MOOREBANK INTERMODAL PRECINCT

Moorebank Precinct East:
Six-Monthly Operations Compliance Report

Report: #9

Period: May 2024 – November 2024

30 DECEMBER 2024

Moorebank Intermodal Precinct

MOOREBANK INTERMODAL PRECINCT

May 2024 – November 2024

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Author Details	Qualifications and Experience
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REVISIONS

Revision	Date	Description	Prepared by	Approved by
00	30/12/2024	Final	Tactical Group	[redacted]

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 May 2024 to November 2024.

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 December 2024

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.

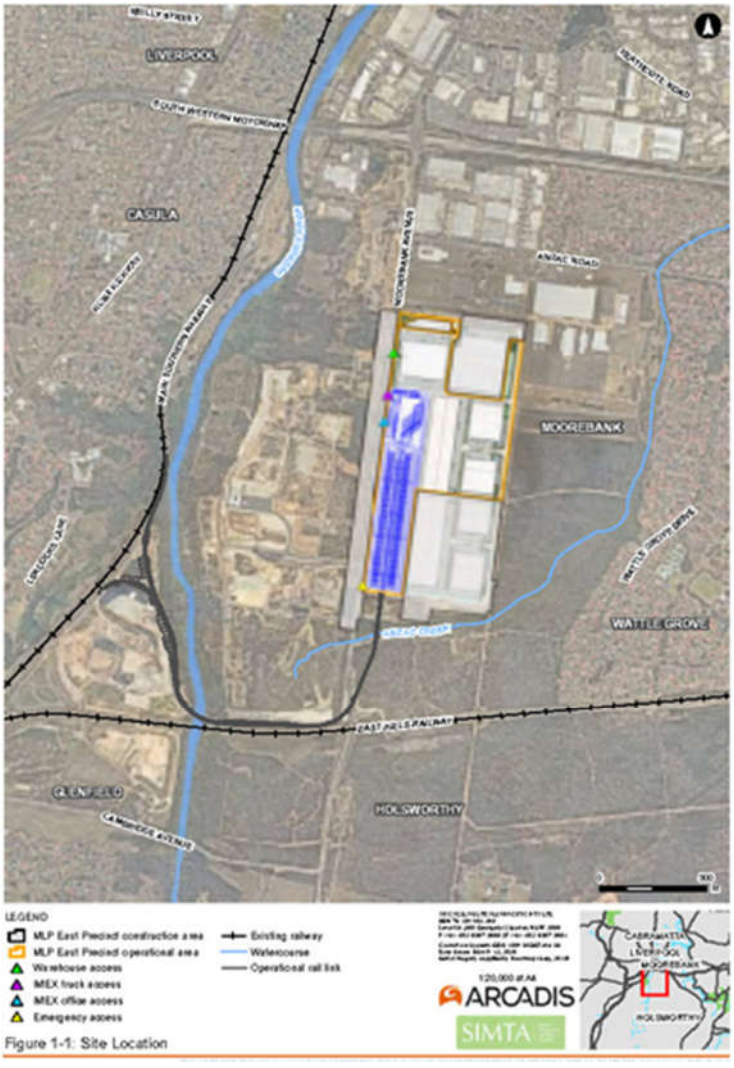

Figure 1 MLP East Precinct Layout – sourced MPE STAGE 2 OEMP Rev 18

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 May2024 – November2024.

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 6 is occupied but not currently operating.
- 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 2024, 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 G**.

3.4 Environmental Monitoring

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 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:

3.4.1.1 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 1.

Table 1 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

3.4.1.2 Dust deposition gauge results

The results of the collection period May 2024 to October 2024 as provided by SERS is shown in Table 2.

Table 2 Dust deposition (insoluble solids g/m^2/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	Average
May 2024	**2.7**	0.4	0.5	1.3	0.5	0.6	1.0	1.0
June 2024	0.6	0.2	0.4	**3.6**	0.3	0.3	0.2	0.8
July 2024	0.5	<0.1	<0.1	1.1	0.4	0.4	0.1	0.5
August 2024	1.2	0.6	1.1	1.7	0.5	0.8	0.1	0.9
September 2024	0.8	0.5	N/A*	**3.6**	0.7	1.8	0.3	1.3
October 2024	1.5	1.0	1.2	**2.0**	1.0	1.0	0.8	1.2

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

* Stage 2 DDG 2 was damaged while handling therefore no results available for the sampling period.

As shown in Table2 there were four individual gauge exceedances between May 2024 and October 2024. However, no monthly average exceedances of the dust deposition (insoluble solids) 2 g/m2/month (incremental) and 4 g/m2/month (cumulative) criteria occurred between 8 April 2024 and 24 October 2024.

3.4.1.3 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.

3.4.2 Annual exceedances

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

AQM03 did not record any data between June 2023 and 19 September 2023 and had low data availability between 33% and 88% for each month between October 2023 and April 2024. This has resulted in a low average availability for the monitor for the rolling 12-month averages.

The sensors and monitoring software was swapped out in mid-April 2024 and as such, there was no data available to calculate the monthly and annual averages for April 2024. Daily, and hourly (1hr/8hr) exceedances were calculated for April 2024 and are described in further detail below.

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

Table 2-1: Monitoring station availability (%)

Monitoring station	May 2024	Jun 2024	Jul 2024	Aug 2024	Sep 2024	Oct 2024	Average %	Latest calibration date
	% availability each month							
AQM01	100	100	100	100	100	100	100	March 2024
AQM02	100	100	100	100	100	100	100	March 2024
AQM03	95	100	100	100	100	99	99	March 2024
AQM04	99	100	58 [1]	85 [2]	100	100	88	March 2024

[1] AQM04 only had 58% availability for $PM_{2.5}$ and PM_{10}, however, the monitor had 100% availability for NO_2 and CO

[2] AQM04 only had 85% availability for $PM_{2.5}$ and PM_{10}, however, the monitor had 100% availability for NO_2 and CO

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

Compared to last reporting period, monitor AQM03 availability has improved significantly with an average of 99% for this reporting period (compared to 77% for the previous reporting period).

Monitors AQM01 and AQM02 had 100% availability through the reporting period.
AQM04 had 58% availability in July 2024 for PM2.5 and PM10 and 85% availability in August 2024 for PM2.5 and PM10.

Availability was 100% at AQM04 in July and August for CO and NO2. This has resulting in a lower average availability (88%) for the reporting period, compared to 100% for the previous reporting period. Availability improved for September and October 2024.

3.4.2.1 PM2.5 and PM10 Monitoring

The 12-month rolling annual average for the period November 2023 to October 2024 for all four monitors combined was below the annual average criteria (i.e. 8.0 µg/m3 for PM2.5 and 25.0 µg/m3 for PM10) for each month, excluding April 2024.

As of October 2024, the 12-month rolling annual average for all four monitors (excluding April 2024) was 3.7 µg/m3 for PM2.5 and 10.1 µg/m3 for PM10.

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

3.4.2.2 NO2 Monitoring

The 12-month rolling annual average for all four monitors for the period November 2023 to October 2024 was below the annual average criteria (0.03 ppm) for each month.

As of October 2024, the 12-month rolling annual average (excluding April 2024) for NO2 for all four monitors is 0.009 ppm, well below the annual average criteria of 0.03 ppm.

3.4.2.3 CO Monitoring

CO does not require annual reporting.

3.4.3 24-hour exceedances

3.4.3.1 PM2.5 Monitoring

A review of the data for the reporting period (May 2024 to October 2024) did not identify any exceedance of the 24-hour average criteria (25 µg/m3) for PM2.5 for the 6-month reporting period.

3.4.3.2 PM10 Monitoring

One exceedance of the 50 µg/m3/day limit for PM10 was recorded during the 6-month reporting period (May 2024 to October 2024). This exceedance is summarised in Table 2-3. The table includes the 24-hour average for PM10 recorded at the Liverpool monitoring station for comparison and includes analysis of the exceedance.

Table 2-3 – PM10 Exceedance

Date of exceedance	AQM01 µg/m^3	AQM02 µg/m^3	AQM03 µg/m^3	AQM04 µg/m^3	Liverpool average[8]
13/08/2024	-	-	-	61.9	15.9

Analysis of exceedance
The higher recordings occurred from 10am to midnight. No out of hours work occurred during the time of exceedance. Trains were arriving/ departing at the terminal on this day during times of exceedance. However, AQM04 is located approximately 680 metres to the north of where the trains operate, therefore the exceedance is unlikely to be related to the train movements. The exceedance did not coincide with any higher readings at the Liverpool air quality monitoring station. This may indicate that more localised sources are influencing air quality in this location.

3.4.3.3 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.

3.4.3.4 CO 8-hour exceedances

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

3.4.4 Air Quality Complaints

No complaints were made relating to air quality during this reporting period. These complaints were managed in accordance with the complaints reporting procedure.

3.4.5 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**
    - Next annual report is due in May 2025.
    - No exceedances of the planning approval noise limits were measured during the period.
    - 7 complaints were received in relation to operational noise levels in the period. These complaints were managed in accordance with the complaints reporting procedure.

- **Angle of Attack Rail Noise Report**
  The commissioned report covers rail movements between 1 May 2024 and 31 November2024. 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 detailed review of the AoA exceedances identified that Wagon ID CQMY 003099 exceeded the AoA alarm level on seven 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 LAeq(9hour) noise levels at 30 m were above 60 dB(A)].
- **Warehouse Noise Mechanical Plant** monitoring occurred for relevant operational warehouses during the period.

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.

3.4.6 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 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.

Water quality monitoring in the 2024 period found that concentrations of lead in sediments collected at Site AQ1 continue to exceed the guideline value (50 mg/kg). All other toxicants monitored at that site, including total petroleum hydrocarbons and poly-fluoroalkyl substances (e.g. PFAS and PFOS), continue to be within guideline levels. Site AQ1 is situated upstream of potential inputs from the Project, so no additional testing of heavy metals at this site is considered necessary.

Alligator Weed continues to be abundant at the most upstream site (Site AQI), although there has been considerable defoliation of the noxious plant since the spring 2022 surveys. Cooler temperatures in autumn and the presence of Flea beetles, commonly used to control floating mats of Alligator Weed, are thought to have contributed to large amounts of decaying Alligator weed litter observed on the creek bed and reduced dissolved oxygen levels.

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.

3.4.7 Storm Water Infrastructure

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 audit found that:

1) In general, the WSUD infrastructure is being diligently maintained in accordance with CoC51.

2) The condition of the systems are generally good with clear evidence of rectification works undertaken where there was active erosion. This especially relevant given the very rainfall depths experienced in the last 2 years. The high rainfall and effort by Apical has also seen excellent vegetation growth within OSD 1 which is now well established and likely to be performing as a best practice.

3) It is very likely that the constructed elements of the system are working as intended to deliver best practice WSUD.

4) The systems are being cleaned and maintained so they remain functional, and the maintainer has a good understanding of the systems.

5) No excessive build-up of material is evident.

6) OSD 10 (swale alongside Moorebank Avenue) has been removed, Warehouses (WH) 6 and 7 were constructed during this last audit period. There have been some observed impacts on the OSD and water quality basins (OSD 2) to the south of the precinct. Monitoring will continue.

3.4.8 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 a similar condition to what was recorded in last year monitoring event. There has been a minor increase in weeds, however this has been restricted to disturbed areas immediately adjacent to the Rail Link. Weeds are mostly present in areas which were disturbed during construction of the rail link rather than in areas of intact native vegetation that did not experience disturbance. From observations, it is evident that most exotic species within the Rail Link are not able to readily colonise adjacent areas of bushland. This may be due to the low fertility of the naturally occurring sandy soils which are not suitable to exotic species, and high competition from regenerating native species. The weed species *Senecio madagascariensis* (Fireweed) and *Eragrostis curvula* (African Lovegrass) were recorded immediately adjacent to the Rail Link fence. These species have the potential to infiltrate natural areas, however neither of these weed species were observed to be degrading the condition of native vegetation during monitoring.
- The number of individuals of the threatened plant species *Grevillea parviflora* subsp. *parviflora* (Small-flower Grevillea) and *Hibbertia puberula* subsp. *puberula* has increased since last year's monitoring event, with most individuals occurring in the south-eastern section of the lands adjoining the Rail Link. Individuals of these species appeared to be in a healthy condition with some bearing flowers and seed. The number of *Acacia bynoeana* (Bynoe's Wattle) within the monitored area has experienced a decline with half the number of individuals re-found (3 individuals) during the monitoring event. The individuals re-found did not appear to be in a healthy condition. It is unknown why this species has experienced decline over the past year. There are no signs to suggest current management practices within the Rail Link (or lack) of has negatively impacted on this species.

Riparian vegetation management (RVMP reporting)

- The Anzac Creek management site was not monitored as no bush regeneration works have occurred in this location in the reporting period.
- Monitoring will continue in 2025.

Koala management & fencing

- No Koala structures (bridges, culverts, refuge posts) have been installed to prevent the movement of Koalas into the MPE operational facility or facilitate the movement of Koala from the Wattle Grove offset area to adjoining areas of suitable habitat in the Holsworthy defence areas.
- Koala Monitoring will continue in 2025.

Feral animals and weeds

- Four species of feral animal were previously recorded in Wattle Grove offset area, immediately adjacent to the MPE operational facility including *Lepus europaeus* (Brown Hare), *Felis catus* (Domestic Cat), *Vulpes vulpes* (Red Fox) and *Rattus rattus* (Black Rat). It is expected that these feral animals are using the MPE operational facility when moving around the local landscape.
- Monitoring of feral animals occurred in the 2024 reporting period and will continue into 2025.

Nest Box Monitoring

- Nest box monitoring will occur in 2025 to assess the functionality of nest boxes in the Bootland and Georges River Corridors were undertaken.

Fauna connectivity

- Surveys were initially undertaken in 2023 to assess fauna habitat connectivity, determine feral animal presence and review the effectiveness of fauna habitat features relevant to the operation of the MPE facility. Connectivity surveys will cease in 2025.

Annual EPBC Offset Site Monitoring

- **The Threatened Species Offset Management Plan (TSOMP)** is in place for MPE operations and surveys to assess impacts for the 2 species listed, Small-flower Grevillea and *Persoonia nutans* (Nodding Geebung), will occur as required in 2025.
- **Weeds**
- Weed cover across the MPE operation facility is generally low and has been effectively managed across the 2024 monitoring year with Inspectons being undertaken across the site.
- Works are ongoing within the Rail Link to suppress weeds and promote the germination and establishment of native species following a rehabilitation project undertaken by contractor's actions are provided in the weed monitoring report.

3.4.9 Biannual Trip and Origin Destination Report

The BTODR has been undertaken for the 2024 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 Previous Report Actions

The previous Six-Monthly Operational Compliance Report had no actions identified. Ongoing actions being tracked will be reported in the next Six-Monthly Operational Compliance Report.

3.6 Incidents

There were no significant operational incidents reported in MPE operations in the reporting period.

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

Incidents are summarised in Appendix J.

3.7 Complaints Management

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

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

Complaints are summarised in Appendix F.

Moorebank Intermodal Precinct

APPENDIX A - SSD 6766 CONDITIONS OF CONSENT

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	**Compliant**	External audit	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)	Commission and pay the full cost of an Independent Environmental Audit of the SSD.	ESR	Tactical	Wolf Peak	Tactical	Compliance	Audit	Within 12 months of operation and bi-annually at the disrection of the Secretary		**Open**

SSD 7628	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	Interview with auditees 8-9/5/2024	Note only.	ESR	ESR			Monitoring Reporting	Other	During construction		Closed
SSD 7628	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 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. The scope of the surveys is based on the current network configuration, which assumes a single access to MPE for all warehouse & intermodal traffic. This includes the survey of a single internal MPE intersection to 'separate' warehouse traffic from intermodal traffic as required.	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	An Operational Traffic and Access Management Plan has been prepared to address the requirements of this condition.	ESR	ESR	Ason	Tactical	Monitoring and reporting	Traffic and Access	Six months		Open
SSD 7628	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	Not triggered	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. The scope of the surveys is based on the current network configuration, which assumes a single access to MPE for all warehouse & intermodal traffic. This includes the survey of a single internal MPE intersection to 'separate' warehouse traffic from intermodal traffic as required.	As above	An Operational Traffic and Access Management Plan has been prepared to address the requirements of this condition.	ESR	ESR	Ason	Tactical	Monitoring and reporting	Traffic and Access	Six months		Open
SSD 7628	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	Not triggered		As above	An Operational Traffic and Access Management Plan has been prepared to address the requirements of this condition.	ESR								Closed
SSD 7628	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	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.	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.	ESR	ESR	Ason	Tactical	Monitoring and reporting	Traffic and Access	Six months		Open
SSD 7628	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	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	All information is currently on Moorebank project website. Outstanding Information Required - Nill	ESR	QUBE	Ason	Tactical	Plan	Warehouse	Monthly	30/07/2024	Ongoing
SSD 7628	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.	Interview with auditees 8-9/05/24 Site inspection 8/05/24 WH3, WH4, WH6 and WH7 Occupation certificates (Mckenzie Group)	Outstanding Information Required - WH1 Knight Frank to upload the Occupation Certificate	ESR	Knight Frank	Tenants	Tactical	Other	Warehouse	Prior to occupancy		Open
SSD 7628	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	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)	Documentation Monitoring	ESR	Tactical			Monitoring Reporting	Other	Prior to the commencement of construction		Closed
SSD 7628	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	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 OEMPs Pre-Operational Compliance report, 13/7/2020 Rev.06 (Area 1 – WH1 and IMEX)	Documentation Monitoring	ESR	Several consultants			Monitoring Reporting	Other	Prior to the commencement of construction		Closed
SSD 7628	A16	With the approval of the Secretary, any strategy, plan or program required by this consent may be combined	All	Compliant	Documentation Monitoring	Operational Environmental Management Plan Moorebank Logistics Park – East Precinct Rev.18, 13/01/23, SIMTA (the OEMP). Post Approval Submission (DPHI portal)	Note only.	ESR	Several consultants		Tactical	Monitoring Reporting	Compliance	Prior to the commencement of construction		Closed
SSD 7628	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	As above	Note only.	ESR	Several consultants		Tactical	Monitoring Reporting	Compliance	Prior to the commencement of construction		Closed

SSD 7628	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	Refer to evidence in relation to B26, B29, B106, B107, B110, B116, B140, C18	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.	ESR	Several consultants		Tactical	Monitoring Reporting	Compliance	Prior to the commencement of construction		Closed
SSD 7628	A20	All licences, permits, approvals and consents as required by law must be obtained and maintained as required for the development. No condition of this consent removes the obligation for the Applicant to obtain, renew or comply with such licences, permits, approvals and consents.	All	Compliant	Compliance Monitoring of all relevant licences, permits, approvals and consents	Evidence referred to elsewhere in this Audit Table, and the Audit Table of SSD 6766	Compliance Monitoring of all relevant licences, permits, approvals and consents through the compliance tracker.	ESR	Several consultants		Tactical	Monitoring Reporting	Compliance	Prior to the commencement of construction		Closed
SSD 7628	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	Section 73 Compliance Certificates, Sydney Water, 18/07/19	Obtain a compliance certificate for water and sewerage infrastructure	ESR	ESR	Mckenzie Group	Aspect	Other	Stormwater	Prior to operation		Open
SSD 7628	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.	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.	Monitor and Report any damage or rectification required should activities cause damage to public infrastructure. Outstanding Information Required - Nill	ESR	ESR	Mckenzie Group	Aspect	Other	Warehouse	Prior to occupancy		Open
SSD 7628	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.	Caesarstone WHS: - 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	Outstanding Information Required - Monitor all plant and equipment used at the site. Ensre maintenance records are kept.Provide evidences/ reports.	ESR	ESR	ESR	Not Applicable	Monitoring Reporting	Plant and Equipment	During construction		Open
SSD 7628	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.	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	Monitor and record consultation included in all plans.	ESR	Several consultants			Monitoring Reporting	Plant and Equipment	During construction		Open
SSD 7628	B7	All vehicles are to enter and leave the site in a forward direction.	All	Compliant	Traffic Monitoring as per OTAMP	Operational Traffic and Access Management Plan Moorebank Logistics Park – East Precinct, Rev.14, SIMTA, 20/01/23 Site inspection 8/05/24	Traffic Monitoring as per CTAMP	ESR	ESR	Ason	Tactical	Compliance	Plan	As required		Open
SSD 7628	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	Operational Traffic and Access Management Plan Moorebank Logistics Park – East Precinct, SIMTA, 15/05/20 Site inspection 8/05/24	An Operational Traffic and Access Management Plan has been prepared to address the requirements of this condition.	ESR	ESR	Ason	Tactical	Compliance	Plan	As required		Open
SSD 7628	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	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	An Operational Traffic and Access Management Plan has been prepared to address the requirements of this condition. Outstanding Information Required - Nill	ESR	Ason Group			Plan	Traffic and Access	As required		Open
SSD 7628	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	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	An Operational Traffic and Access Management Plan has been prepared to address the requirements of this condition. Outstanding Information Required - Nill	ESR	Ason Group			Plan	Traffic and Access	As required		Open

SSD 7628	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. The scope of the surveys is based on the current network configuration, which assumes a single access to MPE for all warehouse & intermodal traffic. This includes the survey of a single internal MPE intersection to 'separate' warehouse traffic from intermodal traffic as required.	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 DPH post approval portal lodgement for the BTODR for May 2022, 24/10/2022 DPH post approval portal lodgement for the BTODR for May 2023, 9/8/2023 DPH post approval portal lodgement for the BTODR for Nov 2023, 29/2/2024 DPH post approval portal lodgement for the BTODR for May 2024, 5/6/2024	A Biannual Trip Origin and Destination Report will be prepared to address the requirements of this condition.	ESR	QUBE	Ason	Tactical	Report	Traffic and Access	6 monthly	30/11/2024	**Open**
SSD 7628	B29	Prior to issue of any Occupation Certificate, the Applicant must prepare a **Workplace Travel Plan** 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	Workplace Travel Plan, SIMTA, 13/11/19 and 26/03/20 (the WTP) Letter DPE to Qube, 06/12/19 (Initial conditional approval of OTAMP and WTP) Letter DPE 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	An Operational Workplace Travel Plan has been prepared to address the requirements of this condition. Outstanding Information Required - Nill	ESR	Ason Group			Plan	Traffic and Access	As required		**Ongoing**
SSD 7628	B30	The Applicant must ensure that the **Workplace Travel Plan** is implemented for the life of the development.	Operation	**Compliant**	Workplace Travel Plan	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	KF to provide updated evidences of: - Shuttle bus info from May/24 - pedestrian access to the Piccolo Cafe	ESR	Knight Frank/ QUBE	Tenant	Tactical	Monitoring and reporting	Other	Monthly		**Ongoing**
SSD 7628	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 Network Water Quality Monitoring Data and Reporting, Apical, April 2021 Sprig Stormwater Network & Water Quality Monitoring Data and Report for October 2023, from Apical Biodiversity Monitoring Report, Anzac Creek, Spring 2023, Bioanalysis, 9/1/2024	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.	ESR	ESR	Arcadis	Tactical	Monitoring	Sediment/Water	6 monthly	1/12/2022	**Open**
SSD 7628	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 Network Water Quality Monitoring Data and Reporting, Apical, April 2021 Sprig Stormwater Network & Water Quality Monitoring Data and Report for October 2023, from Apical Biodiversity Monitoring Report, Anzac Creek, Spring 2023, Bioanalysis, 9/1/2024	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.	ESR	ESR	Arcadis	Tactical	Monitoring	Sediment/Water	6 monthly	1/12/2022	**Open**
SSD 7628	B49	Prior to operation, the Applicant must prepare a **Stormwater Infrastructure Operation and Maintenance Plan** 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	Stormwater Infrastructure Operation and Maintenance Plan Rev 8, SIMTA, 23/01/23 (the SIOMP) Post Approval Submission (DPH portal) undated re: submission of SIOMP Rev 8 to DPH Letter DPH 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		ESR	MID	MID	Not Applicable	Monitoring Reporting	Stormwater	Prior to operation		**Ongoing**
SSD 7628	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	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	complete	ESR	MID	MID	Not Applicable	Monitoring Reporting	Stormwater	Prior to operation		**Open**

SSD 7628	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	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.		ESR	MID	Sustainability Workshop	Not Applicable	Report	Stormwater	Monthly/Quarterly reporting and Annual Audit	22/10/2024	**Open**
SSD 7628	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	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	An Operation Air Quality Management Plan has been prepared to address the requirements of this condition.	ESR	SERs/ Arcadis			Monitoring Reporting	Waste and Resource	During construction - Monthly		**Closed**
SSD 7628	B59	The Applicant must prepare an **Operational AQMP** to the satisfaction of the Secretary for the entire precinct (MPE + MPW), unless this has been prepared and approved under an approval for the MPW site. The AQMP 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	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)	An Operational Air Quality Management Plan has been prepared to address the requirements of this condition. Outstanding Information Required - Nil	ESR	ESR	Arcadis	Not Applicable	Monitoring Reporting	Air Quality	Prior to operation	As required	**Open**
SSD 7628	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	Operational Air Quality Management Plan Rev.12, SIMTA, 23/01/23 (OAQMP) Complaints Register current to 31 May 2024 Site inspection 8/05/24	An Operational Air Quality Management Plan has been prepared to address the requirements of this condition.	ESR	Envirosuite			Monitoring Reporting	Waste and Resource	During construction - Monthly		**Closed**
SSD 7628	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 certs	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 54/2024 - 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)	An Operational Air Quality Management Plan has been prepared to address the requirements of this condition.	ESR	Envirosuite			Monitoring Reporting	Waste and Resource	During construction - Monthly		**Closed**
SSD 7628	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	**Not triggered**	Noise report	-		ESR	ESR	Renzo Tonin	Tactical	Monitoring Reporting	Air and Noise	6 monthly report	15/12/2024 (check if this is the date of the last report)	**Open**
SSD 7628	B79	The permitted hours of warehouse and distribution operation are detailed in **Table 4**.	Operation	**Compliant**	Ocupation environmental management plan	Operational Noise and Vibration Management Plan Rev 13, SIMTA, 24/01/23 (ONVMP) Approved WOEMPs include the permitted hours	Operations can occur 24 hours, 7 days per week. Outstanding Information Required - Tenant to provide evidence, statement, checklist, report.	ESR	ESR	Arcadis	Not Applicable	Report	General Operation	Prior occupation		**Open**
SSD 7628	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**	noise monitoring	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	An Operational Noise and Vibration Management Plan has been prepared to address the requirements of this condition.	ESR	ESR	Renzo Tonin	Tactical	Monitoring Reporting	Noise and Vibration	3 months		**Open**

SSD 7628	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	Operational Noise and Vibration Management Plan Rev.13, SIMTA, 24/01/23 (ONVMP). Post Approval Submission (DPH 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	An Operational Noise Management Plan (ONMP) has been prepared to address the requirements of this condition. Outstanding Information Required - Nill	ESR	Arcadis (Renzo Tonin is responsible to implement this plan)			Monitoring Reporting	Noise and Vibration	Prior to operation	13/08/2025	**Ongoing**
SSD 7628	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	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 WH6 is pending commencement of operations WH7 is pending report from Renzo. (Lodged post reporting period	WH 3a and 4b submitted to DPIE Just completed monitoring for 3b, 4a and 5. Report outstanding Outstanding Information Required - WH6 is pending commencement of operations WH7 is pending report from Renzo.	ESR	ESR	Renzo Tonin	Tactical	Monitoring Reporting	Noise and Vibration	3 months	15/07/2024	**Open**
SSD 7628	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	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		ESR	ESR	Renzo Tonin	Tactical	Monitoring Reporting	Noise and Vibration	Annually	15/07/2024	**Open**
SSD 7628	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	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	Evidence of submission of the Annual Noise Review Report to the Department and the EPA.	ESR	ESR	Renzo Tonin	Tactical	Certificate	Noise Monitoring	Annually	15/07/2024	**Open**
SSD 7628	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	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)		ESR	ESR	Renzo Tonin	Tactical	Monitoring Reporting	Noise and Vibration	Annually		**Open**

Moorebank Intermodal Precinct

APPENDIX B - SSD 7628 CONDITIONS OF CONSENT

COMPLIANCE REQUIREMENT	UNIQUE (ID)	COMPLIANCE REQUIREMENT2	DEVELOPMENT PHASE	COMPLIANCE STATUS	MONITORING METHODLOGY	EVIDENCE AND COMMENTS 31/10/2024	SUMMARY OF REQUIREMENTS	PRIMARY RESPONSIBLE	RESPONSIBLE FOR IMPLEMENTATION	RESPONSIBLE FOR REPORTS	RESPONSIBLE FOR LODGING W/ DEPARTMENT	TYPE	CATEGORY	FREQUENCY OF REPORTS	NEXT REPORT DUE DATE	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	Compliance Monitoring	Interview with auditees 8-9/05/24 S MTA Intermodal Terminal Facility – Stage 1 – Environmental Impact Statement, Hyder, May 2015 S MTA Intermodal Terminal Facility – Stage 1 – Response to Submissions, Hyder, September 2015 Evidence referred to elsewhere in this Audit Table	Development in Accordance with Plans and Documents	ESR	Several consultants	Several consultants	Tactical	Compliance	Compliance	Within three months of every 12 month anniversary of the commencement of MPE 1 (July 2020)		Ongoing
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	Interview with auditees 8-9/05/24	Development in Accordance with Plans and Documents	ESR	Several consultants	Several consultants	Tactical	Monitoring Reporting	Compliance	As triggered		Ongoing
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	Compliance Monitoring	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.	Development in Accordance with Plans and Documents	ESR	Several consultants	Several consultants	Tactical	Compliance	Compliance	As triggered		Ongoing
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	Compliance Monitoring	This consent granted 12/12/16 Site inspection 8/05/24 Interview with auditees 8-9/05/24	Approval will lapse ten years from the date of this approval	ESR	Several consultants	Arcadis	Tactical	Plan	Compliance	10 years		Open
SSD 6766	A5	In the event of a dispute between the Applicant and a public authority, in relation to this approval, either party may refer the matter to the Secretary for resolution. The Secretary's resolution of the matter shall be binding on the parties.	All	Not Triggered	CEMP	Interview with auditees 8-9/05/24		ESR				Compliance	Other	As triggered		Closed
SSD 6766	A6	Any advice or notice to the consent authority shall be served on the Secretary	All	Not Triggered	CEMP	Interview with auditees 8-9/05/24	Any advice or notice to the consent authority shall be served on the Secretary	ESR				Compliance	Other	As triggered		Closed
SSD 6766	B1	Access for people with disabilities shall be provided for offices and amenities for the development in accordance with the Disability Discrimination Act 1992 (Commonwealth). Prior to the issue of a Construction Certificate, verification of compliance with this condition from an appropriately qualified person shall be provided to the Certifying Authority.	pre-operation	Not Triggered	Parking: IMEX-RCG-AR-DWG-A710(1) Toilet: IMEX-RCG-AR-DWG-A200(2) Access – Single story building.	-	Access for people with disabilities shall be provided for offices and amenities for the development	ESR	Reid Campbell			Compliance	Other	Prior to the issue of a Construction Certificate		Closed
SSD 6766	B3	Prior to the issue of a Construction Certificate, the Applicant shall pay a monetary levy of $643,027.27 to Liverpool City Council for transport, drainage, community facilities, administration and professional and legal fees pursuant to section 94B(2) of the Environmental Planning and Assessment Act 1979.	pre-operation	Not Triggered	Legal fee	-		ESR	ESR	ESR		Other	Compliance	Prior to the issue of a Construction Certificate	As required	Closed
SSD 6766	B6	The Applicant shall include provision for emergency access to the site. Plans demonstrating compliance shall be submitted to the satisfaction of the Certifying Authority and provided to the Secretary for information.	pre-operation	Not Triggered	IMEX-ARC-CV-DWG-2136	-		ESR	Reid Campbell			Plan	Emergency Response	Prior operation		Closed
SSD 6766	B7	A detailed plan prepared by a suitably qualified lighting engineer must be submitted to the Certifying Authority for approval prior the issue of a Construction Certificate, and include, but not be limited to: a) Adequate lighting of pedestrian thoroughfares; b) All lighting in public domain areas is to comply with the relevant Council requirements and Australian Standard AS1158 for Street Lighting Applications; c) The lighting plan should include lighting designs, supported by luminance calculations and luminance plots, and is to be of a high standard and Energy Australia compatible; and d) All outdoor lighting (excluding street lighting) shall comply with, where relevant, AS/NZ1158.3: 1999 Pedestrian Area (Category P) Lighting and AS4282: 1997 Control of the Obtrusive Effects of Outdoor Lighting.	pre-operation	Not Triggered	Lighting Plan	-		ESR	Reid Campbell			Plan	Other	Prior the issue of a Construction Certificate		Closed
SSD 6766	B8	The SSD shall be designed to ensure a bus stop on Moorebank Avenue (including direct pedestrian access from the terminal site to the bus stop), and associated turnaround facility suitable for a 14.5 metre long non-rear steer bus is not precluded.	pre-operation	Not Triggered	Basis of Design Report	-		ESR	Reid Campbell			Plan	Other	Prior construction		Closed
SSD 6766	C19	The Applicant shall ensure that the construction and operation of the proposed development will not prevent the existing use of Moorebank Avenue as a public road to a standard commensurate to its current use prior to the development. Note: temporary closures or part closures and changes to the operation of Moorebank Avenue may occur for limited periods during construction as detailed in the Construction Traffic Management Plan	All	Not Triggered	CTAMP	-		ESR	ESR			Other	Traffic and Access	As triggered	2022/07 - Check if a revision is required post IMEX switch	Closed
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	pre-operation	Compliant	Dilapidation report	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, S MTA, 27/03/20 (the ONVMP) Rev.12 (no changes) Operational Traffic and Access Management Plan, S MTA, 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, S MTA, 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	OEMP	ESR	KF/ QUBE	Arcadis	Tactical	Compliance	General Operation	Prior operation	As required	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	pre-operation	**Compliant**	Brake Squeal Report	Brake Squeal Report, Renzo, 02/07/19	Brake Squeal Report	ESR	QUBE	Renzo Tonin		Monitoring Reporting	Brake Squeal	Prior to the commencement of operation,	As required	**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	pre-operation	**Compliant**	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	CNBMP	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	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	Industrial Noise Compliance / ONVMP	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	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	Applying Noise Criteria in F5B / ONVMP	ESR	Renzo Tonin	Renzo Tonin	Not Applicable	Compliance	Noise	Prior to Operation		**OPEN**
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	Operational Traffic and Access Management Plan Moorebank Logistics Park – East Precinct, Rev 14, S MTA, 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) OTAMP REV 15 - 02/09/2024	OTAMP	ESR	KF/ QUBE	Arcadis	Tactical	Plan	Traffic and Access	no later than one month prior to the commencement of operation	As required	**Ongoing**
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	Interview with auditees 8-9/05/24	Signal Decommissioning	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	Interview with auditees 8-9/05/24	Create an Easement	ESR	ESR	ESR	Not Applicable	Compliance	General Operation	Prior to Operation		**Open**

SSD 6766	G1	Within 6 weeks of commencement of operation, unless otherwise agreed by the Secretary, the Applicant shall undertake road pavement deflection testing of the truck routes as defined by Condition E34(a). If the deflection tests show an increase in defection as a result of the truck routes associated with construction, the Applicant shall undertake pavement rehabilitation of the affected road pavements to achieve the pavement deflection that existing prior to the commencement of works.	operation	Not Triggered	OTMP	Interview with auditees 8-9/05/24	Road Pavement Deflection Testing	ESR	Ason			Compliance	Traffic and Access	Within 6 weeks of operation	22/10/2024	Closed
SSD 6766	G2	Within 3 months of commencement of operation, unless otherwise agreed by the Secretary, the Applicant shall carry out rectification work to the extent of the damage resulting from the construction works at the Applicant's expense and to the reasonable requirements of the owners.	operation	Not Triggered	OTMP	Interview with auditees 8-9/05/24	Rectification work to the extent of the damage resulting from the construction works.	ESR	Ason			Compliance	Traffic and Access	Within 3 months of operation	22/07/2024	Closed
SSD 6766	G3	Within 3 months of commencement of operation, the Applicant shall provide to the Certifying Authority evidence that all easements required by this approval, and other licences, approvals and consents, have been lodged for registration or registered at the NSW Land and Property Information.	operation	Compliant	OTMP	Memo, Tactical to DPIE, 030319 Interim Occupation Certificate, 19/124050-7, McKenzie Group, 16/07/19) Interface Deed – Moorebank Logistics Precinct, between Qube RE Services (Terminal Assets Co & Terminal Operations Co) and the Trust Company (Warehouse Development Co), 3/12/2021	Provide to the Certifying Authority evidence to all easement required by this approval and other	ESR	Ason			Compliance	Traffic and Access	Within 3 months of commencement	22/07/2024 - check if required prior to WH 6 & 7	Closed
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	Urban Design and Landscape Plan Moorebank Precinct East Stage 1, S MTA, 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	Signage Installation	ESR	ESR	Cunneen Sign	Not Applicable	Design	Traffic and Access	Prior to Operation	22/07/2024 - check if required prior to WH 6 & 7	OPEN
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	Road Pavement Deflection Report	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	- Dangerous Goods - WH7 - update evidences of DG container transportation from Apr 24 to date - Confirm if required to WH 6	ESR	Knight Frank	Tenant	Aspect	Compliance	Incident	Prior to Operation	3 months	OPEN
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	Operational Air Quality Management Plan Rev 12, S MTA, 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) 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, 26/7/23023 (report no.3), Rev.2 from Arcadis - Best Practice Report DPHI outcome on 28/09/2024.	Submit a report that justifies the technology proposed and how it meets the objective of best practice noise technologies	ESR	QUBE	ARCADIS	Tactical	Monitoring Reporting	Noise and Vibration	Annually	30/05/2025	Lodged with DPHI
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	Angle of Attack and Rail Noise Monitoring System - G7, G7A, Renzo Tonin, (Revision 06 16/07/19) Functional and Performance Specification for Permanent Noise Monitor and Proposed Noise and AOA Monitoring Locations, Renzo Tonin, 16/10/19 (RNMS report), Rev.9 Letter DPIE to Qube, 16/08/19 (approval of F5A, G6(b), G7A, and G7 reports) Email DPIE to Qube, 31/10/19 DPIE post approval lodgement record 12/05/21 (Rail Link Noise Monitoring Report submission). Six Monthly Review of AoA – November 2023 from Renzo Tonin, Rev.1 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 (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 Post Approval Form, 29/5/2022 re. Annual Noise Report (Y2 Ops - 23/5/2022) Six-Monthly Compliance Reports from Renzo Tonin	Install and maintain a rail noise monitoring system on the rail link	ESR	Qube	Renzo Tonin	Tactical	Monitoring Reporting	Air and Noise	Annually	1/05/2025	Ongoing

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	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://moorebanknoisemonitoremsbk.trackiq.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 OCR 8 in 23 July 24. - Angle of Attack nov 24. Dated 22 November 2024. Report to be submitted in the 6 months Compliance Report.	Install and maintain a rail noise monitoring system on the rail link	ESR	QUBE	Renzo	Tactical	Monitoring Reporting	Noise and Vibration	six-monthly	30/05/2024	**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)	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) undated 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)	Rail Link Noise Monitoring and Mitigation	ESR	QUBE	Renzo Tonin		Monitoring Reporting	Rail Link Noise	3-12 months of commencement of operations	30/05/2024	**Ongoing**
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)	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)	Use of Automatic Rail Lubrication Equipment / Maintain Rail Cross Sectional Profile	ESR	QUBE	Arcadis		Monitoring Reporting	Noise and Vibration	3-12 months of commencement of operations	As required	**Ongoing**
SSD 6766	G9	The transfer of containers between Port Botany and the IMEX terminal must not commence until the rail connection to the SSFL is operational.	pre-operation	**Compliant**	Containers	Interview with auditees 8-9/05/24 Independent Environmental Compliance Audit, S MTA Moorebank Precinct East (MPE) Stage 1 – Import Export Terminal (IMEX No 1), WolfPeak, 17/01/20	No Train Operations Until the Rail Connection to the SSFL is Operational	ESR	QUBE			Compliance	Container Noise	Not commence until the rail connection to the SSFL is operational.		**Closed**
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	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	BTODR	ESR	QUBE/ KF	Ason	Tactical	Monitoring Reporting	Traffic and Access	6 months	Dec-24	**Lodged with DPHI**

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	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 Oper[illegible]	BTODR	ESR	QUBE/ KF	Ason	Tactical	Monitoring Reporting	Trip Origin Destination	6 months	Dec-24	**Lodged with DPHI**
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	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	Container handling equipment purchased after 2019 must meet US EPA	ESR	QUBE	Arcadis		Monitoring Reporting	Air Quality	Operations		**Open**
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**	Prevent or minimise air pollution	See report MIP PE Internal Monthly Air Quality Report December 2023 FINAL and MIP PE Internal Monthly Air Quality Report January 2024 FINAL Operational Air Quality Management Plan Rev 12, S MTA, 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.0. Sighted Calibration Certificates from Airpol for COV0100008267, COV0100008268 on the 27/01/21 and CNB0100008403, CNB0100008404 and CNB0100008405 on the 25/02/21.	OAQMP	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	No heavy road freight vehicle from the project has been identified 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	A main gate monitoring system (eg CCTV) shall be installed/ Provide a heavy vehicle monitoring report for the prior 12 month period.	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	Operational Noise and Vibration Management Plan, S MTA, 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	SIMTA	ESR	QUBE/ KF	Renzo Tonin	Tactical	Monitoring Reporting	Noise and Vibration	Yearly	Jun-24	**OPEN**

SSD 7628	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	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 DPH post approval portal lodgement 24/02/21 for Nov 2020 report DPH post approval portal lodgement for the BTODR for Nov 2023, 29/2/2024 DPH 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	Outstanding Information Required - Nill	ESR	ASON Group			Monitoring Reporting	Traffic and Access	Six months		**Open**
SSD 7628	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**	heavy vehicle monitoring report	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, 18/2022 (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		ESR	ASON Group			Monitoring Reporting	Traffic and Access	Six months		**Open**
SSD 7628	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	Heritage Interpretation Plan, 27/06/19 Letter DPIE to Qube, 08/04/20 (MPE S1 and S2 operational document approval)		ESR	ESR	Artefact	Tactical	Monitoring Reporting	Heritage	Prior to operation		**Ongoing**
SSD 7628	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	Heritage Interpretation Plan, 27/06/19 Letter DPIE to Qube, 08/04/20 (MPE S1 and S2 operational document approval)		ESR	ESR	ESR	Not Applicable	Plan	Other	Prior to operation		**Open**
SSD 7628	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	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	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.	ESR	ESR	Arcadis	Not Applicable	Monitoring	Aquatic Monitoring	6 monthly	1/11/2024	**Open**
SSD 7628	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	Operational Flora and Fauna Management Plan Rev.9, SIMTA, 13/01/23 (the OFFMP) Post Approval Submission (DPHI portal), undated re: submission of OFFMP Rev 7 to DPH Letter DPHI to ESR, 7/9/23 (approval of OMPs) - Operational Flora and Fauna Management Plan Rev.10, 13/08/24 (the OFFMP)	An Operational Flora and Fauna Management Plan (OFFMP) has been prepared to address the requirements of this condition.	ESR	Arcadis	WERS	Not Applicable	Monitoring	Flora and Fauna	as required	1/08/2025	**Ongoing**
SSD 7628	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	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	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 Outstanding Information Required - KF to check if we have uploaded in the folder the most updated Environmental Management Plan (WH1 and WH7)	ESR/ QUBE	Knight Frank	Tenant	Tactical	Monitoring Reporting	Other	Annually		**Ongoing**
SSD 7628	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	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	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. 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	ESR/ QUBE	Knight Frank	Mainfreight	Tactical	Compliance	Other	Monthly	30/09/2024	**Ongoing**

SSD 7628	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**	Dangerous Good	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	Fire Safety Study for Warehouse 7/ Final Hazard Analysis for Warehouse 7 - Outstanding Information Required - Nill	ESR	Knight Frank	Mainfreight	Aspect	Compliance	Other	Annual	As required	**Ongoing**
SSD 7628	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	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	develop and implement the plans and systems set out under subsections (a) and (b). The Applicant must submit to the Planning Secretary Outstanding Information Required - Nill	ESR	Knight Frank	Mainfreight	Aspect	Compliance	Emergency Response	Annual	As required	**Ongoing**
SSD 7628	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	Interview with auditees 8-9/05/24 Site inspection 8/05/24	Hazard Audit of Warehouse 7 and within one month of each audit submit a report to the Planning Secretary. - KF to provide evidences	ESR	Knight Frank	Mainfreight	Tactical	Compliance	Other	12 months after commencement of the operations and every 5 years	1/10/2024	**Ongoing**
SSD 7628	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	Interview with auditees 8-9/05/24 Site inspection 8/05/24	comply with all reasonable requirements of the Planning Secretary - KF to provide evidences	ESR	Knight Frank	Mainfreight	Tactical	Monitoring Reporting	Other	12 months after commencement of the operations and every 5 years	1/10/2024	**Ongoing**
SSD 7628	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	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)	This will be addressed by a WOEMP which must be prepared and approved by the Secretary prior to operation of the warehouse Outstanding Information Required - Nill	ESR	Knight Frank/ QUBE	Tenant	Tactical	Plan	Warehouse	Prior operation		**Lodged with DPHI**
SSD 7628	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	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	An Emergency Response Plan has been prepared to address the requirements of this condition. Outstanding Information Required - Nill	ESR	ESR			Plan	Emergency Response	Prior to operation		**Ongoing**
SSD 7628	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	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	A Waste Management Plan has been prepared to address the requirements of this condition.	ESR	ESR	ESR	Not Applicable	Plan	Waste and Resource	Prior to operation	13/08/2025	**Ongoing**

SSD 7628	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	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 (WH5) Waste Register for 2021, 2022 and from Jan to Apr 2023	Outstanding Information Required - Tenants to provide waste reports	ESR	Arcadis	Senversa	Not Applicable	Plan	Waste and Resource	3 months	30/07/2024	Open
SSD 7628	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	Operational Waste and Resources Management Plan Rev.11, SIMTA, 23/01/23 (the OWRMP) Warehouse Operational Environmental Management Plans (various) (WOEMP) Wastefree EPL 20572 Mainfreight (WH7) Waste Report April 2024 Caesarstone (WH5) Waste Register for 2021, 2022 and from Jan to Apr 2023		ESR	CARAS			Monitoring Reporting	Waste and Resource	During construction		Closed
SSD 7628	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	Operational Waste and Resources Management Plan Rev.11, SIMTA, 23/01/23 (the OWRMP) Warehouse Operational Environmental Management Plans (various) (WOEMP)		ESR	CARAS			Monitoring Reporting	Waste and Resource	During construction		Closed
SSD 7628	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	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		ESR	CARAS			Monitoring Reporting	Waste and Resource	During construction		Closed
SSD 7628	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 classification report	WH7 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		ESR	Prensa			Monitoring Reporting	Waste and Resource	During construction		Closed
SSD 7628	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	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	Outstanding Information Required - Tenants to provide evidences e-mail, statements, report etc.	ESR	Arcadis	Senversa	Not Applicable	Plan	Waste and Resource	As required		Open
SSD 7628	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	Biodiversity Management Implementation Plan	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	Outstanding Information Required - Nill	ESR	ESR	Arcadis	Not Applicable	Plan	Waste and Resource	3 months		Open
SSD 7628	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	Not triggered		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. 211790/10 (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.	Evidence of submission of SAS (Site Audit Statement (s) to the department	ESR	Tactical Group			Certificate	Audit	Only Once	As required	Closed

SSD 7628	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**	Traffic management plan	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)	A Bushfire Management Strategy has been prepared to address the requirements of this condition.	ESR	Arcadis			Monitoring Reporting	Traffic and Access	During construction		**Closed**
SSD 7628	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	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)	A Bushfire Management Strategy has been prepared to address the requirements of this condition.	ESR	Arcadis			Monitoring Reporting	Other	During construction		**Closed**
SSD 7628	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	Interview with auditees 8-9/05/24 Site inspection 8/05/24	DPE Receipt Outstanding Information Required - KF to provide the certificate for Mainfreight	ESR	Knight Frank/ QUBE	Tenant	Tactical	Plan	Warehouse	Prior operation		**Open**
SSD 7628	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	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	The Community Construction Strategy has been updated to address the requirements of community consultation during operation	ESR	TSA	ESR	Not Applicable	Plan	Other	Prior to operation		**Ongoing**
SSD 7628	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	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/	The Community Construction Strategy has been updated to address the requirements of community consultation during operation	ESR	Arcadis	Arcadis	Tactical	Plan	Other	Operation		**Open**
SSD 7628	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	https://moorebankintermodalprecinct.com.au/wp-content/uploads/2024/04/Moorebankintermodal-Precinct-Online-Complaintsdocument-tolun24.pdf Email to DPHI 23/08/21 15/11/21 29/11/21 (issue of the complaints register) Six-monthly Compliance Reports (Appendix)	The Community Construction Strategy has been updated to address the requirements of community consultation during operation	ESR	ESR	TSA	Not Applicable	Monitoring Reporting	Other	3 months	15/12/2024	**Open**
SSD 7628	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)	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) 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	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. Outstanding Information Required - Nill	ESR	ESR	Arcadis	Not Applicable	Plan	Other	Prior to operation	13/08/2025	**Ongoing**
SSD 7628	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**	OEMP	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) undated re: submission of OEMP Rev 18 to DPHI Letter DPHI to ESR, 7/9/23 (approval of OMPs) Email from Tactical re. latest OEMPs, 28/9/2023 Email Knight Frank to Tenants re. latest OEMPs and sub-plans, no date	Note only.	ESR	ESR	Arcadis	Tactical	Plan	Other	Prior to operation		**Ongoing**
SSD 7628	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**	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 • Changes required to address the findings of third-party audits, including Department of Planning and Environment (DPE) or Department of Climate Change, Energy, the Environment and Water (DCCEEW) • Changes as a result of any Modifications that have been approved.	Site inspection 8/05/24 Operational Environmental Management Plan Moorebank Logistics Park – East Precinct Rev.18, 13/01/23, SIMTA (the OEMP)	The environmental approach, including roles and responsibilities of the development are detailed in Section 4.	ESR	ESR	Arcadis	Not Applicable	Monitoring and Reporting	Air Quality Flora and Fauna Aquatic Biodiversity	Annual		**Open**

SSD 7628	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	Warehouse 1 Occupation Environmental Management Plan for Catch Rev 1, 14/03/22 Email 7/03/22 DPHI-Tactical Group re: submission of WOEMP WH3A to DPHI Email 31/03/22 DPHI-Tactical Group re: assessment completion of WOEMP WH3A Environmental Management Plan WH3A Caesar Stone Rev 8, 26/05/20 by HSS 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 Warehouse 5 WOEMP)	A template for a WOEMP is included in Appendix D. Each Warehouse tenant will prepare a WOEMP prior to occupation. Outstanding Information Required - Nil	ESR	ESR	ESR	Not Applicable	Plan	Other	Prior to operation		**Open**
SSD 7628	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**	CEMP	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	(a) Base ine 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 6.3.2 and CCS Outstanding Information Required - Nil	ESR	ESR	ESR	Not Applicable	Plan	Other	Pior operations		**Open**
SSD 7628	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	As Above		ESR	Several consultants			Plan	Other	annually or as triggered		**Open**
SSD 7628	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**		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)	The review and submission process for the OEMP will be undertaken in accordance with this condition, as described in Section 6.2.2.	ESR	ESR	Aspect	Aspect	Monitoring Reporting	General Operation	annually or as triggered		**Ongoing**
SSD 7628	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	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	A review of the environmental performance of the development will be submitted to DP&E, in accordance with this condition.	ESR	ESR	Aspect	Aspect	Monitoring Reporting	Other	Annually		**Ongoing**
SSD 7628	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	**Not triggered**		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	Written notification to the Department will occur immediately, as required. Outstanding Information Required - Tenant to provide evidence that no incidents occurred	ESR/ QUBE	Knight Frank	Tenant	Tactical	Compliance	Warehouse	Monthly/ as required	30/09/2024	**Ongoing**
SSD 7628	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**		As above Interview with auditees 8-9/05/24	Written notification to the Department will occur immediately, as required. Outstanding Information Required - Tenant to provide evidence that no incidents occurred	ESR/ QUBE	Knight Frank	Tenant	Tactical	Compliance	Warehouse	7 days after the Applicant becomes aware of an incident		**Ongoing**
SSD 7628	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**		As above. Interview with auditees 8-9/05/24	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. Outstanding Information Required - Tenant to provide evidence that no incidents occurred	ESR/ QUBE	Knight Frank	Tenant	Tactical	Compliance	Warehouse	Within 30 days of the date on which the incident occurred		**Ongoing**

SSD 7628	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		As above. Interview with auditees 8-9/05/24	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. Outstanding Information Required - Tenant to provide evidence that no incidents occurred	ESR/ QUBE	Knight Frank	Tenant	Tactical	Compliance	Warehouse	Monthly/ as required	30/09/2024	Ongoing
SSD 7628	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		As above. Interview with auditees 8-9/05/24	Notification will be provided to the Secretary within 24 hours after notification was provided to the EPA. Outstanding Information Required - Tenant to provide evidence that no incidents occurred	ESR/ QUBE	Knight Frank	Tenant	Tactical	Compliance	Warehouse	within 24 hours after the notification was provided to EPA.		Ongoing
SSD 7628	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		Interview with auditees 8-9/05/24 First Operational Independent Audit, WolfPeak, 21/6/2021	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. Outstanding Information Required - Nill	ESR/ QUBE	Knight Frank/ QUBE	Tenants	Tactical	Compliance	Warehouse	7 days after the Applicant becomes aware of any non-compliance.		Ongoing
SSD 7628	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		Interview with auditees 8-9/05/24 First Operational Independent Audit, WolfPeak, 21/6/2021	Section 4.6.4 outlines the requirements for the notification of the non-compliance, in accordance with this condition. Outstanding Information Required - Nill	ESR/ QUBE	Knight Frank/ QUBE	Tenants	Tactical	Compliance	Warehouse	As required		Ongoing
SSD 7628	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)	Moorebank Precinct East Operations Independent Audit Program, WolfPeak, 24/02/20, updated 25/08/2024 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)	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	ESR	ESR	Arcadis	Tactical	Monitoring Reporting	comp iance	Annualy		Open
SSD 7628	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	nterview 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	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.	ESR	ESR	Arcadis	Tactical	Monitoring Reporting	comp iance	Within three months of commencing an Independent Environmental Audit		Open
SSD 7628	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	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, 22/1/2/2021 - 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	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. Outstanding Information Required - Nill	ESR	ESR	Arcadis	Tactical	Monitoring Reporting	General Operation	6 monthly	30/10/2024	Open

Moorebank Intermodal Precinct

APPENDIX C – AIR QUALITY MONITORING COMPLIANCE REPORT

ARCADIS Design & Consultancy for natural and built assets

MOOREBANK INTERMODAL PRECINCT – EAST AND WEST PRECINCTS

Operational Air Quality Six Monthly Compliance Report #9

May 2024 – October 2024

05 DECEMBER 2024

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MOOREBANK INTERMODAL PRECINCT – EAST AND WEST PRECINCTS

Operational Air Quality Six Monthly Compliance Report #9

May 2024 – October 2024

Author	Samuel Brown	
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Report No	PREC-ARC-EN-RPT-0014
Date	5/12/2024
Revision Text	002

REVISIONS

Revision	Date	Description	Prepared by	Approved by
001	03/12/2024	Submitted draft to client for review	SB	HT
002	05/12/2024	Submitted final to client based on comments	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) initially 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 Operational Air Quality Management Plan (OAQMP - Revision 18 dated 20 January 2023) monitoring and reporting requirements.

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 2020 December 2023.

The POAQMP 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 #9 (this report) 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, i.e.:

- *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 of the:

- **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 and Warehouse 7a and 7b. Warehouse 6 is occupied but not currently operating.

No major construction related activities occurred in 2024, with only internal fit-out and preparation for operations occurring. These activities were 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
1 April 2024 to 30 June 2024	Moorebank Avenue upgrade (Including Anzac and Bapaume Roads)

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 (December 2023).

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

MIP East Precinct (MPE) commenced operations on 13 May 2020 and MIP West Precinct (MPW) commenced operations in April 2024.

This six-monthly internal air quality report has been prepared to provide an overview of operational air quality results for the six-month operational period from 1 May 2024 to 31 October 2024 (inclusive) to inform the six-monthly operational compliance reports required for the life of the project.

This report will be the ninth report since MIP (East Precinct) operations began in May 2020. Eight of the reports were for MPE only, and the ninth report (this report) combines the operations of MIP (East and West Precincts).

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 DDG's are located across both precincts. 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.

The DDGs were installed in May 2021 and 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.

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 and to a slightly lesser extent, any construction activities occurring at MPW Stage 2.

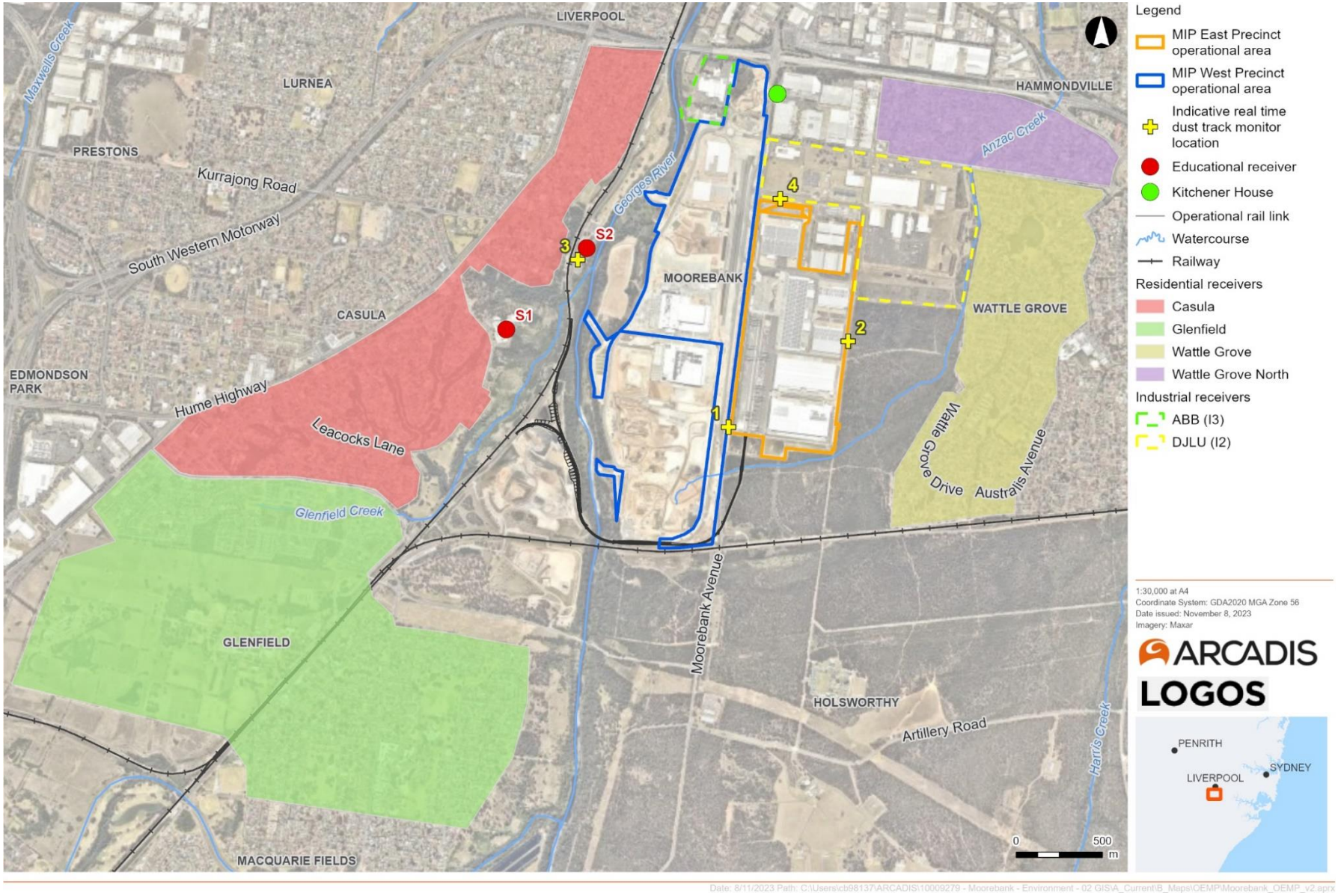


Figure 2-1: Continuous real-time air quality monitors (Source: Arcadis, 2023)

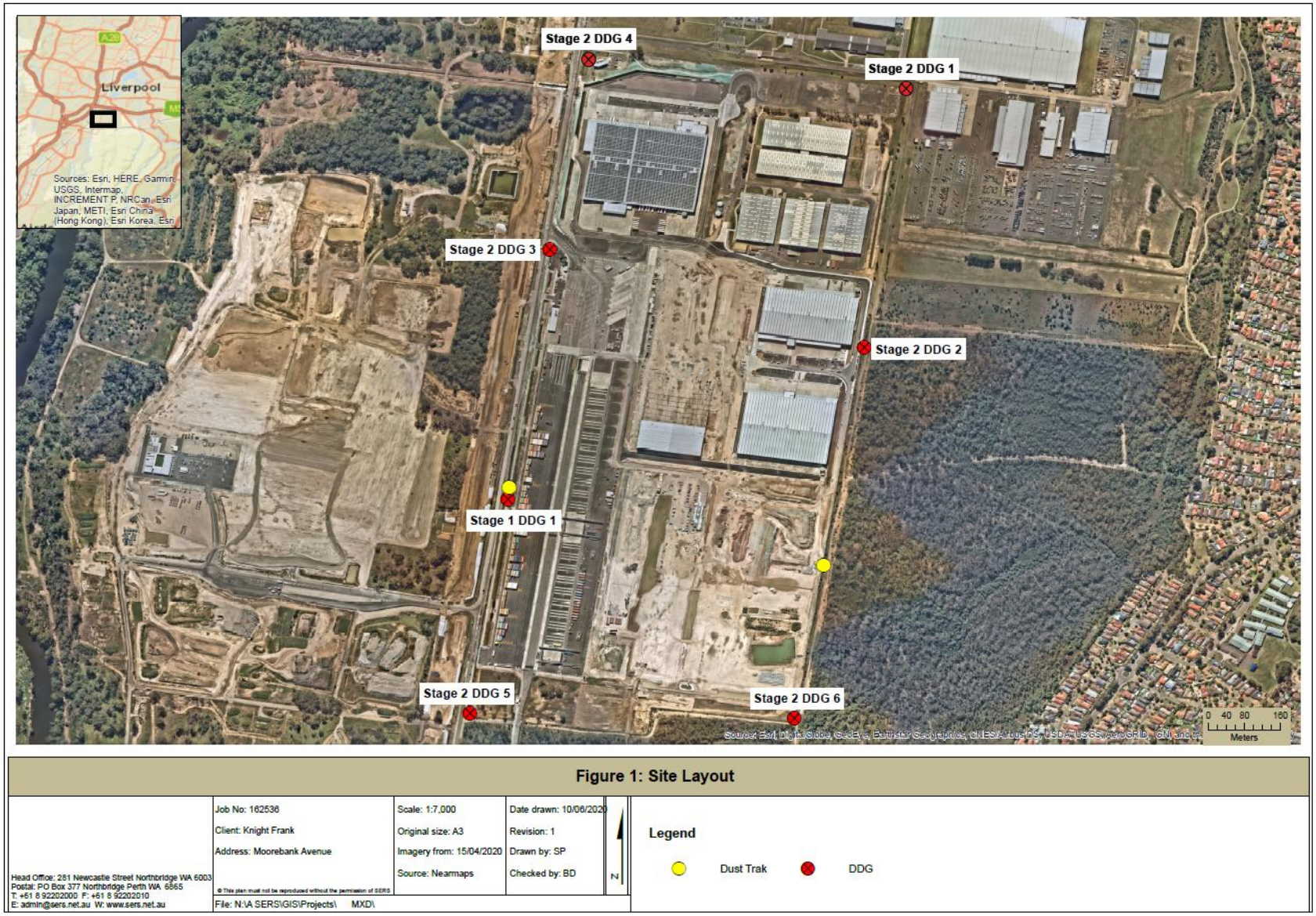


Figure 2-2: Location of Dust Deposition Gauges (Source: SERS, October 2024). Stage refers to approval stages for MPE.

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	May 2024	Jun 2024	Jul 2024	Aug 2024	Sep 2024	Oct 2024	Average %	Latest calibration date
	% availability each month							
AQM01	100	100	100	100	100	100	100	March 2024
AQM02	100	100	100	100	100	100	100	March 2024
AQM03	95	100	100	100	100	99	99	March 2024
AQM04	99	100	58 [1]	85 [2]	100	100	88	March 2024

[1] AQM04 only had 58% availability for $PM_{2.5}$ and PM_{10}, however, the monitor had 100% availability for NO_2 and CO

[2] AQM04 only had 85% availability for $PM_{2.5}$ and PM_{10}, however, the monitor had 100% availability for NO_2 and CO

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.

- Compared to last reporting period, monitor AQM03 availability has improved significantly with an average of 99% for this reporting period (compared to 77% for the previous reporting period).
- Monitors AQM01 and AQM02 had 100% availability through the reporting period.
- AQM04 had 58% availability in July 2024 for $PM_{2.5}$ and PM_{10} and 85% availability in August 2024 for $PM_{2.5}$ and PM_{10}. Availability was 100% at AQM04 in July and August for CO and NO_2. This has resulting in a lower average availability (88%) for the reporting period, compared to 100% for the previous reporting period. Availability improved for September and October 2024.

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

The site weather station was unavailable for August 2024, September 2024 and October 2024, therefore, weather data from the government operated Bankstown Airport Automatic Weather Station (AWS) (station 066137) was used to assess the prevailing wind conditions for these months.

3.1.2.1 Site weather station

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

Table 3-1: Site weather station average wind speed and direction for May 2024 to July 2024

Month	Wind speed (m/s)	Beaufort Wind scale category[3]	Wind direction
May 2024	1.1	Light air	Southwest (233°)
June 2024	0.9	Light air	West-southwest (243°)
July 2024	0.5	Light air	West-southwest (241°)

3.1.2.2 Bankstown Airport AWS

The AWS was used as a reference station from August 2024 to October 2024 as there was no data available from the site weather station between these months.

The average wind speed and direction data at 9 am and 3 pm from the Bankstown Airport AWS from August 2024 to October 2024 is summarised in Table 3-2.

Table 3-2: Bankstown Airport AWS average wind speed and direction for August 2024 to October 2024

Month	9 am			3 pm		
	Wind direction	Wind speed (m/s)	Beaufort Wind scale category	Wind direction	Wind speed (m/s)	Beaufort Wind scale category
Aug 2024	Variable	2.6	Light breeze	Variable	3.9	Gentle breeze
Sep 2024	Variable	3.1	Light breeze	Variable	5.5	Moderate breeze
Oct 2024	West-northwest	3.1	Light breeze	East-southeast	5.9	Moderate breeze

[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)

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 3-3.

Table 3-3: 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)
May 2024	10.7	20.8	0.8	62.7
June 2024	6.8	17.5	176.4	78.2
July 2024	7.0	17.6	48.4	47.9
Aug 2024	9.6	21.6	20.2	48.9
Sep 2024	9.7	23.8	32.2	44.3
Oct 2024	12.5	24.3	38.2	61.4

Source: Bankstown, NSW - October 2024 - Daily Weather Observations (bom.gov.au)

Rainfall for the reporting period was mixed throughout the 6-month period. However, June 2024 was well above the long-term monthly average rainfall and May 2024 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].

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

			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	µg/m^3	<50	50–100	100–200	200–600	600 and above
Particulate matter < 2.5 µm $PM_{2.5}$	1-hour	µg/m^3	<25	25–50	50–100	100–300	300 and above

Figure 3-1: 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 3-4.

Table 3-4: 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 average	Good	Good every day
PM_{10} 24-hour average	Mostly good, with 7 days fair.	'Good' every day except for: • Friday 24 May 2024 had 'fair' PM_{10} (39.7 µg/m^3) • Tuesday 28 May 2024 had 'fair' PM_{10} (37.5 µg/m^3) • Wednesday 29 May 2024 had 'fair' PM_{10} (45.5 µg/m^3) • Wednesday 24 July 2024 had 'fair' PM_{10} (35.3 µg/m^3) • Friday 30 August 2024 had 'fair' PM_{10} (43.9 µg/m^3) • Wednesday 4 September 2024 had 'fair' PM_{10} (34.1 µg/m^3) • Wednesday 25 September 2024 had 'fair' PM_{10} (36.0 µg/m^3).
$PM_{2.5}$ 24-hour average	Mostly good, with 3 days fair.	'Good' every day except for: • Tuesday 28 May 2024 had 'fair' $PM_{2.5}$ (17.1 µg/m^3) • Wednesday 29 May 2024 had 'fair' $PM_{2.5}$ (17.2 µg/m^3) • Monday 5 August 2024 had 'fair' $PM_{2.5}$ (16.9 µg/m^3).

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

Month	Average for Reporting Period	Comment for reporting period
Visibility[6],	Mostly good, with 2 days fair.	'Good' every day except for: • Sunday 19 May 2024 had 'fair' Visibility ($1.54\ 10^{-4}m^{-1}$) • Saturday 29 June 2024 had 'fair' Visibility ($1.67\ 10^{-4}m^{-1}$).

[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 $1.5x10^{-4}$ m^{-1}. NSW has adopted a 1-hour visibility standard of $2.1x10^{-4}$ 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 MPE was assessed against the new criteria from June 2021.

Table 4-1: Monitoring criteria (applied from June 2021)

Monitoring focus	Averaging period	Criteria / Trigger
$PM_{2.5}$	24-hour average	25 µg/m^3
	Annual average	8 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

It is also worth noting that in 2025, the criteria for $PM_{2.5}$ will change to 20 µg/m^3 for the 24-hour averaging period and 7 µg/m^3 for the annual average.

4.1.2 Dust deposition

Dust deposition data from seven DDGs located around MIP 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 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 8 April 2024 to 24 October 2024 as provided by SERS is shown in Table 4-3.

Table 4-3: Dust deposition (insoluble solids g/m^2/month) results from 8 April 2024 to 24 October 2024

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	Average
May 2024	**2.7**	0.4	0.5	1.3	0.5	0.6	1.0	1.0
June 2024	0.6	0.2	0.4	**3.6**	0.3	0.3	0.2	0.8
July 2024	0.5	<0.1	<0.1	1.1	0.4	0.4	0.1	0.5
August 2024	1.2	0.6	1.1	1.7	0.5	0.8	0.1	0.9
September 2024	0.8	0.5	N/A*	**3.6**	0.7	1.8	0.3	1.3
October 2024	1.5	1.0	1.2	**2.0**	1.0	1.0	0.8	1.2

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

* Stage 2 DDG 2 was damaged while handling therefore no results available for the sampling period.

All months (except for October 2024) include data from two different SERS DDG reports to ensure the entire month was covered. This was due to collection periods ending during the month rather than at the beginning or end of the month and sometimes covered over two months' worth of data. **NOTE:** The information in the table provides consolidated results per month to minimise any confusion with the exceedances.

As shown in Table 4-3, there were four individual gauge exceedances between May 2024 and October 2024. However, no monthly average exceedances of the dust deposition (insoluble solids) 2 g/m^2/month (incremental) and 4 g/m^2/month (cumulative) criteria occurred between 8 April 2024 and 24 October 2024.

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.

AQM03 did not record any data between June 2023 and 19 September 2023 and also had low data availability between 33% and 88% for each month between October 2023 and April 2024. This has resulted in a low average availability for the monitor for the rolling 12 month averages.

The sensors and monitoring software was swapped out in mid-April 2024 and as such, there was no data available to calculate the monthly and annual averages for April 2024. Daily, and hourly (1hr/8hr) exceedances were calculated for April 2024 and are described in further detail below.

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 November 2023 to October 2024 for all four monitors combined was below the annual average criteria (i.e. 8.0 µg/m^3 for $PM_{2.5}$ and 25.0 µg/m^3 for PM_{10}) for each month, excluding April 2024.

As of October 2024, the 12-month rolling annual average for all four monitors (excluding April 2024) was 3.7 µg/m^3 for $PM_{2.5}$ and 10.1 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 November 2023 to October 2024 was below the annual average criteria (0.03 ppm) for each month.

As of October 2024, the 12-month rolling annual average (excluding April 2024) for NO_2 for all four monitors is 0.009 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 (May 2024 to October 2024) did not identify any exceedance of the 24-hour average criteria (25 µg/m^3) for $PM_{2.5}$ for the 6-month reporting period.

4.3.2.2 PM_{10} Monitoring

One exceedance of the 50 µg/m^3/day limit for PM_{10} was recorded during the 6-month reporting period (May 2024 to October 2024). This exceedance is summarised in Table 4-4. The table includes the 24-hour average for PM_{10} recorded at the Liverpool monitoring station for comparison and includes analysis of the exceedance.

Table 4-4 Summary of exceedance of the PM_{10} 50 µg/m^3/day limit

Date of exceedance	AQM01 µg/m^3	AQM02 µg/m^3	AQM03 µg/m^3	AQM04 µg/m^3	Liverpool average[8]
13/08/2024	-	-	-	61.9	15.9

Analysis of exceedance

The higher recordings occurred from 10am to midnight. No out of hours works occurred during the time of exceedance.

Trains were arriving/ departing the terminal on this day during times of exceedance. However, AQM04 is located approximately 680 metres to the north of where the trains operate, therefore the exceedance is unlikely to be related to the train movements.

The exceedance did not coincide with any higher readings at the Liverpool air quality monitoring station. This may indicate that more localised sources are influencing air quality in this location.

[8] Liverpool average: The 24-hour average is the average of the 1-hour averages recorded for the day (i.e., between 01:00 and 24:00)

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

No complaints were made relating to air quality during this reporting period.

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 May 2024 to October 2024 (inclusive).

The following summarises the monitoring results for this reporting period:

- The rolling annual average for all four monitors combined was below the annual average criteria (8.0 µg/m^3 for $PM_{2.5}$ and 25.0 µg/m^3 for PM_{10}) for each month during the reporting period (excluding April 2024).
- There were no exceedances of the $PM_{2.5}$ 24-hour average criteria (25 µg/m^3) during the 6-month reporting period.
- There was one (1) exceedance (out of 184 days) of the PM_{10} 24-hour average criteria (50 µg/m^3) during the 6-month reporting period (0.5%).
  - The exceedance was recorded at AQM04.
  - The exceedance had higher readings from approximately 10am to midnight.
  - The exceedance did not coincide with any higher readings at the Liverpool air quality monitoring station. This may indicate more localised sources influencing air quality.
  - August 2024 was a drier month compared to long-term averages, which may have contributed to the exceedance.
  - No out of standard hours work occurred during times of PM_{10} exceedance.
  - The exceedance occurred during times when trains where entering/exiting the site, although based on the location of the monitors from the trains (~680 metres) it is therefore considered unlikely that the exceedance was attributed to the train movements.
- 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) at AQM02 and AQM04 (the only monitors that recorded CO) during the 6-month reporting period.
- There were four individual gauge exceedances of the dust deposition (insoluble solids) 2 g/m^2/month (incremental) criteria between May 2024 and October 2024. However, no monthly average exceedances of the dust deposition (insoluble solids) 2 g/m^2/month (incremental) and 4 g/m^2/month (cumulative) criteria occurred between 8 April and 24 October 2024 as reported by SERS.
- It is recommended that monitors continue to be calibrated annually as per operational requirements and device specifications.

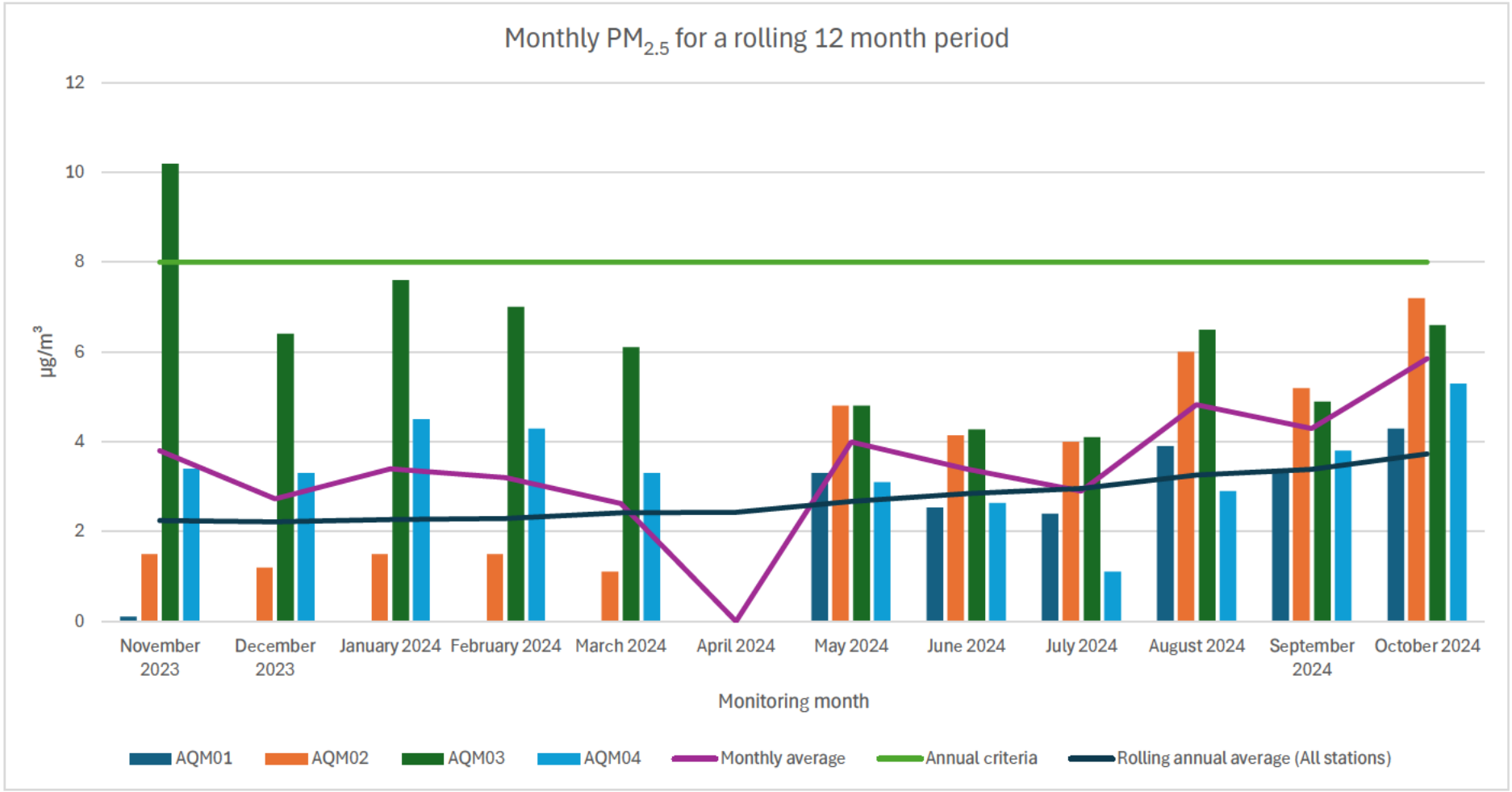
APPENDIX A

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	
November 2023	0.1	1.5	**10.2**	3.4	3.8	2.2	8.0	No exceedance of annual average criteria. AQM03 had sporadic recording of data through the month.
December 2023	0.0	1.2	6.4	3.3	2.7	2.2	8.0	No exceedance of annual average criteria.
January 2024	0.0	1.5	7.6	4.5	3.4	2.3	8.0	No exceedance of annual average criteria. AQM03 had sporadic recording of data through the month.
February 2024	0.0	1.5	7.0	4.3	3.2	2.3	8.0	No exceedance of annual average criteria. AQM03 had sporadic recording of data through the month.
March 2024	0.0	1.1	6.1	3.3	2.6	2.4	8.0	No exceedance of annual average criteria. AQM03 had sporadic recording of data through the month.
April 2024	N/A	N/A	N/A	N/A	N/A	2.4	8.0	Sensors and monitoring systems were swapped half-way through April, therefore data is inconsistent, and averages aren't available for the month.
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.
Rolling 12 month average	1.8	3.5	6.2	3.4	-	-	8.0	No exceedance of annual average criteria.
All months^	1.0	3.3	6.6	2.7	3.3	-	8.0	No exceedance of annual average criteria.

Bold/grey indicates an exceedance of the criteria.

^ All months since May 2020

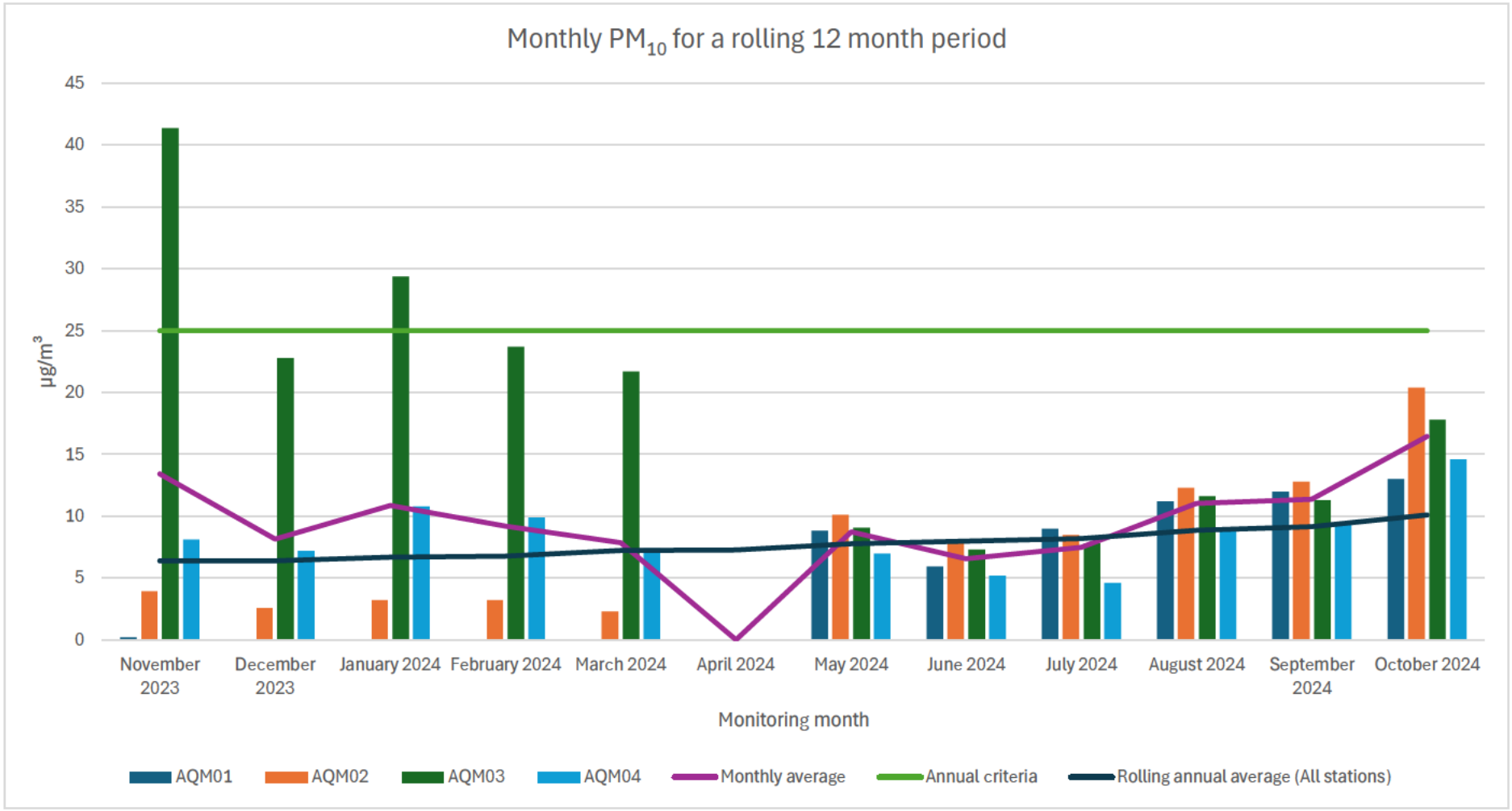


Monthly $PM_{2.5}$ over 12 months including the 6-months for this report

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	
November 2023	0.2	3.9	**41.4**	8.1	13.4	6.4	25.0	No exceedance of annual average criteria. AQM03 had sporadic recording of data through the month.
December 2023	0.0	2.6	22.8	7.2	8.2	6.4	25.0	No exceedance of annual average criteria.
January 2024	0.0	3.2	**29.4**	10.8	10.9	6.7	25.0	No exceedance of annual average criteria. AQM03 had sporadic recording of data through the month.
February 2024	0.0	3.2	23.7	9.9	9.2	6.8	25.0	No exceedance of annual average criteria. AQM03 had sporadic recording of data through the month.
March 2024	0.0	2.3	21.7	7.4	7.9	7.2	25.0	No exceedance of annual average criteria. AQM03 had sporadic recording of data through the month and a very high maximum.
April 2024	N/A	N/A	N/A	N/A	N/A	7.2	25.0	Sensors and monitoring systems were swapped half-way through April, therefore data is inconsistent, and averages aren't available for the month.
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.
Rolling 12 month average	5.5	7.9	18.5	8.5	-	-	25.0	No exceedance of annual average criteria.
All months^	2.9	9.6	22.2	5.9	9.9	-	25.0	No exceedance of annual average criteria.

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



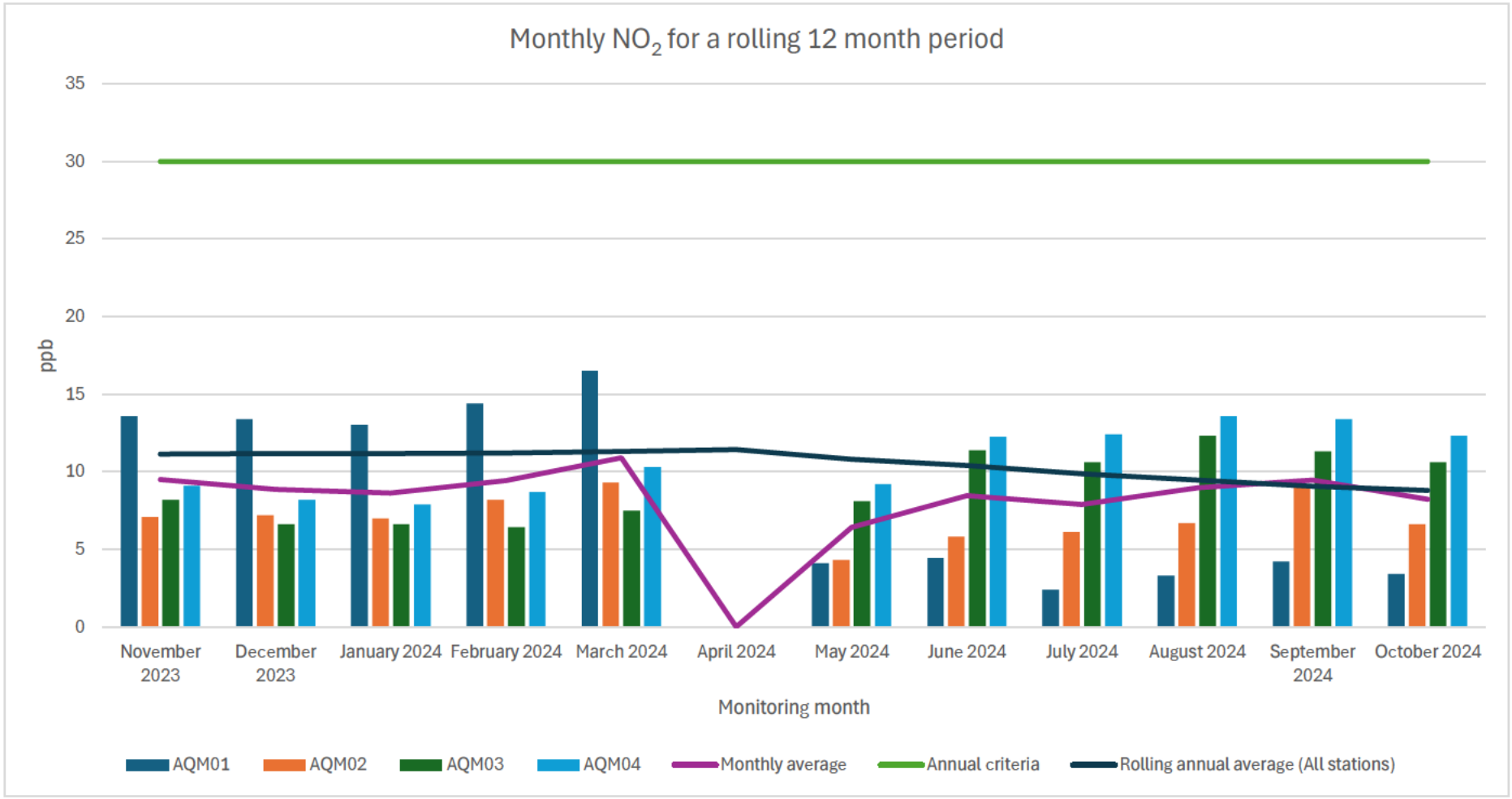
Monthly PM_{10} over 12 months including the 6-months for this report

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*	
November 2023	13.6	7.1	8.2	9.1	9.5	11.1	0.03 / 30.0	No exceedance of annual average criteria. AQM03 had sporadic recording of data through the month.
December 2023	13.4	7.2	6.6	8.2	8.9	11.2	0.03 / 30.0	No exceedance of annual average criteria.
January 2024	13.0	7.0	6.6	7.9	8.6	11.2	0.03 / 30.0	No exceedance of annual average criteria. AQM03 had sporadic recording of data through the month.
February 2024	14.4	8.2	6.4	8.7	9.4	11.2	0.03 / 30.0	No exceedance of annual average criteria. AQM03 had sporadic recording of data through the month.
March 2024	16.5	9.3	7.5	10.3	10.9	11.3	0.03 / 30.0	No exceedance of annual average criteria. AQM03 had sporadic recording of data through the month.
April 2024	N/A	N/A	N/A	N/A	N/A	11.3	0.03 / 30.0	Sensors and monitoring systems were swapped half-way through April, therefore data is inconsistent, and averages aren't available for the month
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.
Rolling 12 month average	0.008 ppm / 8.4 ppb	0.007 ppm / 7.0 ppb	0.009 ppm / 9.1 ppb	0.011 ppm / 10.7 ppb	-	-	0.03 / 30.0	No exceedance of annual average criteria.
All months^	0.007 ppm / 7.3 ppb	0.006 ppm / 6.0 ppb	**0.040 ppm / 39.9 ppb**	0.011 ppm / 11.2 ppb	0.015 ppm / 15.4 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

ARCADIS Design & Consultancy for natural and built assets

Moorebank Intermodal Precinct

APPENDIX D – NOISE MONITORING REPORTS

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Six Monthly Review of AoA - November 2024

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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.

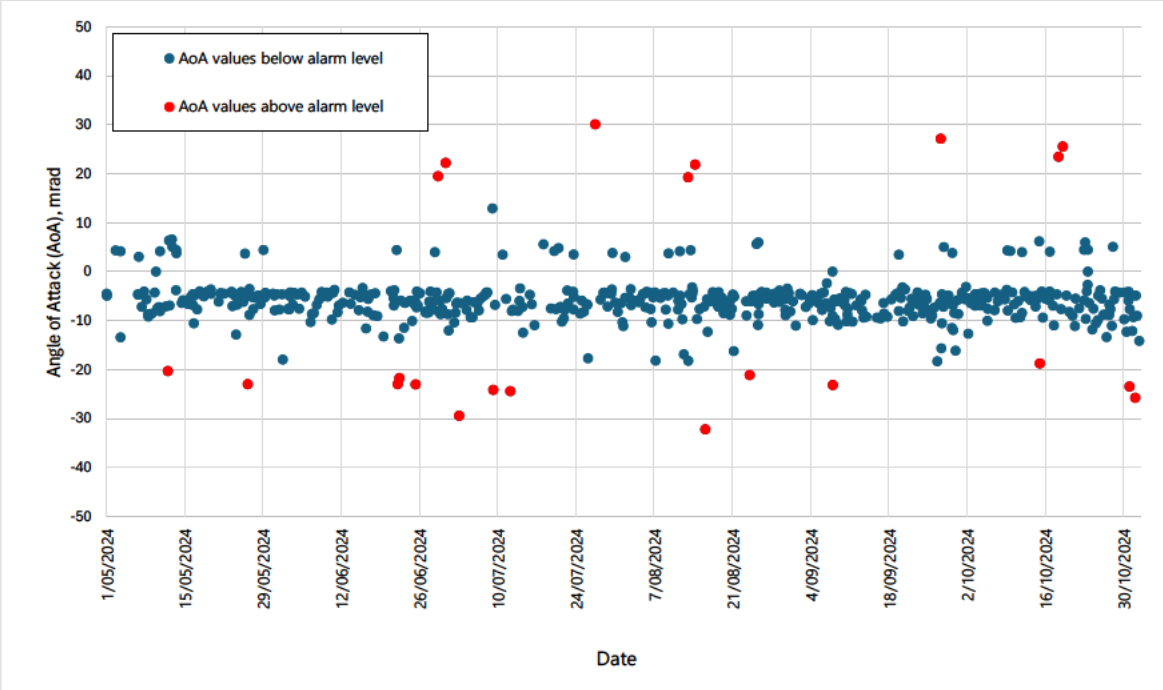
[1] Transport for NSW Asset Standards Authority T HR RS 00400 ST *RSU 400 Series – Minimum Operating Standards for Rolling Stock – Freight Vehicle Specific Interface Requirements* Version 2.0 dated 24 August 2017

[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.

Moorebank Intermodal Precinct

APPENDIX E - WATER QUALITY MONITORING REPORTS

MOOREBANK PRECINCT EAST STAGE 2: BIODIVERSITY MONITORING IN ANZAC CREEK

AUTUMN 2024 SURVEY

Draft Report Prepared for
ARCADIS

21 August 2024

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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. 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 autumn 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 autumn 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 (during construction).

Results

This report presents the results of i) autumn 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 (autumn 2024), no construction discharges occurred. There was no exceedance (as per communication with Tactical). 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, copper and zinc 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 autumn 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

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.

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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 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, in a few years. 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 autumn 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).

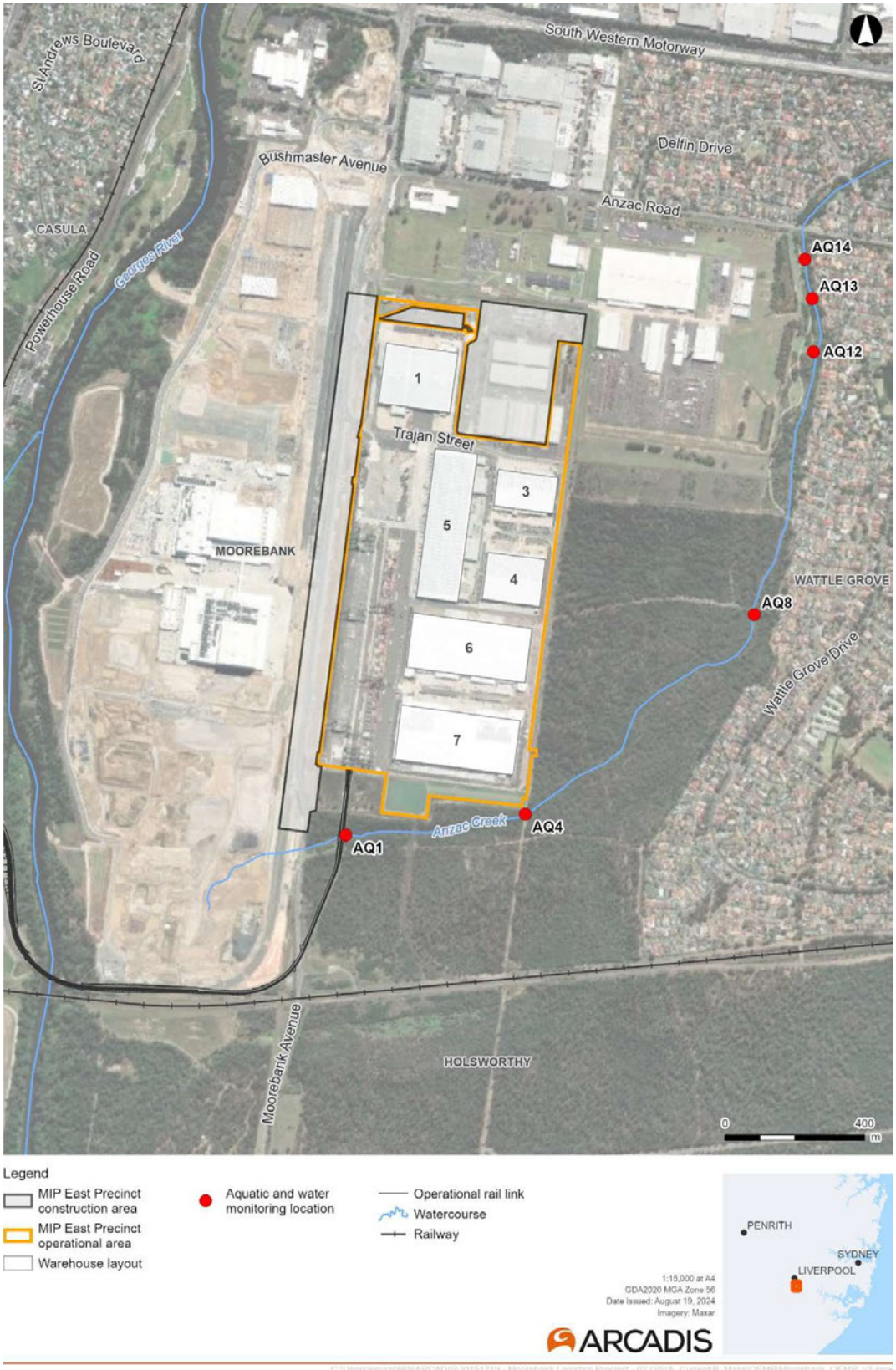

Figure 1. Project Location

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.

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 was above ground and included fit-out. No construction discharges occurred via DP5 or DP 7 within the reporting period (after December 2023). There was no exceedance (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 autumn 2024 monitoring event, sites were sampled on 8 May 2024 (Survey 1) and 28 May 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 autumn Survey 1 (8 May 2024) and 2024 autumn Survey 2 (28 May 202), a total of 222 mm and 243 mm rainfall was recorded respectively by the meteorological station situated near Holsworthy Aerodrome AWS Rainfall Station (Station ID: 66161) (Figure 2).

All earthworks have been completed. Construction of the warehouses was above ground and includes fit-out. No construction discharges occurred within the reporting period.

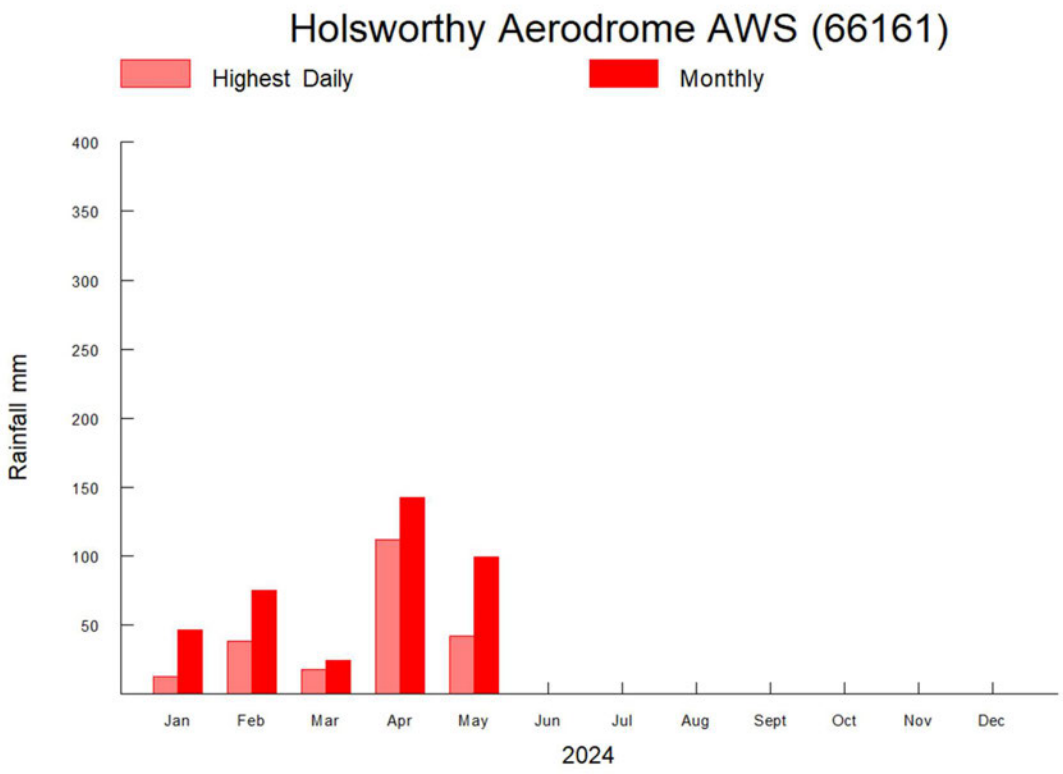

Figure 2. Rainfall (mm) measured at Holsworthy Aerodrome AWS Rainfall Station (66161) between 1 January and 31 May 2024.

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 2023 surveys, but the channel was almost full-to-bank (up to approximately 0.5 m deep) (Plates 1&2) during the autumn 2024 surveys. 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 Lantana (*Lantana camara*) on either side of the stream channel since spring 2023. Alligator Weed (*Alternanthera philoxeroides*) is still common at this site but where present, it was mostly defoliated. Slender knotweed (*Persicaria decipiens*) occupied a large proportion of the channel previously occupied by Alligator weed (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 upstream (5/05/24)

Plate 2: AQ1 – View upstream (5/05/24)

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, including at the time of autumn 2024 surveys, where it was up to approximately 0.25 m deep (Plates 3&4). There was no apparent flow at Site AQ4 at the time of the autumn 2024 surveys.

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). Jointed Twig Rush and Twig Rush continues to be common (Plates 3&4). Typha, Slender Knotweed, Frog's Mouth (*Philydrum lanuginosum*) and *Utricularia* sp. were also present. Frogs were heard calling.

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 of the stream channel by emergent macrophytes and reduced flow within the creek since spring 2022 (Plate 3&4, Appendix 2).

Plate 3: AQ4 – View across-stream (5/04/24)

Plate 4: AQ4 – View downstream (5/04/24)

Site AQ8

Site AQ8 was situated approximately 1 km downstream of Site AQ4 (Figure 1). At the time of Surveys 1 and 2, surface water was present up to a depth of approximately 0.3 m deep.

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).

Plate 5: Site AQ8 – view upstream (28/05/24)

Plate 6: Site AQ8 – view downstream (28/05/24)

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 but it was less common than during the spring 2023 surveys.

Water level in the pool was up to approximately 0.7 m deep. 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 autumn 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 (28/05/24)

Plate 8: Site AQ12 – view across stream (8/05/24)

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 (8/05/24)

Plate 10: Site AQ13 – view downstream (8/05/24)

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 (28/05/24)

Plate 12: Site AQ14 – view downstream (28/05/24)

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 autumn surveys 1 and 2 indicated that:

- Water temperature ranged between 8.6 to 16.7 °C;
- pH (range = 6.7 to 7.2) was within the recommended DTV at site AQ12 at the time of both surveys;
- Conductivity (range = 164 to 640 µS/cm) was within the recommended DTVs at all the sites sampled;
- Dissolved oxygen (DO) measurements (range = 21 to 78 % saturation) were below the lower DTV at all sites during Survey 1 and Survey 2;
- Turbidity levels were within the recommended DTV at all sites during autumn 2024 (range = 10.3 to 44.3 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 = 0.32 – 0.36 mg/L) was below the upper DTV (0.5 mg/L) at Site AQ12 during both surveys. 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 autumn 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. 13 of 20 surveys), including at the time of the baseline survey (260 µg/L), and at the time of the current survey (Autumn 2024 Survey 2: 170 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. 14 of 22 surveys, including the baseline survey (2 µg/L), but not during autumn 2024 (Survey 1: 1.4 µg/L; Survey 2: 1.1 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) was occasionally detected but has always been well within the recommended DTV (Table 6): PFOA was not detected during autumn 2024 (Table 6);
- PFOS was commonly detected, including during autumn 2024 (Survey 1: 0.094 µg/L; Survey 2: 0.061 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 autumn 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 (8/05/24)					
			AQ1	AQ4	AQ8	AQ12	AQ13	AQ14
Temperature °C (*n* =3)	-	-	16.1 (0.0)	15.6 (0.0)	15.7 (0.0)	15.8 (0.0)	16.7 (0.0)	11.1 (0.0)
pH (*n* =3)	**6.5-8.0**	7.01	7.0 (0.0)	6.8 (0.0)	7.0 (0.0)	7.0 (0.0)	7.0 (0.0)	6.7 (0.0)
Conductivity (µS/cm) (*n* = 3)	**125-2200**	354	554 (1.5)	246 (0.6)	183 (0.3)	222 (0.7)	164 (0.3)	290 (0.0)
Dissolved Oxygen (%) (*n* = 3)	**85-110**	**62**	**36** (0.1)	**20.9** (0.1)	**66.0** (0.4)	**78.2** (2.2)	**70.9** (0.1)	**22.2** (0.2)
Turbidity (NTU) (*n* = 3)	**<50**	**91**	44.3 (0.1)	24.2 (0.1)	12.5 (3.4)	22.6 (0.5)	10.9 (0.2)	14.5 (0.2)
Alkalinity (mg/L) *(n* = 1)	-	-	N/R	N/R	N/R	25	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	0.32	N/R	N/R
Total Kjeldahl (mg/L) *(n* = 1)	-	-	N/R	N/R	N/R	0.30	N/R	N/R
Indicator Variable	**DTV***	**Baseline[A]**	**Survey 2 (28/05/24)**					
			AQ1	**AQ4**	**AQ8**	**AQ12**	**AQ13**	**AQ14**
Temperature °C (*n* =3)	-	-	9.0 (0.0)	9.7 (0.0)	8.6 (0.0)	9.9 (0.0)	10.5 (0.0)	13.8 (0.0)
pH (*n* =3)	**6.5-8.0**	7.01	7.2 (0.0)	7.2 (0.1)	7.0 (0.0)	7.0 (0.0)	6.7 (0.0)	7.0 (0.0)
Conductivity (µS/cm) (*n* = 3)	**125-2200**	354	640 (0.3)	372 (0.0)	271 (0.3)	227 (0.3)	250 (0.3)	274 (6.6)
Dissolved Oxygen (%) (*n* = 3)	**85-110**	**62**	**54.6** (0.5)	**37.4** (0.2)	**69.3** (0.3)	**55.3** (0.0)	**28.7** (0.1)	**39.6** (0.0)
Turbidity (NTU) (*n* = 3)	**<50**	**91**	37.9 (0.5)	10.3 (0.2	N/R	10.4 (0.2)	16.4 (0.1)	14.7 (0.0)
Alkalinity (mg/L) *(n* = 1)	-	-	N/R	N/R	N/R	35	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	0.36	N/R	N/R
Total Kjeldahl (mg/L) *(n* = 1)	-	-	N/R	N/R	N/R	0.35	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 autumn 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		
Aluminium pH >6.5	**80**	**260**	37	**170**		
Aluminium pH <6.5	-	-				
Arsenic Total (µg/L)	**42**	<1	<1	<1		
Barium	-	2	23	18		
Beryllium	-	<1	<1	<1		
Boron	**680**	<50	38	32		
Cadmium (µg/L)	**0.4**	<0.1	<0.1	<0.1		
Chromium	**6**	<1	<1	<1		
Cobalt	-	<1	<1	<1		
Copper (µg/L)	**1.8**	**2**	1.4	1.1		
Iron	-	450	310	420		
Lead (µg/L)	**5.6**	<1	<1	<1		
Manganese	**2500**	3	5.2	19		
Mercury (µg/L)	**1.9** [A]	<0.1	<0.1	<0.1		
Molybdenum	-	<1	<1	<1		
Nickel (µg/L)	**13**	<1	<1	<1		
Selenium Total	**18**	<10	<1	<1		
Strontium	-	52	78	82		
Vanadium	-	<10	<1	<1		
Zinc (µg/L)	**15**	<5	13	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).

3.2.2 Sediment Characteristics

Sediment samples were collected at Site AQ1, AQ4, AQ14 between autumn 2018 (baseline) and autumn 2024 (during construction) (Table 7&8).

Results indicated that:

- Concentrations of lead measured at Site AQ1 (Survey 1: 100 mg/kg; Survey 2: 73 mg/kg) exceeded the guideline value (50 mg/L) on both sampling occasions within autumn 2024. The majority (i.e. 15 of 17 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) and autumn 2024 (27 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 autumn 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 autumn 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 autumn 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 8. Mean (± SE) sediment results for perfluoronated compounds between autumn 2018 (*n* = 1) and autumn 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.

3.3 Aquatic Macroinvertebrates

A total of 11 taxon were identified from edge habitat samples collected at Site AQ12 in autumn 2024 (Survey 1: 11 taxa; Survey 2: 8 taxa) (Table 11, Appendix 3). Eight taxa, Acarifomes (Water mites), Chironominae (True flies), Tanypodinae (True flies), Ceratopogonidae (Biting midges), Coenagrionidae (Damselflies), Libellulidae (Dragonflies), Corixidae (Water boatmen) and Lumbriculidae (Segmented worms), were collected on both sampling occasions (Appendix 3). One Freshwater yabby and individuals of the alien species of fish, Gambusia, were also collected in net samples (Survey 1: 9 individuals; Survey 2: 9 individuals).

Site AQ12 obtained an OE50 score of 0.41 for Survey 1 and 0.29 for Survey 2 during Autumn 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, and the beetle family, Dytiscidae. The caddis fly family, Leptoceridae, was expected but not collected by Survey 1.

SIGNAL2 scores of 3.19 and 4.00 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

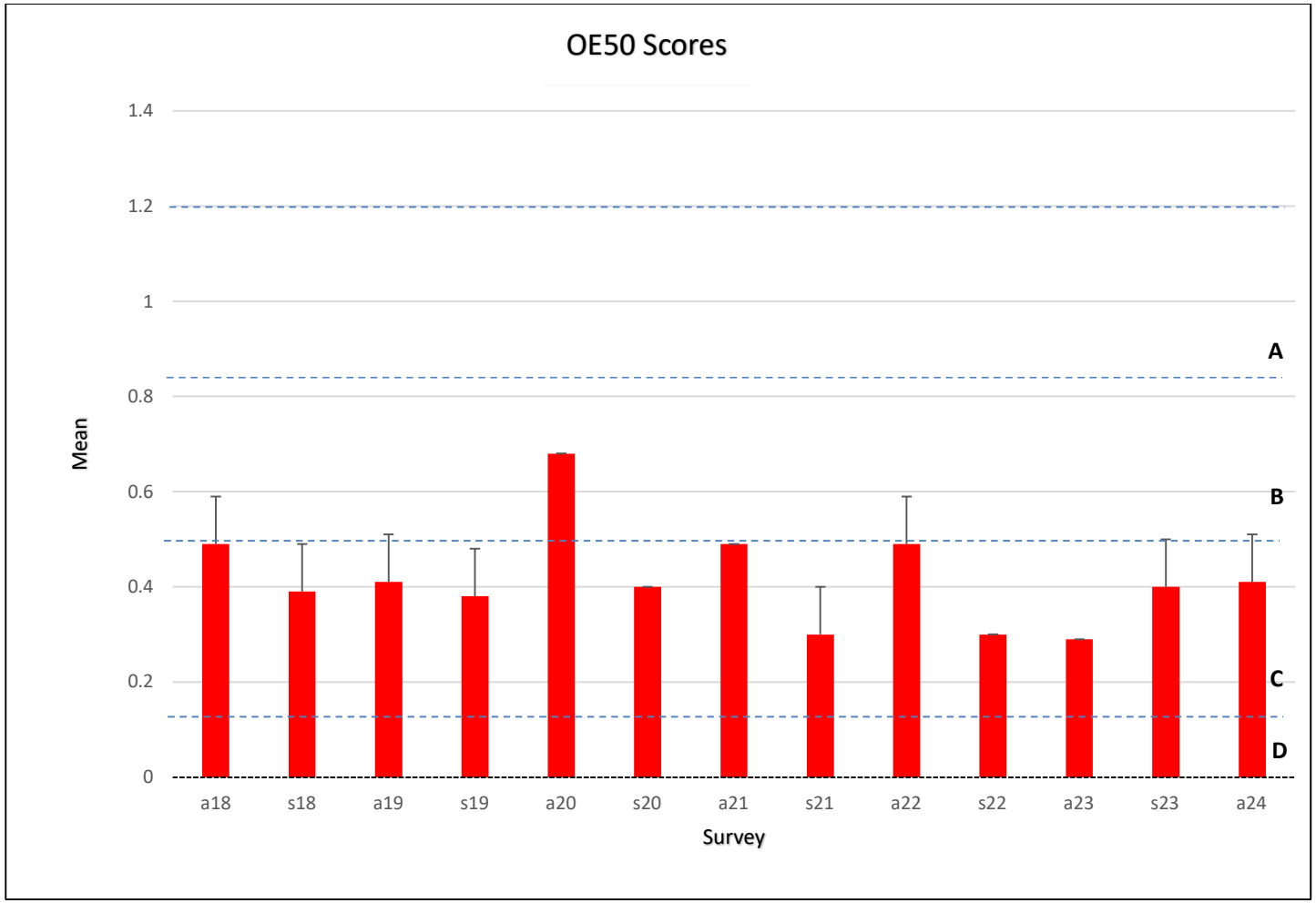

Figure 3. Mean (±SE) OE50 Taxa Scores and their respective Band Scores (B-D) for AUSRIVAS samples collected at Site AQ12 since autumn 2018. NB Note that the bands displayed are relevant to autumn edge habitat, these being slightly different to spring.

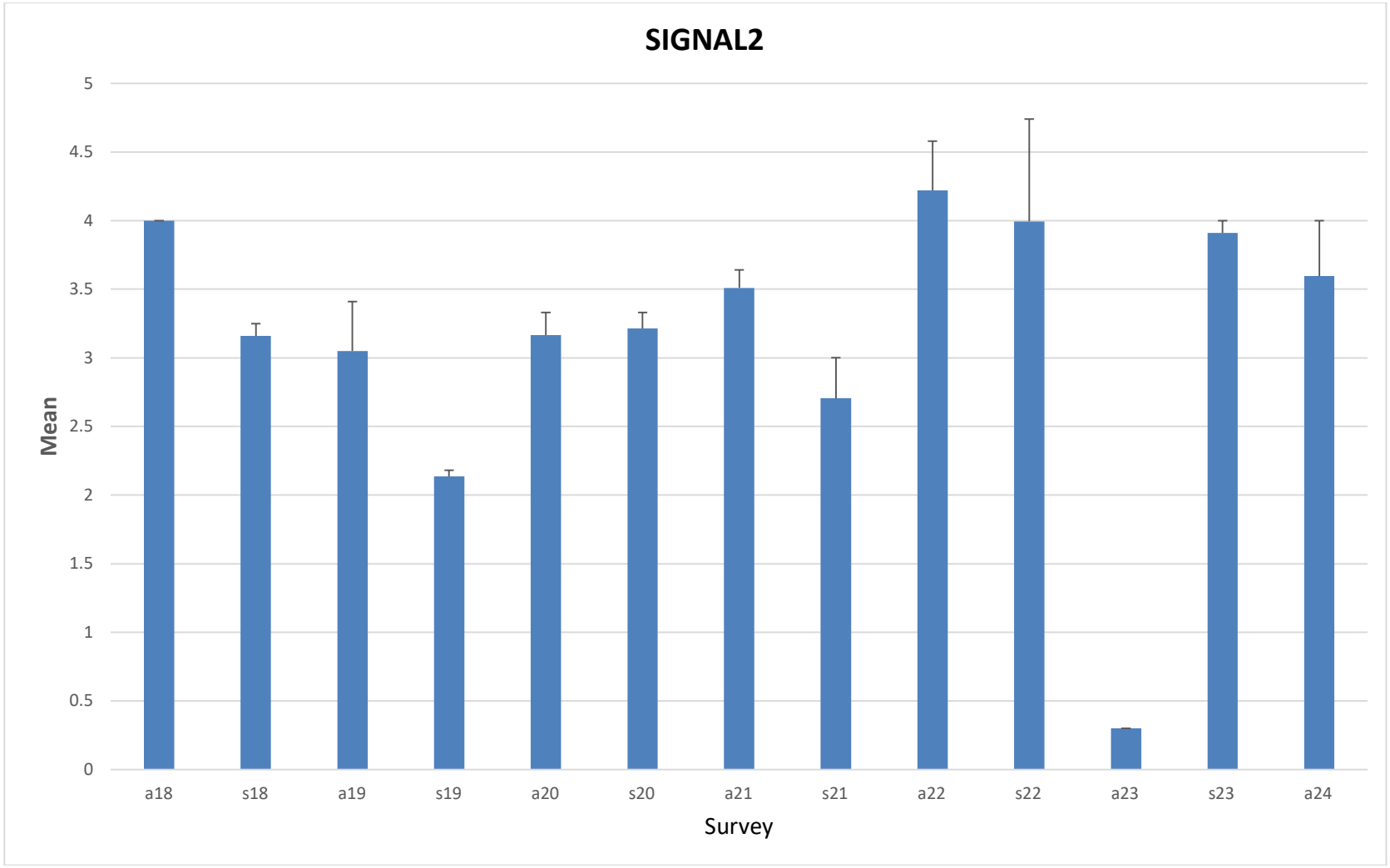

Figure 4. Mean (±) SIGNAL 2 results for Site AQ12 sampled in Anzac Creek since autumn 2018.

3.4 Fish

Four species of fish were observed while electro-fishing at Site AQ12 in autumn 2024 (Table 10). Gambusia (*Gambusia holbrooki*) were common and also caught in dip nets used to sample aquatic macroinvertebrates in autumn 2023 (Table 10). Other species collected included a Striped gudgeon, 2 individuals of Short-finned eel (*Anguilla australis*) (20-30cm in length) and the introduced species, Oriental weatherloach (*Misgurnus anguillicaudatus*) (Table 10).

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: Oriental weatherloach collected at Site AQ12 (spring 2022 and autumn 2024).

Table 10. Fish collected at Site AQ12 between autumn 2018 and autumn 2023[#].

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
Anguilla reinhardtii	Long-finned eel	2	3	2	-	4	1	2	1	1	-	-
Anguilla australis	Short-finned eel	-	13	-	9	13	2	4	2	4	1	2
Galaxias maculatus	Common galaxias								8		-	1
Gobiomorphus australis	Striped gudgeon	28	8	3	2	-	-	-	2	2	3	1
Hypseleotris compressa	Empire gudgeon	13	-	-	-	-	-	-	-	-	1	-
Hypseleotris cf *galii*	Firetail gudgeon	-	-	-	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	-
*Misgurnus anguillicaudatus**	Oriental weatherloach	-	-	-	1	-	-	-	2	1	1	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, 7a and 7b are now operational. Warehouse 6 is constructed but is not yet operational. The next warehouse to be constructed is WH2, in a few years. During construction, water is 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 autumn 2024 surveys, recent rainfall had filled the channel to the bank at all the sites sampled. 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). At the time of sampling, the leaves and stems of Alligator weed were in poor condition. This species is a summer growing perennial herb, so the apparent decline may be seasonal.

Also notable at Site AQ1 was the appearance of Lantana (*Lantana camera*) within the creek channel. Lantana prefers moist soils and is often prevalent within riparian zones along creek and river systems (DPI NSW, 2008). Lantana does not tolerate waterlogging, which suggests

that recent dry conditions at Site AQ1 may have facilitated its expansion into the creek channel.

Concentrations of lead measured at Site AQ1 (Survey 1: 100 mg/kg; Survey 2: 73 mg/kg) exceeded the guideline value (50 mg/L) on both sampling occasions within autumn 2024. The majority (i.e. 15 of 17 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 autumn 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 monitored within sediments at the sites situated downstream of inputs from the MPES2 Project site (i.e. at Sites AQ4 and AQ14) within autumn 2024, including total petroleum hydrocarbons and poly-fluoroalkyl substances (e.g. PFAS and PFOS), continue to be within the appropriate 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 autumn 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.

Low values of the SIGNAL 2 score and the number of macroinvertebrate types (only 11 taxa) were also indicative of a site suffering from one or more forms of human impact (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 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 autumn 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 spring 2024;
- Land managers focus on containment and on-going suppression of Alligator Weed and Lantana 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 (autumn 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					
Site	**Score (%)**	**Category**				
AQ1	94	Very Stable				
AQ4	94	Very Stable				
AQ8	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					
Site	**Score (%)**	**Category**				
AQ1	31	Marginal				
AQ4	40	Marginal				
AQ8	41	Marginal				
AQ12	50	Suboptimal				
AQ13	30	Marginal				
AQ14	32	Marginal				

Appendix 3 - Macroinvertebrate taxa collected at Site AQ12 in autumn 2024 using the NSW AUSRIVAS protocol. Mosquito fish were also collected in the net samples.

Taxa	Survey 1 (8 May 2024)	Survey 2 (28 May 2024)
Cherax cf *destructor*	1	0
Acariformes	2	25
Ceratopogonidae	1	1
Chironomidae - Chironominae	6	14
Chironomidae - Tanypodinae	1	1
Coenagrionidae	2	2
Corixidae	3	1
Leptoceridae	2	0
Libellulidae	4	4
Lumbriculidae	1	1
Lymnaeidae	3	0
Number of Taxa	**11**	**8**
Mosquito fish	9	9

Moorebank Intermodal Precinct

APPENDIX F – COMPLAINTS REGISTER

Moorebank Intermodal Precinct Complaints Register - as of 1 Nov 2024			
Date received	**Complainant**	**Nature of complaint**	**Status**
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**
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	**Closed**

		signage was installed correctly.	
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 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**
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**

		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 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.	**Closed**

		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 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.	Closed
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	Closed

		substance. The complaint has been 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 night-time noise. However, operational teams were reminded to stay vigilant when operating at night.	Closed
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 caters, wheel washing and sweeper trucks.	Closed
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	Closed

		other days/times are being investigated further through additional noise monitoring. The complainant was advised further additional attended noise monitoring will be 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 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 undertaken.	Closed
11/8/2022	Community	Noise:	Closed

	member	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.	
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 additional noise monitoring. The complainant was advised further additional attended noise monitoring will be undertaken.	Closed
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	Closed

		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	
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 undertaken.	Closed
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: 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.	Closed
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:	Closed

		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 & 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
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 impacts.	Closed
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	Closed

		caused by the incident.	
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: 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.	Closed
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.	Closed

		Complainant was provided RMS details to advise of traffic delays that may require adjustment to the signaling.	
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
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	Condition of road:	Closed

	member	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.	
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: 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.	Closed
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	Closed

		to further reinforce the noise wall.	
2019 Complaints			
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 Motorway roadworks also carried out on the date in question.	Closed
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	Closed

		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.	
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 Transport for NSW	Condition of road: 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.	Closed
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	Closed

		project website.	
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 road surface. Project team referred complainants to relevant insurance agency.	Closed
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. 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.	Closed
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	Closed

		that Anzac Rd past fire station carried a weight limit.	
28/5/2018	Community member	General project: 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.	Closed
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
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	Noise:	Closed

	member via OPIE	Resident alleged that loud banging noise was audible at 4.25am. Project team confirmed no work was underway on site at that time.	

Moorebank Intermodal Precinct

APPENDIX G – BIODIVERSITY (FLORA AND FAUNA MONITORING REPORTS)

Ongoing internal reporting. No submission required under SSD 6766 and 7628.

Moorebank Intermodal Precinct

APPENDIX H – BTODR REPORTING

To be submitted separately

Moorebank Intermodal Precinct

APPENDIX I – OPERATIONS INCIDENT REGISTER

Moorebank Intermodal Precinct

APPENDIX J - COMPLIANCE REPORT DECLARATION FORM

Moorebank Intermodal Precinct

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	Monday, 30 December 2024

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

Moorebank Intermodal Precinct

COMPLIANCE REPORT DECLARATION

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

- 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