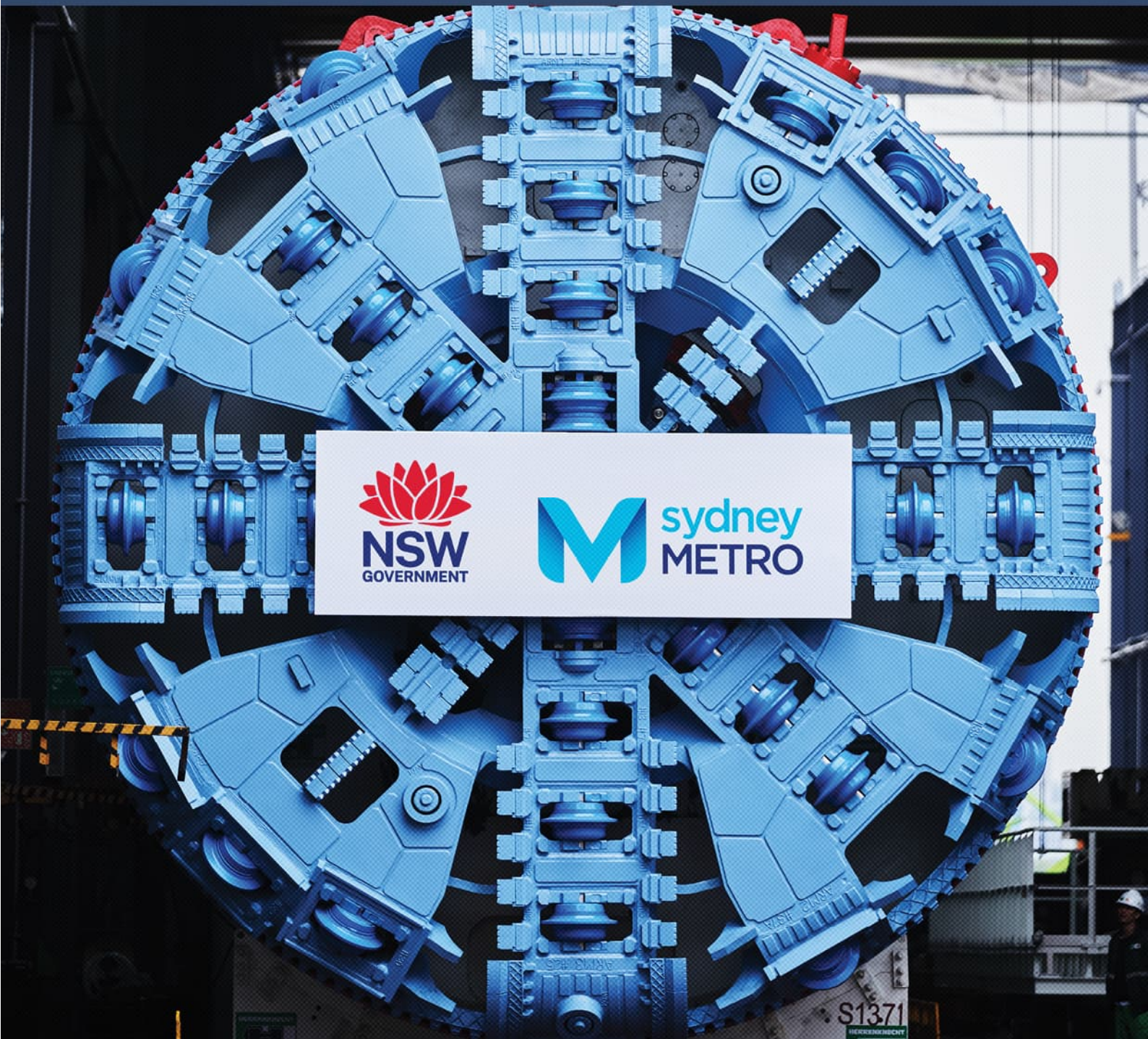
EASTERN TUNNELLING PACKAGE
John Holland CPB Contractors Ghella JV

# EPL 21784 POLLUTION MONITORING REPORT

## October 2025



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## October 2025

| | |
|---|---|
| Project number | 7040 |
| Document number | SMWSTETP-JCG-SWD-SW000-EN-RPT-095011 |

## Document approval

| Rev | Date | Prepared by | Reviewed by | Comments | Approved by |
|---|---|---|---|---|---|
| 0 | 16/10/2025 | [redacted] | | | |
| | | | | | |
| Signature: | | | | | [redacted] |

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# 1. Introduction

## 1.1. Project overview

Sydney Metro West (SMW) is a new 24-kilometre metro line with nine new stations confirmed at Westmead, Parramatta, Sydney Olympic Park, North Strathfield, Burwood North, Five Dock, The Bays, Pyrmont, and Hunter Street in the Sydney CBD.

The planning process for Sydney Metro West was assessed as a staged infrastructure application under section 5.20 of the *Environment Planning and Assessment Act 1979 (EP&A Act)*.

Stage 1 of the development, the Sydney Metro West Concept and major civil construction work for Sydney Metro West between Westmead and The Bays (SSI-10038 Schedule 2), was approved on 11 March 2021 and includes:

- Construction and operation of new passenger rail infrastructure between Westmead and the central business district of Sydney, including:
  - Tunnels, stations (including surrounding areas) and associated rail facilities
  - Stabling and maintenance facilities (including associated underground and overground connections to tunnels)
- Modification of existing rail infrastructure, including stations and surrounding areas
- Ancillary development.

The Eastern Tunnelling Package (ETP or this Project) is addressed under the Stage 2 Planning Approval (SSI 19238057). This Project includes all major civil construction work including station excavation (at the Pyrmont Station and Hunter Street Station (Sydney CBD) construction sites) and tunnelling between The Bays and Sydney CBD (Figure 1).

It is noted that the existing Sydney Metro West precast facility at Eastern Creek will be utilised in the delivery of the ETP Works. The facility, which was assessed by Sydney Metro in a Review of Environmental Factors (REF) and approved on 11 March 2021, is outside of the scope of the SWMP.

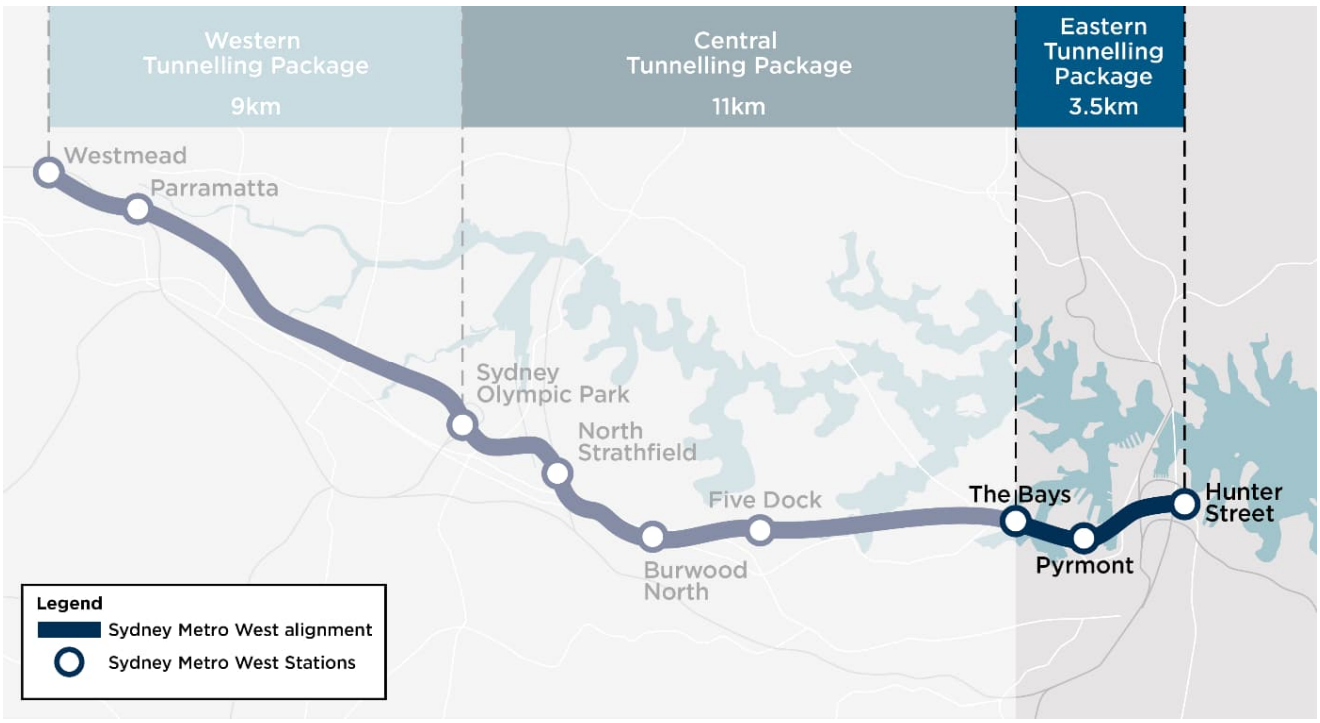


*Figure 1: Sydney Metro West alignment*

## 1.2. Project Scope

The ETP Works include design and construction of:

- Demolition of existing buildings at Pyrmont East and West shaft sites and at Hunter Street East and West shaft sites
- Tunnel Boring Machine (TBM) assembly, launch, tunnelling support from an existing shaft at The Bays
- Approximately 2.5 km twin underground eastbound and westbound bored railway tunnels between The Bays and Hunter Street and twelve cross passages spaced up to 250 metres apart
- Pyrmont Station excavation, including two shaft excavations, associated access adits and nozzle enlargements, including temporary ground support and cast in situ cavern linings
- Excavation and lining of a mined crossover cavern to allow trains to cross from one track to the other
- Hunter Street station mined cavern excavation, including:
    - Two shaft excavations, associated access adits
    - Nozzle enlargements
    - Conversion of an existing temporary connection adit at Bligh Street linking Hunter Street Station to Martin Place Station into a permanent pedestrian connection linking the stations (including temporary ground support and cast in situ linings)
- A turnback extension tunnel, of approximately 675 metres, east of the Hunter Street Station works to enable Sydney Metro train storage and to change tracks and travel direction (eastbound to westbound)
- TBM disassembly and retrieval from Hunter Street East.

## 1.3. Scope of this report

John Holland CPB Contactors Ghella (JCG) have been issued an Environmental Protection Licence (EPL No. 21784) from the NSW Environment Protection Authority (EPA) for the Sydney Metro West Eastern Tunnelling Package (ETP) Project.

The EPL applies to the works approved under the Infrastructure Approval SSI-19238057 associated with the delivery of the Sydney Metro West Eastern Tunnelling Package (ETP) Project.

This EPL Pollution Monitoring Report provides the results of all pollution monitoring required to be measured or monitored by the licensee of EPL 21784 as required by Section 66 of the Protection of the Environment Operations Act 1997 (POEO Act) and with reference to EPA Publication Requirements for publishing pollution monitoring data (Environment Protection Authority, 2013).

Table 1 provides a summary of the EPL 21784 details.

*Table 1 Licence Details*

| Licence Details | |
|---|---|
| Number | 21784 |
| Copy of Licence | https://apps.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=266460&SYSUID=1&LICID=21784 |
| Anniversary Date | 16 March |
| Licensee | John Holland Pty Ltd |
| Premises | Sydney Metro West – Eastern Tunnelling Package |
| Scheduled Activity | Railway activities – railway infrastructure construction |

## 2. Reporting Requirements

Under the POEO Act, holders of environment protection licences (licensees) must publish or make pollution monitoring data available to members of the public.

The POEO Act Section 66 requires:

> "66 Conditions requiring monitoring, certification or provision of information, and related offences
>
> (1) Monitoring The conditions of a licence may require—
>
> (a) monitoring by the holder of the licence of the activity or work authorised, required or controlled by the licence, including with respect to—
>
> (i) the operation or maintenance of premises or plant, and
>
> (ii) discharges from premises, and
>
> (iii) relevant ambient conditions prevailing on or outside premises,
>
> and
>
> (iv) anything required by the conditions of the licence, and
>
> (b) the provision and maintenance of appropriate measuring and recording devices for the purposes of that monitoring, and
>
> (c) the analysis, reporting and retention of monitoring data.
>
> (2) False or misleading information. A holder of a licence who supplies information, or on whose behalf information is supplied, to the appropriate regulatory authority under the conditions of the licence is guilty of an offence if the information is false or misleading in a material respect."

The primary objective of the pollution monitoring reporting requirements is that members of the public have access to the results of all pollution monitoring (which a licence specifies must be carried out) in a way that is meaningful to them. Data for the Sydney Metro West Eastern Tunnelling Package is presented on a monthly sampling period.

The monitoring data that must be published and/or made available on request is any data that is obtained as a result of a monitoring condition on a licence that relates to air, water (surface or groundwater), noise and/or land pollution. The data to be published or provided is limited to data that relates to pollutants generated, discharged or emitted from the licensed premises.

The data is provided in tabular format that is easy for the general public to understand. Tables definitively display raw data values, while graphs and charts are useful for overviews and visualisation of long-term trends. Raw data will be provided upon request.

An upfront note will be included on the licensee's website or in this report to explain why any data may appear to be missing because there is no discharge or the level of pollutant being below the detection level of the measurement instrument.

It is possible from time to time that incorrect data may be published in good faith. As soon as practicable after the licensee becomes aware that the published pollution monitoring data is incorrect or misleading, licensees must then publish a correction log to correct this data that is incorrect or misleading (refer to Error! Reference source not found.**.** Error! Reference source not found.).

Table 2 provides a summary of the pollution monitoring requirements of EPL 21784. Note, the Pyrmont water treatment plant was decommissioned during the previous reporting period and removed from the EPL, therefore no discharge occurred from this point.

*Table 2 EPL 21784 Pollution Monitoring Requirements*

<table>
<tr><th>EPL Condition</th><th>Requirement</th><th>Report Reference</th></tr>
<tr><td colspan="3">Weather</td></tr>
<tr><td>M5.1</td><td>The licensee must monitor and record temperature, humidity, wind direction, wind velocity and rainfall at either the project weather station, or through analysis of equivalent weather information obtained from the Australia Bureau of Meteorology. Monitoring must:<br>a) be representative of each catchment area;<br>b) commence prior to any works that may cause sediment to leave the premises; and<br>c) continue to be operated until soil disturbance activities cease at the premises and the site has been stabilised.</td><td>Section 3.1<br>Appendix A3.1</td></tr>
<tr><td colspan="3">Noise</td></tr>
<tr><td>L5.9</td><td>In undertaking any works and activities outside of standard construction hours under condition L5.8, the licensee must comply with the following:<br>a) Prepare a construction noise and vibration impact assessment in accordance with the Interim Construction Noise Guideline (DEC,2009) that is to include:<br>i. a description of the proposed works and activities outside of standard constructions hours;<br>ii. predictions of LAeq (15 minute) dB noise levels at noise sensitive receivers from these works and activities, where noise levels are predicted to be greater than those permitted under condition L5.3; and<br>iii. a monitoring plan to validate the noise predictions, based on monitoring at the boundary of representative sensitive receivers during noise generating activities that are representative of the works and activities, including during the period/s predicted to have the highest noise level impacts.<br>b) Undertake noise monitoring in accordance with the monitoring plan required by condition L5.9(a)(iii).</td><td>Section 3.2<br>Appendix B</td></tr>
<tr><td>M4.4</td><td>The licensee must undertake noise and vibration monitoring as directed by an authorised officer of the EPA. If a licensee is unable to obtain permission, they must provide the response to the EPA.</td><td>N/A</td></tr>
<tr><td colspan="3">Water</td></tr>
<tr><td>P1.1</td><td>The following points referred to in the table are identified in this licence for the purposes of the monitoring and/or the setting of limits for discharges of pollutants to water from the point.
<table>
<tr><th>EPA Identi-fication no.</th><th>Type of Monitoring Point</th><th>Type of Discharge Point</th><th>Location Description</th></tr>
<tr><td>1</td><td>Discharge & Monitoring</td><td>Discharge & Monitoring</td><td>Discharge from the Hunter St Station WTP to Sydney Harbour</td></tr>
<tr><td>2</td><td>Discharge & monitoring</td><td>Discharge & monitoring</td><td>Discharge from the Eastern Creek Precast Facility sediment basin</td></tr>
<tr><td>6</td><td>Discharge & Monitoring</td><td>Discharge & Monitoring</td><td>Discharge from The Bays Construction WTP to White Bay</td></tr>
<tr><td>7</td><td>Discharge & Monitoring</td><td>Discharge & Monitoring</td><td>Discharge from Pyrmont East Surface Water Discharge</td></tr>
</table></td><td>Section 3.3</td></tr>
<tr><td>M2.1</td><td>For each monitoring/discharge point or utilisation area specified below (by a point number), the licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The licensee must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns.</td><td>Section 3.3</td></tr>
</table>

| EPL Condition | Requirement | Report Reference |
|---|---|---|
| M2.2 | | Section 3.3 |

**POINT 1**

| Pollutant | Units of measure | Frequency | Sampling Method |
|---|---|---|---|
| Aluminium | micrograms per litre | Monthly during discharge | Grab sample |
| Ammonia | micrograms per litre | Monthly during discharge | Grab sample |
| Arsenic (III) | micrograms per litre | Monthly during discharge | Grab sample |
| Cadmium | micrograms per litre | Monthly during discharge | Grab sample |
| Chromium (hexavalent) | micrograms per litre | Monthly during discharge | Grab sample |
| Cobalt | micrograms per litre | Monthly during discharge | Grab sample |
| Copper | micrograms per litre | Monthly during discharge | Grab sample |
| Iron | micrograms per litre | Monthly during discharge | Grab sample |
| Manganese | micrograms per litre | Monthly during discharge | Grab sample |
| Nitrate | micrograms per litre | Monthly during discharge | Grab sample |
| Nitrogen (total) | micrograms per litre | Monthly during discharge | Grab sample |
| Oil and Grease | Visible | Monthly during discharge | Visual Inspection |
| pH | pH | Daily during any discharge | Probe |
| Phosphorus (total) | micrograms per litre | Monthly during discharge | Grab sample |
| TRH C10-C14 | micrograms per litre | Monthly during discharge | Grab sample |
| TSS | milligrams per litre | Monthly during discharge | Grab sample |
| Zinc | micrograms per litre | Monthly during discharge | Grab sample |

**POINT 2**

| Pollutant | Units of measure | Frequency | Sampling Method |
|---|---|---|---|
| Oil and Grease | Visible | Special Frequency 1 | Visual Inspection |
| pH | pH | Special Frequency 1 | Probe |
| TSS | milligrams per litre | Special Frequency 1 | Grab sample |

**POINT 6**

| Pollutant | Units of measure | Frequency | Sampling Method |
|---|---|---|---|
| Aluminium | micrograms per litre | Monthly during discharge | Grab sample |
| Ammonia | micrograms per litre | Monthly during discharge | Grab sample |
| Arsenic | micrograms per litre | Monthly during discharge | Grab sample |
| Cadmium | micrograms per litre | Monthly during discharge | Grab sample |
| Chromium (hexavalent) | micrograms per litre | Monthly during discharge | Grab sample |
| Cobalt | micrograms per litre | Monthly during discharge | Grab sample |
| Copper | micrograms per litre | Monthly during discharge | Grab sample |
| Iron | micrograms per litre | Monthly during discharge | Grab sample |
| Lead | micrograms per litre | Monthly during discharge | Grab sample |
| Manganese | micrograms per litre | Monthly during discharge | Grab sample |
| Mercury | micrograms per litre | Monthly during discharge | Grab sample |
| Nickel | micrograms per litre | Monthly during discharge | Grab sample |
| Nitrate + nitrite (oxidised nitrogen) | micrograms per litre | Monthly during discharge | Grab sample |
| Nitrogen (total) | micrograms per litre | Monthly during discharge | Grab sample |
| Oil and Grease | Visible | Monthly during discharge | Visual Inspection |
| pH | pH | Daily during any discharge | Probe |
| Phosphorus (total) | micrograms per litre | Monthly during discharge | Grab sample |
| TPH > C10-C40 (sum) Fraction | micrograms per litre | Monthly during discharge | Grab sample |
| TSS | milligrams per litre | Monthly during discharge | Grab sample |
| Zinc | micrograms per litre | Monthly during discharge | Grab sample |

| EPL Condition | Requirement | Report Reference |
|---|---|---|
| | POINT 7<br>Pollutant: Oil and Grease; Units of measure: Visible; Frequency: Monthly during discharge; Sampling Method: Visual Inspection<br>Pollutant: pH; Units of measure: pH; Frequency: Monthly during discharge; Sampling Method: Probe<br>Pollutant: TSS; Units of measure: milligrams per litre; Frequency: Monthly during discharge; Sampling Method: Grab sample | |

# 3. Monitoring

Section 3 presents a summary of the monitoring programs completed in the reporting period from 16 September 2025 to 15 October 2025.

Detailed monitoring results for each program are presented in the Appendices.

## 3.1. Meteorological Data

Meteorological data for the Project has been mostly taken from the Observatory Hill station, but some has also been taken from Fort Denison and Sydney Airport, Bureau of Meteorology Weather Station.

The total rainfall recorded during the reporting period was 10.2 mm, with 3 days exceeding 1mm and no days exceeding 10mm.

During the reporting period, there were 24 days where the maximum wind gust recorded was greater than 25km/h, 10 days where the maximum wind gust recorded was greater than 50km/h and 3 days where the maximum wind gust recorded was greater than 60km/h. Winds recorded during the reporting period were predominantly westerly in the morning and varied in the afternoons.

A summary of the weather observations and weather events during the reporting period of relevance to the Soil and Water Management Sub-plan and Air Quality Management Sub-Plan Trigger Action Response Plans (TARPs) are summarised in Table 3.

Detailed weather observation records for the reporting period are presented in Appendix A.

*Table 3 Weather summary and trigger weather events for the reporting period*

| Weather Event | Observation |
|---|---|
| Minimum temperature | 8.1 °C |
| Maximum temperature | 31.8°C |
| Total rainfall | 10.2 mm |
| Number of days with rain (>1 mm) | 3 days |
| Number of days with rain (>10 mm) | Nil |
| >25 km/hr wind | 24 days |
| >50 km/hr wind | 10 days |
| >60 km/hr wind | 3 days |

## 3.2. Noise

*Table 4 Summary of noise and vibration monitoring completed during the reporting period*

| Date | Monitoring Location | Method | Description |
|---|---|---|---|
| 29/09/2025 | 2 Hunter Street, Sydney NSW | Sound Level Meter | Rock anchor drilling |
| 29/09/2025 | 16 O'Connell Street, Sydney NSW | Sound Level Meter | Anchor drilling (stage 2) |
| 29/09/2025 | 27 O'Connell Street, Sydney NSW | Sound Level Meter | Anchor drilling (HST east) |
| 29/09/2025 | 63 Edward Street, Pyrmont NSW | Sound Level Meter | TBM segment delivery (Pyrmont East site entry) |

| Date | Monitoring Location | Method | Description |
|---|---|---|---|
| 30/09/2025 | 63 Edward Street, Pyrmont NSW | Sound Level Meter | TBM segment delivery (Pyrmont East site entry) |
| 30/09/2025 | 1-9 Pyrmont Bridge Road, Pyrmont NSW | Sound Level Meter | TBM segment delivery (Pyrmont East site exit) |
| 30/09/2025 | 63 Edward Street, Pyrmont NSW | Sound Level Meter | TBM ventilation fans |
| 30/09/2025 | 63 Edward Street, Pyrmont NSW | Sound Level Meter | TBM segment delivery (Pyrmont East site entry) |
| 30/09/2025 | 1-9 Pyrmont Bridge Road, Pyrmont NSW | Sound Level Meter | TBM segment delivery (Pyrmont East site exit) |
| 30/09/2025 | 63 Edward Street, Pyrmont NSW | Sound Level Meter | TBM segment delivery (Pyrmont East site entry) |
| 30/09/2025 | 1-9 Pyrmont Bridge Road, Pyrmont NSW | Sound Level Meter | TBM segment delivery (Pyrmont East site exit) |
| 30/09/2025 | 63 Edward Street, Pyrmont NSW | Sound Level Meter | TBM segment delivery (Pyrmont East site entry) |
| 30/09/2025 | 1-9 Pyrmont Bridge Road, Pyrmont NSW | Sound Level Meter | TBM segment delivery (Pyrmont East site exit) |
| 01/10/2025 | 63 Edward Street, Pyrmont NSW | Sound Level Meter | TBM segment delivery (Pyrmont East site entry) |
| 01/10/2025 | 1-9 Pyrmont Bridge Road, Pyrmont NSW | Sound Level Meter | TBM segment delivery (Pyrmont East site exit) |
| 01/10/2025 | 63 Edward Street, Pyrmont NSW | Sound Level Meter | TBM segment delivery (Pyrmont East site entry) |
| 01/10/2025 | 1-9 Pyrmont Bridge Road, Pyrmont NSW | Sound Level Meter | TBM segment delivery (Pyrmont East site exit) |
| 01/10/2025 | 63 Edward Street, Pyrmont NSW | Sound Level Meter | TBM segment delivery (Pyrmont East site entry) |
| 01/10/2025 | 1-9 Pyrmont Bridge Road, Pyrmont NSW | Sound Level Meter | TBM segment delivery (Pyrmont East site exit) |
| 02/10/2025 | 63 Edward Street, Pyrmont NSW | Sound Level Meter | TBM segment delivery (Pyrmont East site entry) |
| 02/10/2025 | 1-9 Pyrmont Bridge Road, Pyrmont NSW | Sound Level Meter | TBM segment delivery (Pyrmont East site exit) |
| 02/10/2025 | L4, 285 George Street, Sydney NSW | Sound Level Meter | Shaft excavation (D39 Monitoring) |
| 02/10/2025 | L2, 330 George Street, Sydney NSW | Sound Level Meter | Shaft excavation (D39 monitoring) |

No noise and vibration monitoring were undertaken as a result of a direction by the EPA.

## 3.3. Discharge to water

Discharge water quality monitoring is a requirement of the following conditions of EPL 21784:

- L2.1 For each monitoring/discharge point, the concentration of a pollutant discharged at that point, must not exceed the concentration limits specified for that pollutant in the table
- M2.1 For each monitoring/discharge point, the licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The licensee must use the sampling method, units of measure, and sample at the frequency specified opposite in the other columns.

During the reporting period sampling was undertaken from:

- EPL Point 1 – Discharge from Hunter St Station WTP
- EPL Point 6 – Discharge from The Bays Construction WTP.

Table 5 provides the concentration of pollutants discharged from EPL Point 6 during the reporting period. EPL Point 1 discharged under their Trade Waste Agreement with Sydney Water. No discharge occurred from EPL Point 2 during this reporting period.

*Table 5 Concentration of pollutants discharged from Point 6 during the reporting period*

| **Date** | | | **09/10/2025** |
|---|---|---|---|
| **Pollutant** | **Units** | **Criteria** | **Discharge** |
| **Aluminium** | (µg/L) | 250 | <10 |
| **Ammonia** | (µg/L) | 910 | 190 |
| **Arsenic** | (µg/L) | 4.5 | <1 |
| **Cadmium** | (µg/L) | 0.7 | <0.1 |
| **Chromium (hexavalent)** | (µg/L) | 20 | 20 |
| **Cobalt** | (µg/L) | 1.4 | <1 |
| **Copper** | (µg/L) | 2 | <1 |
| **Iron** | (µg/L) | 700 | <10 |
| **Lead** | (µg/L) | 4.4 | <1 |
| **Manganese** | (µg/L) | 1900 | <5 |
| **Mercury** | (µg/L) | 0.1 | <0.05 |
| **Nickel** | (µg/L) | 70 | <1 |
| **Nitrate** | (µg/L) | 660 | 220 |
| **Nitrogen (Total)** | (µg/L) | 1720 | 4,000 |
| **Oil and Grease** | Visible | Not Visible | Not visible |
| **pH** | pH | 7.0-8.5 | 8.0 |
| **Phosphorus (total)** | (µg/L) | 140 | <50 |
| **TPH>C10 – C40 (sum)** | (µg/L) | 100 | <50 |
| **TSS** | (mg/L) | 15 | <10 |
| **Zinc** | (µg/L) | 15 | 2 |

Note: EPA notified of the Total Nitrogen results, reference NO-42872

## 4. Correction Log

It is possible from time to time for incorrect data to get published in good faith.

As soon as practicable after the licensee becomes aware that the published pollution monitoring data is incorrect or misleading, licensees must then publish a correction log to correct this data that is incorrect or misleading.

There are no matters included in the correction log for this reporting period.

# Appendix A Weather Data

*Table 6 Weather Observations. Temperature and Relative Humidity. Observatory Hill BOM Station.*

| Date | Min temperature (°C) | Max temperature (°C) | Rainfall (mm) | 9am Temperature (°C) | 9am relative humidity (%) | 3pm Temperature (°C) | 3pm relative humidity (%) |
|---|---|---|---|---|---|---|---|
| 16/09/2025 | 18.7 | 27 | 0 | 22.9 | 45 | 25.8 | 41 |
| 17/09/2025 | 18.3 | 27.2 | 0 | 20.3 | 58 | 24.6 | 51 |
| 18/09/2025 | 11.3 | 21.2 | 0.2 | 16.2 | 46 | 20.2 | 51 |
| 19/09/2025 | 11.4 | 24.9 | 0 | 16.4 | 61 | 21.1 | 53 |
| 20/09/2025 | 15.9 | 22.5 | 3.6 | 20.5 | 50 | 21.8 | 29 |
| 21/09/2025 | 10.6 | 22.9 | 0 | 16.1 | 41 | 22.9 | 35 |
| 22/09/2025 | 12.2 | 23.2 | 0 | 18.7 | 46 | 18.9 | 61 |
| 23/09/2025 | 8.1 | 18.5 | 2.2 | 13.9 | 47 | 17.9 | 37 |
| 24/09/2025 | 9.6 | 26.1 | 0 | 16.9 | 48 | 23.9 | 38 |
| 25/09/2025 | 11.7 | 26.1 | 0 | 18 | 43 | 25.6 | 18 |
| 26/09/2025 | 17 | 28.2 | 0 | 20.5 | 39 | 27.4 | 22 |
| 27/09/2025 | 20.3 | 28.6 | 0 | 22.4 | 31 | 27.6 | 29 |
| 28/09/2025 | 18.6 | 25.2 | 0 | 20.6 | 73 | 22.5 | 68 |
| 29/09/2025 | 16.1 | 24 | 0 | 19.4 | 68 | 22.6 | 61 |
| 30/09/2025 | 15.5 | 25.6 | 0 | 20.9 | 75 | 24.6 | 66 |
| 1/10/2025 | 19 | 27 | 0 | 22.3 | 31 | 25.8 | 20 |
| 4/10/2025 | 13.6 | 24.5 | 0 | 20.3 | 51 | 21.7 | 57 |
| 5/10/2025 | 13.8 | 25.9 | 0 | 16.1 | 83 | 25.5 | 53 |
| 6/10/2025 | 16.1 | 31.8 | 0 | 24 | 29 | 26.5 | 49 |
| 7/10/2025 | 16.3 | 22.7 | 3.8 | 17.7 | 82 | 21 | 75 |
| 8/10/2025 | 15.8 | 28.3 | 0 | 20 | 63 | 25.9 | 49 |
| 9/10/2025 | 20 | 26.9 | 0 | 24 | 48 | 26.1 | 46 |
| 10/10/2025 | 17 | 30.6 | 0 | 20.5 | 70 | 30.2 | 18 |
| 11/10/2025 | 17.5 | 30.5 | 0 | 22 | 38 | 28.5 | 29 |
| 12/10/2025 | 18.4 | 31.7 | 0 | 24.4 | 26 | 25.5 | 29 |
| 13/10/2025 | 15.1 | 23.6 | 0.2 | 18.7 | 44 | 20.6 | 52 |
| 14/10/2025 | 13.4 | 27.1 | 0.2 | 17.5 | 68 | 25.0 | 46 |
| 15/10/2025 | 14.6 | nd | 0 | 18.3 | 74 | 24.3 | 63 |

Note: nd = no data available

*Table 7 Wind Observations. Observatory Hill BOM Station.*

| Date | Direction of max wind gust | Speed of max wind gust (km/h) | Time of max wind gust | 9am wind direction | 9am wind speed (km/h) | 3pm wind direction | 3pm wind speed (km/h) |
|---|---|---|---|---|---|---|---|
| 16/09/2025 | nd | nd | nd | NNW | 15 | N | 28 |
| 17/09/2025 | WSW | 37 | 23:37 | W | 22 | ENE | 17 |
| 18/09/2025 | WSW | 39 | 0:24 | WNW | 15 | E | 17 |
| 19/09/2025 | NW | 41 | 21:43 | W | 19 | NE | 15 |
| 20/09/2025 | WNW | 57 | 13:11 | WSW | 15 | W | 30 |
| 21/09/2025 | WSW | 41 | 18:49 | WNW | 26 | E | 20 |
| 22/09/2025 | S | 50 | 20:13 | WNW | 17 | SSE | 26 |
| 23/09/2025 | SSW | 39 | 10:31 | SW | 11 | SSE | 20 |
| 24/09/2025 | W | 50 | 13:19 | WNW | 24 | SE | 17 |
| 25/09/2025 | W | 57 | 15:43 | WNW | 13 | WSW | 28 |
| 26/09/2025 | NW | 54 | 12:44 | W | 4 | NW | 26 |
| 27/09/2025 | NNW | 39 | 1:28 | NNW | 17 | N | 20 |
| 28/09/2025 | SSW | 46 | 6:20 | SSE | 19 | ESE | 24 |
| 29/09/2025 | SSW | 31 | 5:03 | W | 15 | SSW | 13 |
| 30/09/2025 | NNE | 44 | 18:28 | NNE | 20 | NE | 24 |
| 1/10/2025 | W | 48 | 14:44 | W | 17 | WNW | 31 |
| 2/10/2025 | W | 72 | 17:04 | NNW | 22 | W | 39 |
| 3/10//2025 | NNW | 52 | 4:54 | NW | 11 | SSW | 31 |
| 7/10/2025 | nd | nd | nd | N | 9 | NE | 20 |
| 8/10/2025 | NW | 52 | 18:40 | ESE | 9 | ENE | 17 |
| 9/10/2025 | NW | 61 | 23:02 | NNW | 17 | NNW | 28 |
| 10/10/2025 | NW | 43 | 15:29 | SSW | 2 | WNW | 19 |
| 11/10/2025 | W | 44 | 17:24 | W | 7 | E | 15 |
| 12/10/2025 | WSW | 87 | 14:53 | WNW | 9 | WSW | 39 |
| 13/10/2025 | SSE | 44 | 13:10 | W | 4 | SE | 26 |
| 14/10/2025 | N | 35 | 08:25 | NWN | 17 | ENE | 24 |
| 15/10/2025 | nd | nd | nd | W | 13 | E | 20 |

Note: nd = no data available

# Appendix B Noise Monitoring Results

*Table 8 Noise Monitoring Results*

| Date | Time | Works Period | Construction Activity | Activity Location | Monitoring Location | NML (dBA) | Predicted* (dBA) | Recorded Leq (dBA) | LAmax | Exceedance of Predicted (dBA) | Exceedance of Predicted | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Attended noise monitoring** | | | | | | | | | | | | |
| 29/09/2025 | 21:00 | Evening | Rock anchor drilling | Hunter Street West | 2 Hunter Street, Sydney NSW | 80 | 70 | 61.7 | 75.6 | -8.3 | No | Music from A by Adina lobby (2 Hunter St) and passing tram on George St (~66dB) were the dominant noise source. Drill rig was operating beneath deck and was almost inaudible from street level. |
| 29/09/2025 | 21:30 | Evening | Anchor drilling (stage 2) | Hunter Street East | 16 O'Connell Street, Sydney NSW | 71 | 68 | 67.1 | 78.9 | -0.9 | No | Drill rig (66dB) was inaudible over background and traffic noise (~70-72dB). |
| 29/09/2025 | 21:45 | Evening | Anchor drilling (HST east) | Huner street East | 27 O'Connell Street, Sydney NSW | 75 | 68 | 67.1 | 85.1 | -0.9 | No | Drill rig (66dB) was inaudible over background and traffic noise (bus on O'Connell St ~85dB). |
| 29/09/2025 | 22:42 | Night | TBM segment delivery (Pyrmont East site entry) | Pyrmont East | 63 Edward Street, Pyrmont NSW | 50 | 49 | 66.8 | 79.9 | 17.8 | Yes | Truck entry took approximately 2min. Observed traffic noise (cars passing by) was louder than site activities. All noise mitigation measures were in place and monitoring was undertaken outside the receiver location, in a publicly accessible area (street level). |
| 30/09/2025 | 00:28 | Night | TBM segment delivery (Pyrmont East site entry) | Pyrmont East | 63 Edward Street, Pyrmont NSW | 50 | 49 | 62.8 | 76.0 | 13.8 | Yes | Truck entry took approximately 3min. Noise mitigation measures were in place and monitoring was undertaken outside the receiver location, in a publicly accessible area (street level). |
| 30/09/2025 | 01:01 | Night | TBM segment delivery (Pyrmont East site exit) | Pyrmont East | 1-9 Pyrmont Bridge Road, Pyrmont NSW | 51 | 52 | 66.5 | 76.1 | 14.5 | Yes | Truck exit took approximately 1min. All noise mitigation measures were in place and monitoring was undertaken outside the receiver location, in a publicly accessible area (street level). Cars passing by at PBR contributed to the noise results (around 65/66 dB). |
| 30/09/2025 | 01:14 | Night | TBM ventilation fans | Pyrmont East | 63 Edward Street, Pyrmont NSW | 50 | - | 69.9 | 100.6 | - | - | Operation of TBM fan was inaudible during the 15min monitoring period. Traffic noise was main source of noise. Cars passing by throughout the whole period (ranged between 57 dB to 100.1). A loud truck passed by |

| Date | Time | Works Period | Construction Activity | Activity Location | Monitoring Location | NML (dBA) | Predicted* (dBA) | Recorded Leq (dBA) | LAmax | Exceedance of Predicted (dBA) | Exceedance of Predicted | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | towards the end of monitoring (68.9 dB). Motorcycles passed by five times (ranged between 58.8 dB and 75.4 dB). |
| 30/09/2025 | 03:13 | Night | TBM segment delivery (Pyrmont East site entry) | Pyrmont East | 63 Edward Street, Pyrmont NSW | 50 | 49 | 66.6 | 76.0 | 17.6 | Yes | Truck entry took approximately 1min. All noise mitigation measures were in place and monitoring was undertaken outside the receiver location, in a publicly accessible area (street level). |
| 30/09/2025 | 03:38 | Night | TBM segment delivery (Pyrmont East site exit) | Pyrmont East | 1-9 Pyrmont Bridge Road, Pyrmont NSW | 51 | 52 | 69.0 | 77.7 | 17 | Yes | Truck exit took approximately 1min. All noise mitigation measures were in place and monitoring was undertaken outside the receiver location, in a publicly accessible area (street level). Car passing by (76.9 dB). |
| 30/09/2025 | 04:54 | Night | TBM segment delivery (Pyrmont East site entry) | Pyrmont East | 63 Edward Street, Pyrmont NSW | 50 | 49 | 65.6 | 78.2 | 16.6 | Yes | Truck entry took approximately 2min. Noise mitigation measures were in place and monitoring was undertaken outside the receiver location, in a publicly accessible area (street level). |
| 30/09/2025 | 05:15 | Night | TBM segment delivery (Pyrmont East site exit) | Pyrmont East | 1-9 Pyrmont Bridge Road, Pyrmont NSW | 51 | 52 | 63.7 | 75.5 | 11.7 | Yes | Truck exit took approximately 1.5min. Noise mitigation measures were in place and monitoring was undertaken outside the receiver location, in a publicly accessible area (street level). Cars passing by at Pyrmont Bridge Road contributed to the noise results. |
| 30/09/2025 | 22:58 | Night | TBM segment delivery (Pyrmont East site entry) | Pyrmont East | 63 Edward Street, Pyrmont NSW | 50 | 49 | 67.5 | 83.0 | 18.5 | Yes | Truck entry took approximately 1min. Noise mitigation measures were in place and monitoring was undertaken outside the receiver location, in a publicly accessible area (street level). Motorcycle passing by during monitoring (over 70dB). Cars passing by during monitoring (around 66dB). |
| 30/09/2025 | 23:36 | Night | TBM segment delivery (Pyrmont East site exit) | Pyrmont East | 1-9 Pyrmont Bridge Road, Pyrmont NSW | 51 | 52 | 66.1 | 75.7 | 14.1 | Yes | Truck exit took approximately 1min. Noise mitigation measures were in place and monitoring was undertaken outside the receiver location, in a publicly accessible area (street level). Cars passing by at Pyrmont Bridge Road during monitoring (when truck was moving down onto PBR). |

| Date | Time | Works Period | Construction Activity | Activity Location | Monitoring Location | NML (dBA) | Predicted* (dBA) | Recorded Leq (dBA) | LAmax | Exceedance of Predicted (dBA) | Exceedance of Predicted | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01/10/2025 | 01:11 | Night | TBM segment delivery (Pyrmont East site entry) | Pyrmont East | 63 Edward Street, Pyrmont NSW | 50 | 49 | 74.9 | 99.8 | 25.9 | Yes | Truck entry took approximately 1.5min. Noise mitigation measures were in place and monitoring was undertaken outside the receiver location, in a publicly accessible area (street level). Motorcycle passing by and other traffic noise in the background contributed to the noise results. |
| 01/10/2025 | 01:49 | Night | TBM segment delivery (Pyrmont East site exit) | Pyrmont East | 1-9 Pyrmont Bridge Road, Pyrmont NSW | 51 | 52 | 65.3 | 70.9 | 13.3 | Yes | Truck exit took approximately 1.5min. Noise mitigation measures were in place and monitoring was undertaken outside the receiver location, in a publicly accessible area (street level). Traffic noise (cars passing by at Pyrmont Bridge Road) contributed to the noise results. |
| 01/10/2025 | 02:10 | Night | TBM segment delivery (Pyrmont East site entry) | Pyrmont East | 63 Edward Street, Pyrmont NSW | 50 | 49 | 65.0 | 73.1 | 16 | Yes | Truck entry took approximately 1min. Noise mitigation measures were in place and monitoring was undertaken outside the receiver location, in a publicly accessible area (street level). |
| 01/10/2025 | 02:37 | Night | TBM segment delivery (Pyrmont East site exit) | Pyrmont East | 1-9 Pyrmont Bridge Road, Pyrmont NSW | 51 | 52 | 66.5 | 75.3 | 14.5 | Yes | Truck exit took approximately 2min. Noise mitigation measures were in place and monitoring was undertaken outside the receiver location, in a publicly accessible area (street level). Truck passing by at Pyrmont Bridge Road not associated with the project (over 70dB). |
| 01/10/2025 | 22:48 | Night | TBM segment delivery (Pyrmont East site entry) | Pyrmont East | 63 Edward Street, Pyrmont NSW | 50 | 49 | 66.1 | 80.3 | 17.1 | Yes | Truck entry took approximately 1min. Noise mitigation measures were in place and monitoring was undertaken outside the receiver location, in a publicly accessible area (street level). |
| 01/10/2025 | 23:18 | Night | TBM segment delivery (Pyrmont East site exit) | Pyrmont East | 1-9 Pyrmont Bridge Road, Pyrmont NSW | 51 | 52 | 71.1 | 82.0 | 19.1 | Yes | Truck exit took approximately 45 seconds. Noise mitigation measures were in place and monitoring was undertaken outside the receiver location, in a publicly accessible area (street level). Motorbike passing by at PBR which contributed to the noise results (~79 dB). |

| Date | Time | Works Period | Construction Activity | Activity Location | Monitoring Location | NML (dBA) | Predicted* (dBA) | Recorded Leq (dBA) | LAmax | Exceedance of Predicted (dBA) | Exceedance of Predicted | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 02/10/2025 | 02:25 | Night | TBM segment delivery (Pyrmont East site entry) | Pyrmont East | 63 Edward Street, Pyrmont NSW | 50 | 49 | 67.2 | 82.5 | 18.2 | Yes | Truck entry took approximately 1min. Noise mitigation measures were in place and monitoring was undertaken outside the receiver location, in a publicly accessible area (street level). |
| 02/10/2025 | 03:16 | Night | TBM segment delivery (Pyrmont East site exit) | Pyrmont East | 1-9 Pyrmont Bridge Road, Pyrmont NSW | 51 | 52 | 69.8 | 83.8 | 17.8 | Yes | Truck exit took approximately 1min. Noise mitigation measures were in place and monitoring was undertaken outside the receiver location, in a publicly accessible area (street level). Background noise without delivery truck present ~60dB. |
| 02/10/2025 | 10:35 | Day standard | Shaft excavation (D39 Monitoring) | Hunter street West | L4, 285 George Street, Sydney NSW | 60 | 60 | 59.5 | 68.3 | -0.5 | No | Noise level of 3x hammers (2x 50t, 1x 14t) approximately 55dB. Note: Mann Group were undertaking demolition in the adjacent building to site at the time (2x 14t hammers visible). |
| 02/10/2025 | 14:20 | Day standard | Shaft excavation (D39 monitoring) | Hunter street West | L2, 330 George Street, Sydney NSW | 60 | 60 | 60.2 | 74.6 | 0.2 | No | Noise level of 3x hammers (2x 50t, 1x 14t) approximately 55-58dB. Note: Background chatter in office throughout monitoring period. Assessed as compliant due to minimal exceedance (0.2dB above predicted) and non-project related background noise. |

*Predicted noise level as per respective DNVIS

*Table 9 Current location of all real time noise and vibration monitors*

| Date | Time | Construction Activity | Activity location | Monitoring location | NML (dBA)* | * Predicted (dBA) | * Recorded Leq, 15min (dBA) | * LAmax | * Exceedance of Predicted (dBA) | Exceedance of Predicted * | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| +Real time noise and vibration monitoring | | | | | | | | | | | |
| | Continuous | Construction – Noise | Pyrmont | 1-5 Hardwood Ln | * | * | * | * | * | * | |
| | Continuous | Construction – Noise | Pyrmont | 69 Edward Street, Pyrmont, 2009 | * | * | * | * | * | * | |
| | Continuous | Construction – Noise | Pyrmont | Site Hoarding on Paternoster Row | * | * | * | * | * | * | |
| | Continuous | Construction – Noise | Hunter Street | 10 Hunter St | * | * | * | * | * | * | |
| | Continuous | Construction – Noise | Hunter Street | The Ivy (Level 2 Office Printer Room) | * | * | * | * | * | * | |
| | Continuous | Construction – Noise | Hunter Street | The Radisson Blu Plaza Hotel (Level 1) 27 O'Connell Street, Sydney, 2000 | * | * | * | * | * | * | |
| | Continuous | Construction – Noise | Hunter Street | Hunter East (site) | * | * | * | * | * | * | |
| | Continuous | Construction – Noise | Hunter Street | Hunter West (site) | * | * | * | * | * | * | |
| | Continuous | Construction – Noise | The Bays | Back of WTP / Haul road | * | * | * | * | * | * | |
| | Continuous | Construction – Vibration | Pyrmont | 87 Miller St, Pyrmont | * | * | * | * | * | * | |
| | Continuous | Construction – Vibration | Pyrmont | 69 Edward Street, Pyrmont, 2009 | * | * | * | * | * | * | |
| | Continuous | Construction – Vibration | Pyrmont | 28 Paternoster Row, Pyrmont, 2009 | * | * | * | * | * | * | |
| | Continuous | Construction – Vibration | Pyrmont | Maritime Museum (1) | * | * | * | * | * | * | |
| | Continuous | Construction – Vibration | Pyrmont | Maritime Museum (2) | * | * | * | * | * | * | |
| | Continuous | Construction – Vibration | Hunter Street | The Ivy (Basement) | * | * | * | * | * | * | |
| | Continuous | Construction – Vibration | Hunter Street | The Skinners Hotel (Level 3 South) | * | * | * | * | * | * | |

| Date | Time | Construction Activity | Activity location | Monitoring location | NML (dBA)* | Predicted* (dBA) | * Recorded Leq, 15min (dBA) | * LAmax | * Exceedance of Predicted (dBA) | Exceedance of Predicted * | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| +Real time noise and vibration monitoring | | | | | | | | | | | |
| | Continuous | Construction – Vibration | Hunter Street | The Skinners Hotel (Level 1) | * | * | * | * | * | * | |
| | Continuous | Construction – Vibration | Hunter Street | NIB Dental (27 Hunter St) | * | * | * | * | * | * | |
| | Continuous | Construction – Vibration | Hunter Street | 109 Pitt Street | * | * | * | * | * | * | |