aeq(9hour)}$ noise levels at 30 m were above 60 dB(A)].

Figure 1 Maximum AoA value for each train passby



4 Conclusion

This report has been prepared to address the requirements of Approval Condition G7A of SSD 6766, which requires the submission of a six-monthly report to the Secretary, which identifies the number of train passbys and wagons with wheels that exceed the ASA standard angle of attack and the action taken by operators to improve steering performance.

For rail movements between 1 May 2024 and 1 November 2024, 22 train passbys had maximum AoA values greater than the established alarm level of approximately 19 mrad. Wagon ID CQMY 003099 exceeded the AoA alarm level on ten occasions. The owner of this wagon has been notified of these exceedances and is in the process of determining the required rectification works.

One of 22 train passby events with AoA alarm levels caused elevated noise levels at the permanent noise monitoring location [i.e. where the calculated $L_{Aeq(9hour)}$ noise levels at 30 m were above 60 dB(A)].

APPENDIX A Glossary of terminology

The following is a brief description of the technical terms used to describe noise to assist in understanding the technical issues presented.

Absorption Coefficient α	The absorption coefficient of a material, usually measured for each octave or third-octave band and ranging between zero and one. For example, a value of 0.85 for an octave band means that 85% of the sound energy within that octave band is absorbed on coming into contact with the material. Conversely, a low value below about 0.1 means the material is acoustically reflective.
Adverse weather	Weather effects that enhance noise (particularly wind and temperature inversions) occurring at a site for a significant period of time. In the NSW INP this occurs when wind occurs for more than 30% of the time in any assessment period in any season and/or temperature inversions occurring more than 30% of nights in winter.
Air-borne noise	Noise which is fundamentally transmitted by way of the air and can be attenuated by the use of barriers and walls placed physically between the noise source and receiver.
Ambient noise	The all-encompassing noise associated within a given environment at a given time, usually composed of sound from all sources near and far.
AoA	Angle of Attack - As the wheels on a bogie negotiate a tight curve, the leading wheelset typically presents an Angle-of-Attack (AoA) to the rail. The AoA of a leading wheelset with good steering performance can be calculated from AoA = wheelbase (m) / curve radius (m). AoA is normally measured in milliradian (mrad).
Amenity	A desirable or useful feature or facility of a building or place.
AS	Australian Standard
ASA	Asset Standards Authority
Assessment period	The time period in which an assessment is made. e.g. Day 7am-10pm & Night 10pm-7am.
Assessment Point	A location at which a noise or vibration measurement is taken or estimated.
Attenuation	The reduction in the level of sound or vibration.
Audible Range	The limits of frequency which are audible or heard as sound. The normal hearing in young adults detects ranges from 20 Hz to 20 kHz, although some people can detect sound with frequencies outside these limits.
A-weighting	A filter applied to the sound recording made by a microphone to approximate the response of the human ear.
Background noise	Background noise is the term used to describe the underlying level of noise present in the ambient noise, measured in the absence of the noise under investigation. It is described as the average of the minimum noise levels measured on a sound level meter and is measured statistically as the A-weighted noise level exceeded for ninety percent of a sample period. This is represented as the LA90 noise level if measured as an overall level or an L90 noise level when measured in octave or third-octave bands.
Barrier (Noise)	A natural or constructed physical barrier which impedes the propagation of sound and includes fences, walls, earth mounds or berms and buildings.
Berm	Earth or overburden mound.
Buffer	An area of land between a source and a noise-sensitive receiver and may be an open space or a noise-tolerant land use.
Bund	A bund is an embankment or wall of brick, stone, concrete or other impervious material, which may form part or all of the perimeter of a compound.
BS	British Standard

CoRTN	United Kingdom Department of Environment entitled "Calculation of Road Traffic Noise (1988)"		
Decibel [dB]	The units that sound is measured in. The following are examples of the decibel readings of common sounds in our environment:		
	threshold of hearing	0 dB	The faintest sound we can hear, defined as 20 micro Pascal
		10 dB	Human breathing
	almost silent	20 dB	
		30 dB	Quiet bedroom or in a quiet national park location
	generally quiet	40 dB	Library
		50 dB	Typical office space or ambience in the city at night
	moderately loud	60 dB	CBD mall at lunch time
		70 dB	The sound of a car passing on the street
	loud	80 dB	Loud music played at home
		90 dB	The sound of a truck passing on the street
	very loud	100 dB	Indoor rock band concert
		110 dB	Operating a chainsaw or jackhammer
	extremely loud	120 dB	Jet plane take-off at 100m away
	threshold of pain	130 dB	
		140 dB	Military jet take-off at 25m away
dB(A)	A-weighted decibel. The A- weighting noise filter simulates the response of the human ear at relatively low levels, where the ear is not as effective in hearing low frequency sounds as it is in hearing high frequency sounds. That is, low frequency sounds of the same dB level are not heard as loud as high frequency sounds. The sound level meter replicates the human response of the ear by using an electronic filter which is called the "A" filter. A sound level measured with this filter is denoted as dB(A). Practically all noise is measured using the A filter.		
dB(C)	C-weighted decibels. The C-weighting noise filter simulates the response of the human ear at relatively high levels, where the human ear is nearly equally effective at hearing from mid-low frequency (63Hz) to mid-high frequency (4kHz), but is less effective outside these frequencies. The dB(C) level is not widely used but has some applications.		
Diffraction	The distortion of sound waves caused when passing tangentially around solid objects.		
DIN	German Standard		
ECRTN	Environmental Criteria for Road Traffic Noise, NSW, 1999		
ENMM	Environmental Noise Management Manual, Roads and Maritime Services (Transport for NSW)		
EPA	Environment Protection Authority		
Field Test	A test of the sound insulation performance in-situ. See also 'Laboratory Test' The sound insulation performance between building spaces can be measured by conducting a field test, for example, early during the construction stage or on completion. A field test is conducted in a non-ideal acoustic environment. It is generally not possible to measure the performance of an individual building element accurately as the results can be affected by numerous field conditions.		
Fluctuating Noise	Noise that varies continuously to an appreciable extent over the period of observation.		
Free-field	An environment in which there are no acoustic reflective surfaces. Free field noise measurements are carried out outdoors at least 3.5m from any acoustic reflecting structures other than the ground.		
Frequency	Frequency is synonymous to pitch. Sounds have a pitch which is peculiar to the nature of the sound generator. For example, the sound of a tiny bell has a high pitch and the sound of a bass drum has a low pitch. Frequency or pitch can be measured on a scale in units of Hertz or Hz.		

Ground-borne noise	Vibration propagated through the ground and then radiated as noise by vibrating building elements such as wall and floor surfaces. This noise is more noticeable in rooms that are well insulated from other airborne noise. An example would be vibration transmitted from an underground rail line radiating as sound in a bedroom of a building located above.
Habitable Area	Includes a bedroom, living room, lounge room, music room, television room, kitchen, dining room, sewing room, study, playroom, family room, home theatre and sunroom. Excludes a bathroom, laundry, water closet, pantry, walk-in wardrobe, corridor, hallway, lobby, photographic darkroom, clothes drying room, and other spaces of a specialised nature occupied neither frequently nor for extended periods.
Heavy Vehicle	A truck, transporter or other vehicle with a gross weight above a specified level (for example: over 8 tonnes).
IGANRIP	Interim Guideline for the Assessment of Noise from Rail Infrastructure Projects, NSW DEC 2007
Impulsive noise	Having a high peak of short duration or a sequence of such peaks. A sequence of impulses in rapid succession is termed repetitive impulsive noise.
INP	NSW Industrial Noise Policy, EPA 1999
Intermittent noise	The level suddenly drops to that of the background noise several times during the period of observation. The time during which the noise remains at levels different from that of the ambient is one second or more.
Intrusive noise	Refers to noise that intrudes above the background level by more than 5 dB(A).
ISEPP	State Environmental Planning Policy (Infrastructure), NSW, 2007
ISEPP Guideline	Development Near Rail Corridors and Busy Roads - Interim Guideline, NSW Department of Planning, December 2008
L1	The sound pressure level that is exceeded for 1% of the time for which the given sound is measured.
L10	The sound pressure level that is exceeded for 10% of the time for which the given sound is measured.
L10(1hr)	The L10 level measured over a 1 hour period.
L10(18hr)	The arithmetic average of the L10(1hr) levels for the 18 hour period between 6am and 12 midnight on a normal working day.
L90	The level of noise exceeded for 90% of the time. The bottom 10% of the sample is the L90 noise level expressed in units of dB(A).
LAeq or Leq	The "equivalent noise level" is the summation of noise events and integrated over a selected period of time, which would produce the same energy as a fluctuating sound level. When A-weighted, this is written as the LAeq.
LAeq(1hr)	The LAeq noise level for a one-hour period. In the context of the NSW EPA's Road Noise Policy it represents the highest tenth percentile hourly A-weighted Leq during the period 7am to 10pm, or 10pm to 7am (whichever is relevant).
LAeq(8hr)	The LAeq noise level for the period 10pm to 6am.
LAeq(9hr)	The LAeq noise level for the period 10pm to 7am.
LAeq(15hr)	The LAeq noise level for the period 7am to 10pm.
LAeq (24hr)	The LAeq noise level during a 24 hour period, usually from midnight to midnight.
Lmax	The maximum sound pressure level measured over a given period. When A-weighted, this is usually written as the LAmax.
Lmin	The minimum sound pressure level measured over a given period. When A-weighted, this is usually written as the LAmin.
Loudness	A rise of 10 dB in sound level corresponds approximately to a doubling of subjective loudness. That is, a sound of 85 dB is twice as loud as a sound of 75 dB which is twice as loud as a sound of 65 dB and so on. That is, the sound of 85 dB is four times or 400% the loudness of a sound of 65 dB.

Microphone	An electro-acoustic transducer which receives an acoustic signal and delivers a corresponding electric signal.
MPE	Moorebank Precinct East
NCA	Noise Catchment Area. An area of study within which the noise environment is substantially constant.
NCG	Noise Criteria Guideline, Roads and Maritime Services (Transport for NSW)
NMG	Noise Mitigation Guideline, Roads and Maritime Services (Transport for NSW)
Noise	Unwanted sound
Pre-construction	Work in respect of the proposed project that includes design, survey, acquisitions, fencing, investigative drilling or excavation, building/road dilapidation surveys, minor clearing (except where threatened species, populations or ecological communities would be affected), establishing ancillary facilities such as site compounds, or other relevant activities determined to have minimal environmental impact (e.g. minor access roads).
Reflection	Sound wave reflected from a solid object obscuring its path.
RING	Rail Infrastructure Noise Guideline, NSW, May 2013
RMS	Root Mean Square value representing the average value of a signal.
Rw	Weighted Sound Reduction Index A measure of the sound insulation performance of a building element. It is measured in very controlled conditions in a laboratory. The term supersedes the value STC which was used in older versions of the Building Code of Australia. Rw is measured and calculated using the procedure in ISO 717-1. The related field measurement is the DnT,w. The higher the value the better the acoustic performance of the building element.
R'w	Weighted Apparent Sound Reduction Index. As for Rw but measured in-situ and therefore subject to the inherent accuracies involved in such a measurement. The higher the value the better the acoustic performance of the building element.
RNP	Road Noise Policy, NSW, March 2011
Sabine	A measure of the total acoustic absorption provided by a material. It is the product of the Absorption Coefficient (alpha) and the surface area of the material (m2). For example, a material with alpha = 0.65 and a surface area of 8.2m2 would have 0.65 x 8.2 = 5.33 Sabine. Sabine is usually calculated for each individual octave band (or third-octave).
SEL	Sound Exposure Level (SEL) is the constant sound level which, if maintained for a period of 1 second would have the same acoustic energy as the measured noise event. SEL noise measurements are useful as they can be converted to obtain Leq sound levels over any period of time and can be used for predicting noise at various locations.
Sound	A fluctuation of air pressure which is propagated as a wave through air.
Sound absorption	The ability of a material to absorb sound energy by conversion to thermal energy.
Sound Insulation	Sound insulation refers to the ability of a construction or building element to limit noise transmission through the building element. The sound insulation of a material can be described by the Rw and the sound insulation between two rooms can be described by the DnT,w.
Sound level meter	An instrument consisting of a microphone, amplifier and indicating device, having a declared performance and designed to measure sound pressure levels.
Sound power level	Ten times the logarithm to the base 10 of the ratio of the sound power of the source to the reference sound power of 1 pico watt.
Sound pressure level	The level of noise, usually expressed in decibels, as measured by a standard sound level meter with a microphone referenced to 20 mico Pascal.
Spoil	Soil or materials arising from excavation activities.

SSFL	Southern Sydney Freight Line
STC	Sound Transmission Class A measure of the sound insulation performance of a building element. It is measured in controlled conditions in a laboratory. The term has been superseded by Rw.
Structure-borne Noise	Audible noise generated by vibration induced in the ground and/or a structure. Vibration can be generated by impact or by solid contact with a vibrating machine. Structure-borne noise cannot be attenuated by barriers or walls but requires the isolation of the vibration source itself. This can be achieved using a resilient element placed between the vibration source and its support such as rubber, neoprene or springs or by physical separation (using an air gap for example). Examples of structure-borne noise include the noise of trains in underground tunnels heard to a listener above the ground, the sound of footsteps on the floor above a listener and the sound of a lift car passing in a shaft. See also 'Impact Noise'.
Tonal Noise	Sound containing a prominent frequency and characterised by a definite pitch.
Transmission Loss	The sound level difference between one room or area and another, usually of sound transmitted through an intervening partition or wall. Also the vibration level difference between one point and another. For example, if the sound level on one side of a wall is 100dB and 65dB on the other side, it is said that the transmission loss of the wall is 35dB. If the transmission loss is normalised or standardised, it then becomes the Rw or R'w or DnT,w.
Wheelbase	The wheelbase is the distance between the centres of the front and rear wheels on a 2-axle bogie.

B.2 Angle of Attack Monitoring Report - 1 November 2024 and 1 May 2025

Renzo Tonin Report TM306-24-02F02 AoA Report May 2025 (r0)

RENZO TONIN & ASSOCIATES
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MOOREBANK INTERMODAL TERMINAL

Six Monthly Review of AoA - May 2025

4 June 2025

The Trust Company (Australia) Limited (ACN 000 000 993) as trustee of the Moorebank Industrial Warehouse Trust

TM306-24-02F02 AoA Report May 2025 (r0).docx

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1 Introduction

1.1 Project overview

Renzo Tonin & Associates (RTA) was engaged by The Trust Company (Australia) Limited (ACN 000 000 993) as trustee of the Moorebank Industrial Warehouse Trust, to provide a report that addresses the requirements of Approval Condition G7A of SSD 6766.

The Sydney Intermodal Terminal Alliance (SIMTA) received the initial approval for the construction and operation of Stages 1 and 2 of the Moorebank Precinct East (MPE) Project (SSD 6766 and SSD 7628 respectively), which together comprise the two stages of development under the MPE Concept Approval (MP10_0193). The Trust Company (Australia) Limited is now the proponent for the MPE projects.

This report has been prepared to address the requirements of Approval Condition G7A of SSD 6766, which requires the submission of a six-monthly report to the Secretary, which identifies the number of wagons with wheels that exceed the ASA standard angle of attack and the action taken by operators to improve steering performance.

Appendix A contains a glossary of acoustic terms used in this report.

2 Compliance Matrix

Table 1 provides a summary of the Approval Conditions which relate to this report.

Table 1 Compliance matrix

Condition ID	Condition	Comments on compliance	Reference for further information
SSD 6766			
G7	The Applicant shall install and maintain a rail noise monitoring system on the rail link at the commencement of operation to continuously monitor the noise from rail operations on the rail link. The system shall capture the noise from each individual train passby noise generation event, and include information to identify: a) Time and date of freight train passbys; b) Imagery or video to enable identification of the rolling stock during day and night; c) $L_{Aeq(15hour)}$ and $L_{Aeq(9hour)}$ from rail operations; and d) $L_{AF(max)}$ and SEL of individual train passbys, measured in accordance with ISO3095; or e) Other alternative information as agreed with, or required by, the Secretary. The results from the noise monitoring system, shall be publicly accessible from a website maintained by the Applicant. The noise results from each train shall be available on the website within 24 hours of it passing the monitor, unless unforeseen circumstances (i.e a system malfunction) have occurred. The $L_{Aeq(15hour)}$ and $L_{Aeq(9hr)}$ results from each day shall be available on the website within 24 hours of the period ending. Prior to the commencement of operation, the Applicant shall submit for the approval of the Secretary, justification supporting the appropriateness of the location for rail noise monitoring, including details of any alternative options considered and reasons for these being dismissed. The rail noise monitoring system shall not operate until the Secretary has approved the proposed monitoring location. The Applicant shall provide an annual report to the Secretary with the results of monitoring for a period of 5 years, or as otherwise agreed with the Secretary, from the commencement of operation of the IMEX terminal. The Secretary shall consider the need for further reporting following a review of the results for year 5.	This condition is not directly related to this report. It is referenced herein on the basis that noise levels from the rail noise monitoring system provides information that may correlate with the Angle of Attack measurement results.	https://moorebankintermodalprecinct.com.au/wp-content/uploads/2023/04/TJ741-04F04-AoA-and-Functional-Spec-for-Permanent-Noise-Monitor-r9_redacted.pdf https://moorebanknoisemonitor-emsbk.trackiq.net/NoiseMonitor/

Condition ID	Condition	Comments on compliance	Reference for further information
G7A	The applicant shall install and maintain a wayside angle of attack monitoring system on the rail link at the commencement of operation to continuously monitor the angle of attack to the rail of rolling stock wheels. The system shall capture the angle of attack from a wheel on each axle of every train, and include information to identify: a) Time and date of each axle passby; and b) The identification number of each item of rolling stock. The results from the angle of attack monitoring system shall be: • accessible by train operators from a website maintained by the Applicant. Angle of attack results from each train shall be available on the website within 24 hours of it passing the monitor, unless unforeseen circumstances have occurred. • included in a six-monthly report to the Secretary. The report should at least identify the number of wagons with wheels that exceed the ASA standard angle of attack and the action taken by operators to improve steering performance. Prior to the commencement of operation, the Applicant shall submit for the approval of the Secretary, justification supporting the appropriateness of the location for angle of attack monitoring, the format of the information to be accessible to operators and the format of the public report. The angle of attack monitoring system shall not operate until the Secretary has approved the proposed monitoring location and reporting arrangements.	An Angle of Attack (AoA) monitoring system was installed on the new rail link in May 2020. The monitoring system captures the AoA of each axle passby and compares the measured values with the acceptable value in the applicable Asset Standards Authority minimum operating standard. The AoA values for each axle are available to operators in accordance with the approval condition. A Functional and Performance Specification for the permanent noise monitoring system and angle of attack monitoring system was prepared for approval by the Secretary before the rail link commissioning. A summary of the AoA noise monitoring results for the current six month period is provided in Section 3.1. The monitoring identified 19 train passbys where the maximum AoA value exceeded the ASA standard alarm level during the 6-month monitoring period. Two of these AoA exceedance events caused elevated noise levels above $L_{Aeq(9hour)}$ 60 dB(A) at the permanent noise monitoring location.	Section 3

3 Rail link angle of attack (AoA) monitoring

The performance of wagon bogies and their ability to negotiate small radius curves without generating curve squeal, is assessed in terms of the angle of attack (AoA) of the wheelset. Acceptable AoA values are defined in Section 2.7.1 of Asset Standards Authority Standard T HR RS 00400 ST[1] and are a function of the curve radius and wheelbase.

An AoA measurement system was installed on the rail link and partially commissioned on 13 May 2020. The system was fully commissioned on 9 July 2020 at the same time as the permanent noise monitoring system. The AoA system is installed on the eastern track.

Justification supporting the appropriateness of the proposed monitoring location is provided in the *Functional and Performance Specification for Permanent Noise Monitor and Proposed Noise and AoA Monitoring Locations*[2], and was approved by the Secretary.

This report provides a summary of the AoA measurement data for the period between 1 November 2024 and 1 May 2025. In accordance with the requirements of the SSD 6766 Condition G7A, the AoA of a wheel of each axle of each train is captured by the measurement system. This data is accessible by train operators on a website maintained by QUBE.

Below is a summary of the monitoring results.

3.1 AoA monitoring results for current six-month period

This report covers rail movements between 1 November 2024 and 1 May 2025. A summary of the key statistics is provided below:

- Number of valid train passby events – **695**
- Number of train passby events where the measure AoA values on one or more axles were above the acceptable level defined in Section 2.7.1 of Asset Standards Authority Standard T HR RS 00400 ST – **19** (representing 3% of passbys).

A summary of the maximum AoA value measured for each train is provided in Figure 1.

The results show that the maximum AoA value is typically less than 12 mrad, except for 19 train passbys that had maximum AoA value greater than the established alarm level of approximately 19 mrad. A detailed review of the Angle of Attack (AoA) exceedances identified three wagons that repeatedly triggered AoA alarms.

[1] Transport for NSW Asset Standards Authority T HR RS 00400 ST *RSU 400 Series – Minimum Operating Standards for Rolling Stock – Freight Vehicle Specific Interface Requirements* Version 2.0 dated 24 August 2017

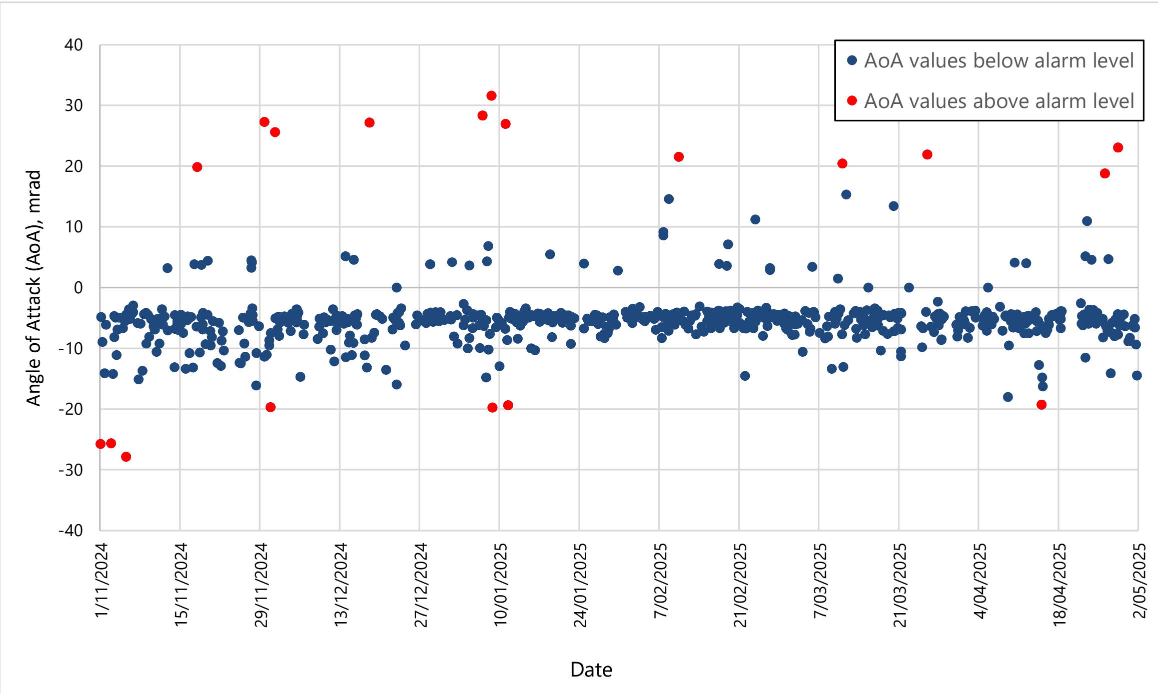
[2] Renzo Tonin & Associates Report TJ741-04F04 AoA and Functional Spec for Permanent Noise Monitor (r8) – available https://moorebankintermodalprecinct.com.au/wp-content/uploads/2023/04/TJ741-04F04-AoA-and-Functional-Spec-for-Permanent-Noise-Monitor-r9_redacted.pdf

A detailed review of the AoA exceedances identified three wagons that repeatedly triggered AoA alarms. Wagon CQMY 003013 and CQMY 003058, each exceeded the AoA alarm threshold on four occasions. Wagon CQMY 003099 triggered the AoA alarm on two occasions. It is the same Wagon ID (CQMY 003099) that previously exceeded the AoA alarm level on ten occasions, during 1 May 2024 and 1 November 2024.

The owner of these three wagons (CQMY 003013, CQMY 003058 and CQMY 003099) have been notified of the exceedances and are in the process of determining the required rectification works.

Two of the 19 passby events with AoA alarm levels resulted in elevated noise levels at the permanent noise monitoring location [i.e. where the calculated $L_{Aeq(9hour)}$ noise levels at 30 m were above 60 dB(A)]. Exceedances of the AoA alarm levels were viewed as one-off instances, occurring irregularly.

Figure 1 Maximum AoA value for each train passby



4 Conclusion

This report has been prepared to address the requirements of Approval Condition G7A of SSD 6766, which requires the submission of a six-monthly report to the Secretary, which identifies the number of train passbys and wagons with wheels that exceed the ASA standard angle of attack and the action taken by operators to improve steering performance.

For rail movements between 1 November 2024 and 1 May 2025, 19 train passbys had maximum AoA values greater than the established alarm level of approximately 19 mrad. Wagon CQMY 003013 and CQMY 003058, each exceeded the AoA alarm threshold on four occasions. Wagon CQMY 003099 triggered the AoA alarm on two occasions. The owner of these wagons have been notified of these exceedances and are in the process of determining the required rectification works.

Two of 19 train passby events with AoA alarm levels caused elevated noise levels at the permanent noise monitoring location [i.e. where the calculated $L_{Aeq(9hour)}$ noise levels at 30 m were above 60 dB(A)]. Exceedances of the AoA alarm levels were viewed as one-off instances, occurring irregularly.

APPENDIX A Glossary of terminology

The following is a brief description of the technical terms used to describe noise to assist in understanding the technical issues presented.

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Adverse weather	Weather effects that enhance noise (particularly wind and temperature inversions) occurring at a site for a significant period of time. In the NSW INP this occurs when wind occurs for more than 30% of the time in any assessment period in any season and/or temperature inversions occurring more than 30% of nights in winter.
Air-borne noise	Noise which is fundamentally transmitted by way of the air and can be attenuated by the use of barriers and walls placed physically between the noise source and receiver.
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ASA	Asset Standards Authority
Assessment period	The time period in which an assessment is made. e.g. Day 7am-10pm & Night 10pm-7am.
Assessment Point	A location at which a noise or vibration measurement is taken or estimated.
Attenuation	The reduction in the level of sound or vibration.
Audible Range	The limits of frequency which are audible or heard as sound. The normal hearing in young adults detects ranges from 20 Hz to 20 kHz, although some people can detect sound with frequencies outside these limits.
A-weighting	A filter applied to the sound recording made by a microphone to approximate the response of the human ear.
Background noise	Background noise is the term used to describe the underlying level of noise present in the ambient noise, measured in the absence of the noise under investigation. It is described as the average of the minimum noise levels measured on a sound level meter and is measured statistically as the A-weighted noise level exceeded for ninety percent of a sample period. This is represented as the LA90 noise level if measured as an overall level or an L90 noise level when measured in octave or third-octave bands.
Barrier (Noise)	A natural or constructed physical barrier which impedes the propagation of sound and includes fences, walls, earth mounds or berms and buildings.
Berm	Earth or overburden mound.
Buffer	An area of land between a source and a noise-sensitive receiver and may be an open space or a noise-tolerant land use.
Bund	A bund is an embankment or wall of brick, stone, concrete or other impervious material, which may form part or all of the perimeter of a compound.
BS	British Standard

<table>
<tr><td>CoRTN</td><td colspan="3">United Kingdom Department of Environment entitled “Calculation of Road Traffic Noise (1988)”</td></tr>
<tr><td rowspan="15">Decibel [dB]</td><td colspan="3">The units that sound is measured in. The following are examples of the decibel readings of common sounds in our environment:</td></tr>
<tr><td rowspan="2">threshold of hearing</td><td>0 dB</td><td>The faintest sound we can hear, defined as 20 micro Pascal</td></tr>
<tr><td>10 dB</td><td>Human breathing</td></tr>
<tr><td rowspan="2">almost silent</td><td>20 dB</td><td></td></tr>
<tr><td>30 dB</td><td>Quiet bedroom or in a quiet national park location</td></tr>
<tr><td rowspan="2">generally quiet</td><td>40 dB</td><td>Library</td></tr>
<tr><td>50 dB</td><td>Typical office space or ambience in the city at night</td></tr>
<tr><td rowspan="2">moderately loud</td><td>60 dB</td><td>CBD mall at lunch time</td></tr>
<tr><td>70 dB</td><td>The sound of a car passing on the street</td></tr>
<tr><td rowspan="2">loud</td><td>80 dB</td><td>Loud music played at home</td></tr>
<tr><td>90 dB</td><td>The sound of a truck passing on the street</td></tr>
<tr><td rowspan="2">very loud</td><td>100 dB</td><td>Indoor rock band concert</td></tr>
<tr><td>110 dB</td><td>Operating a chainsaw or jackhammer</td></tr>
<tr><td>extremely loud</td><td>120 dB</td><td>Jet plane take-off at 100m away</td></tr>
<tr><td>threshold of pain</td><td>130 dB
140 dB</td><td>
Military jet take-off at 25m away</td></tr>
<tr><td>dB(A)</td><td colspan="3">A-weighted decibel. The A- weighting noise filter simulates the response of the human ear at relatively low levels, where the ear is not as effective in hearing low frequency sounds as it is in hearing high frequency sounds. That is, low frequency sounds of the same dB level are not heard as loud as high frequency sounds. The sound level meter replicates the human response of the ear by using an electronic filter which is called the “A” filter. A sound level measured with this filter is denoted as dB(A). Practically all noise is measured using the A filter.</td></tr>
<tr><td>dB(C)</td><td colspan="3">C-weighted decibels. The C-weighting noise filter simulates the response of the human ear at relatively high levels, where the human ear is nearly equally effective at hearing from mid-low frequency (63Hz) to mid-high frequency (4kHz), but is less effective outside these frequencies. The dB(C) level is not widely used but has some applications.</td></tr>
<tr><td>Diffraction</td><td colspan="3">The distortion of sound waves caused when passing tangentially around solid objects.</td></tr>
<tr><td>DIN</td><td colspan="3">German Standard</td></tr>
<tr><td>ECRTN</td><td colspan="3">Environmental Criteria for Road Traffic Noise, NSW, 1999</td></tr>
<tr><td>ENMM</td><td colspan="3">Environmental Noise Management Manual, Roads and Maritime Services (Transport for NSW)</td></tr>
<tr><td>EPA</td><td colspan="3">Environment Protection Authority</td></tr>
<tr><td>Field Test</td><td colspan="3">A test of the sound insulation performance in-situ. See also 'Laboratory Test'
The sound insulation performance between building spaces can be measured by conducting a field test, for example, early during the construction stage or on completion.
A field test is conducted in a non-ideal acoustic environment. It is generally not possible to measure the performance of an individual building element accurately as the results can be affected by numerous field conditions.</td></tr>
<tr><td>Fluctuating Noise</td><td colspan="3">Noise that varies continuously to an appreciable extent over the period of observation.</td></tr>
<tr><td>Free-field</td><td colspan="3">An environment in which there are no acoustic reflective surfaces. Free field noise measurements are carried out outdoors at least 3.5m from any acoustic reflecting structures other than the ground.</td></tr>
<tr><td>Frequency</td><td colspan="3">Frequency is synonymous to pitch. Sounds have a pitch which is peculiar to the nature of the sound generator. For example, the sound of a tiny bell has a high pitch and the sound of a bass drum has a low pitch. Frequency or pitch can be measured on a scale in units of Hertz or Hz.</td></tr>
</table>

Ground-borne noise	Vibration propagated through the ground and then radiated as noise by vibrating building elements such as wall and floor surfaces. This noise is more noticeable in rooms that are well insulated from other airborne noise. An example would be vibration transmitted from an underground rail line radiating as sound in a bedroom of a building located above.
Habitable Area	Includes a bedroom, living room, lounge room, music room, television room, kitchen, dining room, sewing room, study, playroom, family room, home theatre and sunroom. Excludes a bathroom, laundry, water closet, pantry, walk-in wardrobe, corridor, hallway, lobby, photographic darkroom, clothes drying room, and other spaces of a specialised nature occupied neither frequently nor for extended periods.
Heavy Vehicle	A truck, transporter or other vehicle with a gross weight above a specified level (for example: over 8 tonnes).
IGANRIP	Interim Guideline for the Assessment of Noise from Rail Infrastructure Projects, NSW DEC 2007
Impulsive noise	Having a high peak of short duration or a sequence of such peaks. A sequence of impulses in rapid succession is termed repetitive impulsive noise.
INP	NSW Industrial Noise Policy, EPA 1999
Intermittent noise	The level suddenly drops to that of the background noise several times during the period of observation. The time during which the noise remains at levels different from that of the ambient is one second or more.
Intrusive noise	Refers to noise that intrudes above the background level by more than 5 dB(A).
ISEPP	State Environmental Planning Policy (Infrastructure), NSW, 2007
ISEPP Guideline	Development Near Rail Corridors and Busy Roads - Interim Guideline, NSW Department of Planning, December 2008
L_1	The sound pressure level that is exceeded for 1% of the time for which the given sound is measured.
L_{10}	The sound pressure level that is exceeded for 10% of the time for which the given sound is measured.
$L_{10(1hr)}$	The L_{10} level measured over a 1 hour period.
$L_{10(18hr)}$	The arithmetic average of the $L_{10(1hr)}$ levels for the 18 hour period between 6am and 12 midnight on a normal working day.
L_{90}	The level of noise exceeded for 90% of the time. The bottom 10% of the sample is the L_{90} noise level expressed in units of dB(A).
L_{Aeq} or L_{eq}	The "equivalent noise level" is the summation of noise events and integrated over a selected period of time, which would produce the same energy as a fluctuating sound level. When A-weighted, this is written as the L_{Aeq}.
$L_{Aeq(1hr)}$	The L_{Aeq} noise level for a one-hour period. In the context of the NSW EPA's Road Noise Policy it represents the highest tenth percentile hourly A-weighted Leq during the period 7am to 10pm, or 10pm to 7am (whichever is relevant).
$L_{Aeq(8hr)}$	The L_{Aeq} noise level for the period 10pm to 6am.
$L_{Aeq(9hr)}$	The L_{Aeq} noise level for the period 10pm to 7am.
$L_{Aeq(15hr)}$	The L_{Aeq} noise level for the period 7am to 10pm.
$L_{Aeq\ (24hr)}$	The L_{Aeq} noise level during a 24 hour period, usually from midnight to midnight.
L_{max}	The maximum sound pressure level measured over a given period. When A-weighted, this is usually written as the L_{Amax}.
L_{min}	The minimum sound pressure level measured over a given period. When A-weighted, this is usually written as the L_{Amin}.
Loudness	A rise of 10 dB in sound level corresponds approximately to a doubling of subjective loudness. That is, a sound of 85 dB is twice as loud as a sound of 75 dB which is twice as loud as a sound of 65 dB and so on. That is, the sound of 85 dB is four times or 400% the loudness of a sound of 65 dB.

Microphone	An electro-acoustic transducer which receives an acoustic signal and delivers a corresponding electric signal.
MPE	Moorebank Precinct East
NCA	Noise Catchment Area. An area of study within which the noise environment is substantially constant.
NCG	Noise Criteria Guideline, Roads and Maritime Services (Transport for NSW)
NMG	Noise Mitigation Guideline, Roads and Maritime Services (Transport for NSW)
Noise	Unwanted sound
Pre-construction	Work in respect of the proposed project that includes design, survey, acquisitions, fencing, investigative drilling or excavation, building/road dilapidation surveys, minor clearing (except where threatened species, populations or ecological communities would be affected), establishing ancillary facilities such as site compounds, or other relevant activities determined to have minimal environmental impact (e.g. minor access roads).
Reflection	Sound wave reflected from a solid object obscuring its path.
RING	Rail Infrastructure Noise Guideline, NSW, May 2013
RMS	Root Mean Square value representing the average value of a signal.
Rw	Weighted Sound Reduction Index A measure of the sound insulation performance of a building element. It is measured in very controlled conditions in a laboratory. The term supersedes the value STC which was used in older versions of the Building Code of Australia. Rw is measured and calculated using the procedure in ISO 717-1. The related field measurement is the DnT,w. The higher the value the better the acoustic performance of the building element.
R'w	Weighted Apparent Sound Reduction Index. As for Rw but measured in-situ and therefore subject to the inherent accuracies involved in such a measurement. The higher the value the better the acoustic performance of the building element.
RNP	Road Noise Policy, NSW, March 2011
Sabine	A measure of the total acoustic absorption provided by a material. It is the product of the Absorption Coefficient (alpha) and the surface area of the material (m2). For example, a material with alpha = 0.65 and a surface area of 8.2m2 would have 0.65 x 8.2 = 5.33 Sabine. Sabine is usually calculated for each individual octave band (or third-octave).
SEL	Sound Exposure Level (SEL) is the constant sound level which, if maintained for a period of 1 second would have the same acoustic energy as the measured noise event. SEL noise measurements are useful as they can be converted to obtain Leq sound levels over any period of time and can be used for predicting noise at various locations.
Sound	A fluctuation of air pressure which is propagated as a wave through air.
Sound absorption	The ability of a material to absorb sound energy by conversion to thermal energy.
Sound Insulation	Sound insulation refers to the ability of a construction or building element to limit noise transmission through the building element. The sound insulation of a material can be described by the Rw and the sound insulation between two rooms can be described by the DnT,w.
Sound level meter	An instrument consisting of a microphone, amplifier and indicating device, having a declared performance and designed to measure sound pressure levels.
Sound power level	Ten times the logarithm to the base 10 of the ratio of the sound power of the source to the reference sound power of 1 pico watt.
Sound pressure level	The level of noise, usually expressed in decibels, as measured by a standard sound level meter with a microphone referenced to 20 mico Pascal.
Spoil	Soil or materials arising from excavation activities.

SSFL	Southern Sydney Freight Line
STC	Sound Transmission Class A measure of the sound insulation performance of a building element. It is measured in controlled conditions in a laboratory. The term has been superseded by Rw.
Structure-borne Noise	Audible noise generated by vibration induced in the ground and/or a structure. Vibration can be generated by impact or by solid contact with a vibrating machine. Structure-borne noise cannot be attenuated by barriers or walls but requires the isolation of the vibration source itself. This can be achieved using a resilient element placed between the vibration source and its support such as rubber, neoprene or springs or by physical separation (using an air gap for example). Examples of structure-borne noise include the noise of trains in underground tunnels heard to a listener above the ground, the sound of footsteps on the floor above a listener and the sound of a lift car passing in a shaft. See also 'Impact Noise'.
Tonal Noise	Sound containing a prominent frequency and characterised by a definite pitch.
Transmission Loss	The sound level difference between one room or area and another, usually of sound transmitted through an intervening partition or wall. Also the vibration level difference between one point and another. For example, if the sound level on one side of a wall is 100dB and 65dB on the other side, it is said that the transmission loss of the wall is 35dB. If the transmission loss is normalised or standardised, it then becomes the Rw or R'w or DnT,w.
Wheelbase	The wheelbase is the distance between the centres of the front and rear wheels on a 2-axle bogie.

B.3 Warehouse E7 CoC B85 Noise Monitoring Report

Renzo Tonin & Associates Report TM306-05F02 E7 Warehouse B85 Operational Noise Monitoring (r1)

RENZO TONIN & ASSOCIATES
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MOOREBANK INTERMODAL PRECINCT EAST

Monitoring Report for Mechanical Plant (SSD 7628 B85) - Warehouse E7

24 January 2025

The Trust Company (Australia) Limited (ACN 000 000 993) as trustee of the Moorebank Industrial Warehouse Trust c/- Tactical Group

TM306-05F02 E7 Warehouse B85 Operational Noise Monitoring (r1).docx

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1 Introduction

1.1 Monitoring report purpose

Renzo Tonin & Associates was engaged by Logos Investment Management (Logos) on behalf of The Trust Company (Australia) Limited (ACN 000 000 993) as trustee of the Moorebank Industrial Warehouse Trust to undertake noise monitoring of the warehouse mechanical plant and other noisy equipment to satisfy the State Significant Development (SSD) 7628 B85 consent condition (CoC) for Warehouse E7. Warehouse E7 is located within the Moorebank Precinct East (MPE), which forms part of the Moorebank Intermodal Precinct (MIP) at Moorebank, NSW. Warehouse E7 is currently tenanted by the third party logistics provider Mainfreight.

During the May 2024 SSD 7628 B85 noise monitoring, it was identified that one of the fans (Dangerous Good exhaust fan) was operating at noise levels louder than would be expected to manage cumulative noise emissions from the warehouse.

Accordingly, further acoustic mitigation measures were investigated and are currently being implemented to reduce the noise emissions from this fan. As such, the operational noise emissions were not operating as per typical and a valid representation of final noise levels could not be measured. This report has been prepared with the temporary operational noise emissions from the fan, and as such, the noise levels in this report do not reflect the final noise emission levels. However, the final noise levels are expected to be lower once the acoustic mitigation works are complete. Once the works are complete, noise measurements will be undertaken to confirm noise emission levels. This report will then be updated to reflect these final operational noise levels so that valid operational noise emissions could be quantified.

The Sydney Intermodal Terminal Alliance (SIMTA) received approval for the construction and operation of Stage 2 of the MPE development, State Significant Development (SSD) 7628. The approval includes 300,000m^2 GFA of warehousing. These warehouse operations, including the site that is operated by Mainfreight (Warehouse E7), fall under the area and activities approved as part of SSD 7628.

Specifically, this report has been prepared to address the noise emissions from the fixed mechanical plant and equipment of the warehouse that operate as part of typical warehouse operations in accordance CoC B85 of SSD 7628, and as detailed in the MPE Operational Noise and Vibration Management Plan[1] (MPE ONVMP).

SSD 7628 Consent Condition B85 requires noise monitoring of valid data for comparison against the mechanical plant and equipment noise levels predicted in the SSD 7628 Consent Condition B84 assessment prepared by Pulse White Noise Acoustics (PWNA) (*LOGOS MPE 6 & 7 – Acoustic Design*

[1] Arcadis & Renzo Tonin & Associates, Operational Noise and Vibration Management Plan for Moorebank Logistics Park – East Precinct, Revision 013, dated 24/01/2023, reference PREC-QPMS-EN-PLN-0008, available https://moorebankintermodalprecinct.com.au/wp-content/uploads/2023/09/ONVMP_V13_clean_compiled_Redacted-compressed.pdf, accessed 21/07/2024

Report, Report number: *220518 - LOGOS MPE 6&7 - Acoustic Design Report – R5*, 28 March 2023) (B84 assessment).

This report is technical in nature and uses acoustic terminology throughout. APPENDIX A contains a glossary of acoustic terms used in this report.

1.2 Warehouse operations description – Warehouse E7 (Tenant: Mainfreight)

1.2.1 Location

The MIP is located approximately 27 kilometres south-west of the Sydney Central Business District and approximately 26 kilometres west of Port Botany, within the Liverpool Local Government Area. The MIP is divided into an East Precinct and a West Precinct, located east and west of Moorebank Avenue respectively, as shown in Figure 1.

1.2.2 Operational activities and facilities and hours of operation

Warehouse E7 is tenanted by Mainfreight, a third party logistics provider. The key components of Warehouse E7 and the various day to day activities that occur are as follows:

- Warehouse separated into two sections (7A and 7B) with an internal dividing wall:
  - Temperature controlled warehouse storage facility (Warehouse 7A – eastern side)
  - Ambient temperature warehouse (Warehouse 7B – western side)
- Storage of goods
- Warehouse (7A/7B) northern side:
  - Despatching and receiving truck movements in and out of the facility. Typically via sideloading with forklifts on the hardstand at the on-grade docks. For recessed loading docks, this is typically for container trucks, where containers are unloaded typically is via forklift via the rear from within the warehouse space.
  - Forklift (electric and gas) operations on hardstand
- Warehouse (7A/7B) southern side:
  - Receipt and despatch of containers from the MPE IMEX terminal
  - Internal packing and unpacking of containers
- General office administrative and support functions, two offices, one for Warehouse 7A and one for Warehouse 7B.

Mainfreight's warehouse and distribution observed activities typically occur 4:00am to 5:00pm Monday to Friday, with the mechanical plant and equipment operating 24 hours per day, 7 days per week. The truck despatch and receiving activities occur on the northern and southern side of the warehouse including both at-grade and in recessed loading docks. Additionally, on the southern side of the warehouse containers from the IMEX terminal are transported to and from via reach stacker or combilift and stored for unloading from within the warehouse along the southern side of the warehouse.

1.2.3 Mechanical plant and other noisy equipment

The following fixed mechanical plant and equipment operate as part of typical warehouse operations, which are further detailed in Section 5.1.

- **Warehouse 7A (warehouse east)**
    - Package units for maintaining a consistent temperature within Warehouse 7A.
    - Dangerous good (DG) area fan
    - Smoke exhaust fans (do not form part of typical operations, and were observed not to operate during normal operations)
    - Office area air-conditioning plant and equipment
    - Office area fans
    - Office area refrigeration compressors
    - Mechanical plant for dock office, including air-conditioning plant and intake/discharge openings.
- **Warehouse 7B (warehouse west)**
    - Office area air-conditioning plant and equipment
    - Office area fans
    - Mechanical plant for dock office, including air-conditioning plant and intake/discharge openings.

2 Nearby sensitive receivers

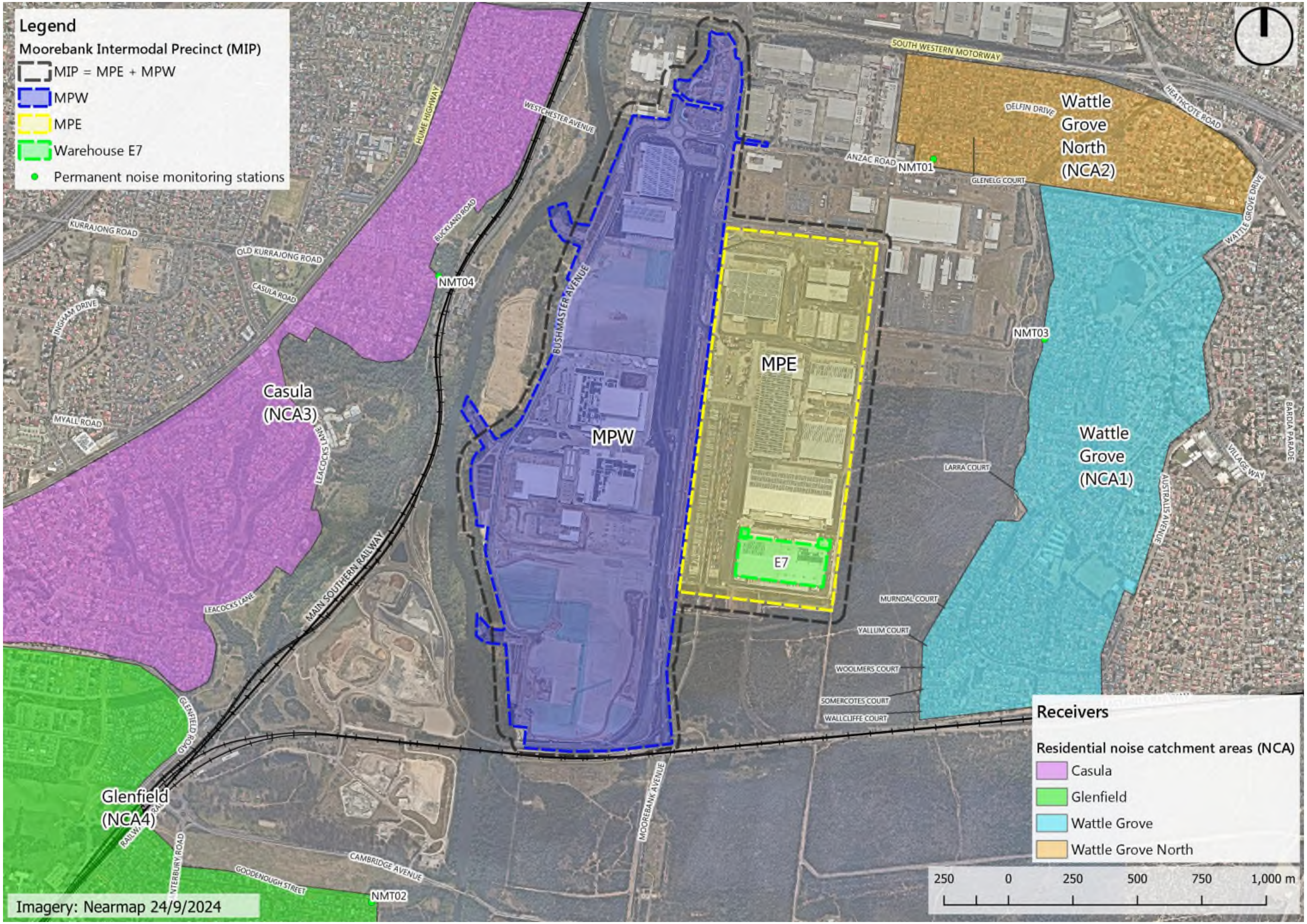
The potentially affected residential receivers nearby to Warehouse E7 around MPE are located in the suburbs of Casula, Glenfield, Wattle Grove and Wattle Grove North. The closest and potentially most affected residential receivers are located within Wattle Grove.

A summary of the approximate distance to the nearest residential receivers in the surrounding area are provided in Table 1, as identified in SSD 7628 CoC B80. The locations of the residential noise catchment areas (NCAs) are shown in Figure 1.

Table 1 Noise sensitive receivers and approximate distance from MPE Warehouse E7

Noise Catchment Area (NCA)	Receiver type	Approximate distance from Warehouse E7, metres
Wattle Grove (NCA1)	Residential	440
Wattle Grove North (NCA2)		1,490
Casula (NCA3)		1,440
Glenfield (NCA4)		1,860

Figure 1 Warehouse E7 location, MIP, MPE and MPW precincts



3 Summary of noise objectives

This report has been prepared to address the noise emissions from the fixed mechanical plant and equipment of the warehouse that operate as part of typical warehouse operations in accordance CoC B85 of SSD 7628, and as detailed in the MPE ONVMP.

CoC B85 requires that the monitored noise levels be compared against the predicted levels reviewed in accordance with CoC B84. The CoC B84 noise assessment, is required to demonstrate that the plant and equipment has been selected to meet the overall noise limits specified in SSD 7628 CoC B80 (Table 5). As such, the following section outlines the requirements for both CoC B85 and the overall CoC B80 (Table 5) noise limits.

3.1 Operational noise limits

The operational noise limits applicable for the warehouse operations within MPE are presented in Table 5 of SSD 7628 CoC B80 and are reproduced in Table 2 below. These noise limits are as per Table 3-5 of the MPE ONVMP. The noise limits are applicable not only to all operational noise sources approved under SSD 7628 but are inclusive of operations as part of MPE Stage 1 (approval SSD 6766).

The $L_{Aeq(15\ minute)}$ criteria are applicable during the day, evening and night-time periods and the $L_{A1\ (1\ minute)}$ sleep disturbance noise limits are applicable during the night-time period.

The noise limits are applicable under prevailing meteorological conditions of wind speeds of up to 3 m/s at 10 metres above ground level or stability category 'F' temperature inversion conditions.

Table 2 SSD 7628 CoC B80 noise limits, dB(A)

Sensitive receiver	Day [1] $L_{Aeq,\ 15\ minute}$	Evening [1] $L_{Aeq,\ 15\ minute}$	Night [1] $L_{Aeq,\ 15\ minute}$	Night [1] $L_{A1\ (1\ min)}$
Wattle Grove (NCA 1)	35	35	35	52
Wattle Grove North (NCA 2)	35	35	35	52
Casula (NCA 3)	35	35	35	52
Glenfield (NCA 4)	35	35	35	52

Notes:

1. In accordance with the INP, day is the period from 7:00 am to 6:00 pm Monday to Saturday; or 8:00 am to 6:00 pm on Sundays and public holidays; evening is the period from 6:00 pm to 10:00 pm; and night is the remaining periods.
2. To determine compliance with the $L_{Aeq,15\ minute}$ noise limits, noise from the development is to be measured at the most affected point within the residential boundary, or at the most affected point within 30 metres of a dwelling where the dwelling is more than 30 metres from the boundary. Where it can be demonstrated that direct measurement of noise from the project is impractical, the EPA may accept alternative means of determining compliance (see Chapter 7 Noise Policy for Industry - NPfI) The modification factors in Section 4 of the INP must also be applied to the measured noise levels where applicable.
3. To determine compliance with the L_{A1} noise limits, noise from the project is to be measured at 1 metre from the dwelling façade. Where it can be demonstrated that direct measurement of noise from the project is impractical, the EPA may accept alternative means of determining compliance (see Chapter 7 of the NPfI).
4. The noise emission limits identified above apply under meteorological conditions of:

   (i) wind speeds of up to 3 m/s at 10 metres above ground level; or

   (ii) 'F' atmospheric stability class.

3.2 Discussion of assessment noise limits

As noted in Section 3.1, the noise limits detailed in SSD 7628 CoC B80 are applicable not only to all operational noise sources approved under SSD 7628, but are also inclusive of operations as part of the MPE Stage 1 approval for SSD 6766. Importantly, when assessing compliance with these noise limits, the most affected residential receiver for any individual operations will not necessarily be at the same location. Additionally, it is unlikely that the reasonable worst-case noise levels from any individual operations would also occur in the same 15-minute period.

As part of the SSD 7709 Moorebank Precinct West (MPW) – Stage 2 Modification 1 (SSD 7709 MOD 1) submitted July 2020, a review of the applicable operational noise requirements across Moorebank Precinct West (MPW) and Moorebank Precinct East (MPE) was undertaken (Renzo Tonin and Associates document reference *TJ741-11F05 (r4),* dated 30 June 2020). The review identified that there are a number of approval conditions that are applicable across both the MPW and MPE sites for operational noise, and that in the application of these approvals to the site activities it became apparent that the operational noise requirements were not consistent across the MPE and MPW sites.

Additionally, the review identified that the operational noise limits across MPE and MPW were set substantially below both the noise criteria and the predicted noise levels (even with feasible and reasonable mitigation measures) established during the environmental assessment stages for the cumulative operational noise levels from all MPE and MPW operations.

As such, the review recommended that an overall approach for cumulative operational noise management of the MIP (for East and West precincts) for a "*whole of complex*" approach be adopted, and that consistent noise management objectives for the Moorebank intermodal terminal precinct's operational noise be adopted to cover all operations within MPE and MPW. Appropriate and achievable noise management objectives consistent with EPA's noise policies were also developed in the review.

Following the modification application for SSD 7709 (MOD 1), the submission received from the NSW Environment Protection Authority (NSW EPA) noted the following:

However, the current noise limits are set below the predicted noise levels and are not based on the Project Specific Noise Levels (PSNL) derived under the then-applicable Industrial Noise Policy 2000 (now superseded by the Noise Policy for Industry 2017)…. The EPA considers that the resulting noise limits are not achievable for MPW, nor are they achievable for the cumulative MPW and MPE sites.

Additionally, Liverpool City Council included in their submission:

Council considers that site regulation in regard to noise management may be assisted by adopting a precinct approach consistent with the NSW EPA's Noise Policy for Industry (2017)…. Whilst it is acknowledged that current criteria in the Approval may be impracticable, it will be necessary for the Department to consider applying suitable noise limits that are achievable and capable of protecting the amenity and wellbeing of sensitive receivers.

SSD 7709 MOD 1 was approved 24 December 2021, along with the revised cumulative noise goals for the overall MIP (MPW & MPE). However, these have not then been adjusted as part of the relevant MPE approvals (SSD 6766 and SSD 7628). Noting the above regulator comments, it is appropriate to assume that the overall MIP (MPW & MPE) operational noise emissions should be managed consistent with the SSD 7709 MOD 1 update, and this will likely be incorporated into a future modification of in SSD 7628.

However, independent of this, as the updates have not yet occurred, this assessment has been done against the existing SSD 7628 noise limit requirements, without further considerations of cumulative MIP noise emissions. These comments have been included for important context relating to cumulative noise considerations.

3.3 CoC B85 assessment noise requirements

3.3.1 Requirements

The management of operational noise emissions from warehouse mechanical plant and equipment activities within MPE Stage 2 is outlined in the MPE ONVMP. Specifically, this report has been prepared to address the requirements of CoC B85 in SSD 7628, as detailed in Section 4.1.1 of the MPE ONVMP.

This report includes noise monitoring performed to address the requirements in CoC B85 as detailed in Table 4-1 in Section 4.1.1 of the MPE ONVMP.

The requirements of CoC B85 state:

> *B85 The Applicant must carry out noise monitoring of mechanical plant and other noisy equipment for a minimum period of one week where valid data is collected following occupation of each warehouse. The monitoring program must be carried out by a suitably qualified and experienced person(s) and a* ***Monitoring Report for Mechanical Plant*** *must be submitted to the Secretary within two months of occupation or each tenancy to verify predicted mechanical plant and equipment noise levels.*

CoC B85 requires that the monitored noise levels be compared against the predicted levels reviewed in accordance with CoC B84.

An assessment of mechanical plant and equipment noise levels was prepared by Pulse White Noise Acoustics (PWNA) (*LOGOS MPE 6 & 7 – Acoustic Design Report*, Report number: *220518 - LOGOS MPE 6&7 - Acoustic Design Report – R5*, 28 March 2023) (B84 assessment). However, this report did not provide specific warehouse predicted noise levels for all nearby noise sensitive receivers for verification under CoC B85. Instead, the report identified that noise emissions have been designed to achieve the overall noise levels presented in Table 5 of CoC B80 of 35 dB(A) $L_{Aeq\ 15minute}$, during all time periods.

Table 3-20 and Table 3-21 of the MPE ONVMP detail the predicted $L_{Aeq\ 15\ minute}$ intrusiveness and L_{Amax} sleep disturbance noise levels respectively for the overall MPE operations at the Environmental Assessment stage. Although these are for the overall MPE operations and not for an individual warehouse, they can be used as reference for consistency verification CoC B85 as per the monitoring requirements detailed in Table 4-1 in Section 4.1.1 of the MPE ONVMP.

Additionally, it is understood that Warehouse E7 has incorporated noise mitigation measures, to achieve noise levels being adopted by Logos that are lower than those required by CoC B80 to assist with their overall management of cumulative noise emissions.

It should also be noted that the monitoring is to be undertaken *"... for a minimum period of one week where valid data is collected"*. As such, it is important that operations are representative of typical operations for the monitored data to be valid. This is of note for this assessment, as the monitored noise levels were determined to not be representative of the future operational noise emissions, as further noise mitigation measures are being implemented, and so the results presented in this report represent interim noise emissions.

3.3.2 Noise monitoring timing

It is understood that the Warehouse E7 was occupied November 2023, with warehouse operations commencing and starting to ramp up during late 2023/early 2024.

However, during this initial operations period construction works were still being undertaken and were underway until April 2024. During this time period the tenant warehouse operations were still ramping up to typical levels. As such, monitoring of valid noise data could not be conducted. As such, the earliest period when valid noise monitoring data could be collected was from May 2024. Noise monitoring was then undertaken mid-May 2024, due to a two week delay to allow for appropriate weather conditions during the monitoring period.

It is noted that the Mainfreight facility had ramped up operations to around 70% capacity at the time of the noise monitoring. The assessment herein has been performed to assess the potential noise impact of current operations as the key operational noise sources were running at suitable capacity (eg. temperature controlled mechanical plant/equipment).

During the May 2024 noise monitoring period, it was identified that one of the fans (Dangerous Good exhaust fan) was operating at noise levels louder than would be expected for managing cumulative noise emissions from the warehouse. Accordingly, further acoustic mitigation measures were investigated and are currently being implemented to reduce the noise emissions from this fan.

This report presents the mechanical plant and equipment noise emissions during this interim time period while further mitigation measures are being implemented. Following the completion of these works, final noise monitoring will be undertaken to confirm the final valid mechanical plant and equipment noise emissions.

4 Measurement methodology and results

4.1 Noise monitoring approach

The NSW Environment Protection Authority's (EPA) *Noise Policy for Industry* (NPfI) provides guidance in Chapter 7 for monitoring the performance of a noise-generating industrial facility. NPfI Section 7.1.1 provides guidance as to how to review noise emissions, which includes direct measurement at a receiver location, direct measurement at alternative or intermediate location/s, unattended monitoring and modelling, in order or preferred to least preferred. It notes that this range of compliance assessment techniques may be used individually, or in combination, to provide a means of determining compliance with a noise limit. At times, the best available compliance assessment methodology will only allow for a balance-of-probabilities type determination of compliance, and repeat assessment may be needed. It also makes clear that "*A noise limit applies to the noise from a particular development/activity and not to general ambient noise. Therefore it is often necessary to use techniques to attempt to separate the noise from a facility versus noise from other sources*."

For the CoC B85 Warehouse E7 assessment, the following points were considered:

- A site inspection undertaken on 21 March 2024, identified that at the residences in the closest residences in Wattle Grove operational noise emissions were not audible or distinguishable in the direction of the Warehouse E7.
- The Warehouse E7 mechanical plant were expected to be more than 10 dB below the existing noise levels, measured at the surrounding NCAs by RTA during previous MIP noise monitoring, and based upon a review of the Wattle Grove permanent noise monitoring station data prior to the commencement of Warehouse E7 operations for the quietest night period (3:00am to 5:00am). This previous attended noise monitoring found the existing ambient noise levels to typically be greater than 40 dB(A) $L_{Aeq15min}$, and controlled by noise sources outside of MIP, such as road traffic noise (ie. M5 and Hume Highway road traffic noise).
- Access to intermediate locations between Wattle Grove residences and Warehouse E7 was possible.
- A number of co-located warehouse and industrial operations, including the IMEX terminal, operate co-currently within the MIP, in particular across MPE.
- Noise source locations are both roof mounted and ground level mounted.

Noting the above points, and that the existing ambient noise levels are already high at receivers compared with the expected noise emission levels at receivers, quantification of the noise under investigation via direct noise measurement of operational noise emissions from the warehouse mechanical plant and equipment operations is not possible at the residential receiver locations or easily accomplished at intermediate locations because of poor signal-to-noise. The NPfI also provides guidance about using noise modelling to review the performance of an industrial operation that is co-located with separate but noise-generating industrial sites impacting the same receiver, similar to the Warehouse E7 within the MIP situation.

As such, the CoC B85 noise monitoring has used a combination of on-site and intermediate location attended noise measurements, unattended monitoring, and noise modelling to quantify the noise emission performance of the warehouse mechanical plant and equipment.

4.2 Compliance measurement methodology

The noise monitoring undertaken to satisfy the requirements of CoC B85 has included the following noise monitoring and assessment steps.

4.2.1 Noise monitoring

The following noise monitoring was undertaken:

1. **Unattended noise monitoring** nearby to the key mechanical plant items for a period of 10 days, to confirm the noise levels of the mechanical plant when operations occurred.

2. **On-site attended measurement** of all mechanical plant and other noisy equipment items to quantify noise emission levels of mechanical plant and equipment that operate as part of the Warehouse E7 operations (Section 5.2.3).

3. **Receiver and intermediate attended measurements** to confirm that the mechanical plant and other noisy equipment items were not quantifiable at the nearest critical receiver locations (Wattle Grove), and/or assist with contribution estimations of noise emissions levels, and provide noise monitor data to aid with confirming the performance of the noise model used to determine noise emission estimations at receivers. For the estimate warehouse mechanical noise contribution at the intermediate and receiver locations, where noise in the direction Warehouse E7 is not audible, it is assumed that the warehouse mechanical noise contribution is at least 10dB(A) below the corresponding measured L_{A90} or L_{Amin} 15minute noise level as appropriate.

4.2.2 Data analysis and assessment

Following the noise monitoring, the following steps were undertaken to assess the noise level contributions at the nearby sensitive receivers:

1. **Noise source analysis** - Review the mechanical plant and equipment attended measurement data, analyse results and quantify noise source levels from all the fixed mechanical plant and equipment for Warehouse E7.

2. **Noise model setup and performance review -** Setup and calibrate the noise model for individual mechanical plant items, including the temperature control roof mounted package units, main office mechanical plant and equipment as well as the dock office mechanical equipment for the assessment of reasonable worst-case noise operations.

3. **Noise emission quantification -** Calculate the fixed mechanical plant and equipment noise levels from the Warehouse E7 operations to all nearby surrounding receivers and determine the noise level contribution at the property with the highest noise levels within each NCA.

4.3 Instrumentation

A range of noise monitoring equipment was used to undertake the compliance noise monitoring. A summary of measurement equipment and calibration dates is provided in Table 3.

All of the noise monitoring equipment are Class 1 instruments, with calibration certificates current at the time of the measurements. Before and after each series of measurements, the calibration of the sound level meters was verified using a reference calibration of 94 dB at 1 kHz. The difference between pre- and post-calibration levels was within 0.5 dB for all measurements.

Table 3 Noise measurement equipment

Monitoring location/ purpose	Monitoring period used (2024)	Equipment (RTA ref.)	Serial number	Last date calibrated
On-site attended noise measurements	17/5/2024	NTi XL2 (RTA07-008)	A2A-08520-E0	18/08/2023
On-site attended noise measurements	17/5/2024	NTi XL2 (RTA07-009)	A2A-09356-E0	24/07/2023
On-site attended noise measurements	24/5/2024	NTi XL2 (XL2-A)	A2A-20889-E0	26/10/2023
On-site attended noise measurements	24/5/2024	NTi XL2 (RTA06-010)	A2A-05811-E0	28/02/2023
Unattended on-site noise measurements (E7 Roof)	14/5/2024 - 24/5/2024	NTi XL2 (RTA07-021)	A2A-13529-E0	31/01/2024
Unattended on-site noise measurements (South-east corner)[1]	14/5/2024 - 24/5/2024[1]	NTi XL2 (RTA07-018)	A2A-12693-E0	17/07/2023
Field calibration	14/5/2024	B&K 4231	2545601	15/01/2024
Field calibration	14/5/2024	B&K 4231	3009707	16/01/2024
Field calibration	17/5/2024	B&K 4231	2545601	15/01/2024
Field calibration	24/5/2024	B&K 4231	2677710	15/01/2024

Notes: 1. Only used in Section 6.2, and so only short period data has been used.

4.4 Meteorological conditions

Meteorological conditions during the period of noise measurement surveys have been reviewed to determine the prevailing wind and temperature inversion conditions were appropriate. For a period of the monitoring, data from the MIP meteorological data monitoring station adjacent to Bushmaster Avenue, established in accordance with SSD 7709 (MPW Stage 2) CoC A54, has been sourced and reviewed.

During the attended noise measurement periods at Warehouse E7 and the nearby receivers, the weather conditions were as detailed in Table 4.

Table 4 Attended noise measurement surveys weather observations

Date / Time period	Air temperature, °C	Relative humidity, %	Average wind speed (at 10 m above ground level), m/s	Wind direction, degrees and Cardinal	Cloud cover	Rain
17/5/2024 3:30AM – 6:00AM Receivers/ Intermediate monitoring	12 to 13	96	Up to 1 m/s	Ranged from SW to WNW	Clear skies throughout	None
17/5/2024 6:00AM – 3:00PM Onsite monitoring	12 to 41	45 to 96	Up to 2 m/s	Generally ranged from WSW to N	Clear skies throughout	None

The noise limits in SSD 7628 are applicable for wind speeds up to 3 m/s (10.8 km/h) at 10 metres above ground level. This meteorological station data was used to exclude weather affected data (wind (greater than 5m/s) or rain) in the unattended noise monitoring presented in APPENDIX B in accordance with the NPfI.

5 Monitoring and analysis

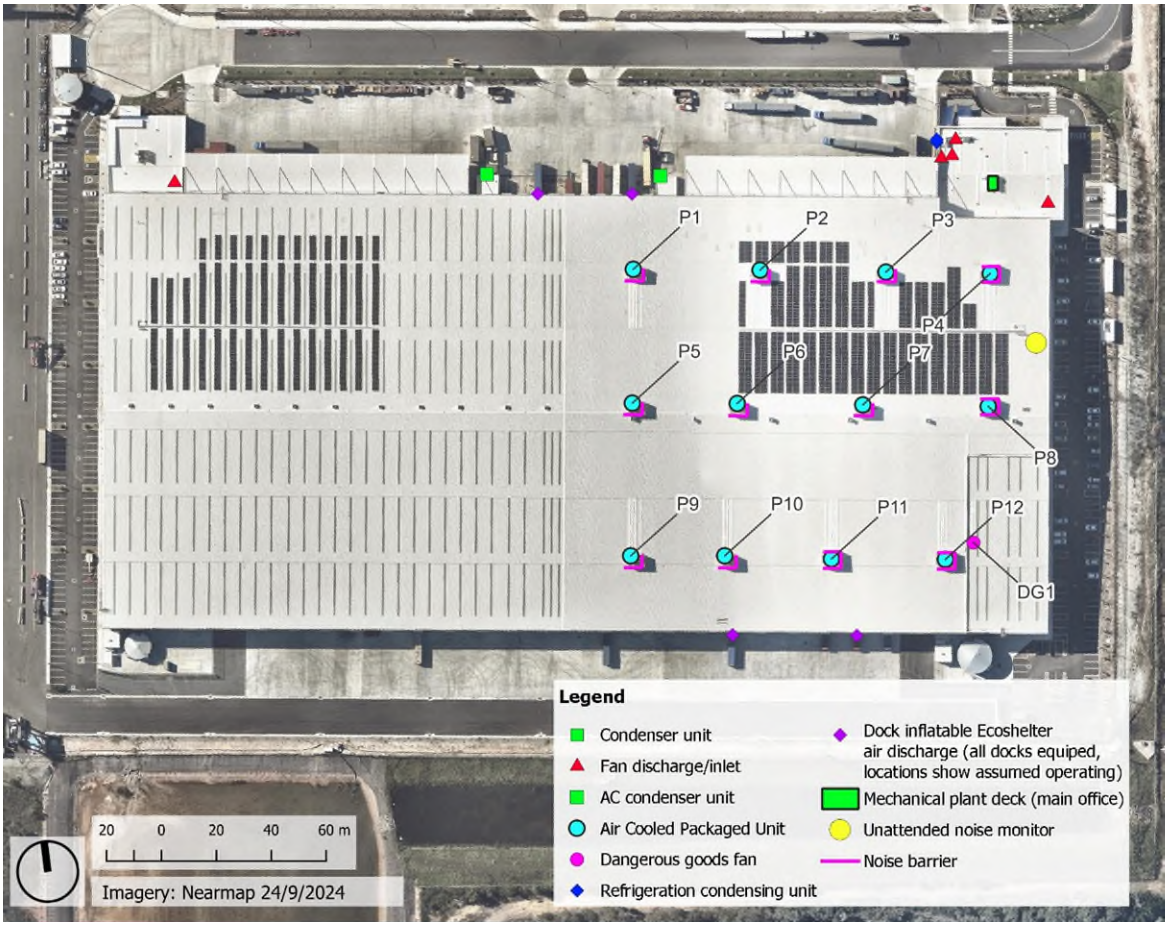
5.1 Key mechanical plant and equipment noise sources

Based on as-built construction information, site inspections, site personal observations, attended and unattended noise measurements, the main sources for the mechanical plant and equipment are as follows:

- Roof mounted air cooled package units
- Dangerous good ventilation fan
- Mechanical plant deck for main office
- Mechanical plant for dock office, including internal mechanical plant and equipment intake/discharge openings
- Discharge opening for the dock inflatable shelter

The relevant locations of the key noise generating mechanical plant noise items are presented in Figure 2.

Figure 2 Key mechanical plant noise source locations and unattended noise monitor location



5.2 Noise monitoring

5.2.1 Receiver noise monitoring

Noise monitoring was undertaken at the receiver locations shown in Figure 3 to aid with confirming the likely noise contribution levels at the nearest residential receivers from the warehouse in each of the surrounding NCAs. The location of these measurements is presented in Figure 3. A summary of the measured noise levels are provided in Table 5, with further details for each of the measurements provided in APPENDIX B.

Table 5 also presents total statistical noise levels measured during the attended noise survey and estimated noise contributions from Warehouse E7 based on short-term audible noise measured at the attended measurement locations that could be attributed as coming from Warehouse E7 operations.

Figure 3 Key receiver noise monitoring locations

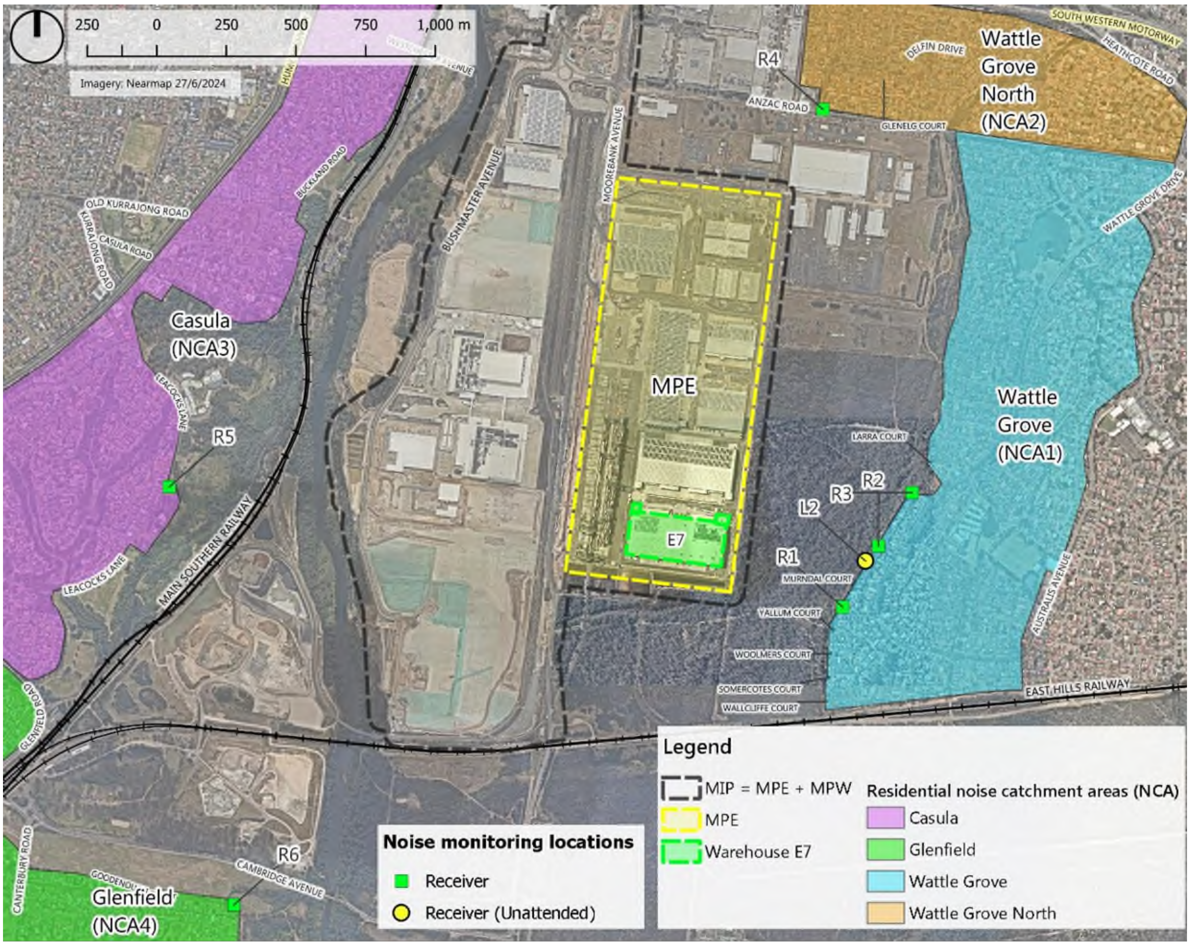


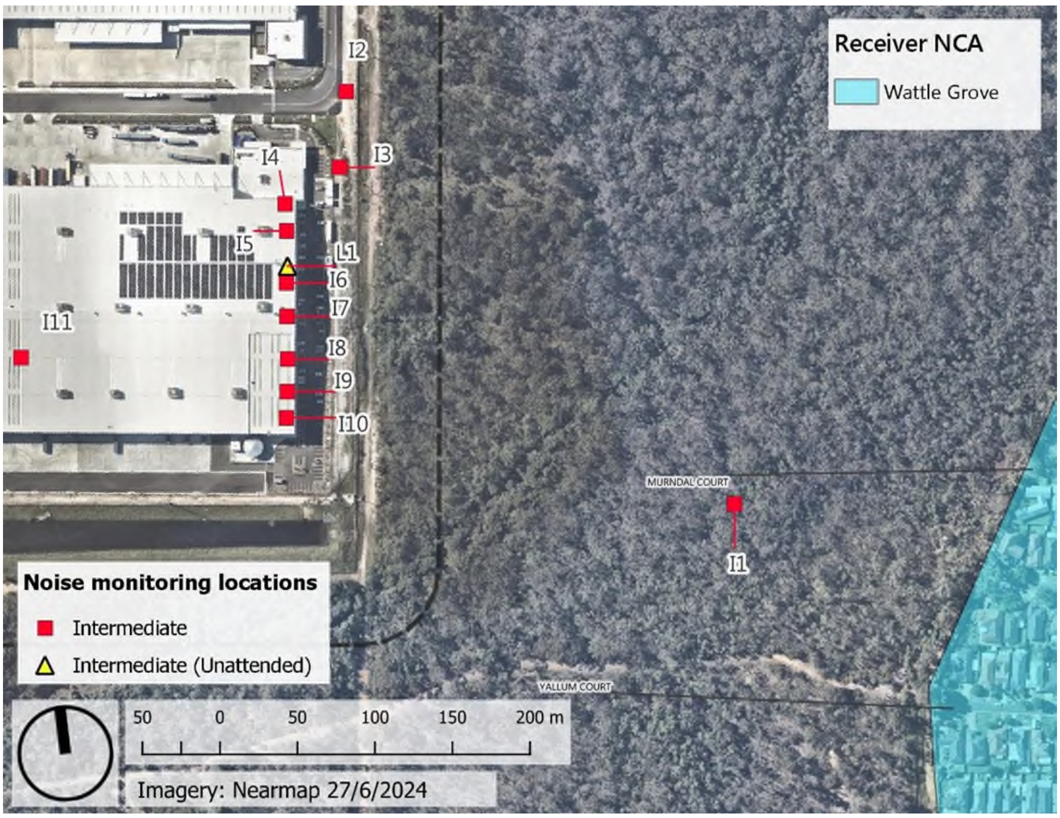
Table 5 Receiver attended noise measurement results (17 May 2024)

ID	Location	Time	Measured noise levels (15-minute), dB(A)				Estimated warehouse contribution, $L_{Aeq, 15minute}$, dB(A)
			L_{AFmax}	L_{Aeq}	L_{A90}	L_{AFmin}	
R1	16 Corryton Court, Wattle Grove	4:08am	62	46	44	42	< 32
R2	52 Corryton Court, Wattle Grove	5:07am	59	45	43	42	< 32
R3	82 Corryton Court, Wattle Grove	5:33am	59	47	45	44	< 34
R4	30 Goodenough Street, Glenfield	4:08am	56	50	46	44	< 34
R5	73A Leacocks Lane, Casula	4:41am	76	54	44	42	< 32
R6	39 Glenelg Court, Wattle Grove	5:09am	86	66	46	44	< 34

5.2.2 Intermediate noise monitoring

As it was not possible to confidently quantify warehouse noise emissions at the receiver locations through the receiver monitoring, intermediate measurements were undertaken between the receivers and the warehouse, in addition to boundary locations around the warehouse. Noise monitoring was undertaken at the intermediate locations shown in Figure 4. Accessible locations between the source and the receiver location were selected, where the signal-to-noise from the warehouse noise sources would be higher than at the residential receiver locations. Additionally, intermediate locations on or near the site boundary (including the warehouse roof) were selected to take into account substantial shielding from the warehouse structure. These locations were selected to assist with determining the likely contribution from the warehouse at these intermediate locations to aid with reviewing the performance of the compliance noise modelling.

Figure 4 Key intermediate noise monitoring locations



A summary of the measured noise levels at the intermediate monitoring locations are provided Table 6 with further measurement details for location I1 provided in APPENDIX B.

Table 6 Intermediate noise measurement results (17 May 2024)

ID	Location / Comment	Time	Measured noise levels, dB(A)				Estimated warehouse contribution, $L_{Aeq,\ 15min}$, dB(A)	Key noise sources contributing to steady state noise levels
			L_{AFmax}	L_{Aeq}	L_{A90}	L_{AFmin}		
I1	Defence area intermediate location (east of Project)	4:37am	63	52	45	42	< 32	Distant road traffic [~42-46 dB(A)] and natural sources (frogs). Full details in APPENDIX B.
I2	MPE fence line east	3:39am	52	46	45	43	38 - 40	Office mechanical just audible, frogs and distant traffic
I3	Ground (east) adjacent to office carpark	3:34am	50	47	46	45	43	Office mechanical audible, crickets and distant traffic
I4	E7 roof (east)	10:22 am	58	52	51	50	51	Office mechanical, package unit and distant traffic
I5	E7 roof (east)	10:13 am	67	49	48	47	48	Package unit
I6	E7 roof (east)	10:13 am	55	49	48	47	49	DG fan and package unit controlled
I7	E7 roof (east)	10:09 am	56	54	52	52	54	DG fan controlled
I8	E7 Roof (east)	10:09 am	62	59	57	56	59	
I9	E7 roof (east)	10:05 am	63	61	59	58	61	
I10	E7 roof (east)	10:05 am	62	59	57	56	60	
I11	E7 roof (west)	11:23 am	54	49	48	47	44	Package unit, distant traffic, and construction activities
L1	During I1 attended measurement	4:37am	56	51	49	48	48	Location controlled by nearby package units. Background and ambient levels would also have some contribution from traffic on nearby arterials and Moorebank Avenue, in addition to construction activities during the daytime period.
	During I2 attended measurement	3:39am	61	52	50	50	50	
	During package unit monitoring period	9:45 am to 11:45 am	75	50	47	46	47	
	Day	14/5/24 to 23/5/24	-	51	47	-	47	
	Evening		-	51	48	-	48	
	Night		-	50	48	-	48	

5.2.3 Onsite noise measurements

Attended noise measurements of individual mechanical plant and equipment items and typical operations were undertaken at Warehouse E7 on 17 May 2024, in order to quantify the noise emissions from the installed mechanical plant and equipment in operation for input into the calibration modelling (Section 6). These noise levels have been used to develop the CoC B85 operational noise compliance noise model.

During all measurements of mechanical plant and equipment, the specific noise source being measured was the dominant noise source. All plant and equipment items were switched on and forced into a typical operational state for the purposes of undertaking the attended noise measurements. Observations were made of the on-site specific mechanical plant item during operations to ensure they were in typical operation.

Results from the on-site attended measurements of the critical mechanical plant and equipment are summarised in Table 7. The locations the key noise generating mechanical plant noise items are presented in Figure 2.

Table 7 On-site attended mechanical plant noise measurement results (17 May 2024)

ID	Activity noise sources	Time	Measurement duration (t), min	Measurement distance (m)	Measured noise levels, dB(A)		
					L_{AFmax}	L_{Aeq}	L_{A90}
	Roof mounted temperature control package units (locations see Figure 2)						
S1	Typical operation at 10m (north side) (P3)	10:47 AM	1:01	10	59	54	50
S2	Typical operation at 15m (north side) (P3)	10:50 AM	1:00	15	58	54	51
S3	Typical operation at 10m (west side) (P5)	11:30 AM	1:00	10	56	54	53
S4	Typical operation at 10m (north side) (P5)	11:36 AM	1:02	10	61	57	57
S5	Typical operation at 10m (west side) (P6)	11:44 AM	1:02	10	56	50	49
S6	Typical operation at 10m (north side) (P6)	11:40 AM	1:00	10	59	51	51
S7	Typical operation at 10m (P7)	11:49 AM	1:00	10	61	56	55
S8	Typical operation at 10m (P9)	11:49 AM	1:20	10	59	56	55
S9	Typical operation at 10m (P10)	11:55 AM	1:01	10	53	51	51
S10	Typical operation at 10m (P11)	11:55 AM	1:00	10	53	50	50
S11	Background noise level (roof west)[1]	11:36 AM	10:04	-	63	48	45
	Dangerous goods fan						
S12	DG fan	9:51 AM	1:00	19	65	63	62
S13	DG fan	9:59 AM	1:00	18	67	64	63
S14	DG fan	9:55 AM	1:01	21	63	60	60
S15	DG fan	9:58 AM	1:02	19	67	63	62
	Office 7A roof						
S17	Office (7A) exhaust fan (east)	1:33 PM	2:03	5	74	66	66
S18	Office (7A) exhaust fan (west)	2:00 PM	1:00	2	-	-	68
	Hardstand and dock offices						
S19	Refrigeration compressor unit (Office 7A)	1:41 PM	30 sec	4	61	54	53
S20	Dock inflatable EcoShelter air discharge	1:54 PM	30 sec	40	64	54	53

Notes: 1. Background (L_{A90}) controlled by distant traffic noise (ie. Moorebank Ave, M5 and Hume Highway) with some construction contribution. The ambient noise levels (LAeq) were contributed to by construction activities and IMEX terminal operations.

5.2.4 Unattended noise measurements

During the attended noise survey in Section 5.1, it was observed that the roof mounted package unit and the dangerous good fan could operate continuously as part of typical operations, and were considered to be the main noise sources for the Warehouse E7 mechanical plant noise emissions.

To confirm that the attended noise levels measured as part of the attended noise surveys presented in Sections 5.2.1, 5.2.2 and 5.2.3 represented the levels as part of normal operations and did not substantially change over time, a minimum one week period of unattended noise monitoring was undertaken as required by CoC B85.

The unattended noise monitoring was undertaken over the period between 14 May to 24 May 2024. The unattended noise monitor was located so that noise contributions from mechanical plant would dominate the monitored noise levels. The unattended monitoring location is shown in Figure 4.

The monitoring data confirmed minimal variation, and the attended monitoring periods were appropriate to estimate noise levels for day, evening and night periods.

Detailed results from the unattended noise monitoring are provided in APPENDIX C.

5.3 Mechanical plant and equipment noise source levels

Based upon the attended and unattended noise monitoring presented in the above sections, the following noise source levels for the key typical operating mechanical plant and equipment have been established based upon periods of typical operation. These have been based upon either direct measurement, or supplier data that has been confirmed through monitoring of cumulative noise levels (ie. condenser units on mechanical deck).

Based upon noise monitoring presented in Section 5.2, the sound power level inputs presented in Table 8 were used in the CoC B85 operational noise compliance modelling detailed in Section 6 for the key noise source locations shown in Figure 2.

Table 8 CoC B85 operational noise compliance noise source levels

Site items / operation	Individual item sound power level (SWL) ($L_{Aeq,t}$), dB(A)	Comment
Warehouse roof		
Roof mounted temperature control package units (P1 to P12)	76 - 84	Based upon the range of attended measurements (Installed unit: Temperzone OPA 1307RKTM01-ENG) Qty - 12 units. Units were observed to operate at different sound powers during the same period.
Dangerous goods fan	95	Based upon the range of attended measurements (Installed unit: CFM Airsystems MAV100006DEX)

Site items / operation	Individual item sound power level (SWL) ($L_{Aeq,t}$), dB(A)	Comment
Office 7A roof[1]		
Office condenser units (4 units) - Vertical discharge units	74	Office roof access not available. Based upon manufacture type (Daikan) and unit observations.
Office condenser unit (1 unit) - Horizontal discharge unit	73	Office roof access not available. Based upon manufacture type (Daikan) and unit observations. Assumed same as dock office condenser unit.
Office (7A) exhaust fan (east)	88	Key office roof eastern noise source. Office roof access not possible. Based upon the attended measurements from side of building on raised pole, and assuming the identified key fan is the dominant noise source.
Office (7A) exhaust fan (west)	82	Key office roof western noise source. Office roof access not possible. Based upon the attended measurements from side of building on raised pole, and assuming the identified key fan is the dominant noise source.
Office 7B roof[1]		
Office (7B) exhaust fan (west)	82	Office roof access not available. Not clearly audible from ground level. Assumed same as office (7A) exhaust fan (west).
Hardstand and dock offices		
Refrigeration condensing unit (adjacent to Office 7A)	74	Installed unit: Patton PCCS225. Qty - Two units. Intermittent operations of one or two units.
Dock office east - Air conditioning condenser unit (CU-7.1.DO) - Horizontal discharge single fan unit (Daikan)	73	Installed unit: Daikan RZQ180MY1. Dock office air conditioning units were not operational, and measurement access not possible. The measured sound power level based upon the installed unit manufacturer sound power levels. Supplier level = Lw 62dB(A)
Dock office west - Air conditioning condenser unit (CU-7.2.DO) - Horizontal discharge single fan unit (Daikan)	73	Installed unit: Daikan RZQ180MY1. Dock office air conditioning units were not operational, and measurement access not possible. The measured sound power level based upon the installed unit manufacturer sound power levels.
Dock inflatable EcoShelter air discharge	91	On average, two docks had the inflatable Ecoshelter running during any one 15-minute period, for both the north (recessed) and southern docks. This has been included in the calibration modelling

Notes:
1. As the office roof areas (7A and 7B) were not accessible. Measurements were made of where mechanical sources were audible, and these fans were quantified and modelled. Other office roof sources were not dominant, based upon observations from warehouse roof levels for cumulative measured noise levels when in operation, and so it was appropriate to model just the key dominant sources.
2. Based upon highest measured levels from multiple attended measurements and unattended noise monitoring.

6 CoC B85 operational noise modelling and assessment

As detailed in Section 4, it was not possible to directly measure or estimate the warehouse mechanical plant and equipment noise levels at nearby receivers without implementing a range of different noise measurement and noise modelling techniques. As such, this assessment has used a combination of on-site attended noise measurements and unattended monitoring presented in Section 5, and noise modelling described below. These techniques were used in combination to assess the noise emissions of the Warehouse E7 mechanical plant and equipment.

6.1 General modelling assumptions and methods

Modelling and assessment of warehouse noise emissions was determined by modelling the noise sources, receiver locations, existing built structures and topographical features, using CadnaA (version 2024. The noise predictions are based on the CONCAWE noise prediction algorithms, noting that the nearby critical noise sensitive receivers are greater 100 metres from the site. The CONCAWE environmental noise prediction method is an appropriate method for predicting the noise propagation in these circumstances. The performance of the noise model used is reviewed in Section 6.2.

The noise prediction model considers:

- Location of all noise sources.
- Height of sources and receivers referenced to digital ground contours both onsite and outside the warehouse and MIP areas.
- Noise source levels of individual mechanical plant and equipment. All fixed mechanical plant and equipment noise sources associated with Warehouse E7 (Mainfreight) operations have been included.
- Separation distances between sources and receivers.
- Ground type between sources and receivers.
- Attenuation from buildings and built structures and topography (natural and purpose built).
- Atmospheric losses and assessment meteorological conditions.

The modelled activities and assumptions for the mechanical plant and equipment and their duration and frequency of operation as part of the 'reasonable' worst-case operational scenarios are described in Section 6.3.

6.2 Noise model performance

To confirm the suitability of the noise model for assessing the CoC B85 noise emissions, the noise model has been reviewed against onsite and receiver/intermediate concurrent noise measurements. The review of the noise model performance uses a combination of noise monitoring at the warehouse, and warehouse boundary where noise source locations and levels could be measured, combined with concurrent intermediate noise measurements towards the key residential receivers in Wattle Grove. This was part of the measurements presented in Section 5.2.2.

The performance of the model has two parts. The first being at the boundary of the site, to confirm the onsite sound power levels are appropriate. The second confirming the propagation assumptions between the site and the receivers. As the mechanical plant and equipment were not audible at the receiver, other onsite noise events (ie. container handling activities) have been used to confirm the noise model performance. Where noise events were audible and quantifiable at both monitoring locations, these have been used for the review.

Shown in Figure 5 are the monitoring locations along with the location of the onsite activity noise event locations. The validation scenario that was modelled along with the predicted outcomes are presented in Table 9. Based on this validation, the noise model is considered suitable for modelling and assessing noise emissions.

Figure 5 Noise model performance review noise monitoring locations

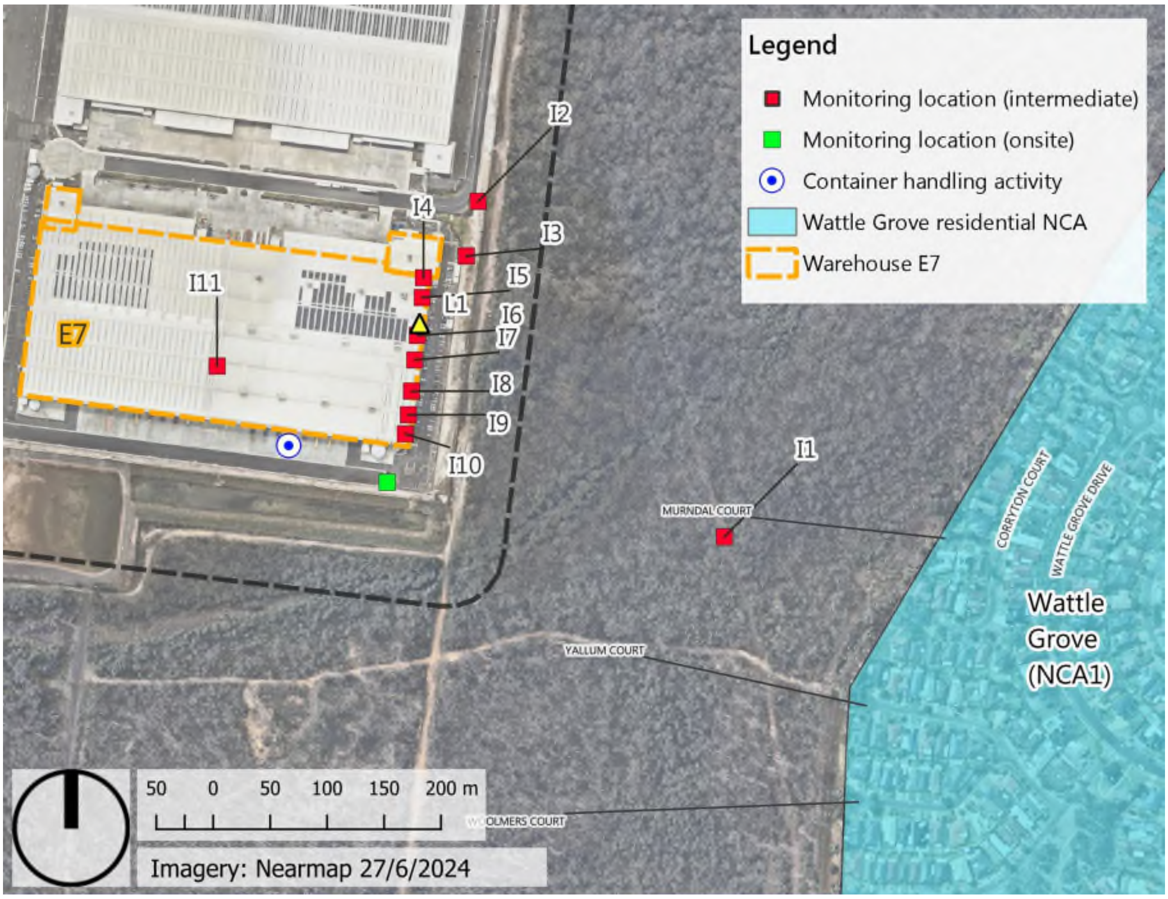


Table 9 **Comparison between measured and modelled noise levels – Between site and receiver**

ID	Noise event	Monitoring location	Prevailing meteorological conditions[1]	Measurement time	Estimated site contribution noise level, dB(A) L_{Amax}	Model predicted noise level, dB(A) L_{Amax}	Difference, dB
SN1	Container handling on southern side of warehouse	Onsite	Wind – 0.25 m/s Direction – 259 degrees Humidity – 96% Temperature - 12°C Stability Class F (based upon the NPfI sigma-theta method)[2]	4:50 am 17/05/2024	74	74[3]	0
		I1 (Defence land)			52	53	1

Notes: 1. Meteorological data based upon the MIP meteorological data monitoring station adjacent to Bushmaster Avenue, along western boundary of MPW.
2. Night time stability class, based upon NPfI Fact Sheet D1.4 '*Use of sigma-theta data*'
3. Modelled with CONCAWE for consistency, however, CONCAWE is typically not valid under 100m.

While the modelled scenarios were based upon the measured source levels presented in Section 5.3, the cumulative noise levels at the boundary of the site have been reviewed in Table 10 to confirm they have been suitably quantified. Based on this validation, the noise model is considered suitable for modelling and assessing noise emissions.

Table 10 **Comparison between measured and modelled noise levels - Roof intermediate monitoring locations (17/5/2024)**

Location	Measured contribution noise level, dB(A) $L_{eq,T}$	Model predicted noise level, dB(A) $L_{eq,T}$	Difference, dB
I1	< 32	31	-1
I2	38 - 40	41	1
I3	43	44	1
I4	51	49	-2
I5	48	47	-1
I6	49	49	0
I7	54	52	-2
I8	59	59	0
I9	61	59	-2
I10	60	56	-2
I11	44	49	1
L1	47 - 50[1]	48	0

Notes: 1. Range based upon unattended monitor measured levels both during the attended monitoring periods on 17/5/2024, in addition to the range experienced over the unattended monitoring period from 14/5/2024 to 24/5/2024.

6.3 Assessment operational scenarios

All key measurable noise-generating mechanical plant and equipment that operate as part of typical operations have been included in the assessment modelling as required by CoC B85. These are listed in Table 8. The locations of these sources are shown in Figure 2.

The roof mounted package units and dangerous good fan are the main mechanical plant and equipment noise sources for Warehouse E7 operations for the reasonable worst case intrusive scenario (15-minute period) assessment. All office mechanical plant and equipment identified in Section 5.3 have been assumed to operate during all assessment periods, although these plant items typically only operate when the office is in use and dock shelter use happens sporadically.

6.4 Noise compliance assessment

Mechanical plant and equipment operational noise levels are presented in Table 11. The noise levels have been modelled to each of the surrounding residential receiver noise catchments with all nearby residences assessed, and the highest residential receiver noise level in each catchment area reported in Table 11. These noise levels represent the reasonable worst-case operational scenario (15-minute period) from typical mechanical plant and equipment operations of the warehouse.

The modelling incorporated the worst-case prevailing meteorological conditions, as required by CoC B85, which are wind speeds of up to 3 m/s at 10 metres above ground level or stability category 'F' temperature inversion conditions.

The mechanical plant and equipment noise sources are steady-state or quasi-steady-state. Therefore, there is unlikely to be significant variation between $L_{Aeq,15min}$ values and $L_{A1, 1minute}$ values, and no significant peak noise events are expected. As such, by achieving the night period $L_{Aeq\ (15\text{-}minute)}$ requirements, the noise emissions will achieve the $L_{A1, 1minute,}$ sleep arousal screening level requirements of 52 dB(A) $L_{A1, 1minute}$.

The results in Table 11 show that the predicted CoC B85 operational compliance noise levels are below the SSD 7628 CoC B80 noise limits. Furthermore, although the B84 assessment report did not provide specific warehouse predicted noise levels for all nearby noise sensitive receivers for verification under CoC B85, noise emissions are aiming to achieve appropriate noise levels below the SSD 7628 CoC B80 noise limits to assist Logos with managing the cumulative noise emissions from the MIP.

As such, it can be concluded that the E7 mechanical plant and equipment noise emissions achieve these requirements, such that they have been selected and installed to achieve the overall noise limits specified in SSD 7628 Table 5 (CoC B80).

The final noise emissions (to be confirmed) will also continue to do so as the final emission levels are expected to be lower than the levels in Table 11 following these rectification works.

Table 11 CoC B85 operational noise levels – Mechanical plant and equipment - Warehouse E7

NCA	Operational compliance assessment noise levels[1,2,3] $L_{Aeq,\ 15\ minute}$			SSD 7628 CoC B80 noise limits $L_{Aeq,\ 15\ minute}$		
	Day	Evening	Night	Day	Evening	Night
Wattle Grove (NCA 1)	33[4]	33[4]	32[4]	35	35	35
Wattle Grove North (NCA 2)	< 20	< 20	< 20	35	35	35
Casula (NCA 3)	< 20	< 20	< 20	35	35	35
Glenfield (NCA 4)	< 20	< 20	< 20	35	35	35

Notes
1. Modelling meteorological were as follows, consistent with the range applicable for the B131 noise limits:
    a. Day/Evening - Winds speeds of 3m/s at 10 meters above ground level (all directions)
    b. Night - Atmospheric stability category F (with no wind).
2. Modelling based upon average temperature and humidity conditions during the monitoring period.
3. For estimated levels less than 20 dB(A) LAeq, 15minute, "< 20dB(A)" is presented.
4. As per Section 1.1, the monitoring identified that mechanical noise emissions were operating at noise levels louder than would be expected in order to manage cumulative noise emissions from the warehouse. Accordingly, further mitigation measures have been investigated and are being implemented so that the final valid noise levels could be monitored. Acoustic mitigation construction works are currently being undertaken to reduce the noise emissions from this fan. As such, the noise levels in this report do not reflect the final noise emission levels. However, the final emission levels are expected to be lower than these levels following these rectification works and so will remain below the required noise levels.

7 Conclusion

Renzo Tonin & Associates was engaged by Logos Investment Management (Logos) on behalf of The Trust Company (Australia) Limited (ACN 000 000 993) as trustee of the Moorebank Industrial Warehouse Trust to undertake noise monitoring of the warehouse mechanical plant and other noisy equipment to satisfy the State Significant Development (SSD) 7628 B85 consent condition (CoC) for the Warehouse E7. Warehouse E7 is located within the Moorebank Precinct East (MPE), which forms part of the Moorebank Intermodal Precinct (MIP) at Moorebank, NSW. Warehouse E7 is currently tenanted by the third party logistics provider Mainfreight.

This report has been prepared to address the noise emissions from the fixed mechanical plant and equipment of the warehouse that operate as part of typical warehouse operations in accordance CoC B85 of SSD 7628, and as detailed in the MPE ONVMP. CoC B85 requires noise monitoring of actual mechanical plant and other noisy equipment operations for a minimum period of one week where valid data is collected following the commencement of operations of each warehouse within MPE. The CoC B84 noise assessment report did not provide specific warehouse predicted noise levels for all nearby noise sensitive receivers for verification under CoC B85. As such, this report has been prepared to confirm that the actual mechanical plant and other noisy equipment operations achieve the overall noise levels presented in Table 5 of CoC B80 of 35 dB(A) $L_{Aeq\ 15minute}$, during all time periods.

SSD 7628 Consent Condition B85 requires noise monitoring of valid data for comparison against the above noise requirements. During the May 2024 SSD 7628 B85 noise monitoring, it was identified that one of the fans (Dangerous Good exhaust fan) was operating at noise levels louder than would be expected to manage cumulative noise emissions from the warehouse. Acoustic mitigation construction works are currently being undertaken to reduce the noise emissions from this fan. As such, the noise levels in this report do not reflect the final noise emission levels. However, the final emission levels are expected to be lower than these levels following the works. After the works are completed, noise measurements will be undertaken to confirm the noise emission levels. This report will then be updated to reflect these final operational noise levels so that valid operational noise emissions can be quantified.

The NSW EPA *Noise Policy for Industry* (NPfI) provides guidance for monitoring the performance of a noise-generating industrial facility, which includes direct measurement at a receiver location, direct measurement at alternative or intermediate location/s, unattended monitoring and modelling. As the existing ambient noise levels are already high at residences nearby to Warehouse E7 compared with the expected noise emission levels, a combination of on-site, intermediate and receiver attended noise measurements, unattended monitoring, and noise modelling have been used to quantify the noise emission performance of the warehouse mechanical plant and equipment.

Unattended noise monitoring was conducted on the warehouse roof nearby to the key noise generating mechanical plant items over the period of 14 May to 24 May 2024. In addition, attended noise measurements were undertaken on 17 May 2024. The aim of the measurements was to quantify fixed mechanical plant and equipment operational noise levels on-site, to develop a noise model and estimate the noise emission levels at nearby residences.

The monitoring data was analysed to confirm the warehouse mechanical plant and equipment noise source levels. These were used to then develop a noise model for the warehouse. The noise model was reviewed against onsite, intermediate and receiver concurrent noise measurements to confirm its suitability to assessing the CoC B85 noise emissions.

This assessment concluded that the warehouse mechanical plant and equipment noise emission levels achieve the overall noise levels presented in Table 5 of CoC B80 of 35 dB(A) $L_{Aeq\ 15minute}$, during all time periods a required by CoC B84 and CoC B85.

Following the implementation of further acoustic mitigation measures currently underway, the final emission levels are expected to be lower than the levels in Table 11 and so will maintain the outcome of this report.

Notwithstanding this, after the rectification works are completed, noise measurements will be undertaken to confirm the noise emission levels. This report will then be updated to reflect these final operational noise levels so that valid operational noise emissions could be quantified.

APPENDIX A Glossary of terminology

The following is a brief description of the technical terms used to describe noise to assist in understanding the technical issues presented.

Adverse weather	Weather effects that enhance noise (that is, wind and temperature inversions) that occur at a site for a significant period of time (that is, wind occurring more than 30% of the time in any assessment period in any season and/or temperature inversions occurring more than 30% of the nights in winter).
Ambient noise	The all-encompassing noise associated within a given environment at a given time, usually composed of sound from all sources near and far.
Assessment period	The period in a day over which assessments are made.
Assessment Point	A point at which noise measurements are taken or estimated. A point at which noise measurements are taken or estimated.
Background noise	Background noise is the term used to describe the underlying level of noise present in the ambient noise, measured in the absence of the noise under investigation, when extraneous noise is removed. It is described as the average of the minimum noise levels measured on a sound level meter and is measured statistically as the A-weighted noise level exceeded for ninety percent of a sample period. This is represented as the L90 noise level (see below).
Decibel [dB]	The units that sound is measured in. The following are examples of the decibel readings of common sounds in our daytime environment:

threshold of hearing	0 dB	The faintest sound we can hear
	10 dB	Human breathing
almost silent	20 dB	
	30 dB	Quiet bedroom or in a quiet national park location
generally quiet	40 dB	Library
	50 dB	Typical office space or ambience in the city at night
moderately loud	60 dB	CBD mall at lunch time
	70 dB	The sound of a car passing on the street
loud	80 dB	Loud music played at home
	90 dB	The sound of a truck passing on the street
very loud	100 dB	Indoor rock band concert
	110 dB	Operating a chainsaw or jackhammer
extremely loud	120 dB	Jet plane take-off at 100m away
threshold of pain	130 dB	
	140 dB	Military jet take-off at 25m away

dB(A)	A-weighted decibels. The A- weighting noise filter simulates the response of the human ear at relatively low levels, where the ear is not as effective in hearing low frequency sounds as it is in hearing high frequency sounds. That is, low frequency sounds of the same dB level are not heard as loud as high frequency sounds. The sound level meter replicates the human response of the ear by using an electronic filter which is called the "A" filter. A sound level measured with this filter switched on is denoted as dB(A). Practically all noise is measured using the A filter.
dB(C)	C-weighted decibels. The C-weighting noise filter simulates the response of the human ear at relatively high levels, where the human ear is nearly equally effective at hearing from mid-low frequency (63Hz) to mid-high frequency (4kHz), but is less effective outside these frequencies.

Frequency	Frequency is synonymous to pitch. Sounds have a pitch which is peculiar to the nature of the sound generator. For example, the sound of a tiny bell has a high pitch and the sound of a bass drum has a low pitch. Frequency or pitch can be measured on a scale in units of Hertz or Hz.
Impulsive noise	Having a high peak of short duration or a sequence of such peaks. A sequence of impulses in rapid succession is termed repetitive impulsive noise.
Intermittent noise	The level suddenly drops to that of the background noise several times during the period of observation. The time during which the noise remains at levels different from that of the ambient is one second or more.
L_{Max}	The maximum sound pressure level measured over a given period.
L_{Min}	The minimum sound pressure level measured over a given period.
L_1	The sound pressure level that is exceeded for 1% of the time for which the given sound is measured.
L_{10}	The sound pressure level that is exceeded for 10% of the time for which the given sound is measured.
L_{90}	The level of noise exceeded for 90% of the time. The bottom 10% of the sample is the L90 noise level expressed in units of dB(A).
L_{eq}	The “equivalent noise level” is the summation of noise events and integrated over a selected period of time.
Reflection	Sound wave changed in direction of propagation due to a solid object obscuring its path.
SEL	Sound Exposure Level (SEL) is the constant sound level which, if maintained for a period of 1 second would have the same acoustic energy as the measured noise event. SEL noise measurements are useful as they can be converted to obtain Leq sound levels over any period of time and can be used for predicting noise at various locations.
Sound	A fluctuation of air pressure which is propagated as a wave through air.
Sound absorption	The ability of a material to absorb sound energy through its conversion into thermal energy.
Sound level meter	An instrument consisting of a microphone, amplifier and indicating device, having a declared performance and designed to measure sound pressure levels.
Sound pressure level	The level of noise, usually expressed in decibels, as measured by a standard sound level meter with a microphone.
Sound power level	Ten times the logarithm to the base 10 of the ratio of the sound power of the source to the reference sound power.
Tonal noise	Containing a prominent frequency and characterised by a definite pitch.

APPENDIX B Noise monitoring survey information

Table 12 Attended noise monitoring results (receivers) (monitoring locations shown in Figure 3)

ID	Location / Time	Prevailing meteorological conditions[1]	Measured noise level, dB(A)						Comments on measured noise levels
			L_{Amax}	L_{A1}	L_{A10}	L_{Aeq}	L_{A90}	L_{Amin}	
R1	Wattle Grove (adjacent to 16 Corryton Court) 4:08am – 4:23am 17 May 2024	Wind – 0 m/s Direction – n/a Humidity – 96% Temperature - 13°C Stability Class G[2]	62	50	47	46	44	42	*Warehouse E7 related noise emissions:* Warehouse E7 were not audible/distinguishable. *Estimate warehouse mechanical noise contribution:* $L_{Aeq\,(15minute)}$ = < 32 dBA [*inaudible at 42 dB(A)*] L_{Amax} = < 32 dBA [*inaudible at 42 dB(A)*] *Other noise source contributions:* **Background noise environment –** Background L_{A90} was controlled by distant road traffic [~43-44 dB(A)] and natural sources (frogs). **Ambient noise environment** - Ambient L_{Aeq} noise level was contributed to by distant road traffic [~43-45 dB(A)] (W to NNW), train operations noise [just audible ~35-38 dB(A)], train movement noise [~47-51 dB(A)] and natural sources [frogs ~46-48 dB(A)]. **High noise events** – Distant train horn on main line (~62 dB(A)) (NW) and industrial activities.
R2	Wattle Grove (adjacent to 52 Corryton Court) 5:07am – 5:22am 17 May 2024	Wind – 0 m/s Direction – n/a Humidity – 96% Temperature - 12°C Stability Class D to F[2]	59	53	47	45	43	42	*Warehouse E7 related noise emissions:* Warehouse E7 were not audible/distinguishable. *Estimate warehouse mechanical noise contribution:* $L_{Aeq\,(15minute)}$ = < 32 dBA [*inaudible at 42 dB(A)*] L_{Amax} = < 32 dBA [*inaudible at 42 dB(A)*] *Other noise source contributions:* **Background noise environment –** Background L_{A90} was controlled by distant road traffic [~43-46 dB(A)] and natural sources (frogs). **Ambient noise environment** - Ambient L_{Aeq} noise level was contributed to by distant road traffic [~43-46 dB(A)] (W to NW), local road traffic passbys [~46-49 dB(A)], terminal operations [~37-40 dB(A)], and natural sources [frogs ~44-46 dB(A), birds ~47 dB(A)]. **High noise events** – birds/possums [up to 59 dB(A)] and local road loud car passbys [up to ~59 dB(A)] and industrial activities.

ID	Location / Time	Prevailing meteorological conditions[1]	Measured noise level, dB(A)						Comments on measured noise levels
			L_{Amax}	L_{A1}	L_{A10}	L_{Aeq}	L_{A90}	L_{Amin}	
R3	Wattle Grove (adjacent to 82 Corryton Court) 5:33am – 5:49am 17 May 2024	Wind – 0.3 m/s Direction – W Humidity – 96% Temperature - 12°C Stability Class D to F[2]	59	50	48	47	45	44	*Warehouse E7 related noise emissions:* Warehouse E7 were not audible/distinguishable. *Estimate warehouse mechanical noise contribution:* $L_{Aeq\ (15minute)}$ = < 34 dBA [*inaudible at 44 dB(A)*] L_{Amax} = < 34 dBA [*inaudible at 44 dB(A)*] *Other noise source contributions:* **Background noise environment –** Background L_{A90} was controlled by distant road traffic [~45-47 dB(A)] and natural sources (frogs). **Ambient noise environment** - Ambient L_{Aeq} noise level was contributed to by local road traffic passbys [~46-48 dB(A)], natural sources [frogs ~46-63 dB(A)], distant light plane [~49dB(A)] and distant road traffic [~42-46 dB(A)] (WSW to NNW), terminal operations [~37-43 dB(A)], distant train movement noise [~54-55 dB(A)] (SW) and **High noise events** – mainline train horn [up to 59 dB(A)] (N) and industrial activities.
R4	30 Goodenough Street, Glenfield 4:08am – 4:23am 17 May 2024	Wind – 0 m/s Direction – n/a Humidity – 96% Temperature - 12°C Stability Class G[2]	56	55	52	50	46	44	*Warehouse E7 related noise emissions:* Warehouse E7 were not audible/distinguishable. *Estimate warehouse mechanical noise contribution:* $L_{Aeq\ (15minute)}$ = < 34 dBA [*inaudible at 44 dB(A)*] L_{Amax} = < 34 dBA [*inaudible at 44 dB(A)*] *Other noise source contributions:* **Background noise environment –** Background L_{A90} was controlled by distant road traffic [~44-46 dB(A)] and natural sources (crickets). **Ambient noise environment** - Ambient L_{Aeq} noise level was contributed to by Cambridge Ave road traffic passbys [~50-55 dB(A)], natural sources [frogs ~46-63 dB(A)], distant rail traffic [~48-54 dB(A)] **High noise events** – mainline train horn [up to 59 dB(A)] (N) and industrial activities.
R5	73A Leacocks Lane, Casula 4:41am – 4:56am 17 May 2024	Wind – 0.3 m/s Direction – W Humidity – 96% Temperature - 11°C Stability Class D to F[2]	76	69	50	54	44	42	*Warehouse E7 related noise emissions:* Warehouse E7 were not audible/distinguishable. *Estimate warehouse mechanical noise contribution:* $L_{Aeq\ (15minute)}$ = < 32 dBA [*inaudible at 42 dB(A)*] L_{Amax} = < 32 dBA [*inaudible at 42 dB(A)*] *Other noise source contributions:* **Background noise environment –** Background L_{A90} was controlled by distant road traffic (M5) [~41-45 dB(A)] and natural sources (birds, crickets). **Ambient noise environment** - Ambient L_{Aeq} noise level was contributed to by Hume Highway/M5 road traffic [~44-50 dB(A)], local vehicle passbys [up to ~71-76 dB(A)], natural sources [possum/bats ~45-54 dB(A)], distant rail [~45-49 dB(A)] **High noise events** – local vehicle passbys [up to ~71-76 dB(A)], natural sources [possum/bats ~53-54 dB(A)].

ID	Location / Time	Prevailing meteorological conditions[1]	Measured noise level, dB(A) L_{Amax}	L_{A1}	L_{A10}	L_{Aeq}	L_{A90}	L_{Amin}	Comments on measured noise levels
R6	39 Glenelg Court, Wattle Grove (or Anzac Road) 5:09am – 5:24am 17 May 2024	Wind – 0 m/s Direction – n/a Humidity – 96% Temperature - 12°C Stability Class E to G[2]	86	78	72	66	46	44	*Warehouse E7 related noise emissions:* Warehouse E7 were not audible/distinguishable. *Estimate warehouse mechanical noise contribution:* $L_{Aeq\ (15minute)}$ = < 34 dBA [*inaudible at 44 dB(A)*] L_{Amax} = < 34 dBA [*inaudible at 44 dB(A)*] *Other noise source contributions:* **Background noise environment –** Background L_{A90} was controlled by distant road traffic [~45-47 dB(A)] and natural sources (crickets). **Ambient noise environment** - Ambient L_{Aeq} noise level was contributed local vehicle passbys on Anzac Road [up to ~72-79 dB(A)], natural sources (crickets) and industrial activities. **High noise events** – local vehicle passbys [up to ~71-76 dB(A)] and industrial activities.

Notes: 1. Meteorological data based upon the MIP meteorological data monitoring station adjacent to Bushmaster Avenue, in between Casula.
2. Night time stability class, based upon NPfI Fact Sheet D1.4 '*Use of sigma-theta data*'

Table 13 Attended noise monitoring results (intermediate) (monitoring locations shown in Figure 4)

ID	Location / Time	Prevailing meteorological conditions[1]	Measured noise level, dB(A) L_{Amax}	L_{A1}	L_{A10}	L_{Aeq}	L_{A90}	L_{Amin}	Comments on measured noise levels
I1	Defence area intermediate location (east of Project) "Boot Land" 4:37am – 4:53am 17 May 2024	Wind – 0.4 m/s (*still at monitoring location*) Direction – WSW Humidity – 96% Temperature - 12°C Stability Class D[2]	63	61	58	52	45	42	*Warehouse E7 related noise emissions:* Warehouse E7 were not clearly audible/distinguishable. *Estimate warehouse mechanical noise contribution:* $L_{Aeq\ (15minute)}$ = < 32 dBA [*inaudible at 42 dB(A)*] L_{Amax} = < 32 dBA [*inaudible at 42 dB(A)*] *Other noise source contributions:* **Background noise environment –** Background L_{A90} was controlled by distant road traffic [~42-46 dB(A)] and natural sources (frogs). **Ambient noise environment** - Ambient L_{Aeq} noise level was contributed primarily by natural sources [frogs ~46-63 dB(A)] and distant road traffic [~42-46 dB(A)] (W to NNW), terminal operations [~37-43 dB(A)] and distant train movement noise [~52-54 dB(A)] (SW). **High noise events** – terminal operations (~ 48-51 dB(A)) and natural sources [frogs up to 61 dB(A)].

Notes: 1. Meteorological data based upon the MIP meteorological data monitoring station adjacent to Bushmaster Avenue, in between Casula.
2. Night time stability class, based upon NPfI Fact Sheet D1.4 '*Use of sigma-theta data*'

APPENDIX C Logger location – Warehouse E7 roof

Acoustics
Vibration
Structural Dynamics

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Dates of Survey: 14/05/2024 - 25/05/2024
Monitoring ID: L1
Address: Moorebank Intermodal Precinct (MIP) Warehouse E7 (Mainfreight Logistics)
Description: Warehouse E7 roof (east)

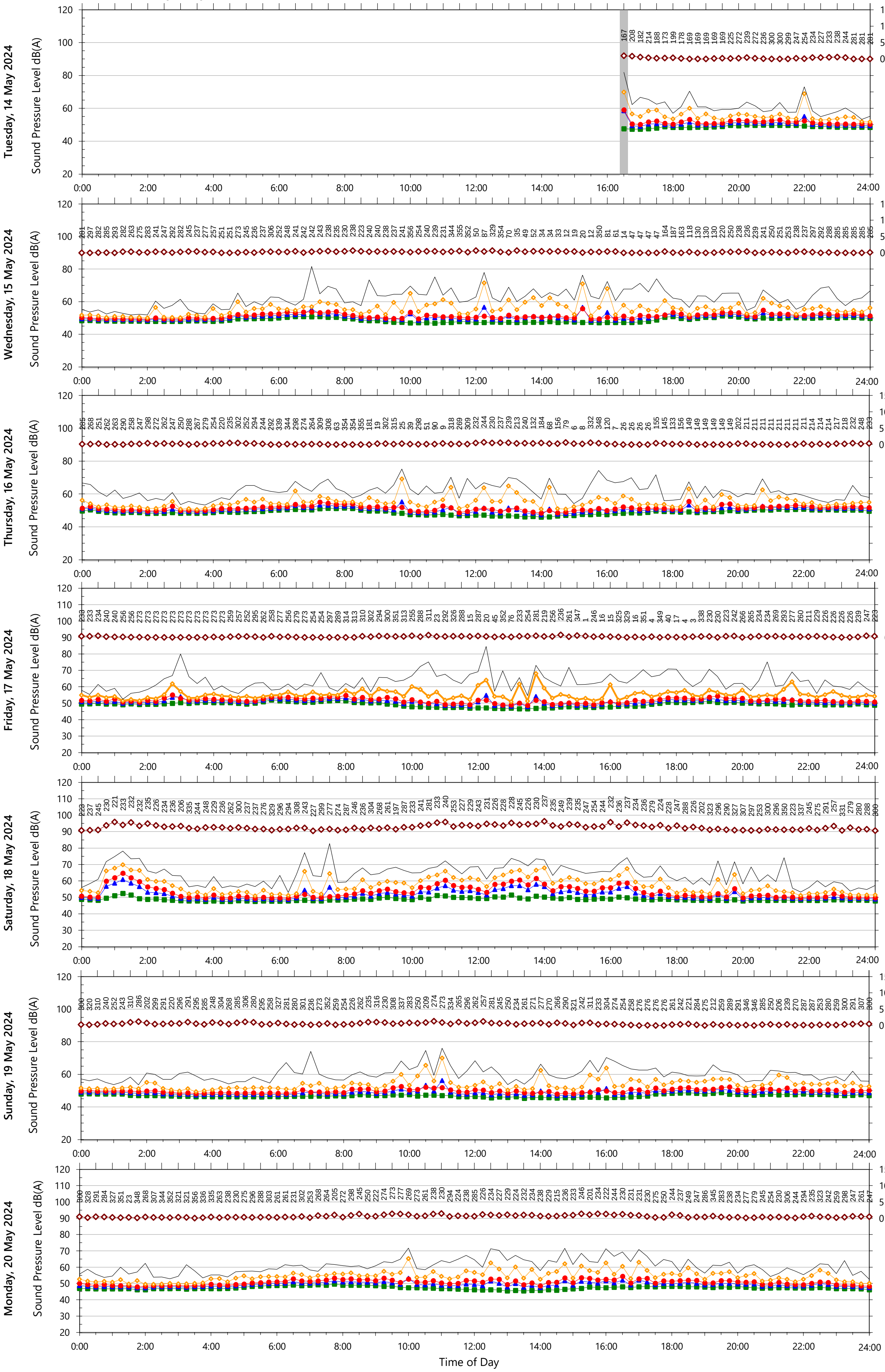
Background & Ambient Noise Monitoring Results

	L_{A90} Background Noise Levels			L_{Aeq} Ambient Noise Levels		
	Day[1]	Evening[2]	Night[3]	Day[1]	Evening[2]	Night[3]
Representative Week[4]	47	48	48	51	51	50

Notes:
1. Day: 7.00am to 6.00pm Monday to Saturday and 8.00am to 6.00pm Sundays & Public Holidays
2. Evening: 6.00pm to 10.00pm Monday to Sunday & Public Holidays
3. Night: 10.00pm to 5.00am Monday to Sunday & Public Holidays
4. Rating Background Level (RBL) for LA90 and logarithmic average for LAeq

Logger location photograph	Logger location map
	

Unattended Monitoring Results - Location: Moorebank Intermodal Precinct (MIP) Warehouse E7 (Mainfreight Logistics) - Warehouse E7 roof (east)

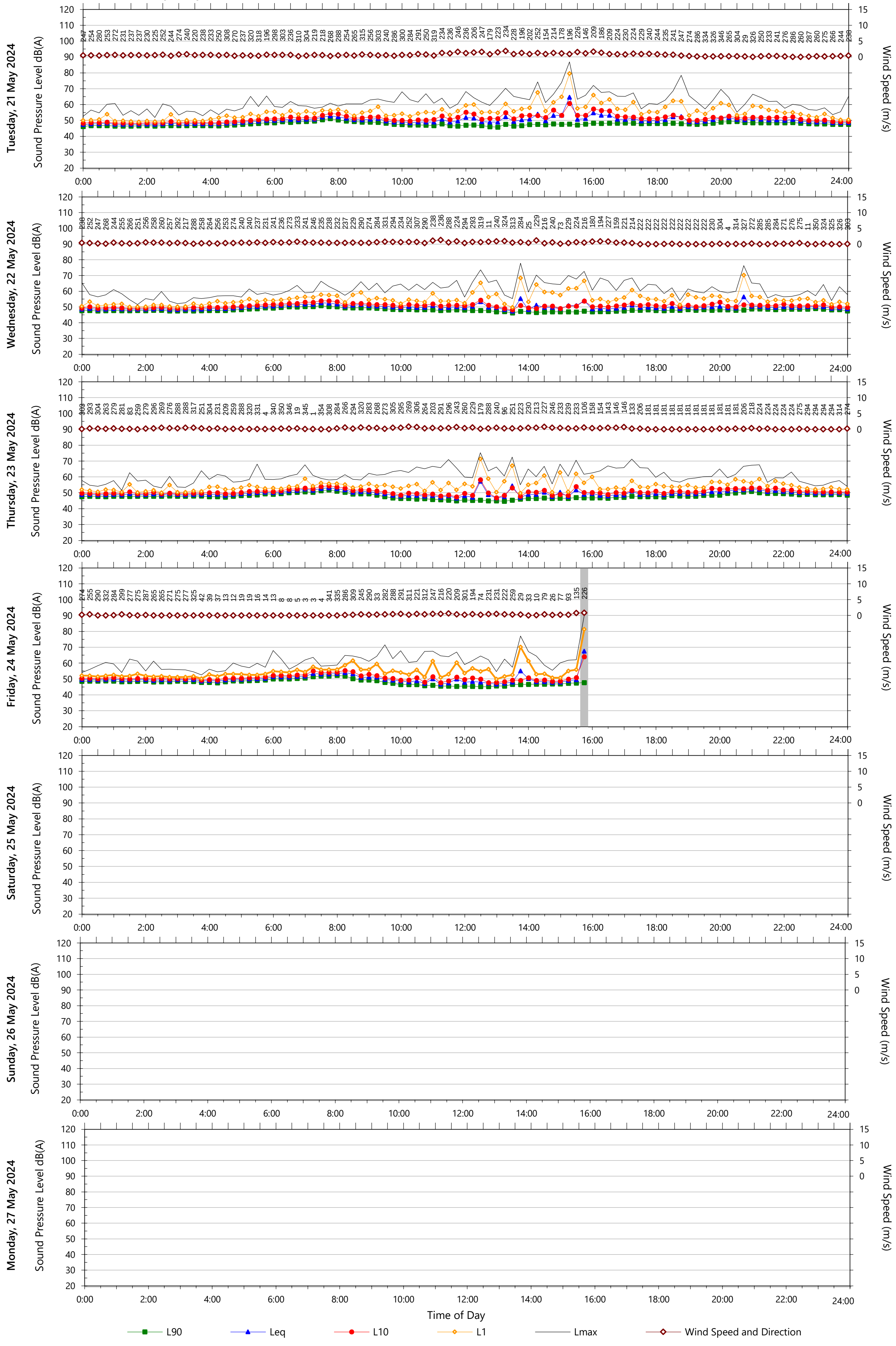


L90 — Leq — L10 — L1 — Lmax — Wind Speed and Direction

Data File: 2024-05-14_SLM_001_123_Rpt_Report.txt

Template: QTE-26 Logger Graphs Program (r46)

Unattended Monitoring Results - Location: Moorebank Intermodal Precinct (MIP) Warehouse E7 (Mainfreight Logistics) - Warehouse E7 roof (east)



Data File: 2024-05-14_SLM_001_123_Rpt_Report.txt

Template: QTE-26 Logger Graphs Program (r46)

B.4 Warehouse E6 CoC B85 Noise Monitoring Report

Renzo Tonin & Associates Report TM306-05F03 E6 Warehouse B85 Operational Noise Monitoring (r1)

RENZO TONIN & ASSOCIATES
inspired to achieve

Acoustics
Vibration
Structural Dynamics

MOOREBANK INTERMODAL PRECINCT EAST

Monitoring Report for Mechanical Plant (SSD 7628 B85) - Warehouse E6

11 May 2025

The Trust Company (Australia) Limited (ACN 000 000 993) As Trustee of The Moorebank Industrial Warehouse Trust (ABN 51 402 161 047) c/- ESR Developments (Australia) Pty Ltd

TM306-05F03 E6 Warehouse B85 Operational Noise Monitoring (r1)

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Detail	Reference
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Prepared for:	The Trust Company (Australia) Limited (ACN 000 000 993) As Trustee of The Moorebank Industrial Warehouse Trust (ABN 51 402 161 047) c/- ESR Developments (Australia) Pty Ltd
Attention:	Mark Howley

Document control

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1 Introduction

1.1 Monitoring report purpose

Renzo Tonin & Associates was engaged by ESR Developments (Australia) Pty Ltd (ESR) on behalf of The Trust Company (Australia) Limited (ACN 000 000 993) as trustee of the Moorebank Industrial Warehouse Trust to undertake noise monitoring of the warehouse mechanical plant and other noisy equipment to satisfy the State Significant Development (SSD) 7628 B85 consent condition (CoC) for Warehouse E6.

The Moorebank Intermodal Precinct (MIP) is located approximately 27 kilometres south-west of the Sydney Central Business District and approximately 26 kilometres west of Port Botany, within the Liverpool Local Government Area. The MIP is divided into an East Precinct and a West Precinct, located east and west of Moorebank Avenue respectively, as shown in Figure 1. Warehouse E6 is located within the Moorebank Precinct East (MPE).

Warehouse E6 is separated into E6A (western warehouse), and E6B (eastern) warehouse. The western warehouse (E6B) is currently tenanted by the Qube Holdings Logistics (Qube), while the eastern warehouse (E6A) is currently tenanted by Ceva Logistics (Ceva).

The Sydney Intermodal Terminal Alliance (SIMTA) received approval for the construction and operation of Stage 2 of the MPE development, State Significant Development (SSD) 7628. The approval includes 300,000m^2 GFA of warehousing. These warehouse operations, including Warehouse E6, fall under the area and activities approved as part of SSD 7628.

Specifically, this report has been prepared to address the noise emissions from the fixed mechanical plant and equipment of the warehouse that operate as part of typical warehouse operations in accordance SSD 7628 CoC B85 of, and as detailed in the MPE Operational Noise and Vibration Management Plan[1] (MPE ONVMP).

SSD 7628 Consent Condition B85 requires noise monitoring of valid data for comparison against the mechanical plant and equipment noise levels predicted in the SSD 7628 Consent Condition B84 assessment prepared by Pulse White Noise Acoustics (PWNA) (*LOGOS MPE 6 & 7 – Acoustic Design Report*, Report number: *220518 - LOGOS MPE 6&7 - Acoustic Design Report – R5*, 28 March 2023) (B84 assessment).

This report is technical in nature and uses acoustic terminology throughout. APPENDIX A contains a glossary of acoustic terms used in this report.

[1] Arcadis & Renzo Tonin & Associates, Operational Noise and Vibration Management Plan for Moorebank Logistics Park – East Precinct, Revision 013, dated 24/01/2023, reference PREC-QPMS-EN-PLN-0008, available https://moorebankintermodalprecinct.com.au/wp-content/uploads/2023/09/ONVMP_V13_clean_compiled_Redacted-compressed.pdf, accessed 21/07/2024

1.2 Warehouse operations description – Warehouse E6 (Tenant: E6B (Qube) & E6A (Ceva)

1.2.1 Operational activities and facilities and hours of operation

Warehouse E6 is tenanted by both Qube (E6B) and Ceva (E6A). The warehouses are separated into two sections (E6A and E6B) with an internal dividing wall. The key activities of these warehouse tenant are:

- **Ceva (E6A) -** A car carrier/transportation and storage facility
- **Qube (E6B) -** Ambient temperature storage and distribution warehouse

Qube (E6B) warehouse and distribution observed activities typically occur 4:00am to 12:00am Monday to Friday, with the mechanical plant and equipment operating 24 hours per day, 7 days per week. The truck despatch and receiving activities occur on the southern side of the warehouse including both at-grade and in recessed loading docks. Additionally, on the northern side of the warehouse (including both E6A/B) containers from the IMEX terminal are transported to and from via reach stacker or straddle carrier operation and stored for unloading along the northern side of the warehouse.

Ceva (E6A) typical hours of operations have been advised as substantially variable. The Ceva trucks (car carriers) are understood to operate infrequency, with an expected frequency of 2 trucks per fortnight in/out of the facility. The warehouse main office and associated mechanical plant and equipment are not being used by this warehouse tenant.

The key noise generating components of Warehouse E6 and the various day to day activities that occur are as follows:

- **Warehouse (E6A/6B) northern side docks/hardstand:**
  - Receipt and despatch of containers from the MPE IMEX terminal
  - Internal packing and unpacking of containers from internal
- **Qube (E6B) southern side docks/hardstand:**
  - Despatching and receiving truck movements in and out of the facility. Typically, via sideloading with forklifts on the hardstand at the on-grade docks. For recessed loading docks, this is typically for container trucks, where containers are unloaded typically is via forklift via the rear from within the warehouse space.
  - Forklift (electric/internal and gas/external) operations on hardstand.
- **Ceva (E6A) southern side docks/hardstand:**
  - Typical car carrier truck loading/unloading activities with Ceva car carrier/truck loading/unloading cars and movements on the hardstand at the on-grade docks in and out of the facility.
  - Typical car unloading activity occurs via truck back drop ladder and the truck driver driving cars out (unloading) of the truck on the hardstand at the on-grade docks and then driving/parking into the warehouse for storage.

    - Typical car loading activity occurs via the truck driver driving cars from the warehouse on the hardstand via the on-grade docks, and then driving cars into the truck via truck back drop ladder (on the hardstand) and parking the cars on truck stand/s.
- **Warehouse (E6B) offices:** General office administrative and support functions.
- **Warehouse (E6A) offices:** Ceva is not using the main office as part of warehouse operations. Noting this, it has been excluded from this assessment as it does not form an operational noise source.

1.2.2 Mechanical plant and other noisy equipment

The following fixed mechanical plant and equipment operate as part of typical warehouse operations, which are further detailed in Section 5.1.

- **Qube (E6B) (west)**
    - Smoke exhaust fans (do not form part of typical operations)
    - Main office rooftop mechanical plant/equipment (including air-conditioning/condenser units)
    - Office area ground floor mechanical plant and equipment (east)
    - Office area mechanical plant/louvers affixed to the office wall (east)
    - Mechanical plant for dock office, including rooftop plant/equipment and on ground air-conditioning plant (1 x condenser unit)
- **Ceva (E6A) (east)**
    - Mechanical plant for dock office, including rooftop and air-conditioning plant/condenser/s.
    - Main office rooftop mechanical plant/equipment are installed but are not used as part of tenant operations and have been excluded form this assessment.

2 Nearby sensitive receivers

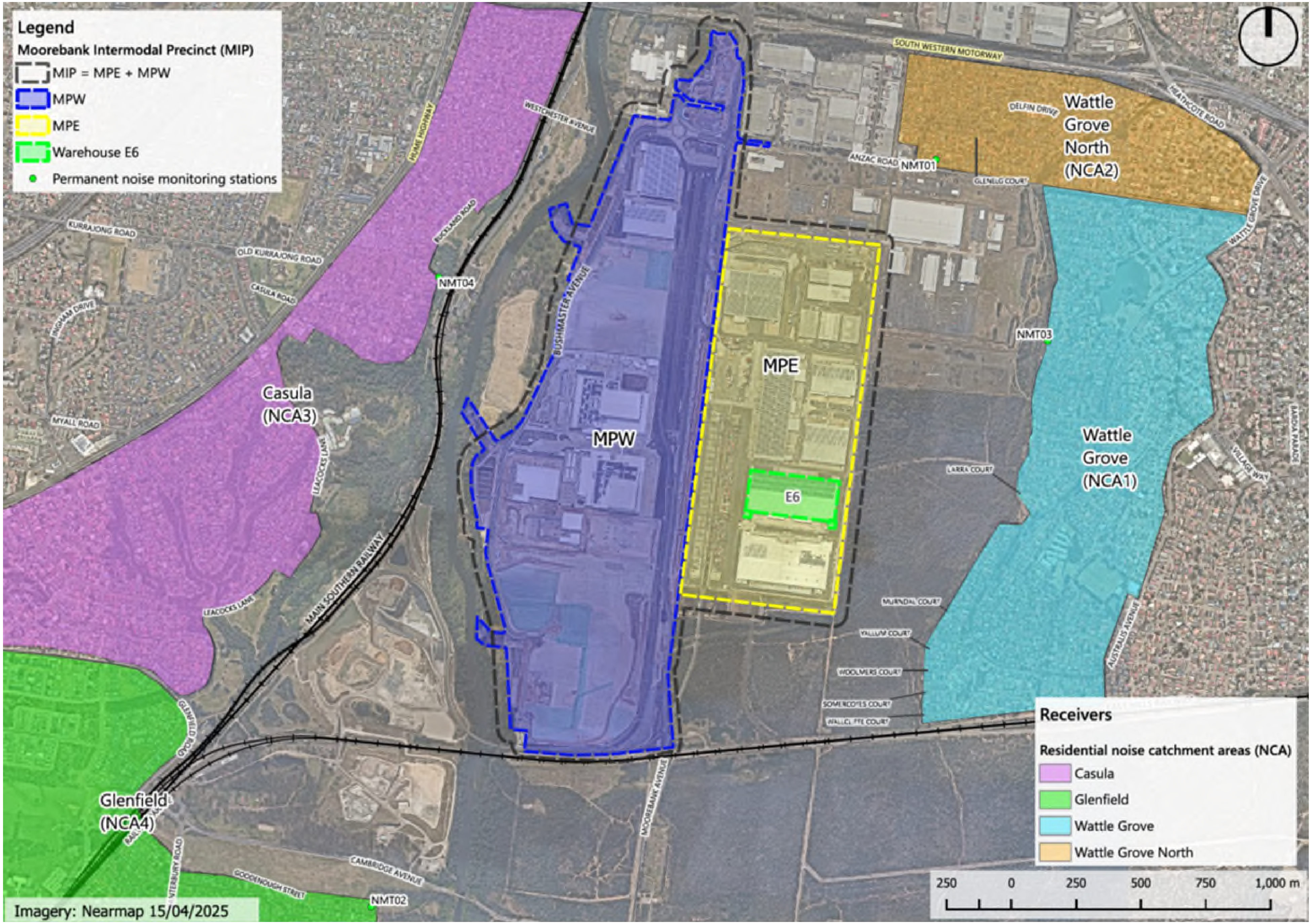
The potentially affected residential receivers nearby to Warehouse E6 around MPE are located in the suburbs of Casula, Glenfield, Wattle Grove and Wattle Grove North. The closest and potentially most affected residential receivers are located within Wattle Grove.

A summary of the approximate distance to the nearest residential receivers in the surrounding area are provided in Table 1, as identified in SSD 7628 CoC B80. The locations of the residential noise catchment areas (NCAs) are shown in Figure 1.

Table 1 Noise sensitive receivers and approximate distance from MPE Warehouse E6

Noise Catchment Area (NCA)	Receiver type	Approximate distance from Warehouse E6, metres
Wattle Grove (NCA1)	Residential	540
Wattle Grove North (NCA2)		1,250
Casula (NCA3)		1,360
Glenfield (NCA4)		2,050

Figure 1 Warehouse E6 location, MIP, MPE and MPW precincts



3 Summary of noise objectives

This report has been prepared to address the noise emissions from the fixed mechanical plant and equipment of the warehouse that operate as part of typical warehouse operations in accordance CoC B85 of SSD 7628, and as detailed in the MPE ONVMP.

CoC B85 requires that the monitored noise levels be compared against the predicted levels reviewed in accordance with CoC B84. The CoC B84 noise assessment, is required to demonstrate that the plant and equipment has been selected to meet the overall noise limits specified in SSD 7628 CoC B80 (Table 5). As such, the following section outlines the requirements for both CoC B85 and the overall CoC B80 (Table 5) noise limits.

3.1 Operational noise limits

The operational noise limits applicable for the warehouse operations within MPE are presented in Table 5 of SSD 7628 CoC B80 and are reproduced in Table 2 below. These noise limits are as per Table 3-5 of the MPE ONVMP. The noise limits are applicable not only to all operational noise sources approved under SSD 7628 but are inclusive of operations as part of MPE Stage 1 (approval SSD 6766).

The $L_{Aeq(15\ minute)}$ criteria are applicable during the day, evening and night-time periods and the $L_{A1\ (1\ minute)}$ sleep disturbance noise limits are applicable during the night-time period.

The noise limits are applicable under prevailing meteorological conditions of wind speeds of up to 3 m/s at 10 metres above ground level or stability category ‘F’ temperature inversion conditions.

Table 2 SSD 7628 CoC B80 noise limits, dB(A)

Sensitive receiver	Day [1] $L_{Aeq,\ 15\ minute}$	Evening [1] $L_{Aeq,\ 15\ minute}$	Night [1] $L_{Aeq,\ 15\ minute}$	Night [1] $L_{A1\ (1\ min)}$
Wattle Grove (NCA 1)	35	35	35	52
Wattle Grove North (NCA 2)	35	35	35	52
Casula (NCA 3)	35	35	35	52
Glenfield (NCA 4)	35	35	35	52

Notes:

1. In accordance with the INP, day is the period from 7:00 am to 6:00 pm Monday to Saturday; or 8:00 am to 6:00 pm on Sundays and public holidays; evening is the period from 6:00 pm to 10:00 pm; and night is the remaining periods.
2. To determine compliance with the $L_{Aeq,15\ minute}$ noise limits, noise from the development is to be measured at the most affected point within the residential boundary, or at the most affected point within 30 metres of a dwelling where the dwelling is more than 30 metres from the boundary. Where it can be demonstrated that direct measurement of noise from the project is impractical, the EPA may accept alternative means of determining compliance (see Chapter 7 Noise Policy for Industry - NPfI) The modification factors in Section 4 of the INP must also be applied to the measured noise levels where applicable.
3. To determine compliance with the L_{A1} noise limits, noise from the project is to be measured at 1 metre from the dwelling façade. Where it can be demonstrated that direct measurement of noise from the project is impractical, the EPA may accept alternative means of determining compliance (see Chapter 7 of the NPfI).
4. The noise emission limits identified above apply under meteorological conditions of:

   (i) wind speeds of up to 3 m/s at 10 metres above ground level; or

   (ii) 'F' atmospheric stability class.

3.2 Discussion of assessment noise limits

As noted in Section 3.1, the noise limits detailed in SSD 7628 CoC B80 are applicable not only to all operational noise sources approved under SSD 7628, but are also inclusive of operations as part of the MPE Stage 1 approval for SSD 6766. Importantly, when assessing compliance with these noise limits, the most affected residential receiver for any individual operations will not necessarily be at the same location. Additionally, it is unlikely that the reasonable worst-case noise levels from any individual operations would also occur in the same 15-minute period.

As part of the SSD 7709 Moorebank Precinct West (MPW) – Stage 2 Modification 1 (SSD 7709 MOD 1) submitted July 2020, a review of the applicable operational noise requirements across Moorebank Precinct West (MPW) and Moorebank Precinct East (MPE) was undertaken (Renzo Tonin and Associates document reference *TJ741-11F05 (r4),* dated 30 June 2020). The review identified that there are a number of approval conditions that are applicable across both the MPW and MPE sites for operational noise, and that in the application of these approvals to the site activities it became apparent that the operational noise requirements were not consistent across the MPE and MPW sites.

Additionally, the review identified that the operational noise limits across MPE and MPW were set substantially below both the noise criteria and the predicted noise levels (even with feasible and reasonable mitigation measures) established during the environmental assessment stages for the cumulative operational noise levels from all MPE and MPW operations.

As such, the review recommended that an overall approach for cumulative operational noise management of the MIP (for East and West precincts) for a "*whole of complex*" approach be adopted, and that consistent noise management objectives for the Moorebank intermodal terminal precinct's operational noise be adopted to cover all operations within MPE and MPW. Appropriate and achievable noise management objectives consistent with EPA's noise policies were also developed in the review.

Following the modification application for SSD 7709 (MOD 1), the submission received from the NSW Environment Protection Authority (NSW EPA) noted the following:

However, the current noise limits are set below the predicted noise levels and are not based on the Project Specific Noise Levels (PSNL) derived under the then-applicable Industrial Noise Policy 2000 (now superseded by the Noise Policy for Industry 2017)…. The EPA considers that the resulting noise limits are not achievable for MPW, nor are they achievable for the cumulative MPW and MPE sites.

Additionally, Liverpool City Council included in their submission:

Council considers that site regulation in regard to noise management may be assisted by adopting a precinct approach consistent with the NSW EPA's Noise Policy for Industry (2017)…. Whilst it is acknowledged that current criteria in the Approval may be impracticable, it will be necessary for the Department to consider applying suitable noise limits that are achievable and capable of protecting the amenity and wellbeing of sensitive receivers.

SSD 7709 MOD 1 was approved 24 December 2021, along with the revised cumulative noise goals for the overall MIP (MPW & MPE). However, these have not then been adjusted as part of the relevant MPE approvals (SSD 6766 and SSD 7628). Noting the above regulator comments, it is appropriate to assume that the overall MIP (MPW & MPE) operational noise emissions should be managed consistent with the SSD 7709 MOD 1 update, and this will likely be incorporated into a future modification of in SSD 7628.

However, independent of this, as the updates have not yet occurred, this assessment has been done against the existing SSD 7628 noise limit requirements, without further considerations of cumulative MIP noise emissions. These comments have been included for important context relating to cumulative noise considerations.

3.3 CoC B85 assessment noise requirements

3.3.1 Requirements

The management of operational noise emissions from warehouse mechanical plant and equipment activities within MPE Stage 2 is outlined in the MPE ONVMP. Specifically, this report has been prepared to address the requirements of CoC B85 in SSD 7628, as detailed in Section 4.1.1 of the MPE ONVMP.

This report includes noise monitoring performed to address the requirements in CoC B85 as detailed in Table 4-1 in Section 4.1.1 of the MPE ONVMP.

The requirements of CoC B85 state:

> *B85 The Applicant must carry out noise monitoring of mechanical plant and other noisy equipment for a minimum period of one week where valid data is collected following occupation of each warehouse. The monitoring program must be carried out by a suitably qualified and experienced person(s) and a **Monitoring Report for Mechanical Plant** must be submitted to the Secretary within two months of occupation or each tenancy to verify predicted mechanical plant and equipment noise levels.*

CoC B85 requires that the monitored noise levels be compared against the predicted levels reviewed in accordance with CoC B84.

An assessment of mechanical plant and equipment noise levels was prepared by Pulse White Noise Acoustics (PWNA) (*LOGOS MPE 6 & 7 – Acoustic Design Report*, Report number: *220518 - LOGOS MPE 6&7 - Acoustic Design Report – R5*, 28 March 2023) (B84 assessment). However, this report did not provide specific warehouse predicted noise levels for all nearby noise sensitive receivers for verification under CoC B85 or separate warehouse E6 and E7. Instead, the report identified that noise emissions have been designed to achieve the overall noise levels presented in Table 5 of CoC B80 of 35 dB(A) $L_{Aeq\ 15minute}$, during all time periods.

Table 3-20 and Table 3-21 of the MPE ONVMP detail the predicted $L_{Aeq\ 15\ minute}$ intrusiveness and L_{Amax} sleep disturbance noise levels respectively for the overall MPE operations at the Environmental

Assessment stage. Although these are for the overall MPE operations and not for an individual warehouse, they can be used as reference for consistency verification CoC B85 as per the monitoring requirements detailed in Table 4-1 in Section 4.1.1 of the MPE ONVMP.

It should also be noted that the monitoring is to be undertaken *"… for a minimum period of one week where valid data is collected"*. As such, it is important that operations are representative of typical operations for the monitored data to be valid. This is of note for this assessment, as the monitored noise levels were determined to be representative of the future operational noise emissions, specifically regarding Warehouse E6B (Qube) operations. However, it is understood that the main office mechanical plant and equipment associated with the Warehouse 6A (Ceva) is currently not operational and hence excluded from this assessment. Warehouse E6B (Qube) main office mechanical plant and equipment is currently operational and hence included/assessed in this assessment.

3.3.2 Noise monitoring timing

It is understood that the Warehouse E6 commenced operations from January 2025.

During this time period the tenant warehouse operations were still ramping up to typical levels. As such, monitoring of valid noise data could not be conducted initially following operations. As such, the earliest period when valid noise monitoring data could be collected was from March 2025. Noise monitoring was then undertaken end of March 2025, due to a two-week delay to allow for appropriate weather conditions during the monitoring period.

It is noted that the warehouse E6A/B facilities had ramped up operations to approximately full capacity at the time of the noise monitoring. The assessment herein has been performed to assess the potential noise impact of current operations as the key operational noise sources were running at suitable capacity (eg. main office mechanical plant/equipment).

This report presents the mechanical plant and equipment noise emissions and assessment in accordance with the requirements of CoC B85 in SSD 7628, as detailed in Section 4.1.1 of the MPE ONVMP.

4 Measurement methodology and results

4.1 Noise monitoring approach

The NSW Environment Protection Authority's (EPA) *Noise Policy for Industry* (NPfI) provides guidance in Chapter 7 for monitoring the performance of a noise-generating industrial facility. NPfI Section 7.1.1 provides guidance as to how to review noise emissions, which includes direct measurement at a receiver location, direct measurement at alternative or intermediate location/s, unattended monitoring and modelling, in order or preferred to least preferred. It notes that this range of compliance assessment techniques may be used individually, or in combination, to provide a means of determining compliance with a noise limit. At times, the best available compliance assessment methodology will only allow for a balance-of-probabilities type determination of compliance, and repeat assessment may be needed. It also makes clear that "*A noise limit applies to the noise from a particular development/activity and not to general ambient noise. Therefore it is often necessary to use techniques to attempt to separate the noise from a facility versus noise from other sources*."

For the CoC B85 Warehouse E6 assessment, the following points were considered:

- A site inspection undertaken on 28 February 2025, identified that at the residences in the closest residences in Wattle Grove operational noise emissions were not audible or distinguishable in the direction of the Warehouse E6 during daytime operations.
- The Warehouse E6 mechanical plant were expected to be more than 10 dB below the existing noise levels, measured at the surrounding NCAs by RTA during previous MIP noise monitoring. This previous attended noise monitoring found the existing ambient noise levels to typically be greater than 40 dB(A) $L_{Aeq15min}$, and controlled by noise sources outside of MIP, such as road traffic noise (ie. M5 and Hume Highway road traffic noise).
- Access to Wattle Grove residences and Warehouse E6 was possible during the attended monitoring period, however access to a suitable intermediate location between the Wattle Grove residences and Warehouse E6 was note very limited.
- A number of co-located noise generating warehouse and industrial operations, including the IMEX terminal, operate co-currently within the MIP, in particular across MPE.
- Noise source locations are both roof mounted and ground level mounted.

Noting the above points, and that the existing ambient noise levels are already high at receivers compared with the expected noise emission levels at receivers, quantification of the noise under investigation via direct noise measurement of operational noise emissions from the warehouse mechanical plant and equipment operations is not possible at the residential receiver locations because of poor signal-to-noise ratio. The NPfI also provides guidance about using noise modelling to review the performance of an industrial operation that is co-located with separate but noise-generating industrial sites impacting the same receiver, similar to the Warehouse E6 within the MIP situation.

As such, the CoC B85 noise monitoring has used a combination of on-site and intermediate location attended noise measurements, unattended monitoring, and noise modelling to quantify the noise emission performance of the warehouse mechanical plant and equipment.

4.2 Compliance measurement methodology

The noise monitoring undertaken to satisfy the requirements of CoC B85 has included the following noise monitoring and assessment steps.

4.2.1 Noise monitoring

The following noise monitoring was undertaken:

1. **Unattended noise monitoring** nearby to the key mechanical plant items for a period of 10 days, to confirm the noise levels of the mechanical plant when operations occurred.

2. **On-site attended measurement** of all mechanical plant and other noisy equipment items to quantify noise emission levels of mechanical plant and equipment that operate as part of the Warehouse E6 operations (Section 5.2.3).

3. **Receiver and intermediate attended measurements** to confirm that the mechanical plant and other noisy equipment items were not quantifiable at the nearest critical receiver locations (Wattle Grove), and/or assist with contribution estimations of noise emissions levels, and provide noise monitor data to aid with confirming the performance of the noise model used to determine noise emission estimations at receivers. For the estimate warehouse mechanical noise contribution at the intermediate and receiver locations, where noise in the direction Warehouse E6 is not audible, it is assumed that the warehouse mechanical noise contribution is at least 10 dB(A) below the corresponding measured L_{A90} or L_{Amin} 15minute noise level as appropriate.

4.2.2 Data analysis and assessment

Following the noise monitoring, the following steps were undertaken to assess the noise level contributions at the nearby sensitive receivers:

1. **Noise source analysis** - Review the mechanical plant and equipment attended measurement data, analyse results and quantify noise source levels from all the fixed mechanical plant and equipment for Warehouse E6.

2. **Noise model setup and performance review -** Setup and calibrate the noise model for individual mechanical plant items, including the rooftop main office mechanical plant and equipment as well as the dock office mechanical equipment for the assessment of reasonable worst-case noise operations.

3. **Noise emission quantification -** Calculate the fixed mechanical plant and equipment noise levels from the Warehouse E6 operations to all nearby surrounding receivers and determine the noise level contribution at the property with the highest noise levels within each NCA.

4.3 Instrumentation

A range of noise monitoring equipment was used to undertake the compliance noise monitoring. A summary of measurement equipment and calibration dates is provided in Table 3.

All of the noise monitoring equipment are Class 1 instruments, with calibration certificates current at the time of the measurements. Before and after each series of measurements, the calibration of the sound level meters was verified using a reference calibration of 94 dB at 1 kHz. The difference between pre- and post-calibration levels was within 0.5 dB for all measurements.

Table 3 Noise measurement equipment

Monitoring location/ purpose	Monitoring period used	Equipment (RTA ref.)	Serial number	Last date calibrated
On-site attended noise measurements	28/3/2025, 3/4/2025	NTi XL2 (XL2-B)	A2A- 16217 -E0	04/08/2023
On-site attended noise measurements	3/4/2025	NTi XL2 (XL2-A)	A2A-12270-E0	09/12/2024
Unattended on-site noise measurements (E6 (B) Office Roof)	28/3/2025 - 11/4/2025	NTi XL2 (RTA07-052)	A2A-17457-E0	17/07/2023
Unattended receiver measurements (nearby to Wattle Grove Residences)[1]	28/3/2025 - 11/4/2025	NTi XL2 (RTA07-043)	A2A-20131-E0	28/02/2024
Field calibration	28/3/2025, 3/4/2025, 11/4/2025	NTi XL2 (XL2-B)	3009707	18/12/2024
Field calibration	3/4/2025	NTi XL2 (XL2-A)	2677710	06/01/2025

Notes: 1. Unattended noise monitor was installed within defence bushland between E6 and Wattle Grove Residences nearby to 76 Corryton Court, Wattle Grove.

4.4 Meteorological conditions

Meteorological conditions during the period of noise measurement surveys have been reviewed to determine the prevailing wind and temperature inversion conditions were appropriate. For a period of the monitoring, data from the MIP meteorological data monitoring station adjacent to Bushmaster Avenue, established in accordance with SSD 7709 (MPW Stage 2) CoC A54, has been sourced and reviewed.

During the attended noise measurement periods at Warehouse E6 and the nearby receivers, the weather conditions were as detailed in Table 4.

Table 4 Attended noise measurement surveys weather observations

Date / Time period	Air temperature, °C	Relative humidity, %	Average wind speed (at 10 m above ground level), m/s	Wind direction, degrees and Cardinal	Cloud cover	Rain
3/4/2025 3:30AM – 6:00AM Receivers/ Intermediate monitoring	12 to 14	95 to 96	Up to 0.3 m/s	Ranged from SW to W	Clear skies throughout	None
3/4/2025 6:00AM – 2:00PM Onsite monitoring	12 to 41	26 to 96	0 to 3.5 m/s	Generally ranged from SW to NW	Clear skies throughout	None

Notes: 1. During the attended monitoring, a handheld anemometer was used, and confirmed wind speeds at the sound level meter were not above 5m/s, as required by the NPfI.

The noise limits in SSD 7628 are applicable for wind speeds up to 3 m/s (10.8 km/h) at 10 metres above ground level. This meteorological station data was used to exclude weather affected data (wind (greater than 5m/s) or rain) in the unattended noise monitoring presented in APPENDIX B in accordance with the NPfI.

5 Monitoring and analysis

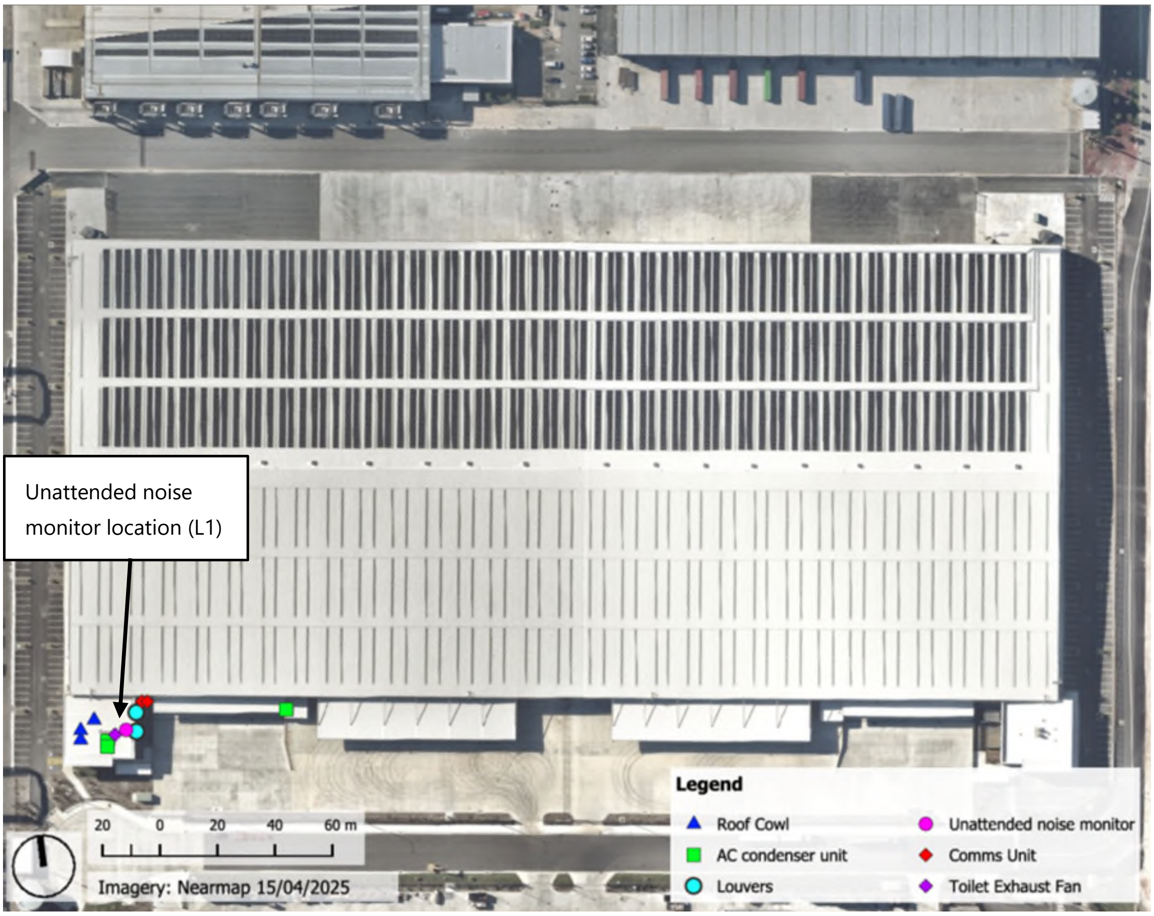
5.1 Key mechanical plant and equipment noise sources

Based on as-built construction information, site inspections, site personal observations, attended and unattended noise measurements, the main sources for the mechanical plant and equipment are as follows:

- Main office (E6B) rooftop mechanical plant and equipment
- Mechanical plant deck on main office (E6B) roof with 2 condenser units installed
- Toilet Exhaust Fan (TEF) on main office (E6B) roof adjacent to condensers
- Main office (E6B) ground area (east) mechanical plant (2 x COMMS units)
- Main office (E6B) area mechanical plant/louvers affixed to the office wall (east)
- Mechanical plant for dock office (E6A and E6B), including rooftop plant/equipment and on ground air-conditioning plant (1 x condenser unit)

The ridgeline smoke exhaust fans do not operate as part of normal operations and only operate in emergencies or during testing, and so do not form part of the assessment. The relevant locations of the key noise generating mechanical plant items are presented in Figure 2.

Figure 2 Key mechanical plant noise source locations and unattended noise monitor location (L1)



5.2 Noise monitoring

5.2.1 Receiver noise monitoring

Noise monitoring was undertaken at the receiver locations shown in Figure 3 to aid with confirming the likely mechanical noise contribution levels at the nearest residential receivers from the warehouse in each of the surrounding NCAs. The location of these measurements is presented in Figure 3. A summary of the measured noise levels are provided in Table 5, with further details for each of the measurements provided in APPENDIX B.

Table 5 also presents total statistical noise levels measured during the attended noise survey and estimated noise contributions from Warehouse E6 based on short-term audible noise measured at the attended measurement locations that could be attributed as coming from Warehouse E6 operations.

Figure 3 Key receiver noise monitoring locations

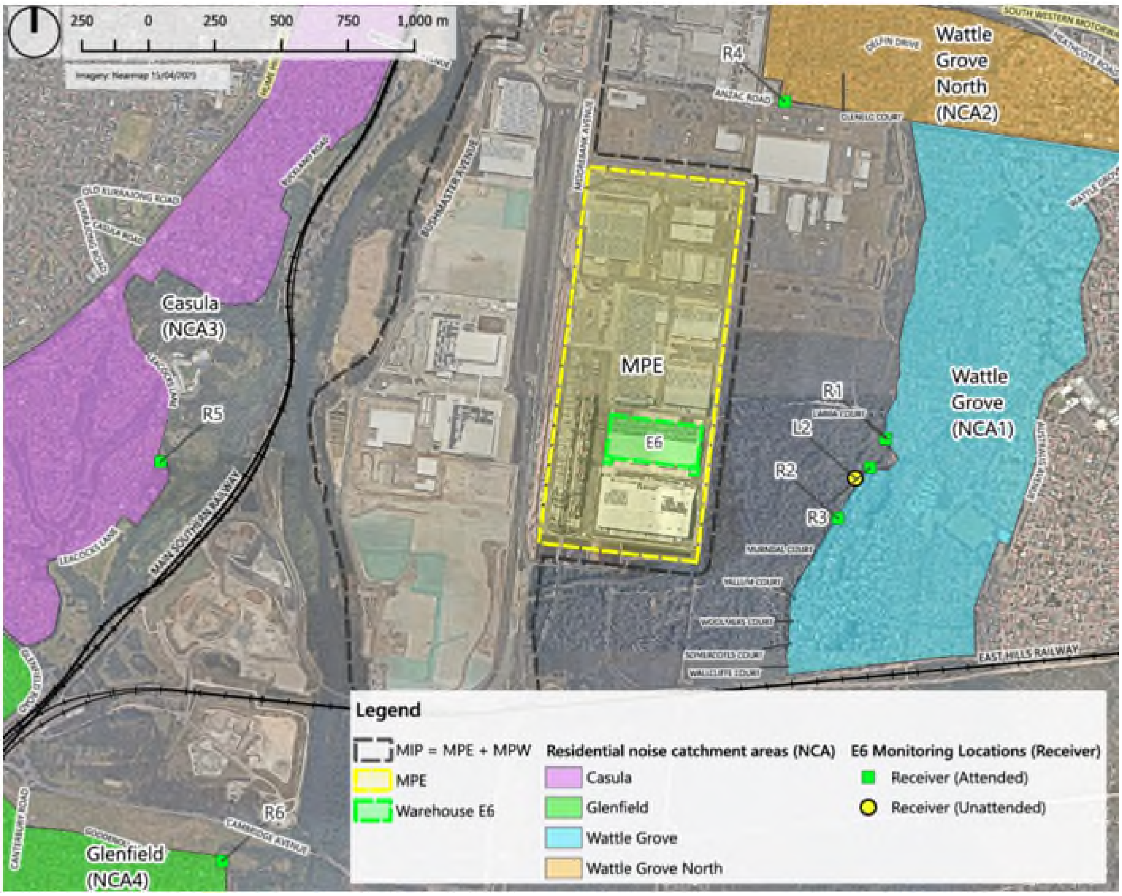


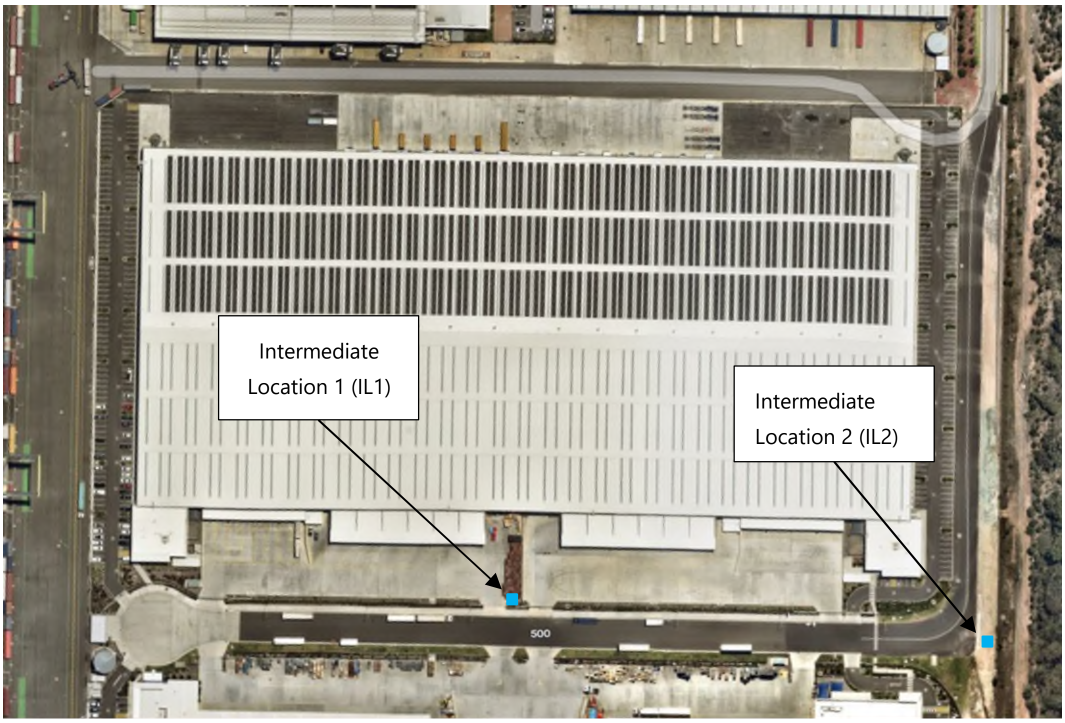
Table 5 Receiver attended noise measurement results (3 April 2025)

ID	Location	Start time	Measured noise levels (15-minute), dB(A)				Estimated warehouse mechanical contribution, $L_{Aeq,\ 15minute}$, dB(A)
			L_{AFmax}	L_{Aeq}	L_{A90}	L_{AFmin}	
R1	15 Larra Court, Wattle Grove	4:06am	57	43	40	39	< 30
R2	52 Corryton Court, Wattle Grove	4:57am	52	43	41	40	< 31
R3	82 Corryton Court, Wattle Grove	4:33am	70	45	43	41	< 33
R4	30 Goodenough Street, Glenfield	5:04am	71	53	47	44	< 37
R5	73A Leacocks Lane, Casula	4:31am	69	53	43	41	< 33
R6	39 Glenelg Court, Wattle Grove	4:02am	82	59	44	43	< 34

5.2.2 Intermediate noise monitoring

As it was not possible to confidently quantify warehouse noise emissions at the receiver locations through the receiver monitoring, intermediate measurements were undertaken between the receivers and the warehouse, in addition to boundary locations around the warehouse. Noise monitoring was undertaken at the intermediate location shown in Figure 4. Accessible locations between the source and the receiver location/s were selected, where the signal-to-noise from the warehouse noise sources would be higher than at the residential receiver locations. These intermediate monitoring locations were selected to assist with determining the likely contribution from the warehouse at these intermediate locations and to aid with reviewing the compliance noise modelling and likely upper bound of noise emissions.

Figure 4 Key intermediate noise monitoring locations



A summary of the measured noise levels at the intermediate monitoring locations are provided Table 6 with further measurement details provided in APPENDIX B.

Table 6 Concurrent intermediate noise measurement results (3 April 2025)

ID	Location / Comment	Start time	Measured 15-minute noise levels, dB(A)				Estimated warehouse contribution, $L_{Aeq,\ 15min}$, dB(A)	Key noise sources contributing to steady state noise levels
			L_{AFmax}	L_{Aeq}	L_{A90}	L_{AFmin}		
IL1	Warehouse E6-B Qube boundary towards south-east	10:05am	77	60	52	48	< 42	Nearby parking and E7 activities, and occasional IMEX noise events. Main office mechanical plant was inaudible. Full details in APPENDIX B.
IL2	MPE fence line east (corner of Marcus Place/Trajan Street)	10:05am	72	54	44	42	< 34	Distant road traffic and birds [~44 dB(A)]. Local truck movements/idle towards east of E6. IMEX and E7 activities. Main office mechanical plant was inaudible. Full details in APPENDIX B
L2 (Unattended noise monitor)[1]	During I1 and I2 attended measurement	10:05am	56	51	49	48	<39	Unattended noise monitor (within defence bushland).

Notes: 1. Unattended noise monitor data was installed within defence bushland between E6 and Wattle Grove Residences nearby to 76 Corryton Court, Wattle Grove.

5.2.3 Onsite noise measurements

Attended noise measurements of individual mechanical plant and equipment items and typical operations were undertaken at Warehouse E6 on 3 April 2025, in order to quantify the noise emissions from the installed mechanical plant and equipment in operation for input into the calibration modelling (Section 6). These noise levels have been used to develop the CoC B85 operational noise compliance noise model.

During all measurements of mechanical plant and equipment, the specific noise source being measured was the dominant noise source. All plant and equipment items were switched on and forced into full capacity for the purposes of undertaking the attended noise measurements. Observations were made of the on-site specific mechanical plant item/s (specifically, critical noise generating plant/equipment i.e. two rooftop condenser units) during operations to ensure they were operating during attended on-site measurements.

Results from the on-site attended measurements of the critical mechanical plant and equipment are summarised in Table 7. The locations the key noise generating mechanical plant noise items are presented in Figure 2.

Table 7 On-site attended mechanical plant noise measurement results (3 April 2025)

ID	Activity noise sources	Time	Measurement duration (t), sec	Measurement distance (m)	Measured noise levels, dB(A)		
					L_{AFmax}	L_{Aeq}	L_{A90}
	Office E6B roof (locations see Figure 2)[1]						
S1	Office (E6B) Condenser Unit 1 + Office (E6B) Condenser Unit 2	12:49 PM	31 sec	6	65	64	63
S2		12:44 PM	31 sec	6	65	63	63
S3	Office (E6B) Toilet Exhaust Fan (TEF)	12:41 PM	47 sec	2	64	60	60
S4	Office (E6B) – Roof Cowl 1	inaudible at 1 metre at 50 dB(A) L_{A90}					
S5	Office (E6B) – Roof Cowl 2						
S6	Office (E6B) – Roof Cowl 3						
	Hardstand and dock offices						
S7	Condenser units/COMMS 1 and 2 (Office E6B)	1:47 PM	18 sec	2.4	55	52	51
S8	Mech louvre (Office E6B - eastern wall)	1:54 PM	40 sec	4	62	52	50
S9	Roof Cowl 1 (Dock Office roof)	inaudible at ground level at 50 dB(A) L_{A90}					
S10	Roof Cowl 2 (Dock Office roof)						

Notes: 1. All plant and equipment items were switched on and forced into full capacity for the purposes of undertaking the attended noise measurements. Monitoring undertaken during steady state operations.

5.2.4 Unattended noise measurements

During the attended noise survey in Section 5.1, it was observed that the rooftop mechanical deck with two condenser units and a toilet exhaust fan (TEF) could operate continuously as part of the typical operations, and were considered to be the main noise sources for the Warehouse E6 mechanical plant noise emissions.

To confirm that the noise emissions from these key mechanical sources represented normal operations and did not substantially change over time, unattended noise monitoring was undertaken to supplement to the attended noise monitoring (Section 5.2.3), this was undertaken for a minimum one week period as required by CoC B85. The unattended noise monitoring was undertaken over the period between 28 March to 11 April 2025. The unattended noise monitor (L1), as shown in Figure 2, as located so that noise contributions from mechanical plant would dominate the monitored noise levels.

The monitoring data confirmed the condenser units only operated occasional, and turned on and off throughout the monitoring period, with some period of reduced load and lower noise levels. The modelling is based upon the maximum measured noise levels. The condenser units typically operated for a period of 1 to 3 hours at a time. Detailed results from the unattended noise monitoring are provided in APPENDIX C.

5.3 Mechanical plant and equipment noise source levels

Based upon the attended and unattended noise monitoring presented in the above sections, the following noise source levels for the key typical operating mechanical plant and equipment have been established based upon periods of typical operation. These have been based upon either direct measurement, or supplier data that has been confirmed through monitoring of cumulative noise levels (ie. condenser units on mechanical deck). Based upon noise monitoring presented in Section 5.2, the sound power level inputs presented in Table 8 were used in the CoC B85 operational noise compliance modelling detailed in Section 6 for the key noise source locations shown in Figure 2.

Table 8 CoC B85 operational noise compliance noise source levels

Site items / operation	Individual item sound power level (SWL) ($L_{Aeq,t}$), dB(A)	Comment
Office E6B (warehouse west) roof[3]		
Office condenser units (2 units) - Vertical discharge units	84	Based upon attended measurements (Unit type Daikan VRV REYQ22BYM/REYQ20BYM) and unit observations. These condenser units observed to be the key dominant noise source for office E6B.
Office (E6B) Toilet Exhaust Fan (TEF)	74	Based upon the attended measurements on office E6B rooftop.
Office (E6B) roof cowl units	48[5]	Office roof cowl units were inaudible. Based upon the attended measurements/observations on main office rooftop. Inaudible at 1m metre at 50 dB(A) $L_{A90.}$
Office 6A (warehouse east) roof[1]		
Office (E6A) rooftop mechanical plant/equipment	n/a[1]	Office (E6A) Ceva main office and associated mechanical plant and equipment is not used as part of typical operations by the tenant.
Hardstand and dock offices		
COMMS units (adjacent to Office E6B)	67[2]	Installed unit: Daikan RXC100AV1A. Two units. Intermittent operations of one or two units.
Dock office (E6B) (warehouse west) - Air conditioning condenser unit (CU-6.2-DO) - Horizontal discharge single fan unit (Daikan)	68[4]	Installed unit: Daikan RZA125CV1. Dock office air conditioning unit was not operational during attended measurements. The sound power level based upon the installed unit manufacturer sound power levels. Supplier level = Lw 68 dB(A)
Dock office (E6A) (warehouse east) - Air conditioning condenser unit (CU-6.1-DO) - Horizontal discharge single fan unit (Daikan)	68[4]	Installed unit: Daikan RZA125CV1. Measurement access was not possible. The sound power level based upon the installed unit manufacturer sound power levels.

Site items / operation	Individual item sound power level (SWL) ($L_{Aeq,t}$), dB(A)	Comment
Mech louvre (Office E6B - eastern wall)	72	Noise level based upon attended measurements conducted onsite (03/05/2025).
Roof Cowl 1 & 2 (Dock Office roof)	48[5]	Noise levels measured at ground level adjacent to dock office. Inaudible at ground level at 50 dB(A) L_{A90}.

Notes:

1. As the main office (E6A) is currently not operational. As such, the office (E6A) associated mechanical plant, and equipment is currently not operational and hence excluded from this assessment.
2. Measurements were made of where mechanical sources were audible, and these fans were quantified and modelled. Other office roof sources were not dominant, based upon observations from warehouse roof levels for cumulative measured noise levels when in operation, and so it was appropriate to model just the key dominant sources.
3. Based upon highest measured levels from multiple attended measurements and unattended noise monitoring.
4. Dock office condenser unit was not operational during attended noise measurements onsite. The sound power level data was obtained from manufacturer provided data for the relevant model number installed onsite.
5. Noise emissions were not audible in a 50 dB(A) LA90 environment, as such noise emission level is assumed to be no higher than 40 dB(A) at 1 metre.

6 CoC B85 operational noise modelling and assessment

As detailed in Section 4, it was not possible to directly measure or estimate the warehouse mechanical plant and equipment noise levels at nearby receivers without implementing a range of different noise measurement and noise modelling techniques. As such, this assessment has used a combination of on-site attended noise measurements and unattended monitoring presented in Section 5, and noise modelling described below. These techniques were used in combination to assess the noise emissions of the Warehouse E6 mechanical plant and equipment.

6.1 General modelling assumptions and methods

Modelling and assessment of warehouse noise emissions was determined by modelling the noise sources, receiver locations, existing built structures and topographical features, using CadnaA (version 2025. The noise predictions are based on the CONCAWE noise prediction algorithms, noting that the nearby critical noise sensitive receivers are greater 100 metres from the site. The CONCAWE environmental noise prediction method is an appropriate method for predicting the noise propagation in these circumstances. The performance of the noise model used is reviewed in Section 6.2.

The noise prediction model considers:

- Location of all noise sources.
- Height of sources and receivers referenced to digital ground contours both onsite and outside the warehouse and MIP areas.
- Noise source levels of individual mechanical plant and equipment. All fixed mechanical plant and equipment operational noise sources associated with Warehouse E6 operations have been included.
- Separation distances between sources and receivers.
- Ground type between sources and receivers.
- Attenuation from buildings and built structures and topography (natural and purpose built).
- Atmospheric losses and assessment meteorological conditions.

The modelled activities and assumptions for the operational mechanical plant and equipment and their duration and frequency of operation as part of the ‘reasonable’ worst-case operational scenarios are described in Section 6.3.

6.2 Noise model performance

The base CadnaA model prepared for the E7 noise monitoring assessment (*TM306-05F02 E7 Warehouse B85 Operational Noise Monitoring (r1),* dated 24 January 2025) (E7 B85 noise monitoring report) was used to develop the compliance monitoring modelling for this assessment.

Section 6.2 of the E7 B85 noise monitoring report demonstrated that through reviewing correlated noise events between onsite noise monitoring and intermediate monitoring locations toward Wattle Grove receivers that the noise model is considered suitable for modelling and assessing noise emissions at nearby receivers. As the assessment is concerned with similar receivers in Wattle Grove, this model performance review is also appropriate for this assessment and demonstrates the base model is suitable.

Similarly, the intermediate monitoring in Section 5.2.2 was further used to confirm the model was predicting as expected. As mechanical plant and equipment levels were inaudible at the intermediate locations, it is assumed they were at least 10 dB(A) below the measured background noise level (L_{A90}). This is confirmed as per Table 9.

Table 9 Comparison between measured and modelled noise levels - Intermediate monitoring locations (3/4/2025)

Location	Measured contribution noise level, dB(A) $L_{eq,T}$	Model predicted noise level, dB(A) $L_{eq,T}$
IL1 (Qube/Ceva boundary SE)	<42 (10 dB(A) below BG)	35
IL2 (Cnr. Marcus Pl/Trajan St)	<34 (10 dB(A) below BG)	31

6.3 Assessment operational scenarios

All key measurable noise-generating mechanical plant and equipment that operate as part of typical operations have been included in the assessment modelling as required by CoC B85. These are listed in Table 8. The locations of these sources are shown in Figure 2.

The office (E6B) rooftop two (2) condenser units and a toilet exhaust fan (TEF) are the main (dominant) mechanical plant and equipment noise sources for Warehouse E6 operations for the reasonable worst case 15-minute scenario assessment. All office mechanical plant and equipment identified in Section 5.3 have been assumed to operate during all assessment periods, although these plant items typically only operate when the office is in use (assessment considered 24 hours a day and 7 days operation).

6.4 Noise compliance assessment

Mechanical plant and equipment operational noise levels are presented in Table 10. The noise levels have been modelled to residential receiver noise catchments surrounding the MIP and the highest residential receiver noise level in each catchment area reported in Table 10. These noise levels represent the reasonable worst-case operational scenario (15-minute period) from typical mechanical plant and equipment operations of the warehouse.

The modelling incorporated the worst-case prevailing meteorological conditions, as required by CoC B85, which are wind speeds of up to 3 m/s at 10 metres above ground level or stability category ‘F’ temperature inversion conditions.

The mechanical plant and equipment noise sources are steady-state or quasi-steady-state. Therefore, there is unlikely to be significant variation between $L_{Aeq,15min}$ values and $L_{A1,\ 1minute}$ values, and no significant peak noise events are expected. As such, by achieving the night period $L_{Aeq\ (15\text{-}minute)}$ requirements, the noise emissions will achieve the $L_{A1,\ 1minute,}$ sleep arousal screening level requirements of 52 dB(A) $L_{A1,\ 1minute}$.

The results in Table 10 show that the predicted CoC B85 operational compliance noise levels are below the SSD 7628 CoC B80 noise limits. Furthermore, although the B84 assessment report did not provide specific warehouse predicted noise levels for all nearby noise sensitive receivers for verification under CoC B85, noise emissions are aiming to achieve appropriate noise levels below the SSD 7628 CoC B80 noise limits to assist ESR with managing the cumulative noise emissions from the MIP.

As such, it can be concluded that the E6 mechanical plant and equipment noise emissions achieve these requirements, such that they have been selected and installed to achieve the overall noise limits specified in SSD 7628 Table 5 (CoC B80).

Table 10 CoC B85 operational noise levels – Mechanical plant and equipment - Warehouse E6

NCA	Operational compliance assessment noise levels[1,2,3] $L_{Aeq,\ 15\ minute}$			SSD 7628 CoC B80 noise limits $L_{Aeq,\ 15\ minute}$		
	Day	Evening	Night	Day	Evening	Night
Wattle Grove (NCA 1)	< 20	< 20	< 20	35	35	35
Wattle Grove North (NCA 2)	< 20	< 20	< 20	35	35	35
Casula (NCA 3)	< 20	< 20	< 20	35	35	35
Glenfield (NCA 4)	< 20	< 20	< 20	35	35	35

Notes

1. Modelling meteorological were as follows, consistent with the range applicable for the B131 noise limits:
   a. Day/Evening - Winds speeds of 3m/s at 10 meters above ground level (all directions)
   b. Night - Atmospheric stability category F (with no wind).
2. Modelling based upon average temperature and humidity conditions during the monitoring period.
3. For estimated levels less than 20 dB(A) LAeq, 15minute, "< 20dB(A)" is presented.

7 Conclusion

Renzo Tonin & Associates was engaged by ESR Developments (Australia) Pty Ltd on behalf of The Trust Company (Australia) Limited (ACN 000 000 993) as trustee of the Moorebank Industrial Warehouse Trust to undertake noise monitoring of the warehouse mechanical plant and other noisy equipment to satisfy the State Significant Development (SSD) 7628 B85 consent condition (CoC) for the Warehouse E6.

Warehouse E6 is located within the Moorebank Precinct East (MPE), which forms part of the Moorebank Intermodal Precinct (MIP) at Moorebank, NSW. Warehouse E6 is separated into E6A (western warehouse), and E6B (eastern) warehouse. The western warehouse (E6B) is currently tenanted by the Qube Holdings Logistics (Qube), while the eastern warehouse (E6A) is currently tenanted by Ceva Logistics (Ceva).

This report has been prepared to address the noise emissions from the fixed mechanical plant and equipment of the warehouse that operate as part of typical warehouse operations in accordance CoC B85 of SSD 7628, and as detailed in the MPE ONVMP. CoC B85 requires noise monitoring of actual mechanical plant and other noisy equipment operations for a minimum period of one week where valid data is collected following the commencement of operations of each warehouse within MPE. The CoC B84 noise assessment report did not provide specific warehouse predicted noise levels for all nearby noise sensitive receivers for verification under CoC B85. As such, this report has been prepared to confirm that the actual mechanical plant and other noisy equipment operations achieve the overall noise levels presented in Table 5 of CoC B80 of 35 dB(A) $L_{Aeq\ 15minute}$, during all time periods.

SSD 7628 Consent Condition B85 requires noise monitoring of valid data for comparison against the above noise requirements. The NSW EPA *Noise Policy for Industry* (NPfI) provides guidance for monitoring the performance of a noise-generating industrial facility, which includes direct measurement at a receiver location, direct measurement at alternative or intermediate location/s, unattended monitoring and modelling. As the existing ambient noise levels are already high at residences nearby to Warehouse E6 compared with the expected noise emission levels, a combination of on-site, intermediate and receiver attended noise measurements, unattended monitoring, and noise modelling have been used to quantify the noise emission performance of the warehouse mechanical plant and equipment.

Unattended noise monitoring was conducted on the warehouse roof nearby to the key noise generating mechanical plant items over the period of 28 March to 11 April 2025. In addition, attended noise measurements were undertaken on 3 April 2025. The aim of the measurements was to quantify fixed mechanical plant and equipment operational noise levels on-site, to develop a compliance noise model and estimate the noise emission levels at nearby residences.

The monitoring data was analysed to confirm the warehouse mechanical plant and equipment noise source levels. These were used to then develop a noise model for the warehouse. The noise model was reviewed against onsite, intermediate and receiver concurrent noise measurements to confirm its suitability to assessing the CoC B85 noise emissions.

This assessment concluded that the warehouse mechanical plant and equipment noise emission levels achieve the overall noise levels presented in Table 5 of CoC B80 of 35 dB(A) $L_{Aeq\ 15minute}$, during all time periods as required by CoC B84 and CoC B85.

APPENDIX A Glossary of terminology

The following is a brief description of the technical terms used to describe noise to assist in understanding the technical issues presented.

Adverse weather	Weather effects that enhance noise (that is, wind and temperature inversions) that occur at a site for a significant period of time (that is, wind occurring more than 30% of the time in any assessment period in any season and/or temperature inversions occurring more than 30% of the nights in winter).
Ambient noise	The all-encompassing noise associated within a given environment at a given time, usually composed of sound from all sources near and far.
Assessment period	The period in a day over which assessments are made.
Assessment Point	A point at which noise measurements are taken or estimated. A point at which noise measurements are taken or estimated.
Background noise	Background noise is the term used to describe the underlying level of noise present in the ambient noise, measured in the absence of the noise under investigation, when extraneous noise is removed. It is described as the average of the minimum noise levels measured on a sound level meter and is measured statistically as the A-weighted noise level exceeded for ninety percent of a sample period. This is represented as the L90 noise level (see below).
Decibel [dB]	The units that sound is measured in. The following are examples of the decibel readings of common sounds in our daytime environment:

threshold of hearing	0 dB	The faintest sound we can hear
	10 dB	Human breathing
almost silent	20 dB	
	30 dB	Quiet bedroom or in a quiet national park location
generally quiet	40 dB	Library
	50 dB	Typical office space or ambience in the city at night
moderately loud	60 dB	CBD mall at lunch time
	70 dB	The sound of a car passing on the street
loud	80 dB	Loud music played at home
	90 dB	The sound of a truck passing on the street
very loud	100 dB	Indoor rock band concert
	110 dB	Operating a chainsaw or jackhammer
extremely loud	120 dB	Jet plane take-off at 100m away
threshold of pain	130 dB	
	140 dB	Military jet take-off at 25m away

dB(A)	A-weighted decibels. The A- weighting noise filter simulates the response of the human ear at relatively low levels, where the ear is not as effective in hearing low frequency sounds as it is in hearing high frequency sounds. That is, low frequency sounds of the same dB level are not heard as loud as high frequency sounds. The sound level meter replicates the human response of the ear by using an electronic filter which is called the "A" filter. A sound level measured with this filter switched on is denoted as dB(A). Practically all noise is measured using the A filter.
dB(C)	C-weighted decibels. The C-weighting noise filter simulates the response of the human ear at relatively high levels, where the human ear is nearly equally effective at hearing from mid-low frequency (E63Hz) to mid-high frequency (4kHz), but is less effective outside these frequencies.

Frequency	Frequency is synonymous to pitch. Sounds have a pitch which is peculiar to the nature of the sound generator. For example, the sound of a tiny bell has a high pitch and the sound of a bass drum has a low pitch. Frequency or pitch can be measured on a scale in units of Hertz or Hz.
Impulsive noise	Having a high peak of short duration or a sequence of such peaks. A sequence of impulses in rapid succession is termed repetitive impulsive noise.
Intermittent noise	The level suddenly drops to that of the background noise several times during the period of observation. The time during which the noise remains at levels different from that of the ambient is one second or more.
L_{Max}	The maximum sound pressure level measured over a given period.
L_{Min}	The minimum sound pressure level measured over a given period.
L_1	The sound pressure level that is exceeded for 1% of the time for which the given sound is measured.
L_{10}	The sound pressure level that is exceeded for 10% of the time for which the given sound is measured.
L_{90}	The level of noise exceeded for 90% of the time. The bottom 10% of the sample is the L90 noise level expressed in units of dB(A).
L_{eq}	The "equivalent noise level" is the summation of noise events and integrated over a selected period of time.
Reflection	Sound wave changed in direction of propagation due to a solid object obscuring its path.
SEL	Sound Exposure Level (SEL) is the constant sound level which, if maintained for a period of 1 second would have the same acoustic energy as the measured noise event. SEL noise measurements are useful as they can be converted to obtain Leq sound levels over any period of time and can be used for predicting noise at various locations.
Sound	A fluctuation of air pressure which is propagated as a wave through air.
Sound absorption	The ability of a material to absorb sound energy through its conversion into thermal energy.
Sound level meter	An instrument consisting of a microphone, amplifier and indicating device, having a declared performance and designed to measure sound pressure levels.
Sound pressure level	The level of noise, usually expressed in decibels, as measured by a standard sound level meter with a microphone.
Sound power level	Ten times the logarithm to the base 10 of the ratio of the sound power of the source to the reference sound power.
Tonal noise	Containing a prominent frequency and characterised by a definite pitch.

APPENDIX B Noise monitoring survey information

Table 11 Attended noise monitoring results (receivers) (monitoring locations shown in Figure 3)

ID	Location / Time	Prevailing meteorological conditions[1]	Measured noise level, dB(A)						Comments on measured noise levels
			L_{Amax}	L_{A1}	L_{A10}	L_{Aeq}	L_{A90}	L_{Amin}	
R1	Wattle Grove (adjacent to 15 Larra Court) 4:06am – 4:21am 3 April 2025	Wind – nil to 0.3 m/s Direction – WSW Humidity – 95% Temperature - 13°C Stability Class F/G[2]	57	49	44	43	40	39	*Warehouse E6 related noise emissions:* Warehouse E6 were not audible/distinguishable. *Estimate warehouse mechanical noise contribution:* $L_{Aeq\ (15minute)}$ = < 30 dBA [*inaudible at 40 dB(A)*] L_{Amax} = < 30 dBA [*inaudible at 40 dB(A)*] *Other noise source contributions:* **Background noise environment –** Background L_{A90} was controlled by distant road traffic [~40-43 dB(A)] and natural sources (frogs). **Ambient noise environment** - Ambient L_{Aeq} noise level was contributed to by distant road traffic [~40-43 dB(A)] (W to NNW), ambulance noise [just audible ~44-45 dB(A)], train movement noise [~47-49 dB(A)] and natural sources [frogs ~44-47 dB(A)]. **High noise events** – Distant traffic accelerating noise (~47-49 dB(A) (N), distant horn (~49 dB(A)) (N/NW) and industrial activities.
R2	Wattle Grove (adjacent to 52 Corryton Court) 4:57am – 5:12am 3 April 2025	Wind – 0 m/s Direction – n/a Humidity – 95% Temperature - 13°C Stability Class G[2]	52	47	44	43	41	40	*Warehouse E6 related noise emissions:* Warehouse E6 were not audible/distinguishable. *Estimate warehouse mechanical noise contribution:* $L_{Aeq\ (15minute)}$ = < 31 dBA [*inaudible at 41 dB(A)*] L_{Amax} = < 31 dBA [*inaudible at 41 dB(A)*] *Other noise source contributions:* **Background noise environment –** Background L_{A90} was controlled by distant road traffic [~41-44 dB(A)] and natural sources (cicadas). **Ambient noise environment** - Ambient L_{Aeq} noise level was contributed to by distant road traffic [~41-44 dB(A)] (N to NW), local road traffic passbys [~44-46 dB(A)], terminal operation events [~42-49 dB(A)], and natural sources [cicadas ~41-43 dB(A)]. **High noise events** – Motorbike passby at distance [up to 52 dB(A)] and local road loud car passbys [up to ~46-47 dB(A)] and industrial activities.

ID	Location / Time	Prevailing meteorological conditions[1]	Measured noise level, dB(A)						Comments on measured noise levels
			L_{Amax}	L_{A1}	L_{A10}	L_{Aeq}	L_{A90}	L_{Amin}	
R3	Wattle Grove (adjacent to 82 Corryton Court) 4:33am – 4:48am 3 April 2025	Wind – 0 m/s Direction – n/a Humidity – 96% Temperature - 13°C Stability Class G[2]	70	49	46	45	43	41	*Warehouse E6 related noise emissions:* Warehouse E6 were not audible/distinguishable. *Estimate warehouse mechanical noise contribution:* $L_{Aeq\ (15minute)}$ = < 33 dBA [*inaudible at 43 dB(A)*] L_{Amax} = < 33 dBA [*inaudible at 43 dB(A)*] *Other noise source contributions:* **Background noise environment –** Background L_{A90} was controlled by distant road traffic [~43-45 dB(A)] and natural sources (frogs/cicadas). **Ambient noise environment** - Ambient L_{Aeq} noise level was contributed to by local road traffic passbys [~46-48, up to 50 dB(A)], natural sources [frogs ~43-45 dB(A)] and distant road traffic [~43-45 dB(A)] (N to NW), terminal operation events [~41-44 dB(A)], distant train movement noise [~44-48 dB(A)] (SW) and **High noise events** – Motorbike passby at distance [up to 51 dB(A)] and local road loud car passbys [up to ~48-50 dB(A)] and industrial activities.
R4	30 Goodenough Street, Glenfield 5:04am – 5:19am 3 April 2025	Wind – 0 m/s Direction – n/a Humidity – 95% Temperature - 13°C Stability Class G[2]	71	66	53	53	47	44	*Warehouse E6 related noise emissions:* Warehouse E6 were not audible/distinguishable. *Estimate warehouse mechanical noise contribution:* LAeq (15minute) = < 37 dBA [inaudible at 47 dB(A)] LAmax = < 37 dBA [inaudible at 47 dB(A)] Other noise source contributions: **Background noise environment** – Background L_{A90} was controlled by distant road traffic [~53-57 dB(A)] and natural sources (cicadas). **Ambient noise environment** - Ambient L_{Aeq} noise level was contributed to by Cambridge Ave road traffic passbys [~53-71 dB(A)], natural sources [cicadas ~43-53 dB(A)], distant rail traffic [~48-54 dB(A)] **High noise events** – Cambridge Avenue vehicle passbys [up to ~65-71 dB(A).
R5	73A Leacocks Lane, Casula 4:31am – 4:46am 3 April 2025	Wind – 0 m/s Direction – n/a Humidity – 96% Temperature - 13°C Stability Class G[2]	69	65	55	53	43	41	Warehouse E6 related noise emissions: Warehouse E6 were not audible/distinguishable. Estimate warehouse mechanical noise contribution: LAeq (15minute) = < 33 dBA [inaudible at 43 dB(A)] LAmax = < 33 dBA [inaudible at 43 dB(A)] Other noise source contributions: **Background noise environment** – Background $_{LA90}$ was controlled by distant road traffic (M5) [~42-45 dB(A)] and natural sources (birds, cicadas). **Ambient noise environment** - Ambient L_{Aeq} noise level was contributed to by Hume Highway/M5 road traffic [~40-45 dB(A)], local vehicle passbys [up to ~62-69 dB(A)], natural sources [possum/bats ~45-54 dB(A)], distant rail [~47-53 dB(A)] **High noise events** – local vehicle passbys [up to ~62-69 dB(A)], natural sources [birds, cicadas ~53-54 dB(A)].

ID	Location / Time	Prevailing meteorological conditions[1]	Measured noise level, dB(A)						Comments on measured noise levels
			L_{Amax}	L_{A1}	L_{A10}	L_{Aeq}	L_{A90}	L_{Amin}	
R6	39 Glenelg Court, Wattle Grove (or Anzac Road) 4:02am – 4:17am 3 April 2025	Wind – 0 m/s Direction – n/a Humidity – 95% Temperature - 13°C Stability Class G[2]	82	72	55	59	44	43	*Warehouse E6 related noise emissions:* Warehouse E6 were not audible/distinguishable. *Estimate warehouse mechanical noise contribution:* $L_{Aeq\ (15minute)}$ = < 34 dBA [*inaudible at 44 dB(A)*] L_{Amax} = < 34 dBA [*inaudible at 44 dB(A)*] *Other noise source contributions:* **Background noise environment –** Background L_{A90} was controlled by distant road traffic [~44-47 dB(A)] and natural sources (cicadas). **Ambient noise environment** - Ambient L_{Aeq} noise level was contributed local vehicle passbys on Anzac Road [up to ~75-79 dB(A)], natural sources (cicadas) and industrial activities. **High noise events** – local vehicle passbys [up to ~75-82 dB(A)] and industrial activities.

Notes: 1. Meteorological data from the MIP meteorological data monitoring station adjacent to Bushmaster Avenue.
2. Night time stability class, based upon NPfI Fact Sheet D '*Use of sigma-theta data*'

Table 12 Attended noise monitoring results (intermediate monitoring locations shown in Figure 4)

ID	Location / Time	Prevailing meteorological conditions[1]	Measured noise level, dB(A)						Comments on measured noise levels
			L_{Amax}	L_{A1}	L_{A10}	L_{Aeq}	L_{A90}	L_{Amin}	
IL1	Intermediate Location 1 (IL1) – E6B boundary fence (SE) intermediate location (south-east of Project/E6-B) 10:05am – 10:20am 3 April 2025	Wind – 0.5-1 m/s (calm *at monitoring location*) Direction – W to N Humidity – 55% Temperature - 32°C Stability Class C[2]	77	71	63	60	52	48	*Warehouse E6 related noise emissions:* Warehouse E6 were not clearly audible/distinguishable. *Estimate warehouse mechanical noise contribution:* $L_{Aeq\ (15minute)}$ = < 42 dB(A) [*inaudible at 52dB(A)*]. L_{Amax} = < 42 dBA [*inaudible at 52 dB(A)*]. *Other noise source contributions:* **Background noise environment –** Background LA90 was controlled by truck parking on local road (ie. truck idle) and E7 hardstand truck idle. **Ambient noise environment** - Ambient LAeq noise level was contributed by local vehicle passbys on Marcus Place and nearby IMEX and E7 activities. **High noise events –** Airplane flyby overhead [(~63-65 dB(A)] and industrial activities.

ID	Location / Time	Prevailing meteorological conditions[1]	Measured noise level, dB(A)						Comments on measured noise levels
			L_{Amax}	L_{A1}	L_{A10}	L_{Aeq}	L_{A90}	L_{Amin}	
IL2	Intermediate Location 2 (IL2) – Corner Marcus Place & Trajan Street near defence land boundary fence (south-east of Project/E6-A boundary) 10:05am – 10:20am 3 April 2025	Wind – 0.5-1 m/s (calm *at monitoring location*) Direction – W to N Humidity – 55% Temperature - 32°C Stability Class C[2]	72	66	57	54	44	42	*Warehouse E6 related noise emissions:* Warehouse E6 were not clearly audible/distinguishable. *Estimate warehouse mechanical noise contribution:* $L_{Aeq\ (15minute)}$ = < 34 dB(A) [*inaudible at 44dB(A)*]. L_{Amax} = < 34 dBA [*inaudible at 44 dB(A)*]. *Is Other noise source contributions:* **Background noise environment –** Background LA90 was controlled by distant road traffic [~44 dB(A)]. **Ambient noise environment** - Ambient LAeq noise level was contributed local vehicle/trucks passbys on Marcus Place [up to ~63-65 dB(A)] and nearby industrial activities (ie. E7 hardstand trucks). **High noise events –** Airplane flyby overhead [(~63-65 dB(A)], construction vehicle passby [up to ~63-64 dB(A)] and industrial activities.

Notes: 1. Meteorological data from the MIP meteorological data monitoring station adjacent to Bushmaster Avenue.
2. Stability class, based upon NPfI Fact Sheet D '*Use of sigma-theta data*'

APPENDIX C Logger location – Warehouse E6B office roof

Acoustics
Vibration
Structural Dynamics

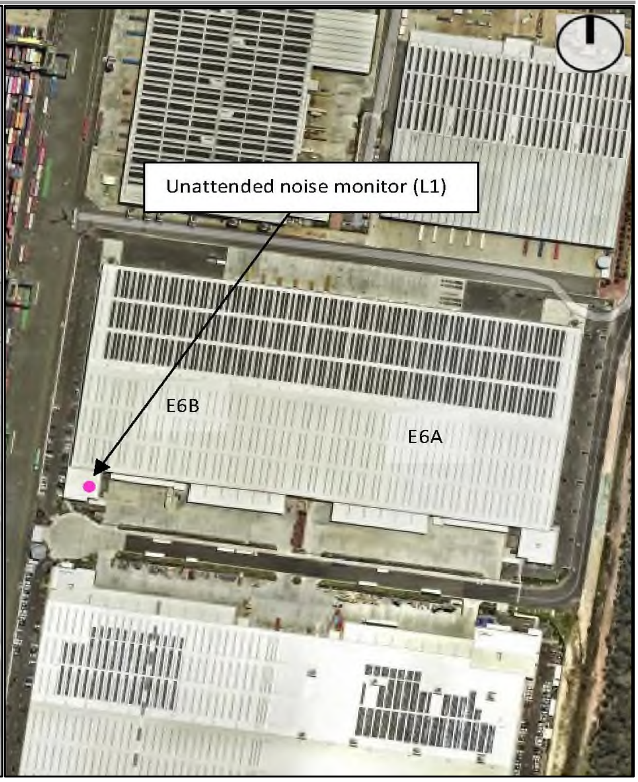
sydney@renzotonin.com.au
www.renzotonin.com.au

Dates of Survey: 28/03/2025 - 09/04/2025
Monitoring ID: Unattended noise monitor (L1)
Address: 6B Marcus Pl, Moorebank NSW
Description: E6B Main office roof

Background & Ambient Noise Monitoring Results						
	L_{A90} Background Noise Levels			L_{Aeq} Ambient Noise Levels		
	Day[1]	Evening[2]	Night[3]	Day[1]	Evening[2]	Night[3]
Representative Week[4]	**49**	**47**	**47**	**56**	**52**	**52**

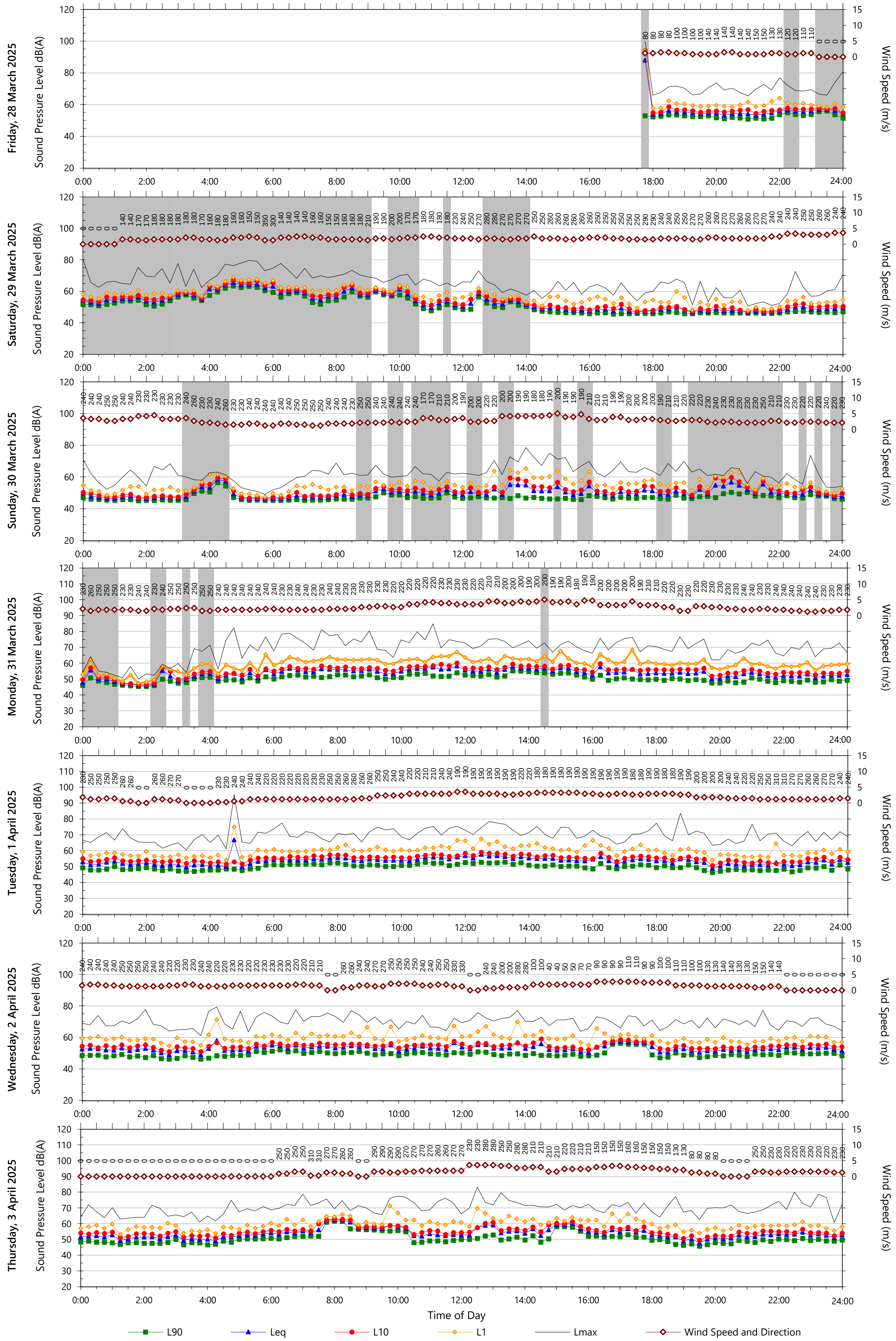
Notes:
1. Day: 7.00am to 6.00pm Monday to Saturday and 8.00am to 6.00pm Sundays & Public Holidays
2. Evening: 6.00pm to 10.00pm Monday to Sunday & Public Holidays
3. Night: 10.00pm to 5.00am Monday to Sunday & Public Holidays
4. Rating Background Level (RBL) for LA90 and logarithmic average for LAeq

Logger location photograph	Logger location map



Unattended Monitoring Results

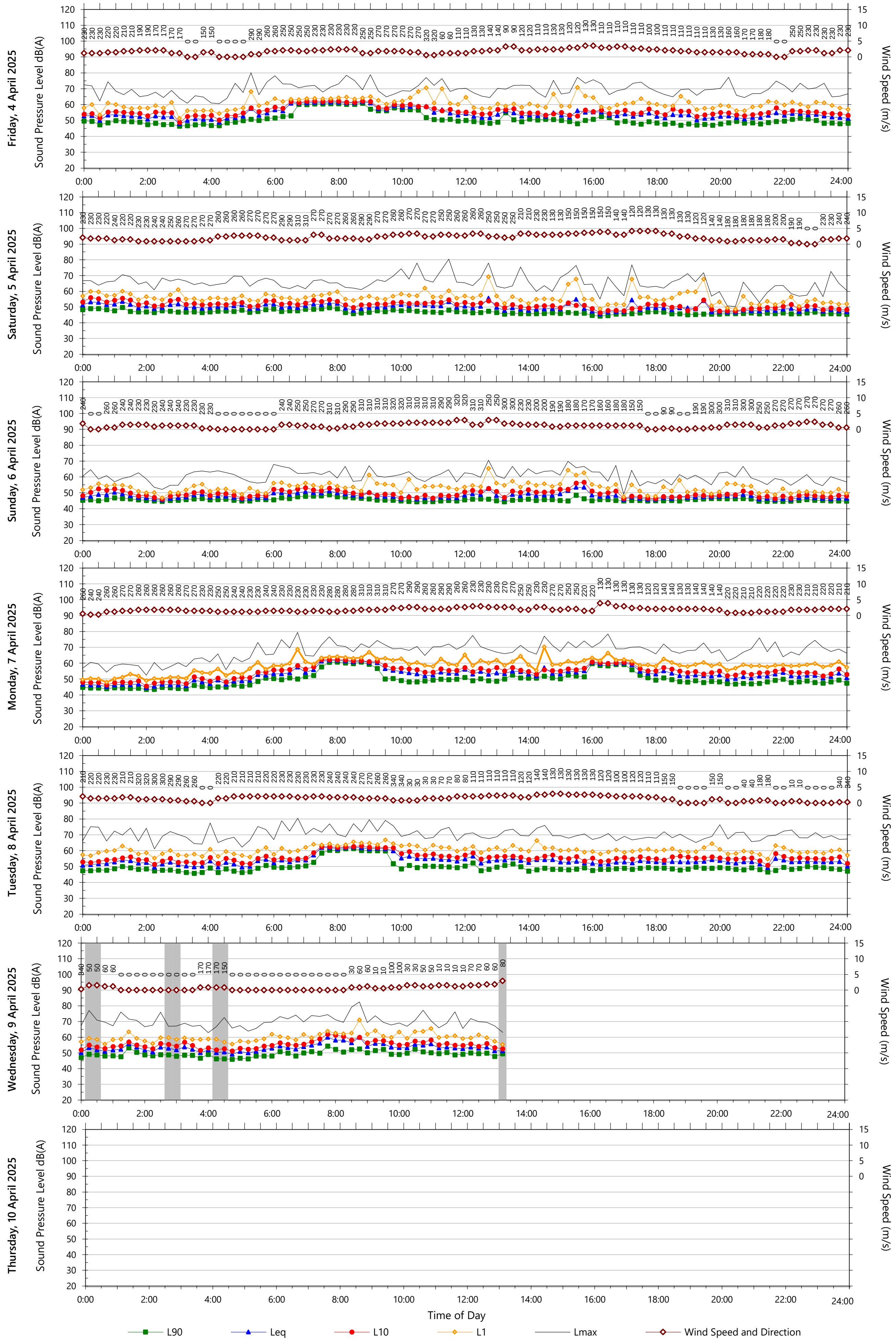
Location: 6B Marcus Pl, Moorebank NSW - E6B Main office roof



Data File: 2025-03-28_SLM_000_123_Rpt_Report.txt

Template: QTE-26 Logger Graphs Program (r47)

Unattended Monitoring Results **Location: 6B Marcus Pl, Moorebank NSW - E6B Main office roof**



Data File: 2025-03-28_SLM_000_123_Rpt_Report.txt

Template: QTE-26 Logger Graphs Program (r47)

APPENDIX E - WATER QUALITY MONITORING REPORTS

MOOREBANK PRECINCT EAST STAGE 2: BIODIVERSITY MONITORING IN ANZAC CREEK

SPRING 2024 SURVEY

Final Report Prepared for
ARCADIS

7 February 2025

BIO-ANALYSIS Pty Ltd
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Document Information

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EXECUTIVE SUMMARY

Introduction

The Sydney Intermodal Terminal Alliance (SIMTA) received approval for the construction and operation of Stage 2 (the Project) of the Moorebank Precinct East (MPE) Project, which comprises the second stage of development under the MPE Concept Approval (MP10_0193) and approved under Development Approval SSD 7628.

SIMTA was the original applicant for Stage 1 (SSD 6766) and Stage 2 (SSD 7628), under the MPE Concept Approval. The applicant for the SSD 7628 has been updated to "The Trust Company Limited" (ACN 004 027 749). In 2022, LOGOS Property took over the management of the warehouse and distribution facilities, as well as the overall management of the Moorebank Intermodal East and West Precincts. In July 2024, ESR Group acquired the remaining interest in LOGOS, and overall management of the MIP East Precinct, is now the responsibility of ESR Australia & NZ (ESR). Qube Logistics will continue to maintain responsibility for the IMEX and the Rail Link.

The MPE site, including the Project site, is located approximately 27 km south-west of the Sydney Central Business District (CBD) and approximately 26 km west of Port Botany and includes the former Defence National Storage and Distribution Centre (DNSDC) site. The MPE site is situated within the Liverpool Local Government Area (LGA), in Sydney's Southwest subregion, approximately 2.5 km from the Liverpool City Centre.

The MPE Project involves the development of an intermodal facility including warehouse and distribution facilities, freight village (ancillary site and operational services), stormwater infrastructure, landscaping, servicing and associated works on the eastern side of Moorebank Avenue. Stage 2 of the MPE Project (MPES2) involves the construction and operation of warehousing and distribution facilities on the MPE site and upgrades to approximately 2.1 kilometres of Moorebank Avenue.

Water during construction will be managed in accordance with the currently approved Construction Environmental Management Plan (CEMP) and will be discharged into the sediment (SED) Basins and into Anzac Creek (via DP5 and DP7).

It was also considered likely that runoff from some areas of the MPES2 site would be collected by a vegetated dam situated within Commonwealth Department of Defence land. Flow from this dam enters Anzac Creek upstream of Site AQ14 via a culvert.

A Baseline Aquatic Ecological Monitoring Program (BAEMP) was developed by Biosis Pty Ltd for Arcadis in March 2018, to address CoC B106. The purpose of the BAEMP was to establish baseline stream health and water quality conditions within selected sites along Anzac Creek prior to commencement of Early Works. This was undertaken in autumn 2018. Construction activities commenced soon after.

The baseline monitoring forms the basis for the ongoing Biodiversity Monitoring Strategy (BMS) to assess stream health in accordance with CoC B106, to determine any change in stream health or water quality throughout the life of the Project and to ascertain whether these changes can be attributed to the Project works. The BMS outlines monitoring requirements and includes the Stormwater Monitoring Strategy required by CoC B43 and B44.

BIO-ANALYSIS Pty Ltd was commissioned by Arcadis on behalf of Tactical Group to assess stream health and water quality at six monitoring sites along Anzac Creek (the Study Area) in spring 2024, in accordance with the BMS.

Methods

The BMS focusses on four main indicators: i) aquatic habitat, including riparian habitat, aquatic macrophytes and fish habitat; ii) surface water quality and sediment characteristics; iii) aquatic macroinvertebrates sampled using the Australian River Assessment System (AUSRIVAS) protocol; and iv) fish sampled using a backpack electro-fisher.

The primary aim of monitoring is to determine whether any change in stream health or water quality occur throughout the life of the MPE Project in accordance with the BMS and to ascertain whether these changes can be attributed to the Project works. Should an indicator variable deteriorate below the range for its baseline value, a stream health investigation protocol is to be initiated under the BAEMPs Adaptive Management Plan.

The sampling design included six sites (approximately 100 m in length). Site AQ1 is situated upstream of the MPE Project. Sites AQ4, AQ8, AQ12, AQ13 and AQ14 are situated at increasing distances downstream of the MPE Project. Stream health monitoring is to be done on two occasions within each of autumn and spring.

The results of the spring 2024 monitoring event were compared with those obtained in autumn 2018 (baseline), spring 2018, autumn and spring 2019, autumn and spring 2020, autumn and spring 2021, autumn and spring 2022, autumn and spring 2023 and autumn 2024 (during construction).

Results

This report presents the results of i) spring 2024 surveys 1 and 2 and ii) comparisons of the findings of the current survey with the Baseline survey (autumn 2018) and subsequent surveys done each autumn and spring.

Within the current reporting period (spring 2024), no construction discharges occurred. Extensive cover by vegetation within the riparian zone and stream channel contribute stability to the refuge pool and the majority of Anzac Creek.

Concentrations of lead in sediments collected at Site AQ1 (range = 21 to 130 mg/kg) continue to exceed the guideline value (50 mg/kg), including at the time of the baseline (91 mg/kg) survey. Copper, nickel and zinc have occasionally exceeded guideline values, but total petroleum hydrocarbons and poly-fluoroalkyl substances (e.g. PFAS and PFOS), continue to comply. Site AQ1 is situated upstream of potential inputs from the Project, so no additional testing at this site is considered necessary.

Reduced dissolved oxygen levels, elevated nitrogen, aluminium and copper measured at the refuge pool (Site AQ12), including prior to commencement of the Project, have consistently suggested that aquatic habitat and biota within Anzac Creek are influenced by various types of anthropogenic disturbance. Importantly, the data collected to date indicate that there has been no further degradation of water quality since the Project related construction work began.

Over the course of the monitoring programme, the diversity of aquatic macroinvertebrates, Australian River Assessment System (AUSRIVAS) and Stream Invertebrate Grade Number Average Level (SIGNAL2) scores have been relatively low, indicating that the aquatic macroinvertebrate fauna have experienced one or more forms of human impact. Despite this, some pollution tolerant taxa have commonly been identified, including dragonfly, caddis fly and mayfly families. Importantly, comparison of the AUSRIVAS and SIGNAL2 scores between the baseline and construction phase continue to indicate an overall stability in aquatic health.

Altogether, ten species of fish have been collected from within the refuge pool: three native species of gudgeon, two native species of eel, one native galaxiid species, one native cat-fish species and three introduced species (Gambusia, Goldfish and Oriental weatherloach), confirming that the creek does provide some habitat for native species of fish. All of the species caught are common within NSW. No threatened species of fish listed under the *NSW Fisheries Management Act, 1994* or the *Environment Protection and Biodiversity Conservation Act, 1999* have been recorded.

Conclusions

Examination of the results from the spring 2024 monitoring event found no evidence of changes in the indicator variables (bed and bank stability, surface water and sediment quality, assemblages of aquatic macroinvertebrates and fish) that could be attributed to the Project works. Thus, in accordance with the Biodiversity Monitoring Strategy, no adaptive management contingency measure was triggered.

Recommendations

It is recommended that the stream health monitoring programme is continued using the methods employed for baseline and operation phase surveys, to ensure continuity of the program. In addition, it is recommended that Land Managers focus on containment and on-going suppression of the Alligator Weed infestation at Site AQ1 and downstream habitats, and the aquarium plant, Egeria, detected within the refuge pool at Site AQ12. Signage and public information at popular points of entry by the public to the creek and other local waterways may reduce the chance of unintentional human-assisted introductions (e.g. by using live bait, or by being released by aquaria) of aquatic plants and fish.

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1.0 INTRODUCTION

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The MPE Project involves the development of an intermodal facility including warehouse and distribution facilities, freight village (ancillary site and operational services), stormwater infrastructure, landscaping, servicing and associated works on the eastern side of Moorebank Avenue. Stage 2 of the MPE Project involves the construction and operation of warehousing and distribution facilities on the MPE site and upgrades to approximately 2.1 kilometres of Moorebank Avenue. Warehouses 1, 3, 4, 5, 7a and 7b are now operational. The next warehouse to be constructed is WH2, which is currently planned for Q4 2025. Water during construction will continue to be managed in accordance with the currently approved CEMP and will be discharged into the sediment (SED) Basins and discharged into Anzac Creek (via DP5 and DP7).

BIO-ANALYSIS Pty Ltd has been commissioned by Arcadis on behalf of Tactical Group to assess stream health and water quality along Anzac Creek (the Study Area) in spring 2024.

Monitoring is to be done in accordance with a Biodiversity Monitoring Strategy (BMS) developed by Biosis (2018) to satisfy the Minister's Conditions of Consent (CoC) B106. The BMS also includes the Stormwater Monitoring Strategy required by CoC B43 and B44.

The primary aim of monitoring is to determine whether any change in stream health or water quality occur throughout the life of the MPE Stage 2 (MPES2) Project in accordance with the BMS and to ascertain whether these changes can be attributed to the Project works. Sampling commenced in autumn 2018 (Biosis, 2018).

2.0 METHODS

2.1 Study Area

Anzac Creek is a small tributary of the Georges River and lies entirely within the Liverpool Local Government Area. The catchment covers an area of approximately 10.6 km^2 (Figure 1).

The headwaters of Anzac Creek lie within the Commonwealth Department of Defence Lands in Moorebank. The creek is approximately 4 km long and highly urbanised: it flows past the suburb of Wattle Grove, underneath the M5 and Heathcote Road intersection, through the Moorebank Industrial Area and underneath Newbridge Road.

While predominantly ephemeral, Anzac Creek has been noted to hold permanent water in isolated pools (Arcadis, 2016). An unnamed first order tributary of Anzac Creek flows from south to north along the eastern boundary of the MPE Project area (GHD, 2016).

Surface water from the MPES2 site was expected to enter Anzac Creek as a licensed discharge between Site AQ4 and AQ8 (Figure 1). It was also considered likely that runoff from some areas of the MPES2 site would be collected by a vegetated dam situated within Commonwealth Department of Defence land (Biosis, 2018). Flow from this dam enters Anzac Creek upstream of Site AQ14 via a culvert (Figure 1).

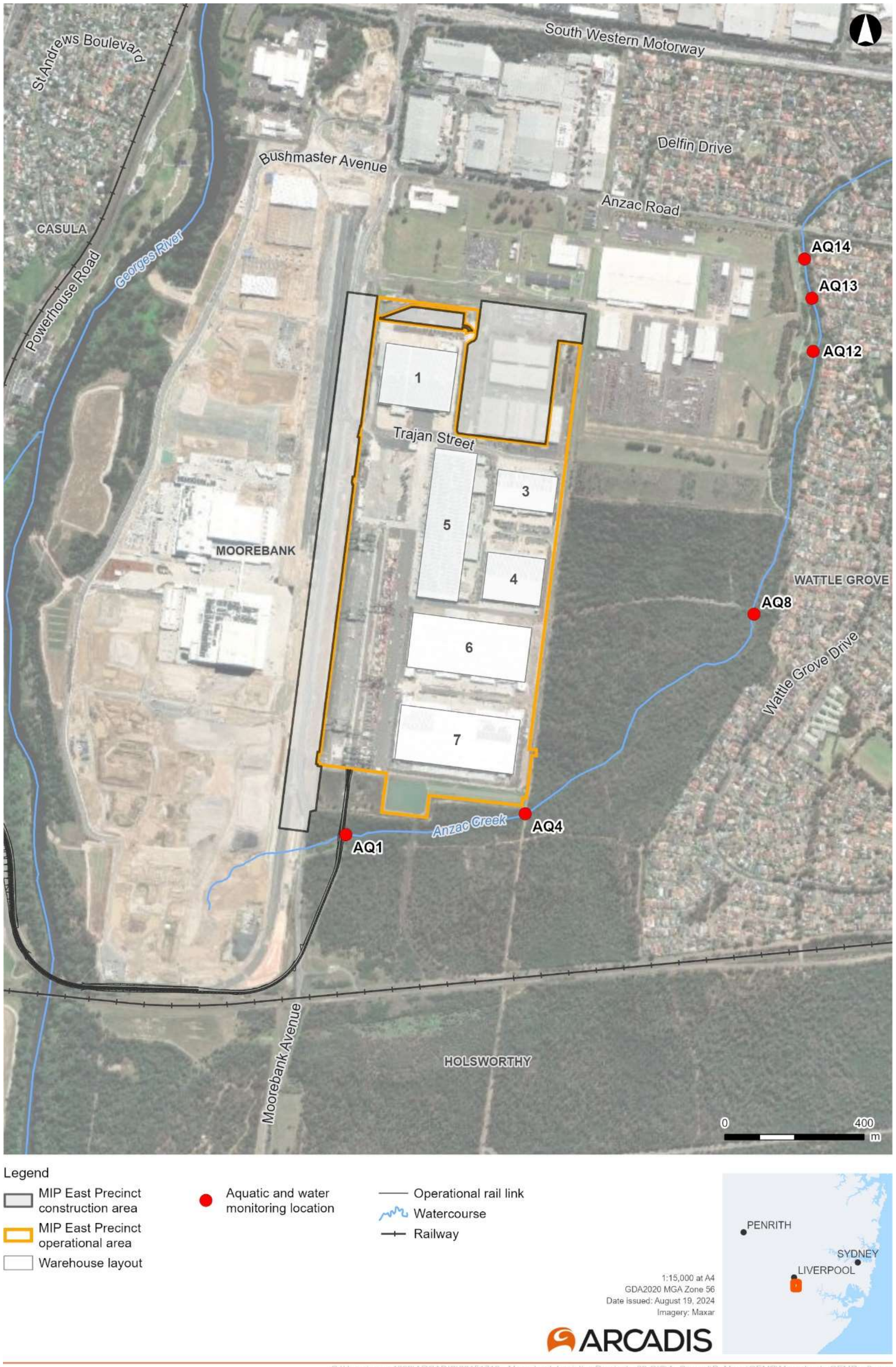

Figure 1. Project Location

2.2 Sampling Dates

The dates and phases of the stream health monitoring program for the MPES2 Project are outlined in Table 1.

Table 1. Date and information on aquatic ecology monitoring completed for the Project.

Project Phase	Event	Dates	Comments
Baseline	Autumn 2018	12&19 April 2018	Only one Baseline survey was able to be sampled in autumn 2018, due to the May 2018 bushfire.
Construction	Spring 2018	6&12 December 2018	
Construction	Autumn 2019	14&30 May 2019	Construction of culvert upstream of Site AQ1 largely completed on 30 May 2019. Site AQ12 was inaccessible to undertake Survey 2 due to restricted access.
Construction	Spring 2019	24 September 2019 21 November 2019	Warehouses 3 and 4 under construction. Moorebank Ave upgrade works ongoing.
Construction /Operation	Autumn 2020	25 May 2020 2 September 2020	Sampling required for the autumn 2020 survey season was unable to commence until late May 2020 due to COVID-19 related delays. The second survey was further delayed due to the time taken to receive parts required to repair the Electrofisher. Warehouses 3 and 4 were operational whilst Warehouse 5 was under construction. Moorebank Ave upgrade works ongoing.
Construction /Operation	Spring 2020	11&30 November 2020	Warehouses 3, 4 and 5 were operational. No further warehouses were being constructed at the time of monitoring
Construction /Operation	Autumn 2021	28 April 2021 11 June 2021	Warehouses 3, 4 and 5 are now operational and the location of Warehouses 6-8 have been left as compacted pads. Any water sheets off into the SED Basin and discharges into ANZAC Creek (via DP5 and DP7). No warehouses were being constructed at the time of monitoring.
Construction /Operation	Spring 2021	21 September 2021 8 November 2021	As above
Construction /Operation	Autumn 2022	5 & 31 May 2022	As above
Construction /Operation	Spring 2022	10 October 2022 30 November 2022	Following a redesign of MPE, only Warehouses 6 and 7 will be constructed within the area designated for Warehouses 6-8. Warehouse 8 will no longer be constructed. Warehouses 6&7 earthworks commenced on 9/06/22.
Construction /Operation	Autumn 2023	18 May & 3 July 2023	Warehouses 6&7 earthworks completed. It is expected that these warehouses will become operational in Q3 of 2023.

Table 2. (Cont'd)

Project Phase	Event	Dates	Comments
Construction /Operation	Spring 2023	20 September & 15 November 2023	Warehouse 7a is now operational. Operation of Warehouse 6 and 7b are expected to commence in Quarter 4 of 2023 and Quarter 2 2024.
Construction /Operation	Autumn 2024	8 & 28 May 2024	Operation of Warehouse 7b and 7a and 6 commenced in Quarter 4 of 2023 and Quarter 3 2024, respectively. The final warehouse to be constructed is WH2, likely to occur in late 2025.
Construction /Operation	Spring 2024	24 September & 19 November 2024	The final warehouse to be constructed is WH2, likely to occur in Q4 2025.

2.3 Performance Measures and Indicators

No instream or riparian works are being undertaken as part of the Project. Alteration to hydrology (increased stormwater inputs from both the stormwater network and surface flows from increases in non-permeable surfaces) and earthworks that have the potential to mobilise sediments into Anzac Creek were identified as potential impacts associated with the construction phase of the project (Biosis, 2018).

Biosis (2018) indicated that increased stormwater inputs to Anzac Creek could result in:

- Bed and bank scour as a result of increased volume and velocity of water during rainfall events;
- Alterations in vegetation structure as a result of altered hydrological regime;
- Introduction of sediments and pollutants via stormwater, with common pollutants including nitrogen, phosphorous, copper, aluminium and zinc.

Water Sensitive Urban Design (WSUD) measures such as onsite detention basins and rainwater gardens were incorporated into designs for the Project to mitigate impacts. A key outcome of this monitoring program was to determine whether these measures functioned as intended. Six monitoring sites (Sites AQ1, AQ4, AQ8, AQ12, AQ13 and AQ14 (Figure 1) are to be assessed in accordance with the BMS to satisfy the CoC B43, B44 and B106 (Table 2). The assessment types to be applied at each site are outlined in Table 2.

Should an indicator variable deteriorate below the range for its baseline value, a stream health investigation protocol is to be initiated under the BAEMPs Adaptive Management (Table 3).

Baseline values are presented in Table 4, Table 5 and Table 6 (Results).

Table 3. Assessment types recommended for each monitoring site (Biosis, 2018).

Assessment Type	Assessment Protocol/ Indicator Variable	AQ1	AQ4	AQ8	AQ12	AQ13	AQ14
Visual	DPI Classification	√	√	√	√	√	√
	NSW AUSRIVAS	√	√	√	√	√	√
	HABSCORE	√	√	√	√	√	√
	Ephemeral Stream Assessment	√	√	√	√	√	√
Surface Water & Sediment Quality Monitoring	*In situ* water quality				√		
	Nutrient, dissolved metal & PFAS				√		
	Sediment & PFAS	√	√				√
Aquatic Macroinvertebrates	NSW AUSRIVAS & Signal2				√		
Fish	Assemblage structure				√		

Table 4. Indicator variables and adaptive management contingency measures.

Result	Potential Problem	Contingency measure
Increases in results of water quality parameters	Introduction or exacerbation of pollutants entering Anzac Creek.	Identify source and undertake corrective measures.
Reduction in results of biological monitoring	Subtle effects of construction and operation are influencing stream health within Anzac Creek.	Identify components causing decline. Assess feasibility of suitable corrective actions. If corrective measures can be implemented, these aspects are to be the focus of future monitoring. If corrective measures cannot be implemented, regulatory authority to be notified of change.
Increase scour of bed and banks of waterways	Reduction in bed and bank stability or loss of instream vegetation.	Identify point source/s of increased flow velocities or changes in stream hydraulics and discuss with project engineers to determine best methods for flow reduction or rectification of stream hydraulics

2.4 Field Methods

To fulfil the requirements of the BMS, monitoring is to be undertaken at 6 sites along Anzac Creek (Figure 1) four times annually during the pre-construction and construction phases of the Project, with the frequency reduced to twice annually during the operational phase of the Project. Surveys should take place during autumn and spring (Biosis, 2018). Sites are to be assessed using the methods outlined below, in accordance with Table 2.

2.4.1 Visual Stream Assessments

A visual assessment was undertaken at each site regardless of the availability of aquatic habitat (i.e. wet or dry). The condition of aquatic habitat at each site was assessed according to the *NSW Department of Primary Industries Policy and Guidelines for Fish Habitat Conservation and Management* (DPI NSW, 2013). The two key indices were habitat *type* and *class*.

Information on stream characteristics was recorded at each site in accordance with the New South Wales (NSW) Australian River Assessment System (AUSRIVAS) protocol (Turak et al., 2004). Characteristics recorded included a visual assessment of surrounding landforms, instream features, presence, extent and type of aquatic vegetation, stream substratum, potential areas of refuge during low flow periods, presence of fish habitat, presence of barriers to fish movement, indicators of point source and diffuse pollution.

HABSCORE assessments were also completed at each site, based on the presence and condition of pool substratum characteristics, pool variability, channel flow status, bank vegetation and stability, width of riparian zone, and epifaunal substrate/cover. The *CSIRO Ephemeral Stream Assessment* guideline was also used to provide an assessment of the geomorphic integrity of each site and to identify the processes operating within each site.

Each site was photographed and the locations recorded with a hand-held GPS (satellite-based Global Positioning System).

2.4.2 Surface Water Quality & Sediment Monitoring

Where sufficient amounts of water were present, *in situ* water quality was measured using a Yeo-Kal 618 probe. Physico-chemical properties measured included electrical conductivity (µS/cm), dissolved oxygen (% saturation and mg/L), pH (pH units), temperature (ºC) and turbidity (NTU). Three replicate measures of each variable were collected from just below the water surface at each site.

Alkalinity was also determined in the field at Site AQ12, using a CHEMetrics' total alkalinity field kit.

As required by the BMS, water chemical and sediment sampling were undertaken for a range of nutrients, metals and hydrocarbons:

- Total Phosphorus (surface water only);
- Total Kjeldahl Nitrogen (TKN) (Total Organic Nitrogen + Total Ammonia) (surface water only);
- Total Nitrogen (TKN + (Nitrate + Nitrite) (surface water only);
- Dissolved metals (standard 19 relevant to aquatic assessment) (surface water);
- Total metals (standard 19 relevant to aquatic assessment) (sediment only);
- Total petroleum hydrocarbons, BTEX (benzene, toluene, ethylbenzene, trimethylbenzenes and three xylene isomers) hydrocarbons;
- PFAS: Poly-fluoroalkyl substances (including Perfluorohexane sulfonate PFHxS).

Samples were sent to the National Measurement Institute (NMI) laboratory (a NATA accredited laboratory) for analysis.

Construction Discharges

Construction of the warehouses are now complete. No construction discharges occurred via DP5 or DP 7 within the reporting period (after December 2023) (as per communication with Tactical).

2.4.3 Aquatic Macroinvertebrates

Aquatic macroinvertebrates were required to be collected by the BMS at Site AQ12 (Biosis, 2018) using the NSW AUSRIVAS protocol (Turak et al., 2004). Biosis (2018) considered this large pool to provide reliable and valuable aquatic habitat. Stream edge habitats were sampled using a 250 µm dip net.

The contents of each net sample were placed into a white sorting tray and animals collected for a minimum period of 30 minutes. Thereafter, removals were done in 10-minute periods, up to a total of one hour (Turak et al., 2004). If no new taxa were found within a 10-minute period, removals ceased (Turak et al., 2004). The animals were collected and placed inside a labelled container and preserved with 70 % alcohol.

In the laboratory, taxa were identified to family level with the exception of Acarina (to order), Chironomidae (to sub-family), Nematoda (to phylum), Nemertea (to phylum), Oligochaeta (to class), Ostracoda (to subclass) and Polychaeta (to class). Some families of Anisoptera (dragonfly larvae) were identified to species, because they could potentially include threatened aquatic species.

2.4.4 Fish Community Survey

Fish sampling is done at Site AQ12 using a Smith Root LR-24 backpack electrofisher. The Electrofisher is used to stun fish in open water, around the edge of the pool, around snags and aquatic vegetation and any overhanging banks. All fish caught were identified and the length of up to 30 individuals of each species measured. Incidental observations such as evidence of disease were also noted before native fish species were returned to the water.

2.4.5 Data Analysis

Water quality measurements were used to assess health of the aquatic ecosystem by comparison with guideline values recommended by ANZECC[1] and ARMCANZ[2] (2000) for the protection of lowland streams (i.e. systems at < 150 m altitude) in south-east Australia.

[1] ANZECC – Australian and New Zealand Environment and Conservation Council
[2] ARMCANZ – Agriculture and Resource Management Council of Australia and New Zealand

For aquatic macroinvertebrates, data were analysed using the appropriate AUSRIVAS predictive models developed for NSW. The ecological health of a waterway was assessed by comparing the macroinvertebrates collected at a site (i.e. Observed) to those predicted to occur (Expected) as if the site was in an undisturbed or 'reference' condition.

The principal outputs of the AUSRIVAS model include:

- Observed to Expected ratio (OE50): the ratio of the number of macroinvertebrate families collected at a site which had a predicted probability of occurrence of greater than 50 % (i.e. Observed) to the sum of the probabilities of all of the families predicted with greater than a 50 % chance of occurrence (i.e. Expected) (Ransom et al., 2004);
- BAND: for each model, the OE50 taxa ratios were divided into bands representing different levels of impairment. Band X represents a more diverse assemblage of macroinvertebrates than control sites; Band A was considered equivalent to reference condition; Band B represents sites below reference condition (i.e. significantly impaired); Band C represents sites well below reference condition (i.e. severely impaired); and Band D represents impoverished sites (i.e. extremely impaired) (Ransom et al., 2004).

The SIGNAL2 biotic index (Stream Invertebrate Grade Number Average level) developed by Chessman (2003) was also used to give an indication of water quality at the sites sampled. The SIGNAL score for a macroinvertebrate sample was calculated by averaging the pollution sensitivity grade numbers of the families present, which may range from 10 (most sensitive) to 1 (most tolerant). The SIGNAL2 scores from samples collected between autumn 2018 and spring 2023 were presented graphically to provide an indication of changes over time.

2.4.6 Quality Assurance/Quality Control (QA/QC)

Data collected in the field were checked for accuracy and completeness before leaving each site. In the office, field data and other records were incorporated into appropriate excel data sheets and checked. Spreadsheets were locked prior to analysis to prevent accidental over-writes or corruption.

In the laboratory, macroinvertebrate samples were identified by an appropriately qualified staff member. Data for each sample were entered into an excel spreadsheet and then checked.

3.0 RESULTS

For the spring 2024 monitoring event, sites were sampled on 24 September 2024 (Survey 1) and 19 November 2024 (Survey 2). Each site was approximately 100 m in length with their GPS co-ordinates listed in Appendix A. Collections of fish and macroinvertebrates were completed in accordance with Section 37 of the *NSW Fisheries Management Act 1994* using Scientific Collection Permit Number FP23/124.

3.1 Aquatic Habitat Characteristics

The section of Anzac Creek within the study area was not mapped as Key Fish Habitat (KFH) under the NSW DPI Key Fish Habitat mapping for the Sydney LGA (DPI 2007; Appendix A). Nevertheless, this section of Anzac Creek is ranked as TYPE 1 KFH according to the DPI (2013) classification scheme due to the presence of native aquatic plants and snags. According to the waterway CLASS scheme, a permanent pool with freshwater aquatic vegetation situated at Site AQ12 is considered CLASS 2 KFH. The remaining reaches of Anzac Creek within the Study Area were considered to be CLASS 3 KFH despite the presence of aquatic vegetation, due to the ephemeral nature of any pools that were present (DPI, 2013).

Vegetation within the channel and banks of Anzac Creek has been classified as Parramatta Red Gum woodland in high condition (GHD, 2016).

Within the two months prior to the 2024 spring Survey 1 (24 September 2024) and 2024 autumn Survey 2 (19 November 2025), a total of 49.2 mm and 93.8 mm rainfall was recorded respectively by the meteorological station situated near Holsworthy Aerodrome AWS Rainfall Station (Station ID: 66161) (Figure 2).

All warehouses are now operational (except warehouse 2, which is proposed for Q4 2025). No construction discharges occurred within the reporting period.

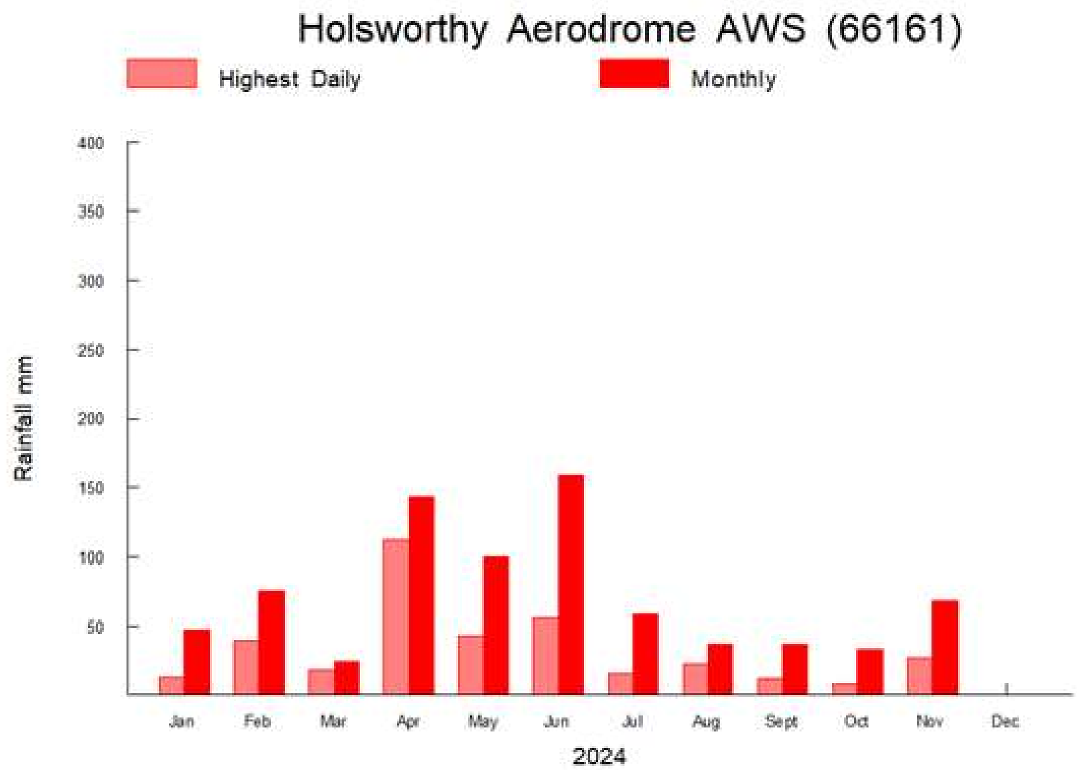

Figure 2. Rainfall (mm) measured at Holsworthy Aerodrome AWS Rainfall Station (66161) between 1 January and 31 November 2024.

Site AQ1

Site AQ1 was situated approximately 750 m downstream of the source of Anzac Creek (Figure 1), and approximately 100 m downstream of a culvert built across Anzac Creek as part of the MPE Stage 1 project. The culvert is composed of box culverts to a length of 15 m and supports one rail track and a maintenance access footway. Construction of the culvert was completed by CPB and handed over to the proponent, Qube Holdings Limited, in July 2019.

There was no flowing water at the time of the spring 2024 surveys, although the channel was almost full-to-bank (up to approximately 0.4 m deep) at the time of the second survey (Plates 1&2). The active channel zone at this site remains stable (i.e., no signs of active erosion), due to the absence of flow, cover of aquatic plants and the relatively intact woody riparian vegetation (Appendix 2). The channel bed consisted of fine sediment, the upper layers of which were anoxic.

There has been a notable increase in cover of the introduced wetland shrub, *Ludwigia peruviana* (Ludwigia), on either side of the stream channel since autumn 2024 (Plate 2). This plant is an introduced, fast-growing wetland shrub that grows to 3 m tall. Slender knotweed (*Persicaria decipiens*) occupied a large proportion of the stream channel and Alligator Weed (*Alternanthera philoxeroides*) is still common, particularly at the time of the second survey (Plates 1&2). Native plant species included Marsh Club-rush (*Bolboschoenus fluviatilis*), Typha (*Typha* sp.), and *Myriophyllum variifolium*. The tree canopy was mostly comprised of *Melaleuca* spp. and *Eucalyptus* spp. (Plates 1&2).

Plate 1: AQ1 – View downstream (24/09/24)

Plate 2: AQ1 – View upstream (19/11/24)

Site AQ4

Site AQ4 was situated approximately 400 m downstream of Site AQ1 (Figure 1).

The stream channel at Site AQ4 has occasionally been dry, including at the time of the Baseline survey (i.e. autumn 2018). Surface water (up to approximately 0.4 m deep) has mostly been present since the autumn 2020 surveys, although very shallow and there was no evidence of flow at the time of spring 2024 surveys (Plates 3&4).

Since the baseline survey, stands of the emergent macrophyte, Jointed Twig Rush (*Baumea articulata*) and Twig Rush (*Baumea rubiginosa*) have colonised a large proportion of the stream channel (Plates 3&4). Typha and Slender Knotweed were also present.

The active channel zone, composed of fine sediments, was up to approximately 4 m wide (Plates 3&4). No indicators of significant erosion were observed suggesting that Anzac Creek continues to be relatively stable at this site, particularly since colonisation by dense stands of emergent macrophytes and little flow along this section of the creek since spring 2022 (Plate 3&4, Appendix 2).


Plate 3: AQ4 – View across-stream (24/09/24)


Plate 4: AQ4 – View downstream (19/11/24)

Site AQ8

Site AQ8 was situated approximately 1 km downstream of Site AQ4 (Figure 1). At the time of Survey 2, surface water was present up to a depth of approximately 0.1 m deep in places.

Most notably, taller species of emergent macrophyte, including Tall Spikerush (*Eleocharis sphacelata*) and Jointed Twig Rush and have encroached upon habitat previously dominated by Heron Bristle Sedge (*Chorizandra cymbaria*) (Plates 5&6). Other shorter plants, including Frogsmouth (*Philydrum lanuginosum*), Slender Knotweed and the introduced species, Umbrella Sedge (*Cyperus eragrostis*) have also declined in abundance. Riparian vegetation continues to be dominated by *Casuarina* trees. Common Reed/Phragmites (*Phragmites australis*) and Typha were present at the downstream end of the site. Blackberry (*Rubus fruticosus*), which is listed as a weed of national significance, has increased its distribution at the upstream end of this site.

The stream channel at Site AQ8 (up to approximately 20 m wide) continues to be classified as stable, mostly due to the dense cover by emergent macrophytes in addition to a relatively intact, woody riparian zone (Appendix 2). Very little aquatic habitat was present within the study channel at the time of the spring 2024 surveys.

Plate 5: Site AQ8 – view upstream (24/09/24)

Plate 6: Site AQ8 – view downstream (19/11/24)

Site AQ12

Site AQ12 was situated approximately 750 km downstream of Site AQ8 (Figure 1). Similar to the findings of biodiversity surveys done since autumn 2018, a large pool (approximately 20 m wide) and a relatively diverse assemblage of aquatic plants, including submerged species, were present (Plates 7&8). The pool substratum was composed primarily of fine sediment with a considerable cover of detritus. Green filamentous macro-algae continues to be present and was relatively abundant at the time of the spring 2024 surveys.

Water level in the pool was up to approximately 0.7 m deep at the time of the second survey. Flow was apparent at the downstream end of the pool at the time of both surveys. Water clarity was considered good. Extensive cover of vegetation within the riparian zone contributes stability to the edges of the pool at Site AQ12. An area of active erosion has been apparent at the downstream end of the pool since autumn 2020, associated with heavy rainfall and bank overflows, including at the time of the spring 2024 surveys.

The submerged macrophyte, *Vallisneria* sp. (Ribbonweed), was common, in addition to Slender Knotweed and dense stands of Typha, Phragmites and Tall Spike Rush (Plate 7). *Nymphoides geminata* (Entire Marshwort), with mostly floating leaves continues to be abundant in areas close to the shore (Plates 7&8).

Also noted was the native perennial, *Utricularia* sp., which occurs on wet soil and in freshwater as terrestrial or aquatic species, and the small native fern, *Azolla*. Egeria (*Egeria densa*), which was collected close to the left-bank (facing downstream) of the pool in spring 2020, continues to be present. Riparian vegetation included Casuarina, Eucalyptus and Melaleuca trees and Spiny-head Mat-rush/Basket Grass (*Lomdandra longifolia*) (Plates 7&8).

Plate 7: Site AQ12 – view upstream (24/09/24)

Plate 8: Site AQ12 – view across stream (19/11/24)

Site AQ13

Site AQ13 was situated approximately 200 m downstream of Site AQ12 (Figure 1). This site was located approximately 150 m downstream from an overflow channel that enters the creek from Wattle Grove. Water to a depth of approximately 0.5 m was present at Site AQ13 at the time of the second survey and flow was apparent at the time of both surveys (Plates 9&10).

A large proportion of the stream channel and edges were colonised by Typha and Slender Knotweed. The aquatic weed, *Sagittaria platyphylla* (Sagittaria) continued to expand its distribution at the edges of the creek channel. River Clubrush (*Schoenoplectus validus*) was also common. The stream channel appeared stable (Appendix 2).

Plate 9: Site AQ13 – view upstream (24/09/24)

Plate 10: Site AQ13 – view downstream (19/11/24)

Site AQ14

Site AQ14 was situated approximately 150 m downstream of Site AQ13 and immediately downstream of the culvert that links the dam within Commonwealth Department of Defence land to Anzac Creek (Figure 1). Flow was apparent at the time of both autumn 2024 surveys (Plates 11&12).

Typha, Slender Knotweed, River Clubrush and Whorled Pennywort/Shield Pennywort continue to be common (Plates 11&12). Sagittaria continued to expand its distribution within the channel of the creek (Plates 11&12). This section of Anzac Creek remains mostly stable due to dense instream vegetation and vegetated banks (Appendix 2). Water visibility was 'good' at the time of both surveys (Plates 11&12).

Plate 11: Site AQ14 – view downstream (24/09/24)

Plate 12: Site AQ14 – view downstream (19/11/24)

3.2 Water & Sediment Characteristics

3.2.1 Water Quality

Physico-chemical measurements were collected at Site AQ12 in accordance with the requirements of the BMS (cf Biosis, 2018) and at sampling sites where sufficient water was present to submerge a water quality instrument probe. The data were compared to the default trigger values (DTVs) recommended by ANZECC/ARMCANZ (2000) for the protection of slightly disturbed lowland river ecosystems in southeast Australia (Table 4).

Results from the 2024 spring surveys 1 and 2 indicated that:

- Water temperature ranged between 13.8 to 28.8 °C;
- pH (range = 5.2 to 8.3) was within the recommended DTV at site AQ12 at the time of both surveys;
- Conductivity (range = 189 to 367 µS/cm) was within the recommended DTVs at all the sites sampled;
- Dissolved oxygen (DO) measurements (range = 29 to 99 % saturation) were below the lower DTV at all sites during Survey 1 and Survey 2, except Site AQ1 during Survey 2 (i.e. 99 %);
- Turbidity levels were within the recommended DTV at all sites during spring 2024 (range = 2.4 to 35.8 NTU);
- Concentrations of total phosphorous (range = <0.05 mg/L) were within the recommended DTV (0.05 mg/L) at Site AQ12;
- Total nitrogen (range = 0.30 – 1.20 mg/L) was above the upper DTV (0.5 mg/L) at Site AQ12 during Survey 1. Nitrogen levels have commonly exceeded the upper limit, including at the time of the baseline survey (see Table 4);
- Total Kjeldahl Nitrogen (TKN) (Total Organic Nitrogen + Ammonia) measured at AQ12 during both surveys was similar to the Total Nitrogen (TKN + (Nitrate + Nitrite) values, indicating that the source of nitrogen within the refuge pool was most likely organic (e.g. algae or decomposing plant material) rather than inorganic (e.g. fertilizer);
- A range of toxicants were also measured in the water between autumn 2018 (baseline) and spring 2024 (during construction) within the vicinity of Site AQ12 (Table 5&6) in accordance with the BMS (cf Biosis, 2018).

Results indicated that:

- Aluminium commonly exceeded the DTV (80 µg/L) (i.e. 15 of 24 surveys), including at the time of the baseline survey (260 µg/L), and at the time of the current survey (Spring 2024 Survey 1: 360 µg/L; Survey 2: 290 µg/L);
- Cadmium exceeded the DTV (0.4 µg/L) at Site AQ12 in autumn 2019 (Survey 1: 0.49 µg/L; Survey 2: 0.41 µg/L) and autumn 2021 Survey 1 (3.8 µg/L), but not subsequently;
- Copper has commonly exceeded the DTV (1.8 µg/L) (i.e. 15 of 24 surveys, including the baseline survey (2 µg/L) and spring 2024 (Survey 2: 2.6 µg/L);
- Zinc exceeded the DTV during autumn 2021 (Survey 2: 20 µg/L) and autumn 2023 (Survey 2: 53 µg/L) (Table 5);
- BTEX compounds and total recoverable hydrocarbons were not detected (Table 6);
- PFOA (perfluoro-octanoic acid) has been occasionally detected but has always been well within the recommended DTV, including at the time of the spring 2024 surveys (Table 6);
- PFOS has commonly been detected, including during spring 2024 (Survey 1: 0.093 µg/L; Survey 2: 0.039 µg/L) but continues to be within the recommended DTV (Table 6).

Table 5. Mean (± SE) physico-chemical water quality and nutrient values recorded at the time of the Baseline (autumn 2018, *n* = 1) and the spring 2024 (*n* = 3) surveys and the appropriate Default Trigger Values (DTV). Values highlighted in bold type indicate where results were outside the recommended DTV.

Indicator Variable	DTV*	Baseline[A]	Survey 1 (24/09/24)					
			AQ1	AQ4	AQ8	AQ12	AQ13	AQ14
Temperature °C (*n* =3)	-	-	I/A	I/A	I/A	19.0 (0.0)	15.5 (0.0)	13.8 (0.0)
pH (*n* =3)	**6.5-8.0**	7.01	I/A	I/A	I/A	6.8 (0.0)	6.9 (0.0)	7.0 (0.0)
Conductivity (µS/cm) (*n* = 3)	**125-2200**	354	I/A	I/A	I/A	320 (4.4)	367 (4.4)	274 (6.6)
Dissolved Oxygen (%) (*n* = 3)	**85-110**	**62**	I/A	I/A	I/A	**29.3** (0.7)	**57.4** (0.4)	**39.6** (0.0)
Turbidity (NTU) (*n* = 3)	**<50**	**91**	I/A	I/A	I/A	35.8 (0.7)	25.6 (0.4)	14.7 (0.0)
Alkalinity (mg/L) (*n* = 1)	-	-	N/R	N/R	N/R	16	N/R	N/R
Total Phosphorous (mg/L) (*n* = 1)	**0.05**	**0.58**	N/R	N/R	N/R	<0.01	N/R	N/R
Total Nitrogen (mg/L) (*n* = 1)	**0.5**	**8.2**	N/R	N/R	N/R	**1.20**	N/R	N/R
Total Kjeldahl (mg/L) (*n* = 1)	-	-	N/R	N/R	N/R	1.20	N/R	N/R
Indicator Variable	**DTV***	**Baseline[A]**	**Survey 2 (19/11/24)**					
			AQ1	**AQ4**	**AQ8**	**AQ12**	**AQ13**	**AQ14**
Temperature °C (*n* =3)	-	-	28.8 (0.0)	I/A	19.5 (0.0)	N/R	N/R	N/R
pH (*n* =3)	**6.5-8.0**	7.01	**5.2** (0.0)	I/A	**5.7** (0.0)	8.3 (0.0)	6.5 (0.0)	6.5 (0.0)
Conductivity (µS/cm) (*n* = 3)	**125-2200**	354	542 (0.0)	I/A	264 (0.0)	203 (0.9)	203 (0.9)	189 (0.3)
Dissolved Oxygen (%) (*n* = 3)	**85-110**	**62**	98.8 (0.1)	I/A	**60.0** (0.0)	**80.3** (0.3)	**70.3** (0.5)	**67.7** (0.3)
Turbidity (NTU) (*n* = 3)	**<50**	**91**	6.1 (0.1)	I/A	2.4 (0.0)	13.0 (0.3)	13.1 (0.5)	8.5 (0.3)
Alkalinity (mg/L) (*n* = 1)	-	-	N/R	N/R	N/R	10	N/R	N/R
Total Phosphorous (mg/L) (*n* = 1)	**0.05**	**0.58**	N/R	N/R	N/R	<0.05	N/R	N/R
Total Nitrogen (mg/L) (*n* = 1)	**0.5**	**8.2**	N/R	N/R	N/R	0.34	N/R	N/R
Total Kjeldahl (mg/L) (*n* = 1)	-	-	N/R	N/R	N/R	0.30	N/R	N/R

*ANZECC/ARMCANZ (2000) – slightly disturbed systems
[A] Baseline values for pH, conductivity, dissolved oxygen and turbidity were obtained from Site AQ12, whilst baseline data for phosphorous and total nitrogen were obtained from Site AQ11 (Biosis, 2018)
I/A: Insufficient Aquatic Habitat; N/R: Not Required; I/M: Instrument Malfunction. Samples were collected in the field and measured at the laboratory.

Table 6. **Summary of dissolved metal compound results for Site AQ12 between autumn 2018 (Baseline) and spring 2024 (*n* = 1).**

Indicator Variable	**DTV* (µg/L)**	**Baseline Site AQ11**	**Autumn 2019 Site AQ12**		**Spring 2019 Site AQ12**	
		April 2018	**14/05/19**	**30/05/19**	**24/09/19**	**21/11/19**
Aluminium pH >6.5	**80**	**260**	**150**	68	**2730**	**280**
Aluminium pH <6.5	**-**	**-**	**-**	-	**-**	-
Arsenic Total (µg/L)	**42**	<1	<1	<1	1.1	<1
Barium	**-**	2	55	34	21	32
Beryllium	**-**	<1	<1	<1	<1	<1
Boron	**680**	<50	20	17	14	14
Cadmium (µg/L)	**0.4**	<0.1	**0.49**	**0.41**	<0.1	<0.1
Chromium	**6**	<1	<1	<1	2.3	<1
Cobalt	**-**	<1	<1	<1	<1	<1
Copper (µg/L)	**1.8**	**2**	**2**	1.1	**3**	**2.3**
Iron	**-**	450	300	100	1650	900
Lead (µg/L)	**5.6**	<1	<1	<1	2.6	<1
Manganese	**2500**	3	33	6.2	60	47
Mercury (µg/L)	**1.9** [A]	<0.1	<0.1	<0.1	0.12	<0.1
Molybdenum	**-**	<1	<1	<1	<1	<1
Nickel (µg/L)	**13**	<1	<1	N/R	1.7	1.1
Selenium Total	**18**	<10	<2	<1	<1	<1
Strontium	**-**	52	120	120	73	53
Vanadium	**-**	<10	<1	<1	3.8	1.4
Zinc (µg/L)	**15**	<5	6.8	N/R	13	14

*ANZECC/ARMCANZ (2000) – slightly disturbed systems (90% species protection)
[A] = inorganic mercury; N/R: not recorded

Table 5 (Cont'd). Summary of dissolved metal compound results for Site AQ12 (*n* = 1).

Indicator Variable	DTV* (µg/L)	Baseline Site AQ11	Autumn 2020 Site AQ12		Spring 2020 Site AQ12	
		April 2018	25/05/20	2/09/20	11/11/20	30/11/20
Aluminium pH >6.5	**80**	**260**	**230**	70	**230**	**100**
Aluminium pH <6.5	-	-	-	-	-	-
Arsenic Total (µg/L)	**42**	<1	<1	<1	<1	<1
Barium	-	2	31	19	36	39
Beryllium	-	<1	<1	<1	<1	<1
Boron	**680**	<50	21	<5	32	31
Cadmium (µg/L)	**0.4**	<0.1	<0.1	<0.1	<0.1	<0.1
Chromium	**6**	<1	<1	<1	<1	<1
Cobalt	-	<1	<1	<1	<1	<1
Copper (µg/L)	**1.8**	**2**	**1.9**	<1	**2**	1.3
Iron	-	450	620	270	460	280
Lead (µg/L)	**5.6**	<1	1.5	<1	<1	<1
Manganese	**2500**	3	19	8.8	6.9	12
Mercury (µg/L)	**1.9** [A]	<0.1	<0.1	<0.1	<0.1	<0.1
Molybdenum	-	<1	1.3	<1	<1	1.1
Nickel (µg/L)	**13**	<1	1.1	<1	1.1	<1
Selenium Total	**18**	<10	<1	<1	<1	<1
Strontium	-	52	120	140	120	130
Vanadium	-	<10	<1	<1	<1	<1
Zinc (µg/L)	**15**	<5	8.5	3.6	5.7	2.9

*ANZECC/ARMCANZ (2000) – slightly disturbed systems (90% species protection)

[A] = inorganic mercury; N/R: not recorded

Table 5 (Cont'd). Summary of dissolved metal compound results for Site AQ12 (*n* = 1).

Indicator Variable	DTV* (µg/L)	Baseline Site AQ11	Autumn 2021 Site AQ12		Spring 2021 Site AQ12	
		April 2018	28/04/21[3]	11/06/21	21/9/21	8/11/21
Aluminium pH >6.5	**80**	**260**	**150**	**1260**	62	**200**
Aluminium pH <6.5	**-**	**-**				
Arsenic Total (µg/L)	**42**	<1	<1	<1	<1	<1
Barium	**-**	2	29	<1	31	13
Beryllium	**-**	<1	<1	<1	<1	<1
Boron	**680**	<50	20	10	20	15
Cadmium (µg/L)	**0.4**	<0.1	**3.8**	<0.1	<0.1	<0.1
Chromium	**6**	<1	<1	1.5	<1	<1
Cobalt	**-**	<1	<1	<1	<1	<1
Copper (µg/L)	**1.8**	**2**	**2.1**	**3.3**	1.7	**3.2**
Iron	**-**	450	160	420	150	180
Lead (µg/L)	**5.6**	<1	<1	<1	<1	<1
Manganese	**2500**	3	6.9	4.7	10	2
Mercury (µg/L)	**1.9 [A]**	<0.1	<0.1	<0.1	<0.1	0.15
Molybdenum	**-**	<1	<1	<1	<1	<1
Nickel (µg/L)	**13**	<1	1.1	<1	<1	<1
Selenium Total	**18**	<10	<1	<1	<1	<1
Strontium	**-**	52	130	46	110	40
Vanadium	**-**	<10	<1	2.7	<1	1.9
Zinc (µg/L)	**15**	<5	9	**20**	8.3	12

*ANZECC/ARMCANZ (2000) – slightly disturbed systems (90% species protection)

[A] = inorganic mercury; N/R: not recorded

[3] NB Data reported here for autumn 2021 Survey 1 and Survey 2 differ from those reported in the autumn 2021 report. Data had been entered incorrectly in the autumn 2021 report but have since been corrected.

Table 5 (Cont'd). Summary of dissolved metal compound results for Site AQ12 (*n* = 1).

Indicator Variable	DTV* (µg/L)	Baseline Site AQ11	Autumn 2022 Site AQ12		Spring 2022 Site AQ12	
		April 2018	5/05/22	31/05/22	10/10/2022	30/11/2022
Aluminium pH >6.5	**80**	**260**		**200**	**1400**	**93**
Aluminium pH <6.5	**-**	**-**	70			
Arsenic Total (µg/L)	**42**	<1	<1	<1	<1	<1
Barium	**-**	2	18	19	15	28
Beryllium	**-**	<1	<1	<1	<1	<1
Boron	**680**	<50	21	18	26	29
Cadmium (µg/L)	**0.4**	<0.1	<0.1	0.13	<0.1	<0.1
Chromium	**6**	<1	<1	<1	1.1	<1
Cobalt	**-**	<1	<1	<1	<1	<1
Copper (µg/L)	**1.8**	**2**	1.4	1.5	**2.6**	<1
Iron	**-**	450	560	320	1500	350
Lead (µg/L)	**5.6**	<1	<1	<1	2.3	<1
Manganese	**2500**	3	99	5.9	9.1	16
Mercury (µg/L)	**1.9** [A]	<0.1	<0.1	<0.1	<0.1	<0.1
Molybdenum	**-**	<1	<1	<1	<1	<1
Nickel (µg/L)	**13**	<1	<1	<1	<1	<1
Selenium Total	**18**	<10	<1	<1	<1	<1
Strontium	**-**	52	93	56	35	99
Vanadium	**-**	<10	<1	<1	2.2	<1
Zinc (µg/L)	**15**	<5	8	6.7	12	5.2

*ANZECC/ARMCANZ (2000) – slightly disturbed systems (90% species protection)
[A] = inorganic mercury; N/R: not recorded

Table 5 (Cont'd). Summary of dissolved metal compound results for Site AQ12 (*n* = 1).

Indicator Variable (µg/L)	DTV*(µg/L)	Baseline Site AQ11	Autumn 2023 Site AQ12		Spring 2023 Site AQ12	
		April 2018	18/05/23	3/07/23	20/09/23	15/11/23
Aluminium pH >6.5	**80**	**260**	37	**160**	30	42
Aluminium pH <6.5	**-**	**-**				
Arsenic Total (µg/L)	**42**	<1	<1	<1	<1	<1
Barium	**-**	2	19	21	20	12
Beryllium	**-**	<1	<1	<1	<1	<1
Boron	**680**	<50	19	22	19	24
Cadmium (µg/L)	**0.4**	<0.1	0.25	0.27	<0.1	<0.1
Chromium	**6**	<1	<1	<1	<1	<1
Cobalt	**-**	<1	<1	<1	<1	<1
Copper (µg/L)	**1.8**	**2**	1.7	**2.5**	**2.7**	**2.5**
Iron	**-**	450	220	400	170	120
Lead (µg/L)	**5.6**	<1	<1	<1	<1	<1
Manganese	**2500**	3	20	40	120	11
Mercury (µg/L)	**1.9** [A]	<0.1	<0.1	<0.1	<0.1	<0.1
Molybdenum	**-**	<1	<1	<1	<1	<1
Nickel (µg/L)	**13**	<1	<1	<1	<1	<1
Selenium Total	**18**	<10	<1	<1	<1	<1
Strontium	**-**	52	67	88	74	66
Vanadium	**-**	<10	<1	<1	<1	<1
Zinc (µg/L)	**15**	<5	13	**53**	11	2

*ANZECC/ARMCANZ (2000) – slightly disturbed systems (90% species protection)

[A] = inorganic mercury; N/R: not recorded

Table 5 (Cont'd). Summary of dissolved metal compound results for Site AQ12 (*n* = 1).

Indicator Variable (µg/L)	DTV*(µg/L)	Baseline Site AQ11	Autumn 2024 Site AQ12		Spring 2024 Site AQ12	
		April 2018	8/05/24	28/05/24	24/09/24	19/11/24
Aluminium pH >6.5	**80**	**260**	37	**170**	**360**	**290**
Aluminium pH <6.5	**-**	**-**				
Arsenic Total (µg/L)	**42**	<1	<1	<1	<1	<1
Barium	**-**	2	23	18	32	18
Beryllium	**-**	<1	<1	<1	<1	<1
Boron	**680**	<50	38	32	32	25
Cadmium (µg/L)	**0.4**	<0.1	<0.1	<0.1	<0.1	<0.1
Chromium	**6**	<1	<1	<1	<1	<1
Cobalt	**-**	<1	<1	<1	<1	<1
Copper (µg/L)	**1.8**	**2**	1.4	1.1	1.4	**2.6**
Iron	**-**	450	310	420	1890	670
Lead (µg/L)	**5.6**	<1	<1	<1	<1	<1
Manganese	**2500**	3	5.2	19	95	36
Mercury (µg/L)	**1.9** [A]	<0.1	<0.1	<0.1	<0.1	<0.1
Molybdenum	**-**	<1	<1	<1	<1	<1
Nickel (µg/L)	**13**	<1	<1	<1	<1	<1
Selenium Total	**18**	<10	<1	<1	<1	<1
Strontium	**-**	52	78	82	94	58
Vanadium	**-**	<10	<1	<1	2.1	1.2
Zinc (µg/L)	**15**	<5	13	10	12	10

*ANZECC/ARMCANZ (2000) – slightly disturbed systems (90% species protection)
[A] = inorganic mercury; N/R: not recorded

Table 7. Summary of BTEX and perfluoronated compound results (*n* = 1).

Indicator Variable	DTV* (µg/L)	Baseline Site AQ11	Spring 2018 Site AQ12		Autumn 2019 Site AQ12	
		April 2018	6/12/18	12/12/18	14/05/19	30/05/19
BTEXN (µg/L)						
Benzene (µg/L)	**1300**	<1	<1	<1	<1	<1
Toluene (µg/L)	**-**	<2	<1	<1	<1	<1
Ethylbenzene (µg/L)	**-**	<2	<1	<1	<1	<1
Ortho-Xylene (µg/L)	**470**	<2	<1	<1	<1	<1
Perfluoronated Compounds (µg/L)						
PFHxS (µg/L)	**-**	0.02	0.02	0.12	0.039	0.039
PFOS (µg/L)	**0.13**	0.03	0.043	0.070	0.068	0.069
PFOA (µg/L)	**220**	<0.01	<0.01	0.011	0.011	0.010
Sum of PFHxS and PFOS	**-**	0.05	0.063	0.19	0.107	0.108
Sum of PFAS (WA DER List)[B]	**-**	0.05	0.128[C]	0.185[C]	0.188[C]	0.19[C]
Indicator Variable	**DTV* (µg/L)**	**Baseline Site AQ11**	**Spring 2019 Site AQ12**		**Autumn 2020 Site AQ12**	
		April 2018	**24/9/19**	**21/11/19**	**25/5/20**	**2/9/20**
BTEXN (µg/L)						
Benzene (µg/L)	**1300**	<1	<1	<1	<1	<1
Toluene (µg/L)	**-**	<2	<1	<1	<1	<1
Ethylbenzene (µg/L)	**-**	<2	<1	<1	<1	<1
Ortho-Xylene (µg/L)	**470**	<2	<1	<1	<1	<1
PFHxS (µg/L)	**-**	0.02	0.091	0.025	0.044	0.068
PFOS (µg/L)	**0.13**	0.03	0.084	0.057	0.055	0.076
PFOA (µg/L)	**220**	<0.01	<0.01	0.013	<0.01	<0.01
Sum of PFHxS and PFOS	**-**	0.05	0.175	0.082	0.099	0.144
Sum of PFAS (WA DER List)[B]	**-**	0.05	0.252[C]	0.164[C]	0.178[C]	0.219[C]

*BTEXN: ANZECC/ARMCANZ (2000) – slightly disturbed systems (90% species protection); PFAS suite: DEE (2016) – Freshwater (95 % species protection – slightly to moderately disturbed ecosystems).
[B] = PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTS and 8:2 FTS.
[C] For any site, where a value has been recorded as less than the detection limit, it was assigned a value of half the detection limit in order to calculate the mean (e.g. <0.02 taken as 0.01).

Table 6 (Cont'd).

Indicator Variable	DTV* (µg/L)	Baseline Site AQ11	Spring 2020 Site AQ12		Autumn 2021 Site AQ12	
		April 2018	11/11/20	30/11/20	28/04/21	11/06/21
Benzene (µg/L)	**1300**	<1	<1	<1	<1	<1
Toluene (µg/L)	**-**	<2	<1	<1	<1	<1
Ethylbenzene (µg/L)	**-**	<2	<1	<1	<1	<1
Ortho-Xylene (µg/L)	**470**	<2	<1	<1	<1	<1
PFHxS (µg/L)	**-**	0.02	0.026	0.041	0.065	0.011
PFOS (µg/L)	**0.13**	0.03	0.054	0.062	0.065	<0.02
PFOA (µg/L)	**220**	<0.01	0.005[C]	0.014	<0.01	<0.01
Sum of PFHxS and PFOS	**-**	0.05	0.080	0.103	0.13	0.021[C]
Sum of PFAS (WA DER List)[B]	**-**	0.05	0.151[C]	0.196[C]	0.222[C]	0.086[C]

Indicator Variable	DTV* (µg/L)	Baseline Site AQ11	Spring 2021 Site AQ12		Autumn 2022 Site AQ12	
		April 2018	21/9/21	8/11/21	5/05/22	31/05/22
BTEXN (µg/L)						
Benzene (µg/L)	**1300**	<1	<1	<1	<1	<1
Toluene (µg/L)	**-**	<2	<1	<1	<1	<1
Ethylbenzene (µg/L)	**-**	<2	<1	<1	<1	<1
Ortho-Xylene (µg/L)	**470**	<2	<1	<1	<1	<1
PFHxS (µg/L)	**-**	0.02	0.037	<0.01	0.044	0.039
PFOS (µg/L)	**0.13**	0.03	0.032	0.021	0.047	0.054
PFOA (µg/L)	**220**	<0.01	0.013	<0.01	<0.01	<0.01
Sum of PFHxS and PFOS	**-**	0.05	0.069	0.026[C]	0.091	0.093
Sum of PFAS (WA DER List)[B]	**-**	0.05	0.169[C]	0.091[C]	0.166	0.176

*BTEXN: ANZECC/ARMCANZ (2000) – slightly disturbed systems (90% species protection); PFAS suite: DEE (2016) – Freshwater (95 % species protection – slightly to moderately disturbed ecosystems).
[B] = PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTS and 8:2 FTS.
[C] For any site, where a value has been recorded as less than the detection limit, it was assigned a value of half the detection limit in order to calculate the mean (e.g. <0.02 taken as 0.01).

Table 6 (Cont'd).

Indicator Variable	DTV* (µg/L)	Baseline Site AQ11	Spring 2022 Site AQ12		Autumn 2023 Site AQ12	
		April 2018	30/10/22	30/11/22	18/05/2023	3/07/2023
Benzene (µg/L)	**1300**	<1	<1	<1	<1	<1
Toluene (µg/L)	**-**	<2	<1	<1	<1	<1
Ethylbenzene (µg/L)	**-**	<2	<1	<1	<1	<1
Ortho-Xylene (µg/L)	**470**	<2	<1	<1	<1	<1
PFHxS (µg/L)	**-**	0.02	0.031	0.026	0.028	0.020
PFOS (µg/L)	**0.13**	0.03	0.030	0.044	0.040	0.024
PFOA (µg/L)	**220**	<0.01	<0.01	<0.01	<0.01	<0.01
Sum of PFHxS and PFOS	**-**	0.05	0.061	0.070	0.068	0.044
Sum of PFAS (WA DER List)[B]	**-**	0.05	0.126[C]	0.135[C]	0.145	0.122
Indicator Variable	**DTV* (µg/L)**	**Baseline Site AQ11**	**Spring 2023 Site AQ12**		**Autumn 2024 Site AQ12**	
		April 2018	**20/09/23**	**15/11/23**	**8/5/24**	**28/5/24**
Benzene (µg/L)	**1300**	<1	<1	<1	<1	<1
Toluene (µg/L)	**-**	<2	<1	<1	<1	<1
Ethylbenzene (µg/L)	**-**	<2	<1	<1	<1	<1
Ortho-Xylene (µg/L)	**470**	<2	<1	<1	<1	<1
PFHxS (µg/L)	**-**	0.02	0.029	0.028	0.12	0.076
PFOS (µg/L)	**0.13**	0.03	0.031	0.032	0.094	0.061
PFOA (µg/L)	**220**	<0.01	<0.01	<0.01	<0.01	<0.01
Sum of PFHxS and PFOS	**-**	0.05	0.060	0.060	0.214	0.137
Sum of PFAS (WA DER List)[B]	**-**	0.05	0.154[C]	0.136[C]	0.309	0.217

*BTEXN: ANZECC/ARMCANZ (2000) – slightly disturbed systems (90% species protection); PFAS suite: DEE (2016) – Freshwater (95 % species protection – slightly to moderately disturbed ecosystems).
[B] = PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTS and 8:2 FTS.
[C] For any site, where a value has been recorded as less than the detection limit, it was assigned a value of half the detection limit in order to calculate the mean (e.g. <0.02 taken as 0.01).

Table 6 (Cont'd).

Indicator Variable	DTV* (µg/L)	Baseline Site AQ11	Spring 2024 Site AQ12			
		April 2018	24/09/24	19/11/24		
Benzene (µg/L)	**1300**	<1	<1	<1		
Toluene (µg/L)	**-**	<2	<1	<1		
Ethylbenzene (µg/L)	**-**	<2	<1	<1		
Ortho-Xylene (µg/L)	**470**	<2	<1	<1		
PFHxS (µg/L)	**-**	0.02	0.17	0.033		
PFOS (µg/L)	**0.13**	0.03	0.093	0.039		
PFOA (µg/L)	**220**	<0.01	0.015	<0.01		
Sum of PFHxS and PFOS	**-**	0.05	0.263	0.072		
Sum of PFAS (WA DER List)[B]	**-**	0.05	0.373[C]	0.153[C]		

Indicator Variable	DTV* (µg/L)	Baseline Site AQ11				
		April 2018				
Benzene (µg/L)	**1300**	<1				
Toluene (µg/L)	**-**	<2				
Ethylbenzene (µg/L)	**-**	<2				
Ortho-Xylene (µg/L)	**470**	<2				
PFHxS (µg/L)	**-**	0.02				
PFOS (µg/L)	**0.13**	0.03				
PFOA (µg/L)	**220**	<0.01				
Sum of PFHxS and PFOS	**-**	0.05				
Sum of PFAS (WA DER List)[B]	**-**	0.05				

*BTEXN: ANZECC/ARMCANZ (2000) – slightly disturbed systems (90% species protection); PFAS suite: DEE (2016) – Freshwater (95 % species protection – slightly to moderately disturbed ecosystems).
[B] = PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTS and 8:2 FTS.
[C] For any site, where a value has been recorded as less than the detection limit, it was assigned a value of half the detection limit in order to calculate the mean (e.g. <0.02 taken as 0.01).

3.2.2 Sediment Characteristics

Sediment samples were collected at Site AQ1, AQ4, AQ14 between autumn 2018 (baseline) and spring 2024 (during construction) (Table 7&8).

Results indicated that:

- Concentrations of lead measured at Site AQ1 (Survey 1: 100 mg/kg; Survey 2: 53 mg/kg) exceeded the guideline value (50 mg/L) on both sampling occasions within spring 2024. The majority (i.e. 17 of 19 times) of measurements of lead at AQ1 (range = 21 to 130 mg/kg) exceeded the threshold limit (50 mg/kg) detailed in the Interim Sediment Quality Guidelines (ISQG) (ANZECC/ARMCANZ 2000), including at the time of the baseline (91 mg/kg) survey (discussed further in Section 5.1);
- Nickel measured in sediments at Site AQ1 marginally exceeded the upper ANZECC/ARMCANZ (2000) guideline on one of two sampling occasions in spring 2022 (25 mg/kg), spring 2023 (26 mg/kg), autumn 2024 (27 mg/kg) and spring 2024 (24 mg/kg);
- Concentrations of lead (56 mg/kg), nickel (23 mg/kg) and zinc (220 mg/kg) measured at AQ4 marginally exceeded the ANZECC/ARMCANZ (2000) guideline levels during Survey 1 in autumn 2022 (Table 7), but not during spring 2024;
- Concentrations of measured at Site AQ14 have consistently been within the Baseline values;
- Concentrations of mercury measured at AQ1 exceeded the recommended trigger level during the autumn 2022 (Survey 1: <0.2 mg/kg; Survey 2: 0.29 mg/kg) but not subsequently, including during spring 2024 (Table 7);
- A spike in barium was detected at Site AQ14 in autumn 2019 (Survey 1: 902 mg/kg) but not subsequently. There are no guideline criteria for barium in sediments or water (ANZECC/ARMCANZ 2000);
- PFOS has consistently been detected at the sites sampled (range = <0.002 to 0.044 mg/kg) but concentrations continued to be below the recommended guideline value for Urban Residential/Public Open Spaces (32 mg/kg) as well as National Parks/Areas with High Ecological Values (6.6 mg/L);

- PFAS (range = <0.001 to 0.0483 mg/kg) measured at each site continues to be similar to baseline values and below the recommended guideline value for Urban Residential/Public Open Spaces (29 mg/kg) and National Parks/Areas with High Ecological Values (1.0 mg/L) (Tables 7&8).

Table 7. Mean (± SE) sediment metal results (mg/L) for surveys done between autumn 2018 (n = 1) and spring 2024 (n = 2).

Indicator Variable	Trigger Value*	Baseline (Autumn 2018)			Autumn 2019			Spring 2019		
		AQ1	AQ4	AQ14	AQ1	AQ4	AQ14	AQ1	AQ4	AQ14
Aluminium	**-**	-	-	-	26,800	24,300 (700)	2,295 (365)	-	-	-
Antimony	**-**	-	-	-	<0.5	<0.5 (0)	<0.5 (0)	-	-	-
Arsenic	**20**	<5	<5	<5	4	6 (0.9)	1 (0.2)	3.90 (0.6)	2.75 (0.5)	2.65 (0.3)
Barium	**-**	110	60	<10	100	66 (4.5)	455 (447)	135 (15)	76.5 (7.5)	29.5 (1.5)
Beryllium	**-**	<1	1	<1	0.96	1.2 (0.0)	<0.5 (0)	1.20 (0.1)	1.01 (0.1)	<0.5 (0.00)
Boron	**-**	<50	<50	<50	2.9	0.8 (0.3)	<1 (0)	<1.0 (0.0)	<1.0 (0.0)	<1.0 (0.0)
Cadmium	**1.5**	<1	<1	<1	<0.5	<0.5 (0)	<0.5 (0)	0.43[A] (0.2)	<0.5 (0.0)	<0.5 (0.0)
Chromium	**80**	23	21	3	21	23 (2.0)	3 (0.4)	21.0 (2.0)	13.5 (0.5)	6.3 (0.7)
Cobalt	**-**	8	6	<2	9	8 (1.9)	1 (0.1)	-	-	-
Copper	**65**	31	12	<5	28	11 (2.1)	2 (0.3)	30.0 (5.0)	6.1 (1.7)	9.0 (1.0)
Lead	**50**	**91**	44	<5	**72**	35 (0.0)	4 (0.2)	**78.0** (32.0)	21.5 (0.5)	12.0 (1.0)
Manganese	**-**	45	69	16	32	80 (2.0)	7 (0.8)	85.0 (55.0)	50.0 (15.0)	32.5 (12.5)
Mercury	**0.15**	<0.1	<0.1	<0.1	<0.2	<0.2 (0)	<0.2 (0)	<0.2 (0.0)	<0.2 (0.0)	<0.2 (0.0)
Molybdenum		-	-	-	2.2	1.0 (0.4)	<0.5 (0)	-	-	-
Nickel	**21**	14	9	<2	16	9 (0.0)	1 (0.0)	20.5 (0.5)	10.6 (1.4)	3.85 (0.2)
Selenium Total	**-**	<5	<5	<5	1	1 (0.0)	<0.5 (0)	2.65 (1.4)	1.59 (0.9)	0.63[A] (0.4)
Strontium	**-**	-	-	-	23	17 (4.5)	1 (0.1)	-	-	-
Vanadium	**-**	48	54	10	36	60 (9.5)	9 (0.9)	-	-	-
Zinc	**200**	93	96	17	100	64 (4.0)	14 (1.5)	119 (61.5)	29 (17.5)	74 (17.0)

***Interim Sediment Quality Guideline – Low (Trigger value) (ANZECC/ARMCANZ 2000)**

[A] For any site, where a value has been recorded as less than the detection limit, it was assigned a value of half the detection limit in order to calculate the mean (e.g. <0.02 taken as 0.01)

NB Aluminium, Antimony, Molybdenum, Strontium and Vanadium were not tested for by the Spring 2019 surveys because they were not required by the BMS (cf Biosis, 2018)

Table 7 (Cont'd).

Indicator Variable	Trigger Value*	Baseline (Autumn 2018)			Autumn 2020			Spring 2020		
		AQ1	AQ4	AQ1	AQ1	AQ4	AQ14	AQ1	AQ4	AQ14
Aluminium	**-**	-	-	-	-	-	-	-	-	-
Antimony	**-**	-	-	-	-	-	-	-	-	-
Arsenic	**20**	<5	<5	<5	1.90 (0.2)	3.4 (0.4)	5.1 (3.1)	1.90 (0.4)	3.4 (1.2)	2.4 (0.3)
Barium	**-**	110	60	<10	83 (15)	63.5 (3.5)	41.3 (31.7)	87.0 (33.0)	69.5 (9.5)	37.5 (9.5)
Beryllium	**-**	<1	1	<1	0.72 (0.1)	0.98 (0.0)	0.5 (0.3)	0.71 (0.2)	0.79 (0.1)	<0.5 (0.0)
Boron	**-**	<50	<50	<50	0.85 (0.4)	0.5 (0.0)	0.5 (0.0)	1.95 (0.4)	1.25 (0.2)	0.75
Cadmium	**1.5**	<1	<1	<1	0.25 (0.0)	0.25 (0.0)	0.3 (0.0)	<0.05 (0.0)	<0.5 (0.0)	1.0[B] (0.5)
Chromium	**80**	23	21	3	14.5 (0.5)	18.5 (0.5)	12.9 (8.2)	13.5 (3.5)	13.0 (0.0)	6.2 (0.3)
Cobalt	**-**	8	6	<2	-	-	-	-	-	-
Copper	**65**	31	12	<5	16.5 (0.5)	11.0 (2.0)	16.7 (12.3)	16.5 (6.5)	7.9 (0.2)	7.2 (1.2)
Lead	**50**	**91**	44	<5	**71** (5.0)	33.5 (3.5)	23.5 (15.6)	**53.5** (10.5)	26.0 (1.0)	11.5 (0.5)
Manganese	**-**	45	69	16	38.5 (0.5)	66.5 (10.5)	49.5 (38.5)	56.5 (16.5)	52.5 (4.5)	31.0 (3.0)
Mercury	**0.15**	<0.1	<0.1	<0.1	0.10 (0.0)	0.10 (0.0)	0.1 (0.0)	<0.2 (0.0)	<0.2 (0.0)	<0.2 (0.0)
Molybdenum		-	-	-	-	-	-	-	-	-
Nickel	**21**	14	9	<2	10.7 (1.3)	8.65 (0.5)	5.4 (3.3)	11.5 (2.6)	6.5 (0.5)	2.8 (0.6)
Selenium Total	**-**	<5	<5	<5	0.70 (0.0)	0.44 (0.2)	0.6 (0.4)	0.63[B] (0.4)	0.40[B] (0.2)	<0.5 (0.0)
Strontium	**-**	-	-	-	-	-	-	-	-	-
Vanadium	**-**	48	54	10	25 (1.0)	41 (2.0)	36.0 (21)	23 (5.0)	32 (5.5)	19.0 (1.0)
Zinc	**200**	93	96	17	78 (6.0)	144 (46.5)	111.0 (79)	86 (24)	58 (6.0)	45.5 (19.5)

***Interim Sediment Quality Guideline – Low (Trigger value) (ANZECC/ARMCANZ 2000**

[A] For any site, where a value has been recorded as less than the detection limit, it was assigned a value of half the detection limit in order to calculate the mean (eg. <0.02 taken as 0.01)

NB Aluminium, Antimony, Molybdenum, Strontium and Vanadium were not tested for by the Spring 2019 surveys because they were not required by the BMS (cf Biosis, 2018)

Table 7 (Cont'd).

Indicator Variable	Trigger Value*	Baseline (Autumn 2018)			Autumn 2021			Spring 2021		
		AQ1	AQ4	AQ1	AQ1	AQ4	AQ14	AQ1	AQ4	AQ14
Aluminium	**-**	-	-	-	-	-	-	-	-	-
Antimony	**-**	-	-	-	-	-	-	-	-	-
Arsenic	**20**	<5	<5	<5	3.65 (1.3)	6.10 (0.0)	4.30 (0.8)	14.55 (9.5)	3.5 (2.6)	2.85 (0.7)
Barium	**-**	110	60	<10	116.5(23.5)	99.5 (10.5)	68.0 (5.0)	74.5 (18.5)	48.0 (41.0)	84.5 (11.5)
Beryllium	**-**	<1	1	<1	1.20 (0.2)	0.87 (0.1)	0.50[A] (0.2)	0.81 (0.2)	0.38 (0.4)	0.44[A] (0.4)
Boron	**-**	<50	<50	<50	2.00 (0.9)	1.75[A] (1.3)	1.40[A] (0.9)	0.80[A] (0.3)	<1 (0.0)	0.95[A] (0.5)
Cadmium	**1.5**	<1	<1	<1	0.41[A] (0.2)	<0.5 (0.0)	<0.5 (0.0)	<0.5 (0.0)	<0.5 (0.0)	<0.5 (0.0)
Chromium	**80**	23	21	3	24 (7.0)	24.5 (1.5)	13.0 (2.0)	17.5 (0.5)	12.7 (10.3)	12.0 (1.0)
Cobalt	**-**	8	6	<2	-	-	-	-	-	-
Copper	**65**	31	12	<5	23 (8.0)	13.5 (1.5)	12.8 (3.3)	13.0 (2.0)	6.55 (5.5)	12.3 (2.8)
Lead	**50**	**91**	44	<5	**80** (50)	31.5 (2.5)	27.5 (7.5)	25.5 (4.5)	16.2 (12.9)	27.0 (7.0)
Manganese	**-**	45	69	16	28 (8)	150 (40)	46 (5)	95 (75)	57.1 (53)	27.5 (13.5)
Mercury	**0.15**	<0.1	<0.1	<0.1	<0.2 (0.0)	<0.2 (0.0)	<0.2 (0.0)	<0.2 (0.0)	<0.2 (0.0)	<0.2 (0.0)
Molybdenum		-	-	-	-	-	-	-	-	-
Nickel	**21**	14	9	<2	17.5 (3.5)	9.75 (2.3)	5.85 (1.4)	10.5 (3.6)	4.1 (3.4)	7.3 (2.8)
Selenium Total	**-**	<5	<5	<5	1.20 (0.00)	0.88 (0.00)	0.41 (0.2)	0.88 (0.3)	0.44 [A] (0.4)	1.18 [A] (0.9)
Strontium	**-**	-	-	-	-	-	-	-	-	-
Vanadium	**-**	48	54	10	10 (13)	56 (2.0)	31 (3.0)	34 (7.0)	32 (22.4)	26 (2.0)
Zinc	**200**	93	96	17	92 (68)	77 (14.0)	94.5 (35.5)	46 (22.0)	35 (28.2)	43 (16.0)

***Interim Sediment Quality Guideline – Low (Trigger value) (ANZECC/ARMCANZ 2000**

[A] For any site, where a value has been recorded as less than the detection limit, it was assigned a value of half the detection limit in order to calculate the mean (eg. <0.02 taken as 0.01)

NB Aluminium, Antimony, Molybdenum, Strontium and Vanadium were not tested for by the Spring 2019 surveys because they were not required by the BMS (cf Biosis, 2018)

Table 7 (Cont'd).

Indicator Variable	Trigger Value*	Baseline (Autumn 2018)			Autumn 2022 (5/5/22)			Autumn 2022 (31/5/22)		
		AQ1	AQ4	AQ1	AQ1	AQ4	AQ14	AQ1	AQ4	AQ14
Aluminium	**-**	-	-	-	-	-	-	-	-	-
Antimony	**-**	-	-	-	-	-	-	-	-	-
Arsenic	**20**	<5	<5	<5	4.3	10	6	2.9	3.6	4.6
Barium	**-**	110	60	<10	140	150	61	87	71	52
Beryllium	**-**	<1	1	<1	1.2	1.7	0.61	0.84	0.83	<0.5
Boron	**-**	<50	<50	<50	3.7	5	1.8	2	1.8	1
Cadmium	**1.5**	<1	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	**80**	23	21	3	23	49	11	17	20	9.9
Cobalt	**-**	8	6	<2	-	-	-	-	-	-
Copper	**65**	31	12	<5	24	32	14	19	14	13
Lead	**50**	**91**	44	<5	**54**	**56**	30	**55**	29	17
Manganese	**-**	45	69	16	28	320	66	25	110	41
Mercury	**0.15**	<0.1	<0.1	<0.1	<0.2	<0.2	<0.2	**0.29**	<0.2	<0.2
Molybdenum		-	-	-	-	-	-	-	-	-
Nickel	**21**	14	9	<2	17	**23**	5.1	13	8.8	4.2
Selenium Total	**-**	<5	<5	<5	3.4	3	1.3	1.1	0.68	0.57
Strontium	**-**	-	-	-	-	-	-	-	-	-
Vanadium	**-**	48	54	10	37	99	31	35	46	33
Zinc	**200**	93	96	17	48	**220**	73	76	96	56

***Interim Sediment Quality Guideline – Low (Trigger value) (ANZECC/ARMCANZ 2000**

[A] For any site, where a value has been recorded as less than the detection limit, it was assigned a value of half the detection limit in order to calculate the mean (eg. <0.02 taken as 0.01)

NB Aluminium, Antimony, Molybdenum, Strontium and Vanadium were not tested for by the Spring 2019 surveys because they were not required by the BMS (cf Biosis, 2018)

Table 7 (Cont'd).

Indicator Variable	Trigger Value*	Baseline (Autumn 2018)			Spring 2022 (10/10/22)			Spring 2022 (30/11/22)		
		AQ1	AQ4	AQ1	AQ1	AQ4	AQ14	AQ1	AQ4	AQ14
Aluminium	**-**	-	-	-	-	-	-	-	-	-
Antimony	**-**	-	-	-	-	-	-	-	-	-
Arsenic	**20**	<5	<5	<5	1.9	3.6	9.8	6.1	4.1	2.1
Barium	**-**	110	60	<10	100	80	61	110	61	71
Beryllium	**-**	<1	1	<1	0.86	1	1.2	1.1	1.2	0.65
Boron	**-**	<50	<50	<50	4.4	2.6	4.2	1.7	<1	<1
Cadmium	**1.5**	<1	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	**80**	23	21	3	19	24	22	56	14	7.3
Cobalt	**-**	8	6	<2	-	-	-	-	-	-
Copper	**65**	31	12	<5	20	15	25	36	6.7	5.4
Lead	**50**	**91**	44	<5	**79**	32	44	**62**	23	12
Manganese	**-**	45	69	16	57	130	62	53	78	74
Mercury	**0.15**	<0.1	<0.1	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Molybdenum		-	-	-	-	-	-	-	-	-
Nickel	**21**	14	9	<2	14	11	9.9	**25**	6.3	3.4
Selenium Total	**-**	<5	<5	<5	0.62	0.61	1.1	1	0.54	<0.5
Strontium	**-**	-	-	-	-	-	-	-	-	-
Vanadium	**-**	48	54	10	24	48	67	35	40	21
Zinc	**200**	93	96	17	93	110	160	84	45	23

***Interim Sediment Quality Guideline – Low (Trigger value) (ANZECC/ARMCANZ 2000**

[A] For any site, where a value has been recorded as less than the detection limit, it was assigned a value of half the detection limit in order to calculate the mean (eg. <0.02 taken as 0.01)

NB Aluminium, Antimony, Molybdenum, Strontium and Vanadium were not tested for by the Spring 2019 surveys because they were not required by the BMS (cf Biosis, 2018)

Table 7 (Cont'd).

Indicator Variable	Trigger Value*	Baseline (Autumn 2018)			Autumn 2023 (18/05/23)			Autumn 2023 (3/07/23)		
		AQ1	AQ4	AQ1	AQ1	AQ4	AQ14	AQ1	AQ4	AQ14
Aluminium	**-**	-	-	-	26700	24500	20600	-	-	-
Antimony	**-**	-	-	-	<0.5	<0.5	<0.5	-	-	-
Arsenic	**20**	<5	<5	<5	2.8	3.1	4.6	2.9	5.1	4.2
Barium	**-**	110	60	<10	88	70	92	100	42	54
Beryllium	**-**	<1	1	<1	0.91	0.81	0.99	0.9	0.59	0.63
Boron	**-**	<50	<50	<50	4.5	2.2	3	2.6	<1	<1
Cadmium	**1.5**	<1	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	**80**	23	21	3	19	20	19	15	18	15
Cobalt	**-**	8	6	<2	7.4	7.7	6.5	-	-	-
Copper	**65**	31	12	<5	22	12	18	17	9.6	16
Lead	**50**	**91**	44	<5	**120**	25	36	37	19	32
Manganese	**-**	45	69	16	38	91	130	23	90	44
Mercury	**0.15**	<0.1	<0.1	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Molybdenum		-	-	-	1.8	0.86	0.66	-	-	-
Nickel	**21**	14	9	<2	14	9.9	8.3	12	5.5	6.7
Selenium Total	**-**	<5	<5	<5	1.3	0.79	1.1	1.6	0.53	0.68
Strontium	**-**	-	-	-	28	19	9.5	-	-	-
Vanadium	**-**	48	54	10	33	39	43	26	43	34
Zinc	**200**	93	96	17	100	97	77	48	54	72

***Interim Sediment Quality Guideline – Low (Trigger value) (ANZECC/ARMCANZ 2000**

[A] For any site, where a value has been recorded as less than the detection limit, it was assigned a value of half the detection limit in order to calculate the mean (eg. <0.02 taken as 0.01)

NB Aluminium, Antimony, Molybdenum, Strontium and Vanadium were not tested for by the Spring 2019 surveys because they were not required by the BMS (cf Biosis, 2018)

Table 7 (Cont'd).

Indicator Variable	Trigger Value*	Baseline (Autumn 2018)			Spring 2023 (20/09/23)			Spring 2023 (15/11/23)		
		AQ1	AQ4	AQ1	AQ1	AQ4	AQ14	AQ1	AQ4	AQ14
Aluminium	**-**	-	-	-	-	-	-	-	-	-
Antimony	**-**	-	-	-	-	-	-	-	-	-
Arsenic	**20**	<5	<5	<5	8	3.8	2.3	3.7	3.7	4.3
Barium	**-**	110	60	<10	140	48	42	150	79	78
Beryllium	**-**	<1	1	<1	1.5	0.63	<0.5	1.3	1.2	1.3
Boron	**-**	<50	<50	<50	6.4	<1	<1	3.7	4.2	1.2
Cadmium	**1.5**	<1	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	**80**	23	21	3	30	14	6.8	31	22	12
Cobalt	**-**	8	6	<2	-	-	-	-	-	-
Copper	**65**	31	12	<5	**78**	8.7	4.5	24	19	10
Lead	**50**	**91**	44	<5	**94**	20	13	**87**	28	17
Manganese	**-**	45	69	16	95	54	42	31	130	55
Mercury	**0.15**	<0.1	<0.1	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Molybdenum		-	-	-	-	-	-	-	-	-
Nickel	**21**	14	9	<2	**26**	5.4	2.6	20	11	8.2
Selenium Total	**-**	<5	<5	<5	2.1	0.89	0.61	0.91	0.65	<0.5
Strontium	**-**	-	-	-	-	-	-	-	-	-
Vanadium	**-**	48	54	10	51	33	20	46	40	31
Zinc	**200**	93	96	17	**230**	52	24	150	120	60

***Interim Sediment Quality Guideline – Low (Trigger value) (ANZECC/ARMCANZ 2000**

[A] For any site, where a value has been recorded as less than the detection limit, it was assigned a value of half the detection limit in order to calculate the mean (eg. <0.02 taken as 0.01)

NB Aluminium, Antimony, Molybdenum, Strontium and Vanadium were not tested for by the Spring 2019 surveys because they were not required by the BMS (cf Biosis, 2018)

Table 7 (Cont'd).

Indicator Variable	Trigger Value*	Baseline (Autumn 2018)			Autumn 2024 (5/05/24)			Autumn 2024 (28/05/24)		
		AQ1	AQ4	AQ1	AQ1	AQ4	AQ14	AQ1	AQ4	AQ14
Aluminium	**-**	-	-	-	-	-	-	-	-	-
Antimony	**-**	-	-	-	-	-	-	-	-	-
Arsenic	**20**	<5	<5	<5	5.2	1.3	1.5	3.7	3.6	5.3
Barium	-	110	60	<10	150	51	14	130	99	63
Beryllium	-	<1	1	<1	1.4	0.97	<0.5	1.1	1.5	0.94
Boron	-	<50	<50	<50	4.6	1.1	1.2	<1	<1	<1
Cadmium	**1.5**	<1	<1	<1	0.52	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	**80**	23	21	3	31	10	4.7	25	20	18
Cobalt	-	8	6	<2	-	-	-	-	-	-
Copper	**65**	31	12	<5	52	4.3	5.2	30	10	19
Lead	**50**	**91**	44	<5	**100**	16	7.1	**73**	32	38
Manganese	-	45	69	16	63	37	27	48	110	55
Mercury	**0.15**	<0.1	<0.1	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Molybdenum		-	-	-	-	-	-	-	-	-
Nickel	**21**	14	9	<2	**27**	4.8	2.1	20	9.8	8.7
Selenium Total	-	<5	<5	<5	1.1	<0.5	<0.5	1.1	0.64	0.71
Strontium	-	-	-	-	-	-	-	-	-	-
Vanadium	-	48	54	10	49	20	12	39	42	43
Zinc	**200**	93	96	17	**200**	35	44	130	73	110

***Interim Sediment Quality Guideline – Low (Trigger value) (ANZECC/ARMCANZ 2000**

[A] For any site, where a value has been recorded as less than the detection limit, it was assigned a value of half the detection limit in order to calculate the mean (eg. <0.02 taken as 0.01)

NB Aluminium, Antimony, Molybdenum, Strontium and Vanadium were not tested for by the Spring 2019 surveys because they were not required by the BMS (cf Biosis, 2018)

Table 7 (Cont'd).

Indicator Variable	Trigger Value*	Baseline (Autumn 2018)			Spring 2024 (24/09/24)			Spring 2024 (19/11/24)		
		AQ1	AQ4	AQ1	AQ1	AQ4	AQ14	AQ1	AQ4	AQ14
Aluminium	**-**	-	-	-	-	-	-	-	-	-
Antimony	**-**	-	-	-	-	-	-	-	-	-
Arsenic	**20**	<5	<5	<5	5	11	2.2	4.6	1.1	4.7
Barium	**-**	110	60	<10	150	110	23	97	31	75
Beryllium	**-**	<1	1	<1	1.5	4.1	<0.5	0.85	<0.5	0.73
Boron	**-**	<50	<50	<50	6	1.7	<1	6	<1	<1
Cadmium	**1.5**	<1	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	**80**	23	21	3	32	32	6.5	16	8.1	17
Cobalt	**-**	8	6	<2	-	-	-	-	-	-
Copper	**65**	31	12	<5	33	5.8	5.4	56	4.9	11
Lead	**50**	**91**	44	<5	**100**	38	9.8	**53**	18	28
Manganese	**-**	45	69	16	46	110	32	67	51	68
Mercury	**0.15**	<0.1	<0.1	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Molybdenum		-	-	-	-	-	-	-	-	-
Nickel	**21**	14	9	<2	**24**	12	2.3	19	3.9	6.6
Selenium Total	**-**	<5	<5	<5	1.3	1.9	<0.5	0.87	<0.5	0.75
Strontium	**-**	-	-	-	-	-	-	-	-	-
Vanadium	**-**	48	54	10	46	80	18	34	16	47
Zinc	**200**	93	96	17	150	47	29	**230**	38	73

***Interim Sediment Quality Guideline – Low (Trigger value) (ANZECC/ARMCANZ 2000**

[A] For any site, where a value has been recorded as less than the detection limit, it was assigned a value of half the detection limit in order to calculate the mean (eg. <0.02 taken as 0.01)

NB Aluminium, Antimony, Molybdenum, Strontium and Vanadium were not tested for by the Spring 2019 surveys because they were not required by the BMS (cf Biosis, 2018)

Table 8. Mean (+ SE) sediment results for perfluoronated compounds between autumn 2018 (*n* = 1) and spring 2024 (*n* = 2).

Indicator Variable	Trigger Value*	Baseline (Autumn 2018)			Spring 2018			Autumn 2019		
		AQ1	AQ4	AQ14	AQ1	AQ4	AQ14	AQ1[C]	AQ4	AQ14
Perfluoronated compound (mg/kg)										
PFHxS	-	0.0036	0.0007	<0.0002	0.0023 (0.00)	<0.001 (0.00)	<0.001 (0.00)	0.0037	<0.001 (0.00)	<0.001 (0.00)
PFOS	32	0.0444	0.0061	0.0005	0.0310 (0.01)	0.0049 (0.00)	<0.002 (0.00)	0.0220	0.0085 (0.01)	<0.002 (0.00)
PFOA	29	-	-	-	<0.001 (0.00)	<0.001 (0.00)	<0.001 (0.00)	<0.001	<0.001 (0.00)	<0.001 (0.00)
Sum of PFHxS and PFOS	-	0.0480	0.0068	0.0005	0.0333 (0.01)	0.0055 [B] (0.00)	0.002 [B] (0.00)	0.0257	0.0090 [B] (0.01)	0.0015 [B] (0.00)
Sum of PFAS (WA DER List) [A,B]	-	0.0483	0.0068	0.0005	0.0369 [B] (0.01)	0.0096 [B] (0.00)	0.0058 [B] (0.00)	0.0329	0.0150 [B] (0.01)	0.0075 [B] (0.00)

Indicator Variable	Trigger Value*	Baseline (Autumn 2018)			Spring 2019			Autumn 2020		
		AQ1	AQ4	AQ14	AQ1	AQ4	AQ14	AQ1	AQ4	AQ14
Perfluoronated compound (mg/kg)										
PFHxS	-	0.0036	0.0007	<0.0002	0.0016 (0.00)	<0.001 (0.00)	<0.001 (0.00)	0.0005 (0.00)	0.0005 (0.00)	0.0005 (0.00)
PFOS	32	0.0444	0.0061	0.0005	0.0075 (0.01)	0.0062 (0.00)	0.0028 (0.00)	0.0115 (0.00)	0.0015 (0.00)	0.0052 (0.00)
PFOA	29	-	-	-	<0.001 (0.00)	<0.001 (0.00)	<0.001 (0.00)	<0.001 (0.00)	<0.001 (0.00)	<0.001 (0.00)
Sum of PFHxS and PFOS	-	0.0480	0.0068	0.0005	0.0231 (0.08)	0.0067 [B] (0.00)	0.0033[B] (0.00)	0.0120 (0.00)	0.0020 (0.00)	0.0057 (0.00)
Sum of PFAS (WA DER List) [A,B]	-	0.0483	0.0068	0.0005	0.0281 [B] (0.08)	0.0117 [B] (0.00	0.0083 [B] (0.00)	0.0170 (0.00)	0.0070 (0.00)	0.0107 (0.00)

*DEE (2016) - Urban residential/public open spaces

[A] = PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTS and 8:2 FTS

[B] For any site, where a value has been recorded as less than the detection limit, it was assigned a value of half the detection limit in order to calculate the mean (e.g. <0.02 taken as 0.01), the Sum of PFHxS and PFOS and the Sum of PFAS.

[C] Only one survey was undertaken at Site AQ1 in autumn 2019.

Table 8 (Cont'd).

Indicator Variable	Trigger Value*	Baseline (Autumn 2018)			Spring 2020			Autumn 2021		
		AQ1	AQ4	AQ14	AQ1	AQ4	AQ14	AQ1[C]	AQ4	AQ14
Perfluoronated compound (mg/kg)										
PFHxS	-	0.0036	0.0007	<0.0002	<0.001 (0.00)	<0.001 (0.00)	<0.001 (0.00)	<0.001[B] (0.00)	<0.001 (0.00)	<0.001 (0.00)
PFOS	32	0.0444	0.0061	0.0005	0.0070 (0.00)	0.0022[B] (0.00)	<0.002 (0.00)	0.016 (0.004)	0.006 (0.002)	0.004 (0.003)
PFOA	29	-	-	-	<0.001 (0.00)	<0.001 (0.00)	<0.001 (0.00)	<0.001 (0.00)	<0.001 (0.00)	<0.001 (0.00)
Sum of PFHxS and PFOS	-	0.0480	0.0068	0.0005	0.0075[B] (0.00)	0.0032[B] (0.00)	0.0015[B] (0.00)	0.0164[B] (0.003)	0.0069[B] (0.002)	0.0042[B] (0.003)
Sum of PFAS (WA DER List) [A,B]	-	0.0483	0.0068	0.0005	0.0125[B] (0.00)	0.0082[B] (0.00)	0.0065[B] (0.00)	0.021[B] (0.003)	0.0119[B] (0.002)	0.0090[B] (0.003)
Indicator Variable	**Trigger Value***	**Baseline (Autumn 2018)**			**Spring 2021**			**Autumn 2022**		
		AQ1	**AQ4**	**AQ14**	**AQ1**	**AQ4**	**AQ14**	**AQ1**	**AQ4**	**AQ14**
PFHxS	-	0.0036	0.0007	<0.0002	<0.001 (0.00)	<0.001 (0.00)	<0.001 (0.00)	0.0015 (0.0010)	<0.001 (0.00)	<0.001 (0.00)
PFOS	32	0.0444	0.0061	0.0005	0.0090 (0.00)	0.0030[B] (0.00)	0.009 [B] (0.01)	0.0265 (0.0075)	0.0056 (0.0014)	0.0038 (0.0033)
PFOA	29	-	-	-	<0.001 (0.00)	<0.001 (0.00)	<0.001 (0.00)	<0.001 (0.00)	<0.001 (0.00)	<0.001 (0.00)
Sum of PFHxS and PFOS	-	0.0480	0.0068	0.0005	0.0075[B] (0.00)	0.0032[B] (0.00)	0.0015[B] (0.00)	0.0280 (0.01)	0.0056 (0.00)	0.0036 (0.0036)
Sum of PFAS (WA DER List) [A,B]	-	0.0483	0.0068	0.0005	0.0168[B] (0.01)	0.0089[B] (0.00)	0.0148[B] (0.01)	0.034[B] (0.0075)	0.0111[B] (0.0014)	0.0096[B] (0.0031)

*DEE (2016) - Urban residential/public open spaces

[A] = PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTS and 8:2 FTS

[B] For any site, where a value has been recorded as less than the detection limit, it was assigned a value of half the detection limit in order to calculate the mean (e.g. <0.02 taken as 0.01), the Sum of PFHxS and PFOS and the Sum of PFAS.

[C] Only one survey was undertaken at Site AQ1 in autumn 2019.

Table 8 (Cont'd).

Indicator Variable	Trigger Value*	Baseline (Autumn 2018)			Spring 2022			Autumn 2023		
		AQ1	AQ4	AQ14	AQ1	AQ4	AQ14	AQ1	AQ4	AQ14
PFHxS	-	0.0036	0.0007	<0.0002	<0.001 (0.00)	<0.001 (0.00)	<0.001 (0.00)	<0.001 (0.00)	<0.001 (0.00)	<0.001 (0.00)
PFOS	**32**	0.0444	0.0061	0.0005	0.0134 (0.01)	0.0008[B] (0.00)	<0.003 (0.00)	0.017 [B] (0.00)	0.002[B] (0.00)	0.007 [B] (0.00)
PFOA	**29**	-	-	-	<0.001 (0.00)	<0.001 (0.00)	<0.001 (0.00)	<0.001 (0.00)	<0.001 (0.00)	<0.001 (0.00)
Sum of PFHxS and PFOS	-	0.0480	0.0068	0.0005	0.0139[B] (0.01)	0.0013[B] (0.00)	0.0038[B] (0.00)	0.018 [B] (0.01)	0.001[B] (0.00)	0.004[B] (0.00)
Sum of PFAS (WA DER List) [A,B]	-	0.0483	0.0068	0.0005	0.0035[B] (0.00)	0.0046[B] (0.00)	0.0091[B] (0.00)	0.023 [B] (0.00)	0.0075[B] (0.001)	0.013[B] (0.004)
Indicator Variable	**Trigger Value***	**Baseline (Autumn 2018)**			**Spring 2023**			**Autumn 2024**		
		AQ1	**AQ4**	**AQ14**	**AQ1**	**AQ4**	**AQ14**	**AQ1**	**AQ4**	**AQ14**
PFHxS	-	0.0036	0.0007	<0.0002	<0.005 (0.00)	<0.001 (0.00)	<0.001 (0.00)	<0.005 (0.00)	<0.001 (0.00)	<0.001 (0.00)
PFOS	**32**	0.0444	0.0061	0.0005	0.009 [B] (0.01)	0.0021 [B] (0.01)	0.0085 [B] (0.01)	0.023 [B] (0.01)	0.0022 [B] (0.01)	0.0031 [B] (0.01)
PFOA	**29**	-	-	-	<0.005 (0.00)	<0.001 (0.00)	<0.001 (0.00)	<0.005 (0.00)	<0.001 (0.00)	<0.001 (0.00)
Sum of PFHxS and PFOS	-	0.0480	0.0068	0.0005	0.0198 [B] (0.00)	0.0034 [B] (0.00)	0.0098 [B] (0.00)	0.0340 [B] (0.00)	0.0030 [B] (0.00)	0.0043 [B] (0.00)
Sum of PFAS (WA DER List) [A,B]	-	0.0483	0.0068	0.0005	0.0242 (0.01)	0.0076 [B] (0.00)	0.014 [B] (0.01)	0.0387 (0.01)	0.0077 [B] (0.00)	0.0089 [B] (0.00)

*DEE (2016) - Urban residential/public open spaces

[A] = PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTS and 8:2 FTS

[B] For any site, where a value has been recorded as less than the detection limit, it was assigned a value of half the detection limit in order to calculate the mean (e.g. <0.02 taken as 0.01), the Sum of PFHxS and PFOS and the Sum of PFAS.

Table 8 (Cont'd).

Indicator Variable	Trigger Value*	Baseline (Autumn 2018)			Spring 2024					
		AQ1	AQ4	AQ14	AQ1	AQ4	AQ14	AQ1	AQ4	AQ14
PFHxS	-	0.0036	0.0007	<0.0002	<0.001 (0.00)	<0.001 (0.00)	<0.001 (0.00)			
PFOS	32	0.0444	0.0061	0.0005	0.0193 (0.01)	0.0032[B] (0.00)	<0.002 (0.00)			
PFOA	29	-	-	-	<0.001 (0.00)	<0.001 (0.00)	<0.001 (0.00)			
Sum of PFHxS and PFOS	-	0.0480	0.0068	0.0005	0.0102[B] (0.01)	0.0048[B] (0.00)	0.0023[B] (0.00)			
Sum of PFAS (WA DER List) [A,B]	-	0.0483	0.0068	0.0005	0.0217[B] (0.01)	0.0074[B] (0.00)	0.0065[B] (0.00)			
Indicator Variable	**Trigger Value***	**Baseline (Autumn 2018)**								
		AQ1	**AQ4**	**AQ14**	**AQ1**	**AQ4**	**AQ14**	**AQ1**	**AQ4**	**AQ14**
PFHxS	-	0.0036	0.0007	<0.0002						
PFOS	32	0.0444	0.0061	0.0005						
PFOA	29	-	-	-						
Sum of PFHxS and PFOS	-	0.0480	0.0068	0.0005						
Sum of PFAS (WA DER List) [A,B]	-	0.0483	0.0068	0.0005						

*DEE (2016) - Urban residential/public open spaces

[A] = PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTS and 8:2 FTS

[B] For any site, where a value has been recorded as less than the detection limit, it was assigned a value of half the detection limit in order to calculate the mean (e.g. <0.02 taken as 0.01), the Sum of PFHxS and PFOS and the Sum of PFAS.

3.3 Aquatic Macroinvertebrates

A total of 14 taxon were identified from edge habitat samples collected at Site AQ12 in Spring 2024 (Survey 1: 9 taxa; Survey 2: 12 taxa) (Table 11, Appendix 3). Seven taxa, Acarifomes (Water mites), Chironominae (True flies), Tanypodinae (True flies), Ceratopogonidae (Biting midges), Leptoceridae (Caddis flies), Libellulidae (Dragonflies) and Physidae (Freshwater snails), were collected on both sampling occasions (Appendix 3).

Site AQ12 obtained an OE50 score of 0.40 for Survey 1 and 0.50 for Survey 2 during Spring 2024 (Table 11, Figure 3), indicating that the macroinvertebrate assemblage at Site AQ12 was severely impaired (Band C) relative to reference sites selected by the AUSRIVAS model. The most recent OE50 scores were within the range of scores obtained since the baseline survey (Figure 3).

Similar to the findings of the previous surveys, taxon with > 0.80 probability of occurrence but not collected at the Anzac Creek site were the mayfly family, Leptophlebiidae, the aquatic bug family, Veliidae, at the time of Survey 2, and the beetle family, Hydrophilidae.

SIGNAL2 scores of 3.94 and 3.71 were obtained for both surveys (Table 4). The absence of mayflies was likely to have contributed to the lower score (Table 4, Figure 4). In summary, SIGNAL 2 scores obtained for Site AQ12 have changed little over time and indicate that the macroinvertebrate assemblage at AQ12 has commonly been dominated by pollution-tolerant taxa since the commencement of sampling in autumn 2018 (Table 11, Figure 4).

Table 9. **Total number of taxa, AUSRIVAS & SIGNAL 2 outputs for Site AQ12 (*n* = 1).**

Survey	No Taxa	SIGNAL-2	OE50	Band
Autumn 2018	13	4.00	0.49	B
Spring 2018 – Survey 1	9	3.25	0.39	C
Spring 2018 – Survey 2	5	3.07	0.10	D
Autumn 2019 – Survey 1	10	2.69	0.41	C
Autumn 2019 – Survey 2	8	3.41	0.20	C
Spring 2019 – Survey 1	11	2.09	0.38	C
Spring 2019 – Survey 2	11	2.18	0.19	D
Autumn 2020 – Survey 1	19	3.00	0.68	B
Autumn 2020 – Survey 2	13	3.33	0.49	B
Spring 2020 – Survey 1	10	3.10	0.40	C
Spring 2020 – Survey 2	13	3.33	0.40	C
Autumn 2021 – Survey 1	13	3.38	0.49	B
Autumn 2021 – Survey 2	12	3.64	0.41	C
Spring 2021 – Survey 1	10	2.41	0.30	C
Spring 2021 – Survey 2	6	3.00	0.30	C
Autumn 2022 – Survey 1	13	3.86	0.49	B
Autumn 2022 – Survey 2	7	4.58	0.31	C
Spring 2022 – Survey 1	12	3.25	0.30	C
Spring 2022 – Survey 2	9	4.74	0.40	C
Autumn 2023 – Survey 1	7	0.30	0.29	C
Autumn 2023 – Survey 2	8	0.30	0.29	C
Spring 2023 – Survey 1	12	3.82	0.40	C
Spring 2023 – Survey 2	9	4.00	0.50	C
Autumn 2024 – Survey 1	11	3.19	0.41	C
Autumn 2024 – Survey 2	8	4.00	0.29	C
Spring 2024 – Survey 1	9	3.94	0.40	C
Spring 2024 – Survey 2	12	3.71	0.50	C

Figure 3. Mean (±SE) OE50 Taxa Scores and their respective Band Scores (B-D) for AUSRIVAS samples collected at Site AQ12 since autumn 2018. NB Note that the bands displayed are relevant to autumn edge habitat, these being slightly different to spring.

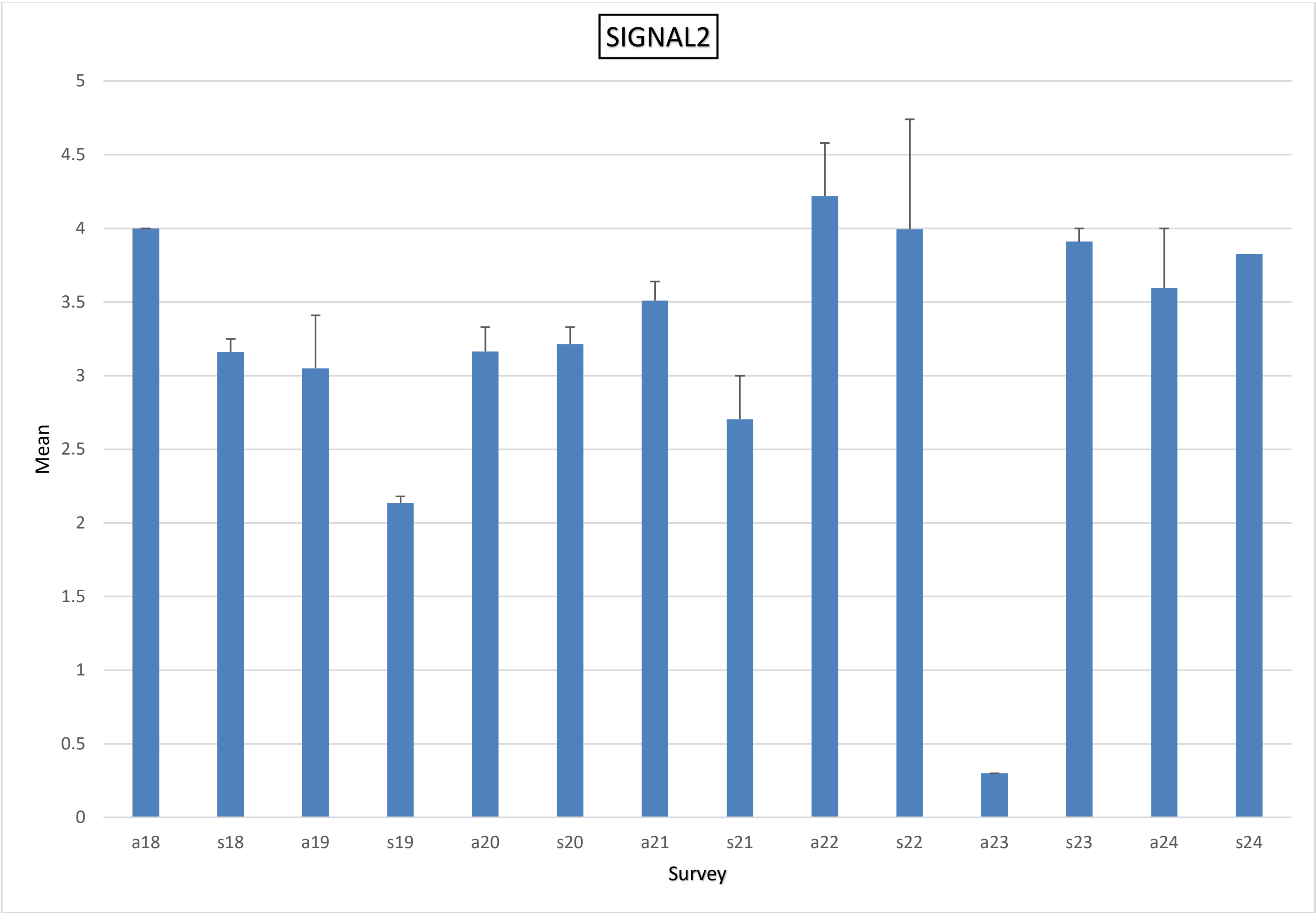

Figure 4. Mean (±) SIGNAL 2 results for Site AQ12 sampled in Anzac Creek since autumn 2018.

3.4 Fish

Four species of fish were collected while electro-fishing at Site AQ12 in spring 2024, including 3 individuals of Striped gudgeon (*Gobiomorphus australis*), one Long-finned eel (*Anguilla reinhardtii*) (20-30cm in length), a Firetail gudgeon (*Hypseleotris* cf *galii*) and numerous Gambusia (*Gambusia holbrooki*) (Table 10). A further species, Australian smelt (*Retropinna semoni*), was collected (1 individual) in net samples while collecting aquatic macroinvertebrates.

In total, ten species of fish, including three introduced species, have been collected since sampling commenced in autumn 2018 (Table 10). All the species caught were common within NSW (McDowall, 1996; DPI 2006; Howell and Creese, 2010). No threatened species of fish listed under the *NSW Fisheries Management Act, 1994* or the *Environment Protection and Biodiversity Conservation Act, 1999* were recorded.

Plate 13: Juvenile Long-finned eel collected at Site AQ12 (spring 2024).

Table 10. Fish collected at Site AQ12 between autumn 2018 and spring 2024#.

Species	Common Name	A-18^	S-18	A-19	S-19	S-20	A-21	S-21	A-22	S-22	A-23	A-24	S-24
Anguilla reinhardtii	Long-finned eel	2	3	2	-	4	1	2	1	1	-	-	1
Anguilla australis	Short-finned eel	-	13	-	9	13	2	4	2	4	1	2	-
Galaxias maculatus	Common galaxias	-	-	-	-	-	-	-	8	-	-	1	1
Gobiomorphus australis	Striped gudgeon	28	8	3	2	-	-	-	2	2	3	1	3
Hypseleotris compressa	Empire gudgeon	13	-	-	-	-	-	-	-	-	1	-	-
Hypseleotris cf *galii*	Firetail gudgeon	-	-	-	1	1	-	-	-	-	-	-	1
Tandanus tandanus	Eel tailed catfish	-	-	-	-	-	-	-	-	-	1	-	-
*Carassius auratus**	Goldfish	-	2	-	-	-	1	-	-	1	-	-	-
*Gambusia holbrooki**	Gambusia	328	100's	10's	10's	100's	100's	100's	10's	100's	100's	-	80
*Misgurnus anguillicaudatus**	Oriental weatherloach	-	-	-	1	-	-	-	2	1	1	1	-
Retropinna semoni	Australian smelt	-	-	--		-	-	-	-	-	-	-	1
Unidentified sp.	-	-	-	-	-	-	-	1	-	-	-	-	-

^**Biosis, 2018**

*Introduced species

#Fish were unable to be sampled at Site AQ12 within the autumn 2020 survey period (due to instrument malfunction) or during autumn 2023 (due to the presence of extensive mats of green macro-algae).

3.5 Limitations

- Only one Baseline survey was able to be sampled in autumn 2018, due to the May 2018 bushfire (Biosis, 2018);
- Due to restricted access through the construction worksite, it was not possible to access Site AQ1 on 30 May 2019 to undertake the 2019 autumn survey 2. Whilst the collection of replicate samples at each site provides important measures of variability in habitat characteristics and concentrations of toxicants, the results from Survey 1 and subsequent surveys were within the range of results collected in the Baseline survey. Therefore, it is considered that the missing sample did not detract from being able to interpret the findings of the 2019 autumn sampling event, and that the intent and outcomes of the MPES2 monitoring survey were achieved;
- Water quality measurements collected during the biological sampling only provide a snapshot of quality at the time of sampling under the prevailing flow conditions;
- In the absence of external reference sites (i.e. similar sites but in systems not subject to the Project activities), it is not possible to account for changes in the variables examined that may occur naturally at a broader regional scale.

5.0 DISCUSSION

Stage 2 of the MPE Project involves the construction and operation of warehousing and distribution facilities on the MPE site and upgrades to approximately 2.1 kilometres of Moorebank Avenue. Warehouses 1, 3, 4, 5, 6, 7a and 7b are now operational. The next warehouse to be constructed is WH2, which is currently anticipated to occur in Q4 2025. During construction of WH2, water will be managed is accordance with the approved CEMP and water is discharged via the sediment (SED) Basins and into Anzac Creek (via DP5 and DP7).

5.1 Aquatic Habitat and Hydrology

At the time of the second spring 2024 survey, recent rainfall had replenished aquatic habitat at the sites sampled although there was little flow observed at the upstream sites (i.e. Sites AQ1-AQ8). Extensive cover of vegetation within the riparian zone contributes stability to the edges of the creek channel, although an area of active erosion has been apparent at the downstream end of the refuge pool (Site AQ12) since autumn 2020. The presence of a dense stand of Typha may have contributed to bank overflow in this area, by acting as a barrier to flow.

The popular aquarium plant, *Egeria densa* (Egeria), first observed within the large refuge pool in spring 2020, has commonly been observed subsequently, including at the time of the autumn 2024 surveys. Infestations of Egeria have been shown to displace native species of other submerged plants (e.g. Roberts et al., 1999), and have been observed in the Georges River near its confluence with Anzac Creek.

The noxious plant, Alligator Weed, continues to be widespread at the most upstream site (Site AQ1). Due to its highly invasive nature, Alligator weed is considered one of the greatest threats to waterways, wetlands, floodplains and irrigation systems in Australia (van Oosterhout, 2007; DPI, 2019).

Also notable at Site AQ1 was the presence of the introduced aquatic weed, Ludwigia (*Ludwigia peruviana*), within the creek channel. Found mostly in creeks and wetland areas, Ludwigia is a fast-growing invasive aquatic plant that can form dense colonies in slow-moving and static waterways (Sainty and Jacobs, 2003). An upright perennial shrub, it can grow to 3 m tall. Its presence can change water flows and increase the risk of flooding, outcompete native plants and reduce food and shelter for fish and other native aquatic animals (Sainty and Jacobs, 2003).

Concentrations of lead measured in sediments at Site AQ1 (Survey 1: 100 mg/kg; Survey 2: 53 mg/kg) exceeded the guideline value (50 mg/L) on both sampling occasions within spring 2024. The majority (i.e. 17 of 19 times) of measurements of lead at AQ1 (range = 21 to 130 mg/kg) have exceeded the threshold limit detailed in the Interim Sediment Quality Guidelines (ISQG) (ANZECC/ARMCANZ 2000), including at the time of the baseline (91 mg/kg) survey. Nickel and zinc have also marginally exceeded the upper ANZECC/ARMCANZ (2000) guidelines, including on one of the two sampling occasions during spring 2024. Site AQ1 is situated upstream of potential inputs from the Project and therefore no additional testing of heavy metals at Site AQ1 should be considered necessary.

Importantly for this study, all toxicants, including total petroleum hydrocarbons and poly-fluoroalkyl substances (like PFAS and PFOS), that were monitored in sediments at the sites downstream of inputs from the MPES2 Project site (i.e., at Sites AQ4 and AQ14) in the spring of 2024, remained within the proper guideline levels.

5.2 Water Quality

Reduced dissolved oxygen levels, elevated nitrogen, aluminium, and copper measured in surface water in the large refuge pool (Site AQ12), including prior to commencement of the Project, reflect historic and current activities (ALS, 2011; Biosis, 2018). Concentrations of total petroleum hydrocarbons and poly-fluoroalkyl substances measured during spring 2024 remain similar to baseline values and within the recommended Australian-derived guidelines for water. Additional degradation of water quality does not appear to have occurred since the Project related construction work began.

5.3 Biological Monitoring

The macroinvertebrate assemblage supported by the refuge pool appears to experience some degree of environmental stress. This is evident in the OE50 Taxa Scores and Bands, which have generally been indicative of an assemblage that is less diverse compared to reference sites selected by the AUSRIVAS model throughout the survey period.

Low values of the SIGNAL 2 score and the number of macroinvertebrate types (only 12 taxa) were also indicative of a site suffering from one or more forms of anthropogenic disturbance (see Chessman, 2003a&b).

Lower than expected macroinvertebrate indices were not unexpected given long-term (decades) exposure to multiple stressors (e.g., reduced dissolved oxygen levels, elevated levels of nitrogen, and excessive aquatic plant growth) that can adversely affect the condition of aquatic habitat. The introduced fish, Gambusia (*Gambusia holbrooki*), has also consistently been observed within the refuge pool. Predation by Gambusia is listed as a Key Threatening Process by the NSW *Biodiversity Conservation Act 2016*, because of known effects on native frogs, freshwater fishes and aquatic macroinvertebrates.

Nevertheless, some pollution sensitive aquatic macroinvertebrates (including caddis fly and dragonfly larvae) and native species of fish continue to be collected, indicating that the creek provides important habitat for aquatic species. Of the species collected, all are common within NSW (McDowall, 1996; DPI 2006; Howell and Creese, 2010).

6.0 CONCLUSION & RECOMMENDATIONS

Examination of the results from the spring 2024 monitoring event found no evidence of changes in the indicator variables (bed and bank stability, surface water and sediment quality, assemblages of aquatic macroinvertebrates and fish) that could be attributed to the Project works. Thus, in accordance with the Biodiversity Monitoring Strategy, no adaptive management contingency measures were triggered.

Recommendations include:

- Sampling of the stream health monitoring programme to be repeated in autumn 2025;
- Land managers focus on containment and on-going suppression of Alligator Weed and Ludwigia within Anzac Creek and the riparian zone, particularly at Site AQ1, and the popular aquarium plant, *Egeria densa* (Egeria), commonly observed within the refuge pool.

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APPENDICES

Appendix 1 - GPS positions (UTMs) for stream monitoring sites (spring 2024).

Site Code	Easting	Northing
AQ1	308116	6240233
AQ4	308557	6240282
AQ8	309216	6240802
AQ12	309377	6241575
AQ13	309369	6241782
AQ14	309365	6241863

Datum: WGS 84, Zone 56H

Appendix 2 – Visual Assessment Scores

Appendix 2a – Ephemeral stream assessment results

	Autumn 2018		Spring 2018		Autumn 2019	
Site	**Score (%)**	**Category**	**Score (%)**	**Category**	**Score (%)**	**Category**
AQ1	88	Very Stable	75	Stable	80	Stable
AQ4	88	Very Stable	75	Stable	78	Stable
AQ8	91	Very Stable	93	Very Stable	93	Very Stable
	Spring 2019		**Autumn 2020**		**Spring 2020**	
Site	**Score (%)**	**Category**	**Score (%)**	**Category**	**Score (%)**	**Category**
AQ1	88	Very Stable	90	Very Stable	90	Very Stable
AQ4	80	Stable	88	Very Stable	89	Very Stable
AQ8	92	Very Stable	93	Very Stable	93	Very Stable
	Autumn 2021		**Spring 2021**		**Autumn 2022**	
Site	**Score (%)**	**Category**	**Score (%)**	**Category**	**Score (%)**	**Category**
AQ1	80	Very Stable	90	Very Stable	92	Very Stable
AQ4	89	Very Stable	89	Very Stable	90	Very Stable
AQ8	93	Very Stable	93	Very Stable	93	Very Stable
	Spring 2022		**Autumn 2023**		**Spring 2023**	
Site	**Score (%)**	**Category**	**Score (%)**	**Category**	**Score (%)**	**Category**
AQ1	92	Very Stable	88	Very Stable	88	Very Stable
AQ4	92	Very Stable	93	Very Stable	93	Very Stable
AQ8	94	Very Stable	94	Very Stable	94	Very Stable
	Autumn 2024		**Spring 2024**			
Site	**Score (%)**	**Category**	**Score (%)**	**Category**		
AQ1	94	Very Stable	92	Very Stable		
AQ4	94	Very Stable	92	Very Stable		
AQ8	94	Very Stable	94	Very Stable		

Appendix 2b – HABSCORE assessment results

	Autumn 2018		Spring 2018		Autumn 2019	
Site	**Score (%)**	**Category**	**Score (%)**	**Category**	**Score (%)**	**Category**
AQ1	27	Marginal	29	Marginal	32	Marginal
AQ4	28	Marginal	25	Marginal	25	Marginal
AQ8	41	Marginal	38	Marginal	38	Marginal
AQ12	55	Suboptimal	51	Suboptimal	53	Suboptimal
AQ13	21	Poor	23	Poor	21	Poor
AQ14	22	Poor	23	Poor	22	Poor
	Spring 2019		**Autumn 2020**		**Spring 2020**	
Site	**Score (%)**	**Category**	**Score (%)**	**Category**	**Score (%)**	**Category**
AQ1	30	Marginal	32	Marginal	27	Marginal
AQ4	26	Marginal	29	Marginal	28	Marginal
AQ8	41	Marginal	41	Marginal	41	Marginal
AQ12	51	Suboptimal	50	Suboptimal	53	Suboptimal
AQ13	19	Poor	21	Poor	22	Poor
AQ14	21	Poor	22	Poor	23	Poor
	Autumn 2021		**Spring 2021**		**Autumn 2022**	
Site	**Score (%)**	**Category**	**Score (%)**	**Category**	**Score (%)**	**Category**
AQ1	29	Marginal	31	Marginal	31	Marginal
AQ4	36	Marginal	38	Marginal	40	Marginal
AQ8	41	Marginal	41	Marginal	41	Marginal
AQ12	55	Suboptimal	55	Suboptimal	50	Suboptimal
AQ13	23	Poor	23	Poor	25	Poor
AQ14	24	Poor	24	Poor	25	Poor
	Spring 2022		**Autumn 2023**		**Spring 2023**	
Site	**Score (%)**	**Category**	**Score (%)**	**Category**	**Score (%)**	**Category**
AQ1	31	Marginal	32	Marginal	27	Marginal
AQ4	39	Marginal	40	Marginal	29	Marginal
AQ8	41	Marginal	41	Marginal	38	Marginal
AQ12	53	Suboptimal	53	Suboptimal	50	Suboptimal
AQ13	21	Poor	25	Poor	25	Poor
AQ14	25	Poor	25	Poor	25	Poor

Appendix 2b – HABSCORE assessment results

	Autumn 2024		Spring 2024			
Site	**Score (%)**	**Category**	**Score (%)**	**Category**		
AQ1	31	Marginal	27	Marginal		
AQ4	40	Marginal	40	Marginal		
AQ8	41	Marginal	41	Marginal		
AQ12	50	Suboptimal	53	Suboptimal		
AQ13	30	Marginal	21	Poor		
AQ14	32	Marginal	25	Poor		

Appendix 3 - Macroinvertebrate taxa collected at Site AQ12 in spring 2024 using the NSW AUSRIVAS protocol. Mosquito fish were also collected in the net samples**.**

Taxa	Survey 1 (24 September 2024)	Survey 2 (19 November 2024)
Acariformes	6	20
Belastomatidae	0	1
Ceratopogonidae	5	13
Chironomidae - Chironominae	25	20
Chironomidae - Tanypodinae	1	2
Coenagrionidae	2	0
Hydroptilidae	3	0
Leptoceridae	1	1
Libellulidae	1	3
Lumbriculidae	0	3
Physidae	1	1
Planorbiidae	0	1
Pleidae	0	2
Veliidae	0	2
Number of Taxa	**9**	**12**
Australian smelt	1	

Moorebank Intermodal Precinct

APPENDIX F – COMPLAINTS REGISTER

Moorebank Intermodal Precinct Complaints Register - As of 19 May 2025				
Date received	**Complainant**	**Nature of complaint**	**Location (MIP/MARW)**	**Status**
18/05/2025	**Community and CCC Member**	Environmental reporting: Stakeholder emailed to lodge a complaint regarding environmental reporting with respect to specific emissions information and more detailed data that they have requested for some time. Response: There has been ongoing correspondence and attempts to provide the requested information. This is currently being reviewed again to confirm that the project team has provided the requested information as best as they are able.	**MIP**	**Open**
24/04/2025	**Community Member**	Noise: Caller phoned the project hotline in the evening, reporting incessant banging and vibrations through the house. *Response*: Caller was phoned back for more information but could not be reached.	**MIP**	**Closed**
24/04/2025	**Community Member**	Noise: Resident phoned the project hotline to make a complaint about overnight works being very disruptive into the early morning affecting sleep. Resident reported smashing and banging, reversing beepers and seeing tippers and lights. Resident called back the following night reporting the same. *Response:* Resident was phoned to discuss. The project team investigated, confirming there were no overnight works at either location. Resident was sent follow up email advising of no night work activities from MIP, provided a copy of recent OOH letter notification for periodic works until June (although nothing expected for a few weeks) and suggestion to contact Council or Sydney Trains in case of any related activities.	**MIP**	**Closed**
5/04/2025	**Community Member**	Noise: Ongoing concerns about the long-term potential of noise and potential for increased bushfire risk due to an increase in traffic accessing the intermodal terminal, cranes movements and handling of containers, once works are completed. Status: Stakeholder acknowledged; no response required. Note not a construction-based comment.		**Closed**
27/03/2025	**Community Member**	Noise: Concerned the upcoming night works required for the Moorebank Avenue upgrade will impact residents on the Western side of Wattle Grove. Response sent to stakeholder on 4/4		**Closed**
24/03/2025	**Community Member**	Traffic and disruptions: Concerns raised around ongoing roadworks including the recent Anzac Road closure between Moorebank Ave and Delfin Dr. Additionally, concerns raised around interruptions from the upgrade of underground electrical supply continuing to September 2025. Response sent to stakeholder 7 April.		**Closed**
17/03/2025	**Community Member**	MAR Construction: Complaint in agreement with prior complaint. Concern about location of Moorebank Avenue Realignment and the risks of increased noise from the precinct. Stated that noise walls were necessary for project. Response sent to stakeholder on 4/4.		**Closed**

Moorebank Intermodal Precinct Complaints Register - As of 19 May 2025				
Date received	**Complainant**	**Nature of complaint**	**Location (MIP/MARW)**	**Status**
17/03/2025	**Community Member**	MAR Construction: Concern about location of Moorebank Avenue Realignment and the risks of increased noise from the precinct. Stated that noise walls were necessary for project. Stakeholder contacted, and complaint receipt acknowledged.		**Closed**
9/03/2025	**Community Member**	MAR Construction: Concern about location of Moorebank Avenue Realignment and the risks of increased noise and bushfires from road moving to the east of the precinct. Suggested noise wall the duration of the road. Response sent to stakeholder on 11/3.		**Closed**
8/03/2025	**Community Member**	Traffic Impacts: Excessive traffic congestion on Moorebank Avenue in mornings heading north towards Liverpool. Response sent to Stakeholder on 27/3		**Closed**
8/03/2025	**Community Member**	Traffic Impacts: Excessive traffic congestion on Moorebank Avenue, Cambridge Avenue, and Canterbury Road. Two traffic light sets within MIP holding traffic. Response sent to Stakeholder on 27/3		**Closed**
2024 Complaints				
18/12/2024	**Community Member**	Building design and Visual Impact: Stakeholder from Glenfield voiced dissatisfaction with the buildings and loss of city views due to Moorebank Development. Complaint acknowledged and plantings to reduce visual impact discussed with stakeholder and complaint closed.		**Closed**
17/12/2024	**Community Member**	Vegetation management: Statement of disapproval in relation to the revegetation approach from a community member. Complaint acknowledged and possible options for improvements discussed with stakeholder		**Closed**
2/12/2024	**Community Member**	Dust: Complaint regarding airborne dust from precinct reaching property in Wattle Grove. This has required an increase in the number of times the pool needs to be cleaned. Requested improvements to dust management on site. Investigation undertaken, and property 1.76kms away from earthworks. Complaint passed to teams to ensure dust management remains a focus. Stakeholder satisfied.		**Closed**
29/10/2024	**Community Member**	Noise: Complaint regarding noise at ABB Site. Noise linked to sandblasting at ABB site. Stakeholder provided update and link to complaint line for ABB.		**Closed**
28/10/2024	**Community Member**	Traffic: Complaint received regarding traffic stationary on Moorebank Avenue. Contractor has struck overhead wires and traffic is stopped while area made safe. Stakeholder advised of incident.		**Closed**
24/10/2024	**Community Member**	Traffic: Concerned with traffic layout of Anzac Road causing traffic build up. Request for an additional right turn lane. Stakeholder advised there is insufficient width to have two right turn lanes.		**Closed**

Moorebank Intermodal Precinct Complaints Register - As of 19 May 2025				
Date received	**Complainant**	**Nature of complaint**	**Location (MIP/MARW)**	**Status**
12/10/2024	**Community Member**	Vegetation management: Dissatisfied with quality of cut of reeds at Woolmers Court. Concern about reeds being left on ground being a fire risk. Contractors returned to site and mulched reeds. Stakeholder updated.		**Closed**
11/10/2024	**Community Member**	Vegetation management: Quality of cut of reeds at Woolmers Court. Dissatisfied with quality of cut. Concern about reeds being left on ground being a fire risk. Contractors returned to site and mulched reeds. Stakeholder updated.		**Closed**
19/09/2024	**Community Member**	Traffic: Concerned with traffic backing up on the M5 when turning onto Moorebank Avenue, wondered if there was a change to traffic conditions to cause the congestion. Investigation conducted, no change to traffic conditions on Moorebank Avenue, issue present at other M5 offramps during morning peak. Likely issue relating to wider network. Stakeholder informed and satisfied.		**Closed**
13/09/2024	**Community Member**	Follow up and dissatisfaction with outcome of pushbike accident complaint resolution. Concern with safety of designated bike route. Update sent to stakeholder regarding outcome of investigation. Work completed to standard and no claim. Item closed.		**Closed**
29/08/2024	**Community Member**	Concern surrounding extent of work, and if road construction will reach Glenfield Road roundabout. Concerns about biodiversity losses through project. Response provided with links to additional information on projects.		**Closed**
27/08/2024	**Community Member**	Question relating to how many trucks are taken off roads and how many containers have been handled each quarter. General complaint against time for Moorebank Ave project to be finished. BMD and MIP provided responses		**Closed**
14/08/2024	**Community Member**	Caller advised excessive noise from smashing containers. Requesting for the noise to stop. Does not want to speak with someone and wanting complaint to be passed on. Stakeholder contacted and acknowledged the receipt of the complaint		**Closed**
23/07/2024	**Community member**	Traffic: Community member lodged complaint about conditions of road upgrade of Moorebank Avenue, poor signage on the road, and workers on the phone not directing traffic. Stakeholder contacted and informed of investigation into traffic management and signage. Stakeholder provided update that project is inline with TfNSW approved traffic Management Plan and all signage was installed correctly.		**Closed**
18/06/2024	**Community member**	Noise: Community member lodged complaint about loud noise occurring from intermodal precinct. Believes it is linked to container management. Noise mitigation strategy developed and shared with stakeholders.		**Closed**
07/06/2024	**Community member**	Noise: Community member lodged complaint about loud noise occurring from intermodal precinct. Believes it is linked to container management. The Liverpool Military Area Base Management team have been contacted. They confirmed that		**Closed**

Moorebank Intermodal Precinct Complaints Register - As of 19 May 2025				
Date received	**Complainant**	**Nature of complaint**	**Location (MIP/MARW)**	**Status**
		defence related activities were occurring on Holsworthy on the 6 June in the early morning and throughout the day. This may be the source of the noise. Stakeholder notified.		
07/06/2024	**Community member**	Noise: Community member lodged complaint about loud noise occurring from intermodal precinct. Believes it is linked to container management. The Liverpool Military Area Base Management team have been contacted. They confirmed that defence related activities were occurring on Holsworthy on the 6 June in the early morning and throughout the day. This may be the source of the noise. Stakeholder notified.		**Closed**
06/06/2024	**Community member**	Letterbox distribution: Community member lodged complaint about receiving project information in their letterbox which they consider to be junk mail. Resident's details passed on to distribution company. Caller informed.		**Closed**
06/06/2024	**Community member**	Noise: Community member lodged complaint about loud noise occurring from intermodal precinct. Believes it is linked to container management. Located approx. 1.5km from terminal. Considers noise to be not acceptable. The Liverpool Military Area Base Management team have also been contacted. They confirmed that defence related activities were occurring on Holsworthy on the 6 June in the early morning and throughout the day. This may be the source of the noise. Stakeholder notified.		**Closed**
23/05/2024	**Community member**	*Resubmission of complaint received on 26 April 2024.* Personal Injury and property damage: Motorcycle rider fell off bike on Moorebank Avenue at intersection with Anzac Road. Sustained injury and damage to property (bike, watch, phone). Original complaint submitted to Liverpool City Council and LCC contacted Logos. Currently investigating CCTV footage of the incident. Stakeholder acknowledged and provided update. Response provided to stakeholder, stating that condition of road was in acceptable condition for road works, and the location of the fall was a 35-50mm edge on final kerb to wearing course of asphalt. Moorebank Precinct will not be reimbursing the stakeholder for damages caused as part of the fall.		**Closed**
13/05/2024	**Community member**	Noise: Community member lodged complaint about loud noise occurring from intermodal precinct. Believes it is linked to container management. Stakeholder contacted and advised that the team at QUBE has been advised of complaints received relating to operational noise with container movement, and to possibly investigate mitigation measures. Stakeholder happy with response.		**Closed**

Moorebank Intermodal Precinct Complaints Register - As of 19 May 2025				
Date received	**Complainant**	**Nature of complaint**	**Location (MIP/MARW)**	**Status**
		The complaint is closed.		
30/04/2024	**Community member**	Noise: Community member lodged complaint about loud noise occurring from intermodal precinct – not sure if construction noise or operational noise. Sounds like operator dropping items. Heard in Wattle Grove @8:30pm 30/04 and keeping 3yr old up. - Currently investigating work location/operational practices possibly resulting in noise generation. Stakeholder contacted and advised that the team at QUBE has been advised of complaints received relating to operational noise with container movement, and to possibly investigate mitigation measures. The complaint is closed.		**Closed**
30/04/2024	**Community member**	Noise: Community member lodged complaint about loud noise occurring from intermodal precinct during night of 29/04. Noise from containers being loaded and unloaded. Concerned about level of noise when terminal is fully uploaded. - Currently investigating work location/operational practices possibly resulting in noise generation. Stakeholder contacted and advised that the team at QUBE has been advised of complaints received relating to operational noise with container movement, and to possibly investigate mitigation measures. Stakeholder happy with response. The complaint is closed.		**Closed**
27/04/2024	**Community member**	Light pollution: Multiple lights in intermodal precinct resulting in high noise pollution to residents in Casula. 4 lights currently turned on with 7 yet to be activated. Stakeholder worried about final lighting pollution. Concerned about direction of lights and colour scheme of warehouses getting lit up with current lighting. - Currently investigating lighting requirements and possible modifications to assist stakeholder. Stakeholder contacted and advised review of lighting had been undertaken and lights would be switched off until lights confirmed to be set at correct angle, and mitigation measures investigated. The complaint is closed		**Closed**
26/04/2024	**Community member**	Personal Injury and property damage: Motorcycle rider fell off bike on Moorebank Avenue at intersection with Anzac Road. Sustained injury and damage to property (bike, watch, phone). Original complaint submitted to Liverpool City Council and LCC contacted Logos. - Investigation complete. Site at an acceptable level and condition through construction. Response provided to stakeholder. Claim rejected		**Closed**
23/04/2024	**Community member**	Traffic impacts: Community member lodged complaint about current road layout of		**Closed**

Moorebank Intermodal Precinct Complaints Register - As of 19 May 2025				
Date received	**Complainant**	**Nature of complaint**	**Location (MIP/MARW)**	**Status**
		Moorebank Avenue – single lane from Anzac Road to M5 is heavily congested, and stakeholder is worried final layout is unequipped for traffic volume of operational precinct. - Informed stakeholder of Moorebank Avenue realignment works. - Currently seeking additional information to provide stakeholder to close out complaint. Stakeholder called and advised of road configuration after alignment completed. Pleased to know that single lane bottleneck would be removed. Also noted future realignment on Eastern side of MIP. Current work focused on Anzac Road to M5. Stakeholder pleased. The complaint is closed.		
05/04/2024	**Community member**	Noise: Community member lodged complaint about loud noise occurring morning of 5/04 from the intermodal terminal, which sounds like someone dropping something large every 30 seconds. Located in Casula and could be heard in Wattle Grove by family member. Stakeholder contacted and provided update: All noise monitors recorded identified noise; however no work activities were occurring on site. Noise not generated from MIP. Stakeholder appreciative of update and glad to see the effort that went into resolving complaint. The complaint has been closed.		Closed
01/02/2024	**Community member**	Noise: The complaint involved a loud echoing noise from a truck's hatch dropping dirt, disturbing a caller working from home across the river about 800 meters away from the construction site. The noise occurred within the scheduled hours, however, disrupted the caller's work online meeting. The caller acknowledged the normalcy of construction noise but emphasized the exceptional loudness on that morning. The caller's feedback was relayed to the construction team for consideration in the future. The complaint has been closed.		Closed
25/01/2024	**Community member**	Noise: A community member complained about helicopter lifting works that occurred on January 25th, 2024. The complaint suggested that the works extended beyond the scheduled and published hours, causing noise disturbances during nighttime. The investigation revealed that the works have been undertaken in accordance with the communicated schedule and there were no scheduled or unscheduled night works at the Precinct during the specified period. The complaint has been closed.		Closed
25/01/2024	**Community member**	Noise: CCC member (Casula resident) complained about noise and the days of operation related to helicopter lift works on January 25th, 2024. The complainant was informed that the helicopter lift works occurred in accordance with the		Closed

Moorebank Intermodal Precinct Complaints Register - As of 19 May 2025				
Date received	**Complainant**	**Nature of complaint**	**Location (MIP/MARW)**	**Status**
		communicated schedule and were sanctioned activities approved under the MPW Construction Noise and Vibration Management Plan. The complainant provided with a copy of the document for their reference. Additionally, the complainant was also advised that their specific observations regarding noise-related issues and preferences for certain days for this type of works would be subject to further investigation by the Project team and discussed during the upcoming Community Consultative Committee meeting. The complaint has been closed.		
2023 Complaints				
24/12/2023	**Road User**	Development impacts: A road user made a complaint regarding a visibility issue caused by an unidentified substance on the caller's vehicle surface while driving in the Precinct area. The investigation determined the substance in question originated from construction operations within the area. The complainant provided with a suitable cleaning product. Additionally, professional cleaning services have been arranged for their car to ensure the complete removal of the substance. The complaint has been closed.		Closed
22/09/2023	**Road User**	Traffic lights: A road user made a complaint about traffic congestion at the intersection of Moorebank Avenue and Anzac Road during peak morning and evening hours. According to the complainant, the congestion is attributed to an auto-sensor system on Anzac Road that causes delays for road users traveling on Moorebank Avenue. The project team advised the complainant that these traffic signals are controlled by TfNSW and not by the Precinct, therefore the concern is to be raised with TfNSW. The complaint has been closed.		Closed
04/09/2023	**Community member**	Noise: A complainant reported noise in the late-night hours near the Fire and Rescue Station on Anzac Road. The area is outside of MIP development boundary, hence there are no construction works or operations being undertaken within the vicinity of the Fire and Rescue station on Anzac Road. The noise appears not related to the MIP development. The complaint has been closed.		Closed
21/08/2023	**Community member**	Noise: A Wattle Grove resident complained about a metallic clunking noise most often at night-time from a west facing wall (towards the precinct). The project team investigated and found no works that could initiate noises described by the complainant were being undertaken within the precinct during night-time hours at the time of complaint. The complainant was advised that the precinct could not identify any specific events that would have caused any excessive		Closed

Moorebank Intermodal Precinct Complaints Register - As of 19 May 2025				
Date received	**Complainant**	**Nature of complaint**	**Location (MIP/MARW)**	**Status**
		night-time noise. However, operational teams were reminded to stay vigilant when operating at night.		
27/06/2023	**Community member**	Dust: A Wattle Grove resident provided feedback about dust generation on Moorebank Avenue. The project team investigated and found no exceedances of the criteria for deposited dust in the last three months. A letter response explaining specific methods for the management and monitoring of dust generation at the Precinct was provided to the complainant. The complaint has been closed.		Closed
30/05/2023	**Community member**	Noise: A Wattle Grove resident complained about noise in the early hours of the morning which they believed originated from the precinct. The project team investigated and found no works were being undertaken within the precinct on the night in question. The complaint has been closed.		Closed
10/05/2023	**Road user**	Traffic congestion: The complainant reported traffic congestion along Moorebank Avenue resulting in increased commute time. The project team investigated and found traffic signals controlled by TfNSW TMC had malfunctioned on the morning in question. A response was provided to the complainant advising of the signal outage and how to report future signal faults. Information about the closure of Chatham Road intersection was also provided.		Closed
27/04/2023	**Road user**	Road conditions: The complainant reported damage to their vehicle while driving on Moorebank Avenue. Further information required to investigate the complaint was not provided. The complaint has been closed.		Closed
07/02/2023	**Road user**	Road conditions: The complainant reported damage to their vehicle while driving on Moorebank Avenue. The project team liaised with the vehicle owner to resolve the complaint.		Closed
02/02/2023	**Community member**	Noise monitoring: Resident raised concern about specific locations of attended noise monitoring undertaken in 2022. The resident was provided with further clarification regarding the location of the noise monitoring as well as details of the noise monitoring requirements under the project's conditions of consent.		Closed
19/01/2023	**Road user**	Construction dust and mud: Road user complained about construction dust and mud on Moorebank Avenue. Road user was advised of mitigation measures in place including dust suppression, the use of water		Closed

Moorebank Intermodal Precinct Complaints Register - As of 19 May 2025				
Date received	**Complainant**	**Nature of complaint**	**Location (MIP/MARW)**	**Status**
		caters, wheel washing and sweeper trucks.		
2022 Complaints				
Date Received	**Complainant**	**Nature of Complaint**		**Status**
31/12/2022	**Community member**	Development impacts: Resident raised concern about the height of MPW warehousing and its impact on views. Resident was advised of initiatives to reduce impacts for community and was advised of the previous community consultation related to the development, including height of warehousing.		Closed
14/11/2022	**CCC member**	Construction schedule and upcoming works: CCC member (Casula resident) complained about helicopter lifting work continuing past standard construction hours. The project team investigated the incident with the relevant contractor, who has been instructed to implement measures to ensure that any future helicopter lifts do not exceed construction hours. Further, the team notified the complainant of upcoming helicopter lifting work in December.		Closed
10/10/2022	**Local business**	Water / Flooding: Water entered the premises of a site neighbour during a heavy rainfall event. Site contractors have undertaken remediation works to repair, regrade and lift the bund to drain the area, pump out remaining water and revegetate the area to stabilise the bund. Contractors will continue to monitor the area to pump excess water as required.		Closed
20/09/2022	**Community member**	General project and noise: A Wattle Grove resident complained about noise and hours of operation at the site, and about the project more broadly. The complainant was advised further additional attended noise monitoring will be undertaken.		Closed
21/08/2022	**Community member**	Noise: A Wattle Grove resident complained about noise and hours of operation at the site, including out of hours works helicopter activity undertaken on site. The complainant was advised the works were an approved activity under the approved MPE Stage 2 Construction Noise and Vibration Management Plan (CNVMP) and noise monitoring undertaken as required by out of hours work consent identified noise levels were under the predicted levels outlined in the CNVMP. The complainant was also advised their observations of noise at other days/times are being investigated further through additional noise monitoring. The complainant was advised further additional attended noise monitoring will be		Closed

Moorebank Intermodal Precinct Complaints Register - As of 19 May 2025				
Date received	**Complainant**	**Nature of complaint**	**Location (MIP/MARW)**	**Status**
		undertaken.		
18/8/2022	**Community member**	Noise: A Wattle Grove resident complained about noise and hours of operation at the site. The complainant was advised their observations are being investigated further through additional noise monitoring. The complainant was advised further additional attended noise monitoring will be undertaken.		Closed
17/8/2022	**Community member**	Noise: A Wattle Grove resident complained about noise and hours of operation at the site. The complainant was advised their observations are being investigated further through additional noise monitoring. The complainant was advised further additional attended noise monitoring will be undertaken.		Closed
16/8/2022	**Community member**	Noise: A Wattle Grove resident complained about noise and hours of operation at the site. The complainant was advised their observations are being investigated further through additional noise monitoring. The complainant was advised further additional attended noise monitoring will be undertaken.		Closed
13/8/2022	**Community member**	Noise: A Wattle Grove resident complained about noise and hours of operation at the site. The complainant was advised their observations are being investigated further through additional noise monitoring. The complainant was advised further additional attended noise monitoring will be undertaken.		Closed
13/8/2022	**Community member**	Noise: A Wattle Grove resident complained about noise and hours of operation at the site. The complainant was advised their observations are being investigated further through additional noise monitoring. The complainant was advised further additional attended noise monitoring will be undertaken.		Closed
12/8/2022	**Community member**	Noise: A Wattle Grove resident complained about noise and hours of operation at the site. The complainant was advised their observations are being investigated further through additional noise monitoring. The complainant was advised further additional attended noise monitoring will be		Closed

Moorebank Intermodal Precinct Complaints Register - As of 19 May 2025				
Date received	**Complainant**	**Nature of complaint**	**Location (MIP/MARW)**	**Status**
		undertaken.		
12/8/2022	**Community member**	Noise: A Wattle Grove resident complained about noise and hours of operation at the site. The complainant was advised their observations are being investigated further through additional noise monitoring. The complainant was advised further additional attended noise monitoring will be undertaken.		Closed
11/8/2022	**Community member**	Noise: A Wattle Grove resident complained about noise and hours of operation at the site. The complainant was advised their observations are being investigated further through additional noise monitoring. The complainant was advised further additional attended noise monitoring will be undertaken.		Closed
10/8/2022	**Community member**	Noise: A Wattle Grove resident complained about noise and hours of operation at the site. The complainant was advised their observations are being investigated further through additional noise monitoring. The complainant was advised further additional attended noise monitoring will be undertaken.		Closed
31/7/2022	**Community member**	Noise: A Wattle Grove resident complained about noise and hours of operation at the site. The complainant was advised their observations are being investigated further through additional noise monitoring. The complainant was advised further additional attended noise monitoring will be undertaken.		Closed
30/7/2022	**Community member**	Noise: A Wattle Grove resident complained about noise and hours of operation at the site. The complainant was advised their observations are being investigated further through additional noise monitoring. The complainant was advised further additional attended noise monitoring will be undertaken.		Closed
29/7/2022	**Community member**	Noise: A Wattle Grove resident complained about noise and hours of operation at the site. The complainant was advised their observations are being investigated further through		Closed

Moorebank Intermodal Precinct Complaints Register - As of 19 May 2025				
Date received	**Complainant**	**Nature of complaint**	**Location (MIP/MARW)**	**Status**
		additional noise monitoring. The complainant was advised further additional attended noise monitoring will be undertaken.		
28/7/2022	**Community member**	Noise: A Wattle Grove resident made a complaint about truck and container movement noise at the site. The complainant was advised the project has approval to operate 24/7 within limits of the Operational Noise and Vibration Management Plan and the project undertakes ongoing noise management and monitoring, including permanent noise monitors. Further, the team notified the complainant that staged commencement of automated electric crane operations later this year which are expected to result in more environmentally friendly operations on site. The complainant was advised further additional attended noise monitoring will be undertaken.		Closed
19/7/2022	**Community member**	Noise: A Wattle Grove resident complained about noise emanating from the site, particular trucks and container movement noise. The complainant was advised the project has approval to operate 24/7 within limits of the Operational Noise and Vibration Management Plan and the project undertakes ongoing noise management and monitoring, including permanent noise monitors. Further, the team notified the complainant that staged commencement of automated electric crane operations later this year which are expected to result in more environmentally friendly operations on site. The complainant was advised further additional attended noise monitoring will be undertaken		Closed
4/7/2022	**Local business**	Flooding: Water entered the premises of a site neighbour during a heavy rainfall weather event (300mm +). Following an investigation, SIMTA contractors undertook cleaning of the site and repair to verges. Further work will be undertaken to repair swale damage.		Closed
18/06/2022	**Community member**	Noise: A resident in Wattle Grove made a complaint relating to container movement noise. The project team investigated and noise monitoring at the time described included some container noise which was within approved noise parameters for the site. As a result of the community member's observations, attended noise monitoring will be undertaken in the area to further explore (in addition to permanent noise monitoring already in place at locations determined by DPE). The complainant was advised further additional attended noise monitoring will be		Closed

Moorebank Intermodal Precinct Complaints Register - As of 19 May 2025				
Date received	**Complaintant**	**Nature of complaint**	**Location (MIP/MARW)**	**Status**
		undertaken.		
10/06/2022	**Community member**	Noise: A resident in Wattle Grove made a complaint about container movement noise. The project team investigated and noise monitoring at the time described included some container noise which was within approved noise parameters for the site. As a result of the community member's observations, attended noise monitoring will be undertaken in the area to further explore (in addition to permanent noise monitoring already in place at locations determined by DPE).		Closed
26/04/2022	**CCC member**	Noise: Complainant noted sound from a water pump has been operating 24/7 near the Georges River at the north of the site for about a week. The project team investigated the complaint and discovered the water level within the excavation works area had recently receded, causing the pump to function incorrectly. The complainant was informed acoustic blankets would be installed for additional noise attenuation and the pump would only be running during standard construction hours until they are in place. Further noise modelling will be undertaken before overnight pumping resumes.		Closed
19/02/2022	**CCC member**	Noise: Complainant noted weekend work was being carried out after 1pm Saturday. The complainant was advised a new extended weekend construction hours order had been issued by the NSW Minister for Planning and was supplied a copy of the order.		Closed
11/01/2022	**CCC member**	Noise: Complainant noted heavy vehicle noise late at night. No work was being undertaken on our project at that time, which complainant was advised.		Closed
2021 Complaints				
Date received	**Complainant**	**Nature of complaint**		**Status**
25/11/2021	**Road user**	Condition of road: A motorist complained about potholes on Moorebank Avenue between East Hills railway line and Cambridge Avenue. The project team advised the motorist that the potholes are within the section of the road owned and managed by the Department of Defence and was not related to the project. The complainant was directed to contact Department of Defence. (Issue not related to project).		Closed
05/11/2021	**Road user**	Condition of road:		Closed

Moorebank Intermodal Precinct Complaints Register - As of 19 May 2025				
Date received	**Complainant**	**Nature of complaint**	**Location (MIP/MARW)**	**Status**
		A road user complained about the condition of Anzac Road. The project team investigated the specific location of Anzac Road and discovered this is an area of Anzac Road currently being upgraded by Liverpool City Council. This upgrade is unrelated to the project.		
04/11/2021	**CCC member**	Dust: A CCC member reported dust coming from the southern end of Moorebank Precinct West. The project team reminded all contractors to ensure mitigation strategies continue to be implemented appropriately. Further discussions about dust management from active stockpiles were conducted with the overall project team. The complaint occurred on a day where the wind was 80-90km/hr - while water carts were suppressing dust on the day, it was impossible to eliminate the dust due to these high wind speeds.		Closed
01/11/2021	**Community member**	Noise: A resident in Wattle Grove complained about night works noise coming from Anzac Road. The project team discovered that these works are undertaken by Liverpool City Council and advised the resident to contact council. (Issue not related to project).		Closed
28/10/2021	**Road user via Liverpool City Council**	Condition of road: Liverpool City Council on behalf of road users complained about the condition of Bapaume Road, Moorebank. The project team is investigating ways to temporary remedy potholes and conditions of the road where possible. Please note this is a local controlled council road.		Closed
25/10/2021	**Community member**	Noise: A resident complained about noise coming from the Moorebank Intermodal Terminal direction. The project team acknowledged the complainant's concerns and requested more information about the noise so the team could carry out further investigation to identify the source. No further information was provided by the complainant, and project teams confirmed that no out of hours works were undertaken at the time by Moorebank Intermodal Terminal.		Closed
16/10/2021	**Community member**	Noise: A resident in Wattle Grove complained about night works noise. The project team investigated the complaint and discovered that night works (asphalting) were undertaken by nearby Holsworthy Army Barrack. Stakeholder was advised and encouraged to provide additional detail for future noise issues. (Issue not related to project.)		Closed
09/09/2021	**CCC member**	Noise: A CCC member complained about trucks beeping noise from a heavy vehicle in the early hours. The project team investigated the noise and discovered that it came from a Fire &		Closed

Moorebank Intermodal Precinct Complaints Register - As of 19 May 2025				
Date received	**Complainant**	**Nature of complaint**	**Location (MIP/MARW)**	**Status**
		Rescue NSW truck inspecting a local business premises. (Issue not related to project.)		
07/09/2021	**Community member**	General project: A resident in Glenfield complained about the height of warehousing on MPW hindering his cityscape view. The project team provided information to assist complainant understanding of works currently underway and those planned and approved for the near future.		Closed
17/07/2021	**Road user**	Vehicle Damage: A motorist reported a pothole on Anzac Road, east of Anzac Creek. The project team advised that the pothole was within the section of the road owned and managed by the Department of Defence and was not related to the project. The complainant was directed to DoD. (Issue not related to project.)		Closed
14/07/2021	**Road user**	Vehicle Damage: A motorist reported windscreen damaged by a rock from a truck on Moorebank Avenue. The project team investigated the claim and discovered the truck was not working on the project on the day of the incident. The motorist was directed to contact the truck company directly. (Issue not related to project.)		Closed
14/05/2021	**Road user**	Driver behaviour: Site neighbour advised that vehicle leaving site failed to completely stop moving at a stop sign. SIMTA contractors issued road safety to relevant team members.		Closed
13/05/2021	**Community member**	Noise: A resident from East Moorebank complained of OOH excavator noise during a one-month period. Further information was requested from the complainant, but no response was provided. Investigations indicated the noise was not related to the project.		Closed
06/05/2021	**Local Business**	Water/Flooding: Site neighbour advised that water was flowing from SIMTA property into culvert situated along fence line on private property. SIMTA introduced measures to help prevent runoff during heavy rainfall.		Closed
13/04/2021	**Road user**	Traffic lights: A road user complained about traffic congestion on Moorebank Avenue causing major delays. Roads and Maritime Services advised the light sequencing system was faulty. The project team had also directly reported the issue to TfNSW. (Issue not related to project.)		Closed

Moorebank Intermodal Precinct Complaints Register - As of 19 May 2025				
Date received	**Complainant**	**Nature of complaint**	**Location (MIP/MARW)**	**Status**
08/04/2021	**Local Business**	Water/Flooding: Advised by site neighbour that a water hose situated on SIMTA property was leaking. The project team inspected the hose and repaired it.		Closed
29/03/2021	**Road user**	Traffic lights: A road user complained about traffic congestion on Moorebank Avenue causing major delays. Roads and Maritime Services advised the light sequencing system was faulty. (Issue not related to project.)		Closed
29/03/2021	**Road user**	Traffic lights: A road user complained about traffic congestion on Moorebank Avenue causing major delays. Roads and Maritime Services advised the light sequencing system was faulty. (Issue not related to project.)		Closed
22/03/2021	**Local Business**	Water/Flooding: Water entered the premises of a site neighbour during heavy rainfall. As a gesture of goodwill, SIMTA offered to pay for the clean-up.		Closed
09/01/2021	**CCC member**	Noise: A CCC member complained about trucks tailgates making noise during the delivery of material to the site. The project team investigated the complaint and noted that the complaint related to trucks operating during standard construction hours and within approval conditions.		Closed
2020 Complaints				
Date received	**Complainant**	**Nature of complaint**		**Status**
12/12/2020	**CCC member**	Noise: A CCC member complained about noise from night work. The project team acknowledge the CCC member's concerns and informed that they have amended the work methodology in response to previous complaints. The team advised they have moved the out-of-hours work to a section of the site located further away from homes in Casula, endeavouring to ensure all plant and machinery on MPW uses non-tonal reversing sounders. Furthermore, the project team also introduced several initiatives to reduce the impact of night works. Noise monitoring indicates that these initiatives appear to be working in helping reduced noise impacts from night works.		Closed
10/12/2020	**Community member**	Dust: A community member complained about dust impacts on her home. The project team outlined the measures used to mitigate the impact of dust; including frequent use of dust suppression vehicles, continually monitoring dust levels and work practices being altered during strong winds. The project team apologised the community member for any		Closed

Moorebank Intermodal Precinct Complaints Register - As of 19 May 2025				
Date received	**Complainant**	**Nature of complaint**	**Location (MIP/MARW)**	**Status**
		impacts.		
09/11/2020	**CCC member**	Noise: A CCC member visited BMD gate on MPW and complained about noisy night work. The site supervisor discussed new noise mitigation measures had been put in place for the night work and the CCC member agreed the noise level had dropped. The supervisor also explained to the CCC member that ongoing toolbox talks with contractors/drivers on the need to keep noise levels down, especially with the use of horns and closing tailgates. The CCC member agreed that everyone was doing their best to keep noise levels down.		Closed
04/11/2020	**Road user**	Truck driver behaviour: A road user complained about an interaction with a truck driver on Moorebank Avenue. The project team investigated the complaint and dashcam footage was inconclusive in terms of the account of the incident. The project team also discussed with the truck driver the importance of always ensuring road safety and road rules are adhered to when entering and leaving site. The project team apologised the road user for any concerns caused by the incident.		Closed
22/10/2020	**CCC member**	Noise: A CCC member complained about noisy night work. The project team acknowledge the CCC member's concerns and advised that they have amended the work methodology in response to his expressing dissatisfaction with the level of out-of-hours work noise. The team advised they have moved the out-of-hours work to a section of the site located further away from homes in Casula. In addition, the project team also introduced additional noise monitoring to help confirm noise sources. Feedback from the CCC member indicated that this eliminated the noise issues he had been experiencing.		Closed
20/10/2020	**CCC member**	Dust: A CCC member complained about dust coming up from the northern end of MPW. The project team investigated the complaint and informed the CCC member they could not conclusively identify any work that caused the dust complaint reported. The project team organised additional street sweeping and dust suppression vehicles to mitigate any possible dust issues.		Closed
15/10/2020	**Community member**	A resident in Casula complained about construction noise. The project team acknowledge the resident's concerns and advised that they have amended the work methodology in response to residents expressing dissatisfaction with the level of out-of-hours work noise. The team did this by relocating the out-of-hours work to a section of the site located further away from homes in Casula. In addition, the project team also introduced additional noise monitoring to help confirm noise sources.		Closed
14/10/2020	**Community member**	Noise:		Closed

Moorebank Intermodal Precinct Complaints Register - As of 19 May 2025				
Date received	**Complainant**	**Nature of complaint**	**Location (MIP/MARW)**	**Status**
		Two residents in Casula complained that they could hear loud metallic bangs at night. The project team acknowledged the residents' concerns and advised that the "banging" noises were determined to be caused by tipper trucks' tailgates delivering crushed sandstone to the site during extended hours. The team reiterated to drivers that they should take care to ensure their tailgates closed as quietly as possible after they deposited their load on-site. In addition, the project team relocated the out-of-hours work to a section of the site further away from homes in Casula and introduced additional noise monitoring. Feedback from the community indicated that this eliminated the noise issues they had been experiencing.		
09/10/2020	**Community member**	Noise: A resident in Wattle Grove complained that he could hear hydraulic excavator or similar making loud noises at night. The project team investigated the complaint and informed the resident that there had not been any night-time activity on the site other than out-of-hours deliveries of crushed sandstone to Moorebank Precinct.		Closed
24/09/2020	**Neighbour**	Traffic lights: A representative of the Department of Defence complained about the traffic light timing at the intersection of Moorebank Ave and Frank Partridge Drive. Roads and Maritime Services advised that the signals operate on an auto-sensor system. Complainant was provided RMS details to advise of traffic delays that may require adjustment to the signaling.		Closed
24/09/2020	**Community member**	Noise: A resident in Casula complained about the noise generated by nightworks. The project team investigated and informed the resident that the noise was caused by trucks delivering crushed sandstone to the site during extended hours. The project team apologised for the inconvenience caused and reminded the contractor of the importance of minimising the noise created by this work.		Closed
21/09/2020	**CCC member**	Noise: A CCC member complained about noisy night work, including jackhammering. The project team investigated and confirmed that no work of high-impact nature caused the excessive noise claimed. The only work which used plant machinery and a bulldozer was the ongoing importation of materials to site.		Closed
15/09/2020	**Community member via DPIE**	Dust: A community member complained via DPIE about rubbish and sand on Moorebank Avenue. The project team organised additional street sweeping and dust suppression.		Closed

Moorebank Intermodal Precinct Complaints Register - As of 19 May 2025				
Date received	**Complainant**	**Nature of complaint**	**Location (MIP/MARW)**	**Status**
02/09/2020	**Community member**	Noise: A resident in Casula complained that he could hear loud metallic bangs at night. The project team investigated the complaint and informed the resident that the noise was likely caused by a truck's tailgate closing after it delivered crushed sandstone to the site during extended hours. The project team apologised for the inconvenience caused and reminded the contractor of the importance of minimising the noise created by this work.		Closed
02/09/2020	**Community member**	Vehicle Damage: A motorist reported that a pothole on Moorebank Avenue caused damaged to her car. The project team investigated the complaint and discovered that the pothole was within the section of the road owned and managed by the Department of Defence. The complainant was directed to DoD to discuss further.		Closed
26/08/2020	**CCC member**	Noise: A CCC member complained about loud metallic bangs from trucks' tailgate while unloading crushed sandstone to site. The project team investigated the complaint and believed that the noise might have been caused by a truck's tailgate closing after it had tipped its load. The project team reminded the contractor of the importance of this work being carried out more quietly in future and has also been carrying out noise monitoring of this work.		Closed
25/08/2020	**Community member**	Environmental impacts: A resident in Casula complained about the height of the proposed Woolworths warehousing on MPW affecting the view from his backyard. The project team advised the resident the proposal was open for public consultation and directed him to the online information link to provide a submission detailing his concerns.		Closed
24/08/2020	**Community member**	Condition of road: A member of the community complained about her vehicle being damaged by the pothole in Moorebank Avenue south of the East Hills rail line. The project team investigated the complaint and discovered that the pothole is in the area owned and managed by Department of Defence and advised her to raise her concerns with DoD.		Closed
18/08/2020	**CCC member via DPIE**	Environmental impacts: CCC member complained via DPIE that the colour scheme of the IMEX crane located on the Moorebank Precinct East site is considered visually intrusive. The project team confirmed to the complainant that this is the final colour scheme of the equipment.		Closed
17/08/2020	**Community member**	Condition of road:		Closed

Moorebank Intermodal Precinct Complaints Register - As of 19 May 2025				
Date received	**Complainant**	**Nature of complaint**	**Location (MIP/MARW)**	**Status**
		A community member complained about a pothole in Moorebank Avenue. The project team investigated the location of the pothole and found that it is in the area owned and managed by Department of Defence and advised the resident to contact the DoD.		
27/05/2020	**CCC member**	Noise: CCC member noted that noise was audible until 8.30 pm on 26/5 as trucks delivered materials to the worksite. Project team confirmed that this is permitted by project approvals.		Closed
20/04/2020	**CCC member**	Lighting: CCC member asked that on-site lighting be trimmed down as one unit is directing light towards his home. Project team adjusted the relevant lighting, including light shields and further engaged with complainant to ensure temporary lighting units were not placed in locations that directed light towards his home.		Closed
13/03/2020	**Community member via DPIE**	Vegetation: Resident claimed that Aboriginal Scar trees were being removed from site. Project team confirmed and provided evidence that this had not occurred.		Closed
10/03/2020	**Community member via Liverpool City Council**	Condition of road: Local resident observed potholes on Moorebank Ave near Anzac Avenue and wanted the potholes repaired. Project team worked with LCC to identify and repair potholes.		Closed
24/02/2020	**Community member**	Environmental impacts: Request that traffic controllers stop feeding bread to the cockatoos. Personnel ceased doing so immediately.		Closed
18/02/2020	**Local business**	General construction: Noting runoff of water from site detention basins following 450mm rainfall storm event. Project team confirmed that this is in line with project approvals.		Closed
22/01/2020	**Community member**	General construction: Stacked containers wall fell during supercell storm. Project team reduced height of stack and altered stacking method to further reinforce the noise wall.		Closed
22/01/2020	**Community member**	General construction: Stacked containers wall fell during supercell storm. Project team reduced height of stack and altered stacking method to further reinforce the noise wall.		Closed
2019 Complaints				

Moorebank Intermodal Precinct Complaints Register - As of 19 May 2025

Date received	Complainant	Nature of complaint	Location (MIP/MARW)	Status
Date received	**Complainant**	**Nature of complaint**		**Status**
27/11/2019	**RAID via DPIE**	Dust: RAID member claimed dust that had settled on outdoor furniture was produced by project construction. No further evidence was able to be supplied.		Closed
25/11/2019	**Local business**	Condition of road: Roadside bollards damaged by turning truck. Project team repaired bollards.		Closed
25/10/2019	**Community member via DPIE**	Dust: Resident noted dust issues affecting his home and pool, as well as Moorebank Avenue. Project team noted dust mitigation and management protocols that are in place.		Closed
11/10/2019	**Road user**	Condition of road: Three pot holes on the road approaching the bridge on Cambridge Ave, Moorebank. Project team reported potholes to road owner.		Closed
7/09/2019	**Road user**	Vehicle damage: Road user reported that her vehicle was damaged by site fencing during heavy wind. Investigation by relevant insurance agency determined that the damage had been existing on the vehicle.		Closed
2/09/2019	**Community member**	Dust: Resident noted dust issues affecting his home. Project team noted dust mitigation and management protocols that are in place.		Closed
21/08/2019	**Community member**	Noise: Complainant reported excessive night-time noise over three nights, which they believed to have been caused by project construction. Project team confirmed that construction took place on only two of the three dates, and that the activities reported as occurring around 2am had concluded by midnight. Project team was able to ascertain that MS Motorway roadworks were also carried out on the dates in question.		Closed
21/08/2019	**Community member**	Noise: Complainant reported excessive night-time noise, which they believed to have been caused by project construction. Project team confirmed that construction took place on the reported date, with MS Motorway roadworks also carried out on the date in question.		Closed
20/08/2019	**Community member**	Noise: Complainant reported excessive night-time noise, which they believed to have been caused by project construction. Project team confirmed that construction took place on the reported date, with MS		Closed

Moorebank Intermodal Precinct Complaints Register - As of 19 May 2025				
Date received	**Complainant**	**Nature of complaint**	**Location (MIP/MARW)**	**Status**
		Motorway roadworks also carried out on the date in question.		
17/08/2019	**Community member**	Noise: Complainant reported excessive night-time noise, which they believed to have been caused by project construction. Project team confirmed that construction took place on the reported date, with MS Motorway roadworks also carried out on the date in question.		Closed
16/08/2019	**Community member**	Noise: Complainant reported excessive night-time noise, which they believed to have been caused by project construction. Project team confirmed that construction took place on the reported date, with MS Motorway roadworks also carried out on the date in question.		Closed
18/07/2019	**Community member**	Water use: Repeat of 9/7/19 complaint, project team reiterated that water use was legal, approved, paid for and only took place when captured rainwater was unavailable.		Closed
16/07/2019	**Community member**	Truck movements: Resident noted heavy vehicle use of Anzac Road in exceedance of weight limit. Was unable to provide any registration number or other identifying features of the vehicles he witnessed.		Closed
9/07/2019	**Community member**	Water use: Complainant witnessed project water suppression tankers filling up from Sydney Water pumping station and alleged water was being stolen. Project team confirmed that this was approved under licence by Sydney Water, that the water was paid for and that mains refilling only took place when project water basins were empty.		Closed
2/07/2019	**Local business**	Condition of road: Complainant noted dirt "tracking" from worksite onto Bapaume Road and dirt in drains from site runoff. Project team cleaned Bapaume Road with street sweeper, improved site features to reduce tracking, cleaned gutters and pumped out roadside drains.		Closed
28/06/2019	**Community member**	Water use: Complainant witnessed project water suppression tankers filling up from Sydney Water pumping station. Project team confirmed that this was approved under licence by Sydney Water and that mains refilling only took place when project water basins were empty.		Closed
20/05/2019	**Community member via DPIE**	Noise: Complainant reported hearing an 'evacuation warning siren'. Project team was unable to identify a source of the noise within the worksite.		Closed
9/04/2019	**Road user via**	Condition of road:		Closed

Moorebank Intermodal Precinct Complaints Register - As of 19 May 2025				
Date received	**Complainant**	**Nature of complaint**	**Location (MIP/MARW)**	**Status**
	Transport for NSW	Road user reported a "lip" in the road surface above the new rail underpass. Project team confirmed this was not the final road surface and that a weekend road closure to apply the final surface was upcoming.		
3/04/2019	**RAID via Liverpool City Council**	Condition of road: Complainant reported localised flooding on the road along Moorebank Ave and its effect on road users. Project team worked with Liverpool City Council to clear drains, and confirmed that a new drainage system delivered with the Moorebank Ave upgrade would resolve this issue.		Closed
15/03/2019	**Community member**	Consultation: Complaint about lack of notification for upcoming helicopter movements. Project team confirmed that a letterbox notification was delivered across an area twice the size of that required by approval condition and the complainant resided outside that area. Also advised that all project notifications are made available on the project website.		Closed
15/02/2019	**Community member**	Noise: Complainant reported noise being produced on-site before 7am start of works. Project team reminded contractors about noise requirements and ensuring staff arrival noise was minimised.		Closed
		2018 Complaints		
Date received	**Complainant**	**Nature of complaint**		**Status**
23/11/2018	**Road user**	Condition of road: Road user reported a near-miss on Moorebank Avenue attributed to vehicle swerving to avoid a pothole. Project team arranged repair of pothole.		Closed
6/11/2018	**Community member**	Worker behaviour: Complainant reported contractor parking on property. Project team reminded work crews of respectful interface with neighbours and community.		Closed
5/11/2018	**Community member**	Truck movements: Resident noted heavy vehicle use of Anzac Road in exceedance of weight limit. Provided vehicle details and sub- contractor was reminded of approved truck travel routes.		Closed
25/10/2018	**Road user**	Vehicle damage and condition of road: Road user reported that two tyres on his vehicle were burst by Moorebank Ave pothole. Project team arranged reimbursement of the cost of two new tyres.		Closed
22/10/2018	**Road user via Liverpool City Council**	Vehicle damage: Liverpool City Council received advice of damage to two vehicles caused by Moorebank Ave		Closed

Moorebank Intermodal Precinct Complaints Register - As of 19 May 2025				
Date received	**Complainant**	**Nature of complaint**	**Location (MIP/MARW)**	**Status**
		road surface. Project team referred complainants to relevant insurance agency.		
19/10/2018	**Community member via Sydney Trains**	Truck movements: Trucks producing dust and blocking entry to Sydney Trains maintenance facility. Project team met with Sydney Trains, erected signage advising trucks not to stop in designated areas and increased dust suppression on entry road.		Closed
3/10/2018	**Road user**	Condition of road: Cyclist advised of dissatisfaction with arrangements for cyclists on Moorebank Avenue during construction and identified safety hazard of damaged signposts. Project team confirmed that footpath that had closed was not a cycle path and use by cyclists was not legally permitted. Project team advised of the approved method for cyclists to navigate during construction, including using road traffic lanes as permitted by the road rules, and ensured dangerous signposts were removed.		Closed
21/9/2018	**Local business**	Condition of road: Roadside bollards damaged by turning truck. Project team repaired bollards.		Closed
10/9/2018	**Community member**	General project: Complainant expressing disgust in the SIMTA project and asking to see proof of approvals from the Land and Environment Court. Project team provided relevant approvals.		Closed
27/8/2018	**Community member**	Dust: Reiteration of earlier complaint.		Closed
24/8/2018	**Community member via DPIE**	Environmental impacts: Resident raised concerns about vegetation clearing beside Moorebank Avenue and asked whether approval had been sought. Project team confirmed this work had been approved and provided relevant approval documents.		Closed
23/8/2018	**Road user**	Condition of road: Complaint about dust and debris on Moorebank Ave. Project team advised of systems in place to manage dust/dirt and regular sweeping of the road surface. Project team reviewed dust suppression measures as a result of this and two other complaints and introduced an additional mitigation measure - spraying a polymer binder to seal dirt that would remain exposed long-term.		Closed
23/8/2018	**Community member**	Condition of road: Complaint about dust and debris on Moorebank Ave. Project team advised of systems to manage dust/dirt and regular sweeping.		Closed

Moorebank Intermodal Precinct Complaints Register - As of 19 May 2025				
Date received	**Complainant**	**Nature of complaint**	**Location (MIP/MARW)**	**Status**
		Project team reviewed suppression measures as a result of this and two other complaints and introduced an additional mitigation measure - spraying a polymer binder to seal dirt that would remain exposed long-term.		
21/8/2018	**Community member**	Dust: Complainant reported his house and car were being regularly made dirty by dust caused by construction and sought compensation for cleaning that he had been carrying out. Project team reviewed dust suppression measures as a result of this and two other complaints and introduced an additional mitigation measure - spraying a polymer binder to seal dirt that would remain exposed long-term.		Closed
8/8/2018	**Road user**	Traffic: Complainant reporting delays on Moorebank Ave caused by the management of project's traffic control. Traffic controllers were advised to ensure priority was given to vehicles travelling on Moorebank Ave during peak periods.		Closed
6/8/2018	**Community member**	Damage to property: Concrete slurry was left. Construction team cleaned this.		Closed
12/7/2018	**Community member**	Noise: Casula resident complaint about beeping noises before 7am. Project team confirmed no site vehicles have reversing "beepers" fitted, and reminded crews to arrive quietly.		Closed
2/7/2018	**Community member**	Condition of road: Resident advised on Moorebank Ave potholes. Project team organised for road to be repaired.		Closed
26/6/2018	**Community member via Liverpool City Council**	General construction: Temporary reinstatement of footpath with asphalt viewed by pedestrian as insufficient. Requested better permanent surface. This was provided after construction was completed in the area.		Closed
17/6/2018	**Community member**	Truck movements: Resident had observed trucks parking alongside Anzac Road so drivers could frequent take-away food store. Also noted exceedance of Anzac Rd weight limit and claimed vehicles were parking in a No Stopping zone. Project team investigated and confirmed that roadside parking in the relevant section of Anzac Rd was legal, but ensured truck drivers were reminded not to block footpath when parking and that Anzac Rd past fire station carried a weight limit.		Closed
28/5/2018	**Community member**	General project:		Closed

Moorebank Intermodal Precinct Complaints Register - As of 19 May 2025				
Date received	**Complainant**	**Nature of complaint**	**Location (MIP/MARW)**	**Status**
		General Concerns around the amount of trucks that will be on local roads in the coming years. Complainant commented that the trucks are too noisy, and she believes they are speeding, especially on her street. Project team advised of project benefits around reduction of heavy vehicle movements and investigated claim re truck speeding on complainant's street. Complainant lives on the northern side of Moorebank in an area not used by project vehicles.		
28/5/2018	**Community member**	General project: Caller advised that she received a letter re Moorebank Intermodal Terminal Facility and she would like more information. Resident lives on Junction Rd, Moorebank, and has many concerns around traffic and project works impacting on Junction Rd. Project team provided additional information on project.		Closed
24/5/2018	**Local business**	Truck movements: Complaint about trucks parking on nature strip outside business's premises. Nature strip was fenced off to ensure trucks were unable to park at that location.		Closed
16/5/2018	**Road user**	Vehicle damage: Complainant's vehicle was sprayed with a substance from a project vehicle. Project team arranged repair of the vehicle.		Closed
4/4/2018	**Community member**	General project: Complainant generally opposes the project. Project team noted the complaint.		Closed
2/3/2018	**Community member**	Dust: Caller advised of large plume of dust going high into the air, viewed from Casula. Project team spoke with demolition crews and was unable to identify cause or confirm this was related to the project.		Closed
1/3/2018	**Community member**	Environmental impacts: A resident advised they had provided EPA with photos of what they say is a sediment control incident. Project team liaised with EPA to resolve matter.		Closed
21/2/2018	**Community member**	Lighting: Report that temporary traffic lights are left on all night. Project team resolved.		Closed
16/2/2018	**Community member via OPIE**	Noise: Resident alleged that loud banging noise was audible at Sam. Project team confirmed no work was underway on site at that time.		Closed
8/2/2018	**Community member**	General project: Complaint made about ignoring community feedback. Project team noted this complaint.		Closed

Moorebank Intermodal Precinct Complaints Register - As of 19 May 2025				
Date received	**Complainant**	**Nature of complaint**	**Location (MIP/MARW)**	**Status**
5/2/2018	**Community member**	Traffic: Complainant reporting delays on Moorebank Ave caused by the management of project's traffic control. Traffic controllers were advised to ensure priority was given to vehicles travelling on Moorebank Ave during peak periods.		Closed
19/1/2018	**Community member via OPIE**	Noise: Resident alleged that loud banging noise was audible at 4.25am. Project team confirmed no work was underway on site at that time.		Closed

Moorebank Intermodal Precinct

APPENDIX G – BIODIVERSITY (FLORA AND FAUNA MONITORING REPORTS)

Ongoing internal reporting. No submission required under SSD 6766 and 7628.

APPENDIX H – BTODR REPORTING

To be submitted separately

APPENDIX I – OPERATIONS INCIDENT REGISTER

Report ID	ReportStatusDesc	Region	BuildingName	BuildingCategory	MRI Building ID	LevelID	LevelName	TenantID	TenantName	SiteName	ManagerName	ManagerContact	ManagerEmail	CCManagerUserID	StaffCompletingReport	PartA_LineManagerName	PartA_LineManagerEmail
IR122775	Completed Signed Off	NSW	400 Moorebank Ave, MOOREBANK (MOOREBANK (MLP Estate))		004180	273643	Ground Level			Knight Frank Facilities	Michael Beresford	0404 608 790	michael.beresford@au.knightfrank.com			Shane Randall	shane.randall@au.knightfrank.com
IR127090	All Actions Completed	NSW	, MOOREBANK (MOOREBANK (Chatham Ave, Moorebank))		004174	271766	Ground Level			Knight Frank Facilities	Michael Beresford	0404 608 790	michael.beresford@au.knightfrank.com	199880		Shane Randall	shane.randall@au.knightfrank.com
IR127585	Completed Signed Off	NSW	400 Moorebank Ave, MOOREBANK (MOOREBANK (MLP Estate))		004180	273643	Ground Level			Knight Frank Facilities	Michael Beresford	0404 608 790	michael.beresford@au.knightfrank.com			Shane Randall	shane.randall@au.knightfrank.com
IR128619	Completed Signed Off	NSW	400 Moorebank Ave, MOOREBANK (MOOREBANK (MLP Estate))		004180	273643	Ground Level			Knight Frank Facilities	Michael Beresford	0404 608 790	michael.beresford@au.knightfrank.com			Shane Randall	shane.randall@au.knightfrank.com
IR130033	Completed Signed Off	NSW	, MOOREBANK (MOOREBANK (Chatham Ave, Moorebank))		004174					Knight Frank Facilities	Michael Beresford	0404 608 790	michael.beresford@au.knightfrank.com	199880		Shane Randall	shane.randall@au.knightfrank.com
IR132556	Completed Signed Off	NSW	400 Moorebank Ave, MOOREBANK (MOOREBANK (MLP Estate))		004180	273643	Ground Level			Knight Frank Facilities	Michael Beresford	0404 608 790	michael.beresford@au.knightfrank.com	45622		Shane Randall	shane.randall@au.knightfrank.com
IR133637	Completed Signed Off	NSW	400 Moorebank Ave, MOOREBANK (MOOREBANK (MLP Estate))		004180	273643	Ground Level			Knight Frank Facilities	Michael Beresford	0404 608 790	michael.beresford@au.knightfrank.com	45622		Moustafa Sanoussi	Moustafa.Sanoussi@au.knightfrank.com
IR134492	Completed Signed Off	NSW	, MOOREBANK (MOOREBANK (Warehouse 52))		004168	271773	Ground Level	182601	Mcphee Distribution Services Pty Ltd	Knight Frank Facilities	Michael Beresford	0404 608 790	michael.beresford@au.knightfrank.com	400255		Shane Randall	shane.randall@au.knightfrank.com
IR143679	Completed Signed Off	NSW	400 Moorebank Ave, MOOREBANK (MOOREBANK (MLP Estate))		004180			185145	Moorebank Intermodal Company Limited	Knight Frank Facilities	Shane Randall	(02) 9036 6888	shane.randall@au.knightfrank.com			Mel Morizzi (KF)	mel.morizzi@au.knightfrank.com
IR144508	All Actions Completed	NSW	, MOOREBANK (MOOREBANK (Warehouse 54))		004178	273641	Ground Level			Knight Frank Facilities	Michael Beresford	0404 608 790	michael.beresford@au.knightfrank.com			Steven Contarino	steven.contarino@au.knightfrank.com
IR145189	Part C Submitted	NSW	, MOOREBANK (MOOREBANK (Warehouse 49 & 50))		004177					Knight Frank Facilities	Michael Beresford	0404 608 790	michael.beresford@au.knightfrank.com	462190		Shane Randall	shane.randall@au.knightfrank.com
IR145325	Part C Submitted	NSW	400 Moorebank Ave, MOOREBANK (MOOREBANK (Warehouse 1 East))		004158	271524	Ground Level			Knight Frank Facilities	Mitch Casey	0451 816 900	mitch.casey@au.knightfrank.com	45622		Steven Contarino	steven.contarino@au.knightfrank.com
IR145846	All Actions Completed	NSW	400 Moorebank Ave, MOOREBANK (MOOREBANK (MLP Estate))		004180	273643	Ground Level			Knight Frank Facilities	Mitch Casey	0451 816 900	mitch.casey@au.knightfrank.com	422981		Steven Contarino	steven.contarino@au.knightfrank.com
IR145914	Part C Submitted	NSW	N2, West 400 Moorbank Ave, Moorebank (MOOREBANK (Warehouse N2 WH9 West))		004245			235702	Sydney Tools Pty Ltd	Knight Frank Facilities	Mitch Casey	0451 816 900	mitch.casey@au.knightfrank.com			Steven Contarino	steven.contarino@au.knightfrank.com
IR145960	Part C Submitted	NSW	N2, West 400 Moorbank Ave, Moorebank (MOOREBANK (Warehouse N2 WH9 West))		004245			235702	Sydney Tools Pty Ltd	Knight Frank Facilities	Steven Contarino	0431 289 275	steven.contarino@au.knightfrank.com	471129		Nidal Mechhawi	nidal.mechhawi@au.knightfrank.com
IR145981	Part C Submitted	NSW	400 Moorebank Ave, MOOREBANK (MOOREBANK (MLP Estate))		004180	273643	Ground Level			Knight Frank Facilities	Steven Contarino	0431 289 275	steven.contarino@au.knightfrank.com	471129		Nidal Mechhawi	nidal.mechhawi@au.knightfrank.com
IR146203	Part C Submitted	NSW	400 Moorebank Ave, MOOREBANK (MOOREBANK (MLP Estate))		004180	273643	Ground Level			Knight Frank Facilities	Mitch Casey	0451 816 900	mitch.casey@au.knightfrank.com			Steven Contarino	steven.contarino@au.knightfrank.com
IR146685	Part C Submitted	NSW	, MOOREBANK (MOOREBANK (Warehouse 4B East))		004165	271532	All Levels	182599	Ats Building Products Pty Ltd	Knight Frank Facilities	Mitch Casey	0451 816 900	mitch.casey@au.knightfrank.com			Steven Contarino	steven.contarino@au.knightfrank.com

Report ID	PartA_LodgedDate	PartA_LodgedMonth	PartA_Section2_Type	PartA_Section2_Risk	PartA_Section3_First	PartA_Section3_Last	PartA_Section3_Gend	PartA_Section3_Relat	PartA_Section3_Empl	PartA_Section3_Com	PartA_Section3_DOB	PartA_Section3_Onsit	PartA_Section3_Empl	PartA_Section3_How	PartA_Section3_Extra	PartA_Section3_OtherObservations	PartA_Section3_PreE	PartA_Section4_Incid	PartA_Section4_Date	PartA_Section4_IncidentDetails
IR122775	18-Mar-22	3	Environmental	Low			Male	-- Please Choose --						Telephone			No	17/03/2022 12:15	17/03/2022 12:15	Extremely large Water leak from underground outside WH53 and flooding the WH53s roadway and lawn and fire pumps running
IR127090	20-Sep-22	9	Near Miss	Low	unknown	unknown	Male	Visitor		unknown		UBER		Witnessed		none	Unknown	19/09/2022 12:30	19/09/2022 12:30	Light vehicle leaving Chatham Avenue site at 12.26pm 19/9/22 ignored boom gate down and drove around exit boom gate at traffic controlled intersection (travelling west to east towards Moorebank Avenue) at Moxie Crossing and fully loaded Moxie travelling from south east to north east which had been cleared to cross by traffic control travelling at 30km/h almost collided in the centre of the Moxie crossing intersection with the light vehicle .Moxie fully loaded came to a stop and avoided collision with the light vehicle.Both vehicles then carried on after traffic controller intervened to clear both vehicles .
IR127585	11-Oct-22	10	Near Miss	Low	VIKTOR	ZILENKO	Male	Other		unkown		unknown		Witnessed		Unknown person observed on CCTV by Security/FM riding pushbike on train line to Imex terminal	No	21/09/2022 11:30	21/09/2022 11:30	At 11.29am on 21/9/22 the PSI CCTV security guard and Knight Frank FM observed on the CCTV an intruder on a pushbike in the rail corridor in the vicinity of the rail tunnel under Moorebank Avenue heading towards the Imex rail terminal.
IR128619	25-Nov-22	11	Near Miss	Low	Peter	Gohbriel	Male	Visitor		unkown		going to cafe		Telephone			Unknown	24/11/2022 13:00	24/11/2022 13:15	Car travelling south on Moorebank Avenue attempted to turn left in to the Cafe driveway entrance ramp and failed to make the turn and drove head on into the concrete Coates Hire barriers on the right hand side of the driveway
IR130033	27-Jan-23	1	Near Miss	Low	unknown	unknown	Female	Contractor	unknown	unknown		working	unknown	Telephone		unknown	Unknown	25/01/2023 15:45	25/01/2023 17:00	Traffic Incident occurred on INTS road up near Martinus .No further details provided
IR132556	19-May-23	5	Property Damage	High			Male	-- Please Choose --						Email			No	18/05/2023 22:00	18/05/2023 22:15	At approx 10.05pm on 18/5/23 security patrolman was reversing the security patrol car to attend to a vehicle which had lost its toolbox off the back of the ute and in doing so reversed the patrol car directly into the freight village 11kv electrical switching station kiosk rotating the kiosk and moving it approx 30cm from its location on the concrete pad.
IR133637	18-Jul-23	7	Property Damage	High			Male	-- Please Choose --						Telephone			No	18/07/2023 3:30	18/07/2023 6:15	I was contacted by Matt Goldfinch from LEdwards Electrical to advise of a break in to the Imex Terminal MSS Switch room area in which a vehicle had driven up through the southern fenceline and knocked over 2 mains electrical distribution boards and comunications cabinet
IR134492	17-Aug-23	8	Property Damage	Low			Male	-- Please Choose --						Telephone			No	16/08/2023 14:30	16/08/2023 14:45	High bay light fitting in Warehouse 52 caught fire , activating the infrared smoke beam alarms triggering the fire brigade response.Tenants extinguished fire in light fitting with hose reel after isolating power to lights.LEdwards Electrical attended site to check/make safe power to lighting .
IR143679	19-Sep-24	9	Property Damage	Low			Male	-- Please Choose --						Telephone			No	02/09/2024 12:30	02/09/2024 12:30	•Notified 12:26pm by Security that the dual solar panel on the RCA light at the entrance to the WH50 tenant car park had come down in extreme high winds •Met up with LEdwards who had found the solar panel had come down . •Reviewed the safety of these solar lights with LEdwards in regards to the panels and found all panels were in various stages of failure due to movement under high wind conditions and all would need to be removed to eliminate the risk. •Arranged with LEdwards to undertake emergency make safe works to decommission the DC power supply to each light 2/9 then remove the solar panels when winds abated and safe to do so with a truck based boom lift on 3/9/24. •Advised Steven Contarino of the issue who prepared an email report of damages incurred at MIP on 2/9/24 due to the high winds. This email was sent to Logos advising of damages found onsite. •Make safe works undertaken on 3/9/24 •Quote for make safe/decommissioning works received 5/9/24
IR144508	21-Oct-24	10	Property Damage	Low			Male	-- Please Choose --						Email			No	19/09/2024 3:45	19/10/2024 3:45	Fire alarm at Warehouse 54
IR145189	21-Nov-24	11	Property Damage	Low			Male	-- Please Choose --						Email			No	19/11/2024 23:30	19/11/2024 23:30	Fire alarm on ASE 74110 for Buildings 49-54
IR145325	27-Nov-24	11	Near Miss	Low	Najim	Mulani	Male	Tenant	Catch	N/A		Tenant FM	0431 538 945	Telephone		Incident report is the result of a false fire alarm triggered on Tuesday 26.11.24 within Warehouse 1 - Catch tenancy. No person's health was affected as a result of the details of this incident report.	No	26/11/2024 17:00	26/11/2024 17:15	Fire alarm triggered for Catch tenancy - Warehouse 1. FRNSW in attendance.
IR145846	10-Dec-24	12	Near Miss	High	Unknown	Unknown	Male	Contractor	Georgiou	Unknown		Construction of Wareh	+61439090435	In Person		No reported to injury to truck driver and traffic control. Incident report raised as the result of a near miss.	Unknown	10/12/2024 13:30	10/12/2024 13:45	Incident happened at 1.21pm. After reviewing the footage, the truck driver is seen speeding down Bushmaster Ave around the bend passing Primary Connect entry, did not see the TF (traffic controller) holding the stop sign on the road (outside FDC). The truck driver slammed on the brakes causing the spilling of the liquid on to the road. S/O Pablo spoke with TC, TC confirmed container was not sealed properly and driver has been seen speeding up and down all day today heading towards Georgiou.
IR145914	17-Dec-24	12	Property Damage	Medium			Male	-- Please Choose --						Telephone			No	05/12/2024 14:00	05/12/2024 14:15	At approximately, 1400hrs the driver entering Sydney Tools has collected the entrance gate whilst doing a delivery.
IR145960	20-Dec-24	12	Property Damage	Medium			Male	-- Please Choose --						In Person			No	19/12/2024 13:00	19/12/2024 13:30	Warehouse manager reported to KF unauthorised works resulting in property damage and costs incurred by the tenant. Subcontractor to Vaughan Construction (Builder of the WH) had been arranging work without the builder or KF knowledge after hours.
IR145981	23-Dec-24	12	Property Damage	Medium			Male	-- Please Choose --						Witnessed			No	20/12/2024 12:00	20/12/2024 12:00	A crane operating on McPhees hardstand (relocating large size reels) for circa one month was found driving in the wrong direction on the estate road today approx. 12pm. Our incumbent HV contractors (L Edwards) witnessed first hand, the driver (Tom Hanlow) of the crane strike the 11kV powerlines in front of WH 53 & 54 (between the warehouses 49-54 and Catch). The incident caused the Eastern side of the Estate to loose power to all facilities and warehouses on the eastern side of the precinct. The western precinct lost water supply and fire systems.
IR146203	6-Jan-25	1	Property Damage	Medium			Male	-- Please Choose --						Telephone			No	06/01/2025 10:30	06/01/2025 10:30	Received a phone call from Dean Roberts at 10:30am advising a pit lid was broken along the footpath near WH4A. No base building footage CCTV available at time of incident and make-safe. Ceva Logistics will review their CCTV on Wednesday 8/1/25 and provide all findings to Knight Frank. Appears that a truck has driven over the pit. Potentially conducting a u-turn.
IR146685	29-Jan-25	1	Property Damage	High			Male	-- Please Choose --						Telephone			No	29/01/2025 8:00	29/01/2025 8:00	Phone call received from Demi Petrusevski advising that there was a power issue within WH 4B - indicating that there may be a tripped circuit.

Report ID	PartA_Section8_PropertyDamageDetails	PartA_Section9_EnvironmentDetails	PartA_Section10_CCTVDetails	PartA_Section10_WitnessName	PartA_Section10_WitnessPhone	PartA_Section10_Evidence	PartA_InjuredPartyRequestedCopy	PartA_AdditionalInformation	PartA_Section3_Appr	PartA_Section3_Addr	PartA_Section3_Subu	PartA_Section3_Postc	PartA_Section3_State	PartA_Section3_Occu	PartB_LodgedDate	PartB_Consequence	PartB_Likelihood	PartB_RiskRating	PartB_IncidentSeverity	PartB_WhoNotified	PartB_WorkCoverClaimMade
IR122775		Contamination of Land	MPW CCTV Control room			CCTV, Photos	FALSE	Reported to Knight Frank's Public Liability Insurer (ie, Proclaim) : Yes Reported to Owner's Public Liability Insurer : Yes Reported to Owner's Representative : Yes							2-May-22	Minor	Possible	Low Risk		Incident Was Notifiable: No	No
IR127090			Knight Frank Facilities Manager and PSI Corporate CCTV Monitoring room on site	Mohamed Charafeddine (Contractor/Visitor)	0479187308	CCTV, Witness	FALSE	Reported to Knight Frank's Public Liability Insurer (ie, Proclaim) : No Reported to Owner's Public Liability Insurer : Yes Reported to Owner's Representative : Yes	Unknown	unknown	unknown	unknown	unknown	unknown	19-Sep-22	Catastrophic	Possible	Extreme Risk		Incident Was Notifiable: Yes External State / Territory Authority Notified	No
IR127585			PSI Corporate CCTV computer/Knight Frank			CCTV, Photos, Other (NSW Police / PSI Corporate security)	FALSE	Reported to Knight Frank's Public Liability Insurer (ie, Proclaim) : No Reported to Owner's Public Liability Insurer : No Reported to Owner's Representative : Yes	50 and over	unknown	unknown	unknown	NSW	unknown	10-Oct-22	Insignificant	Unlikely	Very Low Risk		Incident Was Notifiable: No	No
IR128619						Photos	FALSE	Reported to Knight Frank's Public Liability Insurer (ie, Proclaim) : No Reported to Owner's Public Liability Insurer : Yes Reported to Owner's Representative : Yes	Unknown	unknown	unkown	unknown	unkwon		25-Nov-22	Minor	Possible	Low Risk		Incident Was Notifiable: No	Unknown
IR130033			Security			CCTV	FALSE	Reported to Knight Frank's Public Liability Insurer (ie, Proclaim) : No Reported to Owner's Public Liability Insurer : No Reported to Owner's Representative : Yes	Unknown						27-Jan-23	Moderate	Unlikely	Low Risk		Incident Was Notifiable: No	Unknown
IR132556	General Property Damage $1000+			HASMAT EKHLASS (Contractor/Visitor)	0401133221	Photos, Witness	FALSE	Reported to Knight Frank's Public Liability Insurer (ie, Proclaim) : No Reported to Owner's Public Liability Insurer : No Reported to Owner's Representative : Yes							19-May-23	Insignificant	Unlikely	Very Low Risk		Incident Was Notifiable: No	No
IR133637	Criminal Activity - Police Called, General Property Damage $1000+					Photos	FALSE	Reported to Knight Frank's Public Liability Insurer (ie, Proclaim) : No Reported to Owner's Public Liability Insurer : No Reported to Owner's Representative : Yes							20-Jul-23	Moderate	Rare	Low Risk		Incident Was Notifiable: No	No
IR134492	Fire Damage, General Property Damage $0 - $500					Photos	FALSE	Reported to Knight Frank's Public Liability Insurer (ie, Proclaim) : No Reported to Owner's Public Liability Insurer : No Reported to Owner's Representative : Yes							16-Aug-23	Moderate	Possible	Medium Risk		Incident Was Notifiable: No	No
IR143679	General Property Damage $1000+, Storm Damage					None	FALSE	Reported to Knight Frank's Public Liability Insurer (ie, PROPEL) : No Reported to Owner's Public Liability Insurer : No Reported to Owner's Representative : Yes							19-Sep-24	Minor	Unlikely	Low Risk		Incident Was Notifiable: No	No
IR144508	Other:Fire alarm					Photos, Other (Security Incident Report)	FALSE	Reported to Knight Frank's Public Liability Insurer (ie, PROPEL) : No Reported to Owner's Public Liability Insurer : No Reported to Owner's Representative : Yes							21-Oct-24	Insignificant	Possible	Low Risk		Incident Was Notifiable: No	No
IR145189	Other:Fire alarm only					Other (SECURITY INCIDENT REPORT)	FALSE	Reported to Knight Frank's Public Liability Insurer (ie, PROPEL) : No Reported to Owner's Public Liability Insurer : No Reported to Owner's Representative : Yes							28-Jan-25	Moderate	Likely	High Risk		Incident Was Notifiable: No	No
IR145325						Photos	FALSE	Reported to Knight Frank's Public Liability Insurer (ie, PROPEL) : No Reported to Owner's Public Liability Insurer : No Reported to Owner's Representative : Yes	Unknown	Warehouse 1, 400 Mo	Moorebank	2170	NSW	Maintenance Technici	26-Nov-24	Minor	Possible	Low Risk		Incident Was Notifiable: No	No
IR145846			Sharedrive - accessible via KF FM team on site.			CCTV	FALSE	Reported to Knight Frank's Public Liability Insurer (ie, PROPEL) : No Reported to Owner's Public Liability Insurer : No Reported to Owner's Representative : Yes	Unknown	400 Moorebank Ave	Moorebank	2170	NSW	Construction	11-Dec-24	Major	Possible	High Risk		Incident Was Notifiable: No	No
IR145914	General Property Damage $1000+		Sharedrive - Accessible for KF Facilities			CCTV, Photos	FALSE	Reported to Knight Frank's Public Liability Insurer (ie, PROPEL) : No Reported to Owner's Public Liability Insurer : No Reported to Owner's Representative : Yes							17-Dec-24	Moderate	Possible	Medium Risk		Incident Was Notifiable: No	No
IR145960	General Property Damage $1000+, Property/Stock damage (tenant)			Ibrahim Elsesed (Tenant)	0421167167	Witness	FALSE	Reported to Knight Frank's Public Liability Insurer (ie, PROPEL) : No Reported to Owner's Public Liability Insurer : No Reported to Owner's Representative : Yes							20-Jan-25	Major	Possible	High Risk		Incident Was Notifiable: Yes External State / Territory Authority Notified	No
IR145981	General Property Damage $1000+			Matt Goldfinch (Contractor/Visitor)	0438452535	Witness	FALSE	Reported to Knight Frank's Public Liability Insurer (ie, PROPEL) : Yes Reported to Owner's Public Liability Insurer : Yes Reported to Owner's Representative : Yes							23-Dec-24	Major	Possible	High Risk		Incident Was Notifiable: Yes External State / Territory Authority Notified	No
IR146203	General Property Damage $1000+					Photos	FALSE	Reported to Knight Frank's Public Liability Insurer (ie, PROPEL) : No Reported to Owner's Public Liability Insurer : No Reported to Owner's Representative : Yes							6-Jan-25	Moderate	Possible	Medium Risk		Incident Was Notifiable: No	No
IR146685	General Property Damage $1000+					Photos	FALSE	Reported to Knight Frank's Public Liability Insurer (ie, PROPEL) : Yes Reported to Owner's Public Liability Insurer : Yes Reported to Owner's Representative : Yes							29-Jan-25	Moderate	Possible	Medium Risk		Incident Was Notifiable: No	No

PartB_IncidentDescription	PartB_ResultOfAnotherParty	PartB_ImmediateActionTaken	PartB_IncidentLocation	PartC_HazardInfo_HazardDescription	PartC_HazardInfo_KeyContributingFactor	PartC_HazardInfo_ContributingFactorExtraInfo	PartC_HazardInfo_ManagerHasConfirmedNoHazardsIdentified	PartC_HazardInfo_ManagerNoHazardsIdentifiedComments	PartC_ManagerSignoff_Name	PartC_ManagerSignoff_Position	PartC_ManagerSignoff_LineManager	PartC_ManagerSignoff_Date	PartC_NoHazards_FurtherComments	FinalSignoff_Name	FinalSignoff_Position	FinalSignoff_LineManager	FinalSignoff_Date	FinalSignoff_Comments
Underground combined fire hydrant /sprinkler pipe failure leading to large volumes of eater on the roadway and stormwater network	No	Road rea round site cleaned by street sweeper after vac truck removed excess from pipe failure site .pipe failure site covered in geofab / sheeting and fenced off using temp fencing and shadecloth and tape and secured .	Common Area	Asbestos hazard due to contaminated fill	Plant / Equipment, Environment	Plant / Equipment: Component Failure, Environment:Other:Land waterlogged after long period of heavy rains	1	Pipe failure caused by ground movement/ softening due to prolonged period of heavy rain allowing movement of pressurised pipework underground..which was not forseeable/preventable	Shane Randall	Facilities Manager		10-Aug-23	Pipe failure caused by ground movement/ softening due to prolonged period of heavy rain allowing movement of pressurised pipework underground..which was not forseeable/preventable	Shane Randall	Facilities Manager		10-Aug-23	
	VisitorName: unknown (unknown)Company Name: unknownPurpose on site: visitor	Incident immediately reported to Knight Frank FM .Escalated to Logos WHS Manager , more withes hats deployed to prevent deliberate avoidance of boom gates .Teams meeting held with all parties concerned at 3pm 19/9/22.110Lm of water barriers organised for delivery/install at boom gates 20/9/22.Safework notified by phone at 4.56pm of Near Miss - Dangerous Occurence 2-209788	Common Area	Deliberate breaking of road rules by visiting vehicle	People	People:Other:Deliberate breaking of road rules by site visitor	0		Shane Randall	Facilities Manager		10-May-23						
	N/AName: ()Company Name: Purpose on site:	Damian Wilson at Qube Logistics immediately contacted to advise of person in rail corridor,followed by Alex Almeida from Logos and Karlee Mallia KF. Security dispatched to area to try and locate the person and intercept.NSW Police contacted .	Other (RAIL CORRI	Method of entry to rail corridor unknown at time of incident.Further investiagtion revealed possible point of entry as low height fence/gates at boundary between Rail terminal line ad NSW Trains line which allowed possible access	People	People:Other:	1	Upon contacting NSW Police and upon their attendance it was confirmed that the person was an elderly Missing Person with Dementia and NSW Police dealt with the incident as such .	Shane Randall	Facilities Manager		10-Aug-23	Upon contacting NSW Police and upon their attendance it was confirmed that the person was an elderly Missing Person with Dementia and NSW Police dealt with the incident as such .	Shane Randall	Facilities Manager		10-Aug-23	
	No	Security attended scene and assessed vehicle occupants for signs of injury and any first aid required.Knight Frank Traffic Control responded ot accident scene to make safe entry to cafe and Moorebank ave left turn lane into cafe. BMD responded immediately and moved vehicle to safe location and deployed spill kit to vehicle resting place Police notified of accident	Other (RMS approve	NO HAZARD.Single vehicle accident due to driver behaviour/error.Driver member of the public	People	People:Other:Deliberate breaking of road rules by site visitor	1		Shane Randall	Facilities Manager		10-Aug-23		Shane Randall	Facilities Manager		10-Aug-23	
Date - 25/01/2023 Time - 03.50pm Location - ITV road (interface between Martinus and another contractor on the precinct) Classification - Dangerous Occurrence - High Potential (currently being assessed) Damage - NIL Injuries - Minor Injuries to hand (currently being medically assessed at hospital) Emergency Services - Police Whilst a Martinus contracted traffic controller was operating a boom gate on the ITV road the TC proceeded to open the boom gate for an Interfacing Contractor from an adjacent worksite (not associated with Martinus). Upon opening the boom gate, the vehicle proceeded forward - past the boom gate. The driver then undertook a u-turn (erratically) and proceeded towards the TC at speed. The TC was contacted by the driver's vehicle resulting in the TC being pinned up against the ATF fencing by the vehicle. The driver exited his vehicle and walked towards the TC whilst verbally abusing the TC. The event was witnessed by a Martinus Supervisor within the area who immediately proceeded to the area. As the Martinus Supervisor arrived the driver entered his vehicle and departed site (erratically). The TC has been taken to the hospital for medical assessment as a precaution. Police have been contacted and are on route to the project. Client (Qube) and Precinct (Logos) have been notified.	Unknown	Qube and Logos notified.KF notified by Logos	Other (INTS Road)	Deliberate breaking of road rules by site construction worker.NSW Police matter.	People	People:Other:Deliberate breaking of road rules by site construction worker	1	NSW Police taken charge of the matter.	Shane Randall	Facilities Manager		30-Mar-23	NSW Police taken charge of the matter.	Shane Randall	Facilities Manager		30-Mar-23	
The area where the incident occured is currently vacant and part of the future development of the eastern precinct of Moorebank Logistics Park.This area was chosen as the location to relocate the Moorebank Logistics Park western compound offices to due to its suitability and the CCTV Monitoring room / FM desk was setup adjacent to the Freight Village HV RMU and Switching station until the new offices are constructed/assembled in the coming weeks	ContractorName: ASIF MOHAMMAD (0468 548 050)Company Name: PSI CORPORATEPurpose on site: SECURITY PATROLMAN	Incident report prepared and sent by security immediately following incient. Incident reported to LEdwards Electrical 19/5/23 to inspect the electrical kiosk 19/5/23 which was done with Shane Horsley and Mark Horsley to arrange for crane lifting and inspection of cable joints from May 22nd to verify integrity if cables/joints.Incident reported to LOGOS 19/5/23	Common Area	Electrical hazard from striking 11kv switching station .	People, Environment	People:Other:Accidental striking of switch station with vehicle , Environment:Lighting	0		Shane Randall	Facilities Manager		17-Aug-23		Michael Beresford	Facilities Manager		17-May-24	
South HV Electrical switch room area	Unknown	Incident reported to Qube, LEdwards/ARA Electrical and Knight Frank/security then Logos.NSW Police contacted by QUBE and attended site 9am approx Electrical distribution boards and comms cabinet isolated and made safe Steel HV switchroom staircase acro prop installed to make safe platform	External to the building	Electrical hazard from contact with live power distribution cables/cabinets.hazard from collapsing staircase structure if supports completely removed.	People	People:Other:Criminal activity - illegal access	0		Moustafa Sanoussi	Regional Facilities Manager		13-Aug-23		Michael Beresford	afm		17-May-24	
floor stock warehousing (no racking)	No	NSWFR attended alarm activation , ,acknowledged and reset fire panel alarm .Force Fire advised to attend site 17/8 to reset smoke beams in fault following alarm.Fire extinguisher initially used replaced with spare,	Tenancy Area	Fire hazard due to age of high bay lighting (72) fittings remaining in warehouse 52.FM/PM to visit tenant and discuss a solution to upgrading of lighting to LEDs	Plant / Equipment	Plant / Equipment: Component Failure, Other:high bay light fitting failure	0		Shane Randall	Facilities Manager		30-Jul-24		Michael Beresford	FM		24-Sep-24	Reduce Action (PA2WS22400019) : Control Measure Still in Place, but Not Appropriate Remedial Work Required: Light quotes to be reviewed for acceptance and works to be done
•Notified 12.26pm by Security that the dual solar panel on the RCA light at the entrance to the WH50 tenant car park had come down in extreme high winds •Met up with LEdwards who had found the solar panel had come down . •Reviewed the safety of these solar lights with LEdwards in regards to the panels and found all panels were in various stages of failure due to movement under high wind conditions and all would need to be removed to eliminate the risk. •Arranged with LEdwards to undertake emergency make safe works to decommission the DC power supply to each light 2/9 then remove the solar panels when winds abated and safe to do so with a truck based boom lift on 3/9/24. •Advised Steven Contarino of the issue who prepared an email report of damages incurred at MIP on 2/9/24 due to the high winds. This email was sent to Logos advising of damages found onsite. •Make safe works undertaken on 3/9/24 •Quote for make safe/decommissioning works received 5/9/24	N/AName: ()Company Name: Purpose on site:	•Notified 12.26pm by Security that the dual solar panel on the RCA light at the entrance to the WH50 tenant car park had come down in extreme high winds •Met up with LEdwards who had found the solar panel had come down . •Reviewed the safety of these solar lights with LEdwards in regards to the panels and found all panels were in various stages of failure due to movement under high wind conditions and all would need to be removed to eliminate the risk. •Arranged with LEdwards to undertake emergency make safe works to decommission the DC power supply to each light 2/9 then remove the solar panels when winds abated and safe to do so with a truck based boom lift on 3/9/24. •Advised Steven Contarino of the issue who prepared an email report of damages incurred at MIP on 2/9/24 due to the high winds. This email was sent to Logos advising of damages found onsite. •Make safe works undertaken on 3/9/24 •Quote for make safe/decommissioning works received 5/9/24	Common Area	•Notified 12.26pm by Security that the dual solar panel on the RCA light at the entrance to the WH50 tenant car park had come down in extreme high winds •Met up with LEdwards who had found the solar panel had come down . •Reviewed the safety of these solar lights with LEdwards in regards to the panels and found all panels were in various stages of failure due to movement under high wind conditions and all would need to be removed to eliminate the risk. •Arranged with LEdwards to undertake emergency make safe works to decommission the DC power supply to each light 2/9 then remove the solar panels when winds abated and safe	Environment	Environment:Other:Wind	1		Mel Morizzi (KF)	Partner, Head of Asset Management Services NSW		19-Sep-24		Mel Morizzi (KF)	Partner, Head of Asset Management Services NSW		19-Sep-24	
Vacant warehouse at the time of the alarm	N/AName: ()Company Name: Purpose on site:	Fire brigade attended site on brigade alarm , inspected building and reset fire panel.	Tenancy Area	Fault identified subsequent to the alarm by fire service provider as being possible faulty aged thermal detector(s)	Plant / Equipment	Plant / Equipment: Component Failure	0		Steven Contarino	Senior Facilities Manager		7-Nov-24						
System fault - resulting in FRNSW billable callout.	No	FRNSW attended site.	Tenancy Area	- Fire - Impairment to fire services	Plant / Equipment	Plant / Equipment: Component Failure	0											
Fire alarm notification issued to Knight Frank at 5:00pm. FRNSW attended site. Infinity Fire notified of the alarm and arranged afterhours attendence with a tech arriving at 6:00pm. Per attached correspondence - Found detector hidden under a conveyor belt. Appears that conveyor belts within the tenancy have been removed and the detectors monitoring them were not removed or made safe following removal. The detectors have been placed underneath sitting on a tray.	N/AName: ()Company Name: Purpose on site:	Fire alarm notification issued to Knight Frank at 5:00pm. FRNSW attended site. Infinity Fire notified of the alarm and arranged afterhours attendance with a tech arriving at 6:00pm.	Tenancy Area	System impairment. Incorrect installation.	People, Plant / Equipment	People: Job Competency, Plant / Equipment: Design, Other:Installed in incorrect/ inappropriate position.	0											
Truck travelling on Bushmaster Ave failed to stop safely which resulted in spill of polymer liquid on the street. "FYI, the liquid which spilled onto the road was a due to be sprayed onto a construction site in ESR's (the client) control. The liquid is a polymer which binds dirt in a bid to minimise dust from the site. ESR have not escalated this to the EPA or Safework, nor do they intend to."	ContractorName: Unknown (Unknown)Company Name: UnknownPurpose on site: Construction of Warehouse	Within 3 minutes of spill occurring, street sweeper was deployed to clean spilled polymer substance from street. CCTV footage obtained. Comms issued to Georgiou advising on near miss and procedures for them follow.	External to the building	People - Fatigue, Human error when operating the vehicle. Chemical - Chemical spilt from the trailer of the HR truck. Heavy Vehicle - Large plant/ vehicle stopping in an abrupt manner causing spill and near miss of injury with associated traffic control. Environment - Construction environment	People, Plant / Equipment, Environment	People:Other:Human error, fatigue , Plant / Equipment: Size/Weight, Other:Weight of vehicle resulted in failure to stop quickly, once traffic control were observed by driver., Environment:Other:Construction	0		Steven Contarino	Senior Facilities Manager		11-Dec-24						
N2 - Gate 1 Sydney Tools Tenancy.	TenantName: Mario Diab - mariodiab@sydneytools.com.au (02 8513 3994)Company Name: Sydney ToolsPurpose on site: Tenant	Security attended site immediately to confirm extent of damage and to ensure that no parties were injured. Champagne Building Services engaged for make-safe, temporary repairs to restore operation have been completed. Awaiting parts to be received for final repair which is expected this week. Tenant on charged costs.	Common Area	Damage to property	People, Plant / Equipment	People:Supervision, Job Competency, Plant / Equipment: Size/Weight	0											
refer to witness statement	TenantName: Zack Kuzmanovski (0414794292)Company Name: McPheesPurpose on site: Logistics	Area secured - repairs are underway.	Common Area	Impact to HV power lines	People, Plant / Equipment	People:Supervision, Job Competency, Plant / Equipment: Size/Weight, Design	0											
As discussed, a crane operating on McPhees hardstand (relocating large size reels) for circa one month was found driving in the wrong direction on the estate road today approx. 12pm. Our incumbent HV contractors (L Edwards) witnessed first hand, the driver (Tom Harlow) of the crane strike the 11kV powerlines in front of WH 53 & 54 (between the warehouses 49-54 and Catch). The incident caused the Eastern side of the Estate to loose power to all facilities and warehouses on the eastern side of the precinct. The western precinct lost water supply and fire systems.	CustomerName: Zack Kuzmanovski (0414794292)Company Name: McPheesPurpose on site: Logistics	Contractor engaged: Endevour Energy L Edwards, MID Plumbing, Infinity Fire, APM. Area secured, damage repaired and infrastructure restored.	Common Area	HV power lines and, unauthorised use of estate roads by Customer and their contractors/subcontractors.	People, Plant / Equipment	People:Supervision, Training, Job Competency, Plant / Equipment: Size/Weight	0											
Awaiting footage from Ceva Logistics, however, appears that a truck has driven over the path and pit, causing the damage. No reported injuries. Services within pit to be inspected by incumbent HV Electricians and pit cover to be replaced.	VisitorName: Unknown (Unknown)Company Name: UnknownPurpose on site: Unknown	L Edwards engaged for make-safe and to place bollards for traffic control. L Edwards will inspect for any damaged electrical services run through the pit and organise a replacement pit cover.	Common Area	Property Damage Damage to services Trip Fall/ Injury to persons	People, Plant / Equipment	People: Job Competency, Plant / Equipment: Size/Weight, Other:Weight/ U-turn of HV	0											
Water ingress into DB -4B-3 overnight or during rain event (still current). This appears to be a historic issue with signs of water staining on the surrounding wall. The DB was not sealed, which allowed water to leak into the board, shorting out several circuits. As a result, both chassis were damaged beyond repair, several breakers need replacing as well as additional components. All Property Maintenance (APM) were working on WH7 at the time of the incident and were re-tasked upon receiving a call from ATS Timber. APM immediately made safe the distribution board and commenced investigation into the extent of the damage. APM have been directed to return the board to operating condition urgently, to ensure tenant operations are not impacted. Additionally, it has been identified that we need to develop a strategy to prevent future rain ingress above the board. An awning installation has been raised as a cost-effective solution.	N/AName: ()Company Name: Purpose on site:	Electricians already working on site were immediately tasked with attending to this outage and making safe the distribution board.	Tenancy Area	Electrical injury Electrical outage	Plant / Equipment	Plant / Equipment: Design, Other:Location of installation and design fault. Incoming cables were not sealed at top of distribution board	0											

APPENDIX J - COMPLIANCE REPORT DECLARATION FORM

COMPLIANCE REPORT DECLARATION

Project Name	Moorebank Intermodal Precinct (MIP) – East Precinct
Project Application Number	SSD 6766 & SSD 7628
Description of Project	Moorebank Intermodal Precinct 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. The East Precinct includes the 24/7 operation of an import-export terminal (IMEX), rail link connecting to the South Sydney Freight Line (SSFL), warehousing and distribution facilities and freight village.
Project Address	Moorebank Intermodal Precinct, Moorebank, NSW, 2170
Proponent	The Trust Company Limited (ACN 004 027 749
Title of Compliance Report	Moorebank Intermodal Precinct East Precinct – Operation Compliance Report
Date	Friday, 27 June 2025

I declare that I have reviewed relevant evidence and prepared the contents of the attached Compliance Report and to the best of my knowledge:

- the Compliance Report has been prepared in accordance with all relevant conditions of consent;
- the Compliance Report has been prepared in accordance with the Compliance Reporting Post Approval Requirements;
- the findings of the Compliance Report are reported truthfully, accurately and completely.
- due diligence and professional judgement have been exercised in preparing the Compliance Report; and
- the Compliance Report is an accurate summary of the compliance status of the development.

Notes:

- Under section 10.6 of the Environmental Planning and Assessment Act 1979 a person must not include false or misleading information (or provide information for inclusion in) a report of monitoring data or an audit report produced to the Minister in connection with an audit if the person knows that the information is false or misleading in a material respect. The proponent of an approved project must not fail to include information in (or provide information for inclusion in) a report of monitoring data or an audit report produced to the Minister in connection with an audit if the person knows that the information is materially relevant to the monitoring or audit. The maximum penalty is, in the case of a corporation, $1 million and for an individual, $250,000; and

COMPLIANCE REPORT DECLARATION

- The Crimes Act 1900 contains other offences relating to false and misleading information: section 307B (giving false or misleading information – maximum penalty 2 years' imprisonment or 200 penalty units, or both).

Name of Authorised Reporting Officer	Richard Mason
Title	Possum Environmental Consulting
Signature	
Qualification	Bachelor of Science – Environmental Science
Company	Possum Environmental Consulting
Company Address	32 Rainworth Road Bardon Queensland 4065