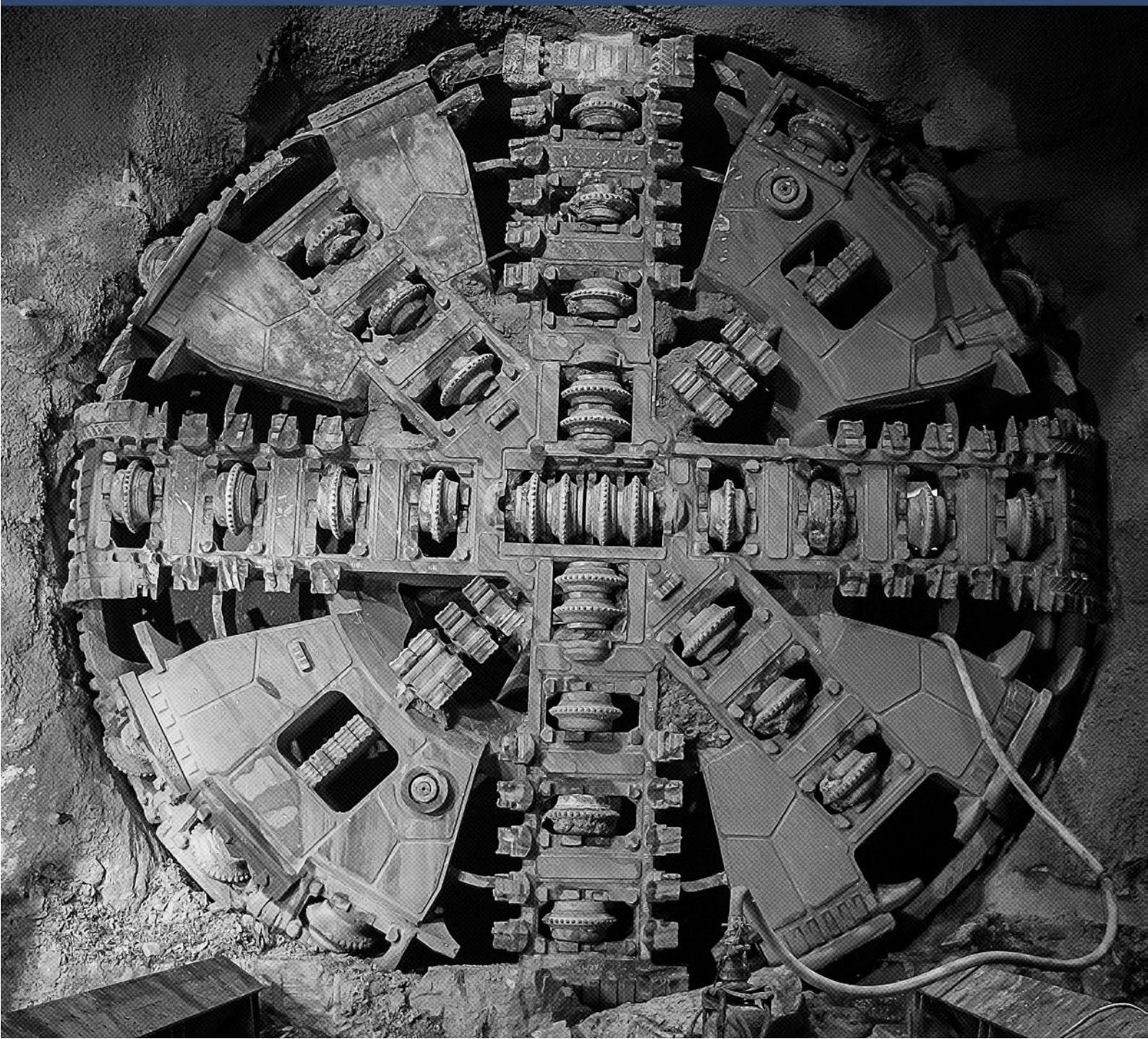
EASTERN TUNNELLING PACKAGE
John Holland CPB Contractors Ghella JV

EPL 21784 POLLUTION MONITORING REPORT

March 2025



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March 2025

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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.

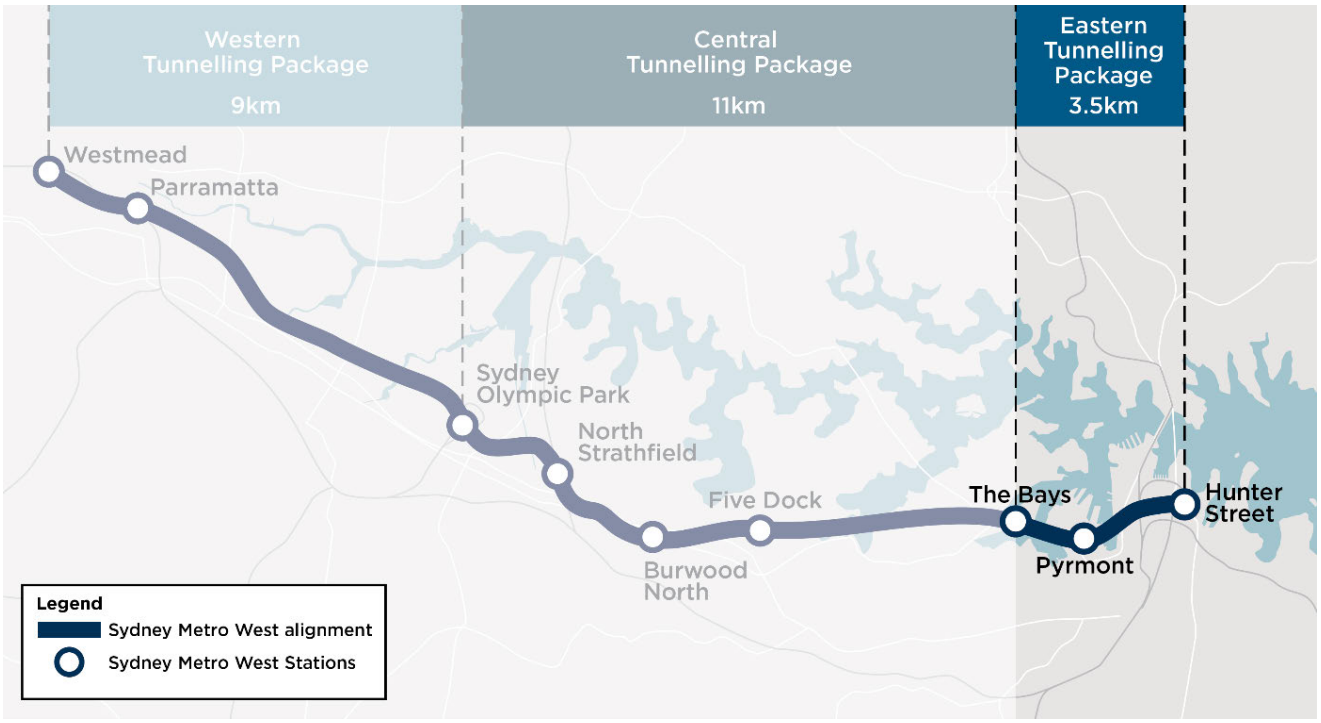

Figure 1: Sydney Metro West alignment

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 six cross passages spaced up to 500 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 **Section 4**).

Table 2 provides a summary of the pollution monitoring requirements of EPL 21784.

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:
a) be representative of each catchment area;
b) commence prior to any works that may cause sediment to leave the premises; and
c) continue to be operated until soil disturbance activities cease at the premises and the site has been stabilised.</td><td>Section 3.1
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:
a) Prepare a construction noise and vibration impact assessment in accordance with the Interim Construction Noise Guideline (DEC,2009) that is to include:
i. a description of the proposed works and activities outside of standard constructions hours;
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
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.
b) Undertake noise monitoring in accordance with the monitoring plan required by condition L5.9(a)(iii).</td><td>Section 3.2
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 Identification 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>3</td><td>Discharge & monitoring</td><td>Discharge & monitoring</td><td>Discharge from The Bays temporary WTP to White Bay</td></tr>
<tr><td>4</td><td>Discharge & Monitoring</td><td>Discharge & Monitoring</td><td>Discharge from the Pyrmont Station WTP to Sydney Harbour</td></tr>
<tr><td>5</td><td>Discharge & Monitoring</td><td>Discharge & Monitoring</td><td>Discharge from the Eastern Tunnelling Package Eastern Creek Precast Facility Water Treatment Plant into Ropes Creek</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	See below	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 3

Pollutant	Units of measure	Frequency	Sampling Method
Arsenic (III)	micrograms per litre	Monthly during discharge	Grab sample
Manganese	micrograms per litre	Monthly during discharge	Grab sample
Nitrate + nitrite (oxidised nitrogen)	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
TSS	milligrams per litre	Monthly during discharge	Grab sample

POINT 4

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

EPL Condition	Requirement	Report Reference

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
TSS	milligrams per litre	Monthly during discharge	Grab sample
Zinc	micrograms per litre	Monthly during discharge	Grab sample

POINT 5

Pollutant	Units of measure	Frequency	Sampling Method
Oil and Grease	Visible	Monthly during discharge	Visual Inspection
pH	pH	Daily during any discharge	Probe
TSS	milligrams per litre	Monthly during discharge	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

POINT 7

Pollutant	Units of measure	Frequency	Sampling Method
Oil and Grease	Visible	Monthly during discharge	Visual Inspection
pH	pH	Monthly during discharge	Probe
TSS	milligrams per litre	Monthly during discharge	Grab sample

3. Monitoring

Section 3 presents a summary of the monitoring programs completed in the reporting period from 15 February 2025 to 14 March 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 59.4 mm, with 9 days exceeding 1mm and 2 days exceeding 10mm.

During the reporting period, there were 25 days where the maximum wind gust recorded was greater than 25km/h, 3 days where the maximum wind gust recorded was greater than 50km/h and 0 days where the maximum wind gust recorded was greater than 60km/h. Winds recorded during the reporting period varied in the mornings and into 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	14.5 °C
Maximum temperature	31.2 °C
Total rainfall	59.4 mm
Number of days with rain (>1 mm)	9 days
Number of days with rain (>10 mm)	2 days
>25 km/hr wind	25 days
>50 km/hr wind	3 days
>60 km/hr wind	0 days

3.2. Noise

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

Date	Monitoring Location	Method	Description
18/02/2025	Pyrmont West site	Sound Level Meter	Sound power testing dozer
19/02/2025	28 Paternoster Row	Sound Level Meter	Picking rock from sawcut
19/02/2025	TBWA lobby area	Sound Level Meter	Sawcutting and popping rock off
20/02/2025	17 Bligh St	Sound Level Meter	Gantry structure install on Richard Johnson Square
20/02/2025	16 O'Connell St	Sound Level Meter	B-class install outside acoustic shed
20/02/2025	27 O'Connell St	Sound Level Meter	B-class hoarding removal / gantry works (Bligh St)
21/02/2025	1-9 Pyrmont Bridge Road	Sound Level Meter	Tunnel deliveries, truck exiting
21/02/2025	65 Edward Street	Sound Level Meter	Entry - Shotcrete Agi
24/02/2025	104 Pyrmont St – The Sebel	Sound Level Meter	Picking oversized rock in a stockpile
27/02/2025	27 O'Connell St	Sound Level Meter	Hoarding removal and works inside the shed
27/02/2025	4-6 Bligh St	Sound Level Meter	Gantry install at Hunter St East
28/02/2025	1-9 Pyrmont Bridge Road	Sound Level Meter	Delivery truck exiting site (PYRE)
28/02/2025	65 Edward St	Sound Level Meter	Delivery truck entering shed
03/03/2025	66 Hunter Street	Sound Level Meter	RJS gantry / decking
03/03/2025	28 Paternoster Row	Sound Level Meter	Use of bulldozer
03/03/2025	27 O'Connell Street	Sound Level Meter	Steel platform construction / 250t crane delivery & mobilisation
03/03/2025	16 O'Connell Street	Sound Level Meter	Spoil loadout / steel platform construction
06/03/2025	Kwik Kopy reception area	Sound Level Meter	35t hammer
06/03/2025	Kwik Kopy reception area	Sound Level Meter	50t hammer
06/03/2025	-2/60 Union Street	Sound Level Meter	50t hammer
06/03/2025	27 O'Connell Street	Sound Level Meter	Richard Johnson Square gantry install
06/03/2025	17 Bligh St	Sound Level Meter	Richard Johnson Square gantry install

Date	Monitoring Location	Method	Description
06/03/2025	27 O'Connell Street	Sound Level Meter	HSTE shaft metro deck platform installation
06/03/2025	65 Edward St	Sound Level Meter	Tunnel delivery (entry)
06/03/2025	1-9 Pyrmont Bridge Road	Sound Level Meter	Tunnel deliveries – exit from PYRE
07/03/2025	65 Edward St	Sound Level Meter	Tunnel support deliveries - concrete agi
07/03/2025	1-9 Pyrmont Bridge Road	Sound Level Meter	Tunnel support delivery - concrete agi (exit)
07/03/2025	Level 2, Grand Hotel	Sound Level Meter	D39 Monitoring - West shaft
10/03/2025	28 Paternoster Row	Sound Level Meter	2x 35t, 1x 75t hammers (GBN)
10/03/2025	28 Paternoster Row	Sound Level Meter	75t hammer (GBN)
14/03/2025	28 Paternoster Row	Sound Level Meter	Dozer and low impact works inside PYRW shed.

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:

- M2.1 Monitoring the concentration of each pollutant specified using the specified sampling method, units of measure and frequency

During the reporting period sampling was undertaken from:

- Point 1 – Discharge from The Hunter Street Construction WTP.
- Point 2 – Discharge from The Precast Sediment Basin.
- Point 6 – Discharge from The Bays Construction WTP.

No discharges to other licensed discharge points occurred during the reporting period.

Table 5, 6 and 7 provides the details of the concentration of pollutants discharged during the reporting period.

Table 5 Concentration of pollutants discharged from Point 1 during the reporting period

Date			24/02/2025
Pollutant	**Units**	**Criteria**	**Discharge**
Aluminium	(µg/L)	900	40
Ammonia	(µg/L)	910	19
Arsenic (III)	(µg/L)	8	2
Cadmium	(µg/L)	0.7	<0.1
Chromium (hexavalent)	(µg/L)	38	<5
Cobalt	(µg/L)	1	<1
Copper	(µg/L)	1.3	2
Iron	(µg/L)	700	10
Manganese	(µg/L)	80	22
Nitrate	(µg/L)	660	500
Nitrogen (Total)	(µg/L)	1720	1100
Oil and Grease	Visible	Not Visible	Not visible
pH	pH	7.0-8.5	8.1

Phosphorus (total)	(µg/L)	140	60
TRH C10-C14	(µg/L)	100	77
TSS	(mg/L)	15	13
Zinc	(µg/L)	15	5

Table 6 Concentration of pollutants discharged from Point 2 during the reporting period

Date			12/03/2025
Pollutant	**Units**	**Criteria**	**Discharge**
Oil and Grease	Visible	Not visible	Not visible
pH	pH	6.5-8.5	8.1
TSS	(mg/L)	50	12

Table 7 Concentration of pollutants discharged from Point 6 during the reporting period

Date			24/02/2025
Pollutant	**Units**	**Criteria**	**Discharge**
Aluminium	(µg/L)	250	<10
Ammonia	(µg/L)	910	130
Arsenic	(µg/L)	4.5	<1
Cadmium	(µg/L)	0.7	<0.1
Chromium (hexavalent)	(µg/L)	20	<5
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	67
Nitrogen (Total)	(µg/L)	1720	2100
Oil and Grease	Visible	Not Visible	Not visible
pH	pH	7.0-8.5	7.3
Phosphorus (total)	(µg/L)	140	100
TPH>C10 – C40 (sum)	(µg/L)	100	<50
TSS	(mg/L)	15	<5
Zinc	(µg/L)	15	<1

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 8 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 (%)
15/02/2025	19.8	26.8	3	21.6	76	3	25.6
16/02/2025	15.6	23	0.2	17	48	3	22
17/02/2025	14.5	24.2	0	16.4	58	1	23.2
18/02/2025	14.7	25.1	0	17.1	71	2	23.1
19/02/2025	17.1	27.5	0	20	83	3	25.8
20/02/2025	19.1	23.6	0	20.4	80	7	21.9
21/02/2025	18	22.7	0	20.2	74	7	20.6
22/02/2025	19.5	28.1	6	22.4	83	6	27.1
23/02/2025	19	28.2	0	21.8	70	1	27.9
24/02/2025	21.5	27.7	0	23	79	3	26.5
25/02/2025	21	23.1	0	21.4	82	8	22.7
26/02/2025	19.7	28	0	21.9	78	5	27.6
27/02/2025	21.6	28.7	0	23	86	4	27.1
28/02/2025	21.2	31.2	0	22.8	83	2	30.9
1/03/2025	22.1	28.8	0	23.5	78	6	27.3
2/03/2025	21.3	28	0	23.2	87	3	24
3/03/2025	20.7	25.9	0	21.9	78	5	25.3
4/03/2025	19.8	26.9	8.2	22.7	82	7	24.9
5/03/2025	19.1	27.7	11.6	22.5	76	4	26.9
6/03/2025	19.9	27.7	2	21.5	84	7	26.2
7/03/2025	20.4	26.7	2.2	22.1	79	26.4	57
8/03/2025	19.6	27.0	0.8	22.9	79	26.2	63
9/03/2025	20.6	27.8	1.8	22.1	93	27.1	62
10/03/2025	21.1	28.0	0.2	23.1	79	25.0	76
11/03/2025	20.7	23.7	14.0	21.3	97	21.7	92
12/03/2025	19.0	27.4	9.4	20.6	96	25.5	71
13/03/2025	19.5	nd	0	21.1	89	27.1	69

Note: nd = no data available

Table 9 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)
15/02/2025	SSW	41	3:16	SSW	20	ESE	19
16/02/2025	S	46	23:25	WSW	13	SSE	24
17/02/2025	SSE	41	14:38	W	19	SSE	24
18/02/2025	E	30	16:18	W	17	E	22
19/02/2025	ENE	31	17:21	W	9	E	17
20/02/2025	SSE	48	13:52	SE	17	SSE	31
21/02/2025	E	37	14:34	W	15	ENE	22
22/02/2025	ENE	44	15:20	NNE	7	ENE	26
23/02/2025	NNE	46	19:11	NNE	13	NE	26
24/02/2025	SSE	43	15:58	W	7	SE	19
25/02/2025	SSE	39	8:39	S	20	SSE	24
26/02/2025	NE	37	19:28	WNW	7	ENE	24
27/02/2025	NE	46	15:40	W	2	E	26
28/02/2025	S	41	22:45	ENE	2	E	13
1/03/2025	S	39	23:12	WSW	7	E	15
2/03/2025	S	50	17:21	ESE	7	SSE	26
3/03/2025	SSW	56	14:32	SSW	28	SSW	31
4/03/2025	SSE	50	12:00	SE	20	SE	28
5/03/2025	ESE	39	10:10	SE	19	ESE	24
6/03/2025	ESE	41	14:46	SE	13	SE	28
7/03/2025	ESE	48	01:07	ESE	28	ESE	28
8/03/2025	SE	41	23:12	E	24	E	28
9/03/2025	ENE	41	14:21	WNW	9	NE	20
10/03/2025	NE	37	09:11	NE	11	NE	19
11/03/2025	E	41	15:27	NNE	11	E	20
12/03/2025	ESE	20	13:42	WNW	7	ESE	15
13/03/2025	nd	nd	nd	W	2	nd	17

Note: nd = no data available

Appendix B Noise Monitoring Results

Table 10 Noise Monitoring Results

Date	Time	Works Period	Construction Activity	Activity Location	Monitoring Location	NML (dBA)	Predicted * (dBA)	Recorded $L_{eq,\ 15min}$ (dBA)	LAmax	Exceedance of Predicted (dBA)	Exceedance of Predicted	Comments
Attended noise monitoring												
18/02/2025	15:10	Day	Sound power testing Dozer	Pyrmont West	On site	60	81	89.5	90.7	8.5	Yes	Construction noise was dominant noise source as this was monitored within the shed and in close proximity to the plant
19/02/2025	13:16	Day	Sawcutting and popping off rock	Pyrmont West	137 Pyrmont Street (TBWA)	60	52	53.1	75.1	1.1	Yes	Traffic from Pyrmont Bridge Road and Pyrmont Street intersection contributed to noise reading
19/02/2025	13:36	Day	Picking rock from sawcut	Pyrmont West	28 Paternoster Row	60	53	59.5	63.6	6.5	Yes	Traffic from Pyrmont Bridge Road contributed to noise reading
20/02/2025	21:15	Evening	Gantry structure install on Richard Johnson Square	Hunter St East	17 Bligh St	65	67	68.9	81.3	1.9	Yes	Construction work noise levels were within an acceptable range of the predicted levels
20/02/2025	23:40	Night	B-class install outside acoustic shed	Hunter St East	16 O'Connell St	65	52	72.5	89	20.5	Yes	Works undertaken under L5.8 (d) of the EPL
20/02/2025	20:25	Evening	B-class hoarding removal / gantry works (Bligh St)	Hunter St East	27 O'Connell St	65	84	70.9	85.5	-13.1	No	Construction work noise levels were below the predicted levels
21/02/2025[1]	04:35	Night	Tunnel deliveries, truck exiting	Pyrmont East	1-9 Pyrmont Bridge Road	51	70	65	75.7	5.7	Yes	Construction work noise levels were below the predicted levels
21/02/2025	06:37	Night	Entry - Shotcrete Agi	Pyrmont East	65 Edward Street	50	66	72	81.5	6	Yes	Construction work noise levels were similar to noise generated by traffic on Edward St and Pyrmont Bridge Road. Could not determine a dominant noise source during a 2-minute reading.
24/02/2025	15:20	Day	Picking oversized rock on stockpile	Pyrmont West	104 Pyrmont Street (The Sebel)	60	53	57	71.7	4	Yes	Dominant noise source was from Pyrmont Bridge Road and Pyrmont Street traffic
27/02/2025	22:11	Night	Hoarding removal	Hunter East	27 O'Connell Street	57	75	64.4	79.7	-10.6	No	Dominant noise source was from external sources i.e traffic, people
28/02/2025[1]	01:13	Night	Delivery truck exiting site	Pyrmont East	1-9 Pyrmont Bridge Road	51	70	64.6	75.1	5.1	Yes	Other vehicles not related works impacted reading
28/02/2025[1]	02:55	Night	Delivery truck entering site	Pyrmont East	65 Edward Street	50	66	63.4	76.1	10.1	Yes	Other vehicles not related works impacted reading
03/03/2025	20:50	Night	RJS gantry / decking	Hunter St East	66 Hunter Street	65	67	68	89.5	1	Yes	Construction work noise levels were within an acceptable range of the predicted levels
03/03/2025	21:40	Evening	Use of bulldozer inside acoustic shed	Pyrmont West	28 Paternoster Row	52	55	58	74.1	3	Yes	Construction work noise was inaudible from monitoring location.

Date	Time	Works Period	Construction Activity	Activity Location	Monitoring Location	NML (dBA)	Predicted * (dBA)	Recorded $L_{eq,\ 15min}$ (dBA)	LAmax	Exceedance of Predicted (dBA)	Exceedance of Predicted	Comments
03/03/2025	23:00	Night	Steel platform construction / 250t crane delivery & mobilisation	Hunter St East	27 O'Connell Street	65	60	68	84.2	8	Yes	Idling vehicle (not related to construction works) was the dominant noise source.
03/03/2025	23:30	Night	Spoil loadout / steel platform construction	Hunter St East	16 O'Connell Street	77	61	68	90.6	7	Yes	Works undertaken under L5.8 (a) of the EPL
06/03/2025	20:10	Evening	Richard Johnson Square gantry install	Hunter St East	27 O'Connell Street	65	66	68.9	94.2	2.9	Yes	Construction activities were not the dominant noise source. Traffic noise contributed higher noise levels throughout reading.
06/03/2025	20:35	Evening	Richard Johnson Square gantry install	Hunter St East	17 Bligh St	65	67	66.5	79.4	-0.5	No	Construction work noise levels were below the predicted levels
06/03/2025	21:05	Evening	HSTE shaft metro deck platform installation	Hunter St East	27 O'Connell Street	65	64	73.5	89	9.5	Yes	Works undertaken under L5.8 (d) of the EPL.
06/03/2025	23:00	Night	Tunnel delivery (entry)	Pyrmont East	65 Edward St	50	66	66	68	N/A	No	Construction work noise levels were consistent with the predicted levels
06/03/2025	23:37	Night	Tunnel deliveries – exit from PYRE	Pyrmont East	1-9 Pyrmont Bridge Road	51	70	67.8	78	-2.2	No	Construction work noise levels were below the predicted levels
07/03/2025	01:13	Night	Tunnel support deliveries - concrete agi	Pyrmont East	65 Edward St	50	66	65.6	70	-0.4	No	Construction work noise levels were below the predicted levels
07/03/2025	01:35	Night	Tunnel support delivery - concrete agi (exit)	Pyrmont East	1-9 Pyrmont Bridge Road	51	70	70.5	80	0.5	Yes	Construction work noise levels were within an acceptable range of the predicted levels
07/03/2025	11:30	Day (S)	D39 Monitoring - West shaft	Hunter St West	Level 2, Grand Hotel	60	70	52.7	72.6	-17.3	No	Construction work noise levels were below the predicted levels
10/03/2025	09:59	Day (S)	2x 35t, 1x 75t hammers	Pyrmont West	28 Paternoster Row	60	55	48	57.5	-6	No	Construction work noise levels were below the predicted levels
10/03/2025	09:35	Day (S)	75t hammer	Pyrmont West	28 Paternoster Row	60	55	46.8	46	-8.2	No	Construction work noise levels were below the predicted levels
14/03/2025	19:15	Evening	Dozer and lower deck works	Pyrmont West	28 Paternoster Row	52	54	61.4	77.5	7.4	Yes	External factors were the dominant noise source i.e traffic on Pyrmont Bridge Road, and windy weather

*Predicted Sound Power level as per respective DNVIS

[1] Predicted dBA is for LAmax

+Real time noise and vibration monitoring											
	Continuous	Construction – Noise	Hunter Street	The Ivy (Level 5 External)	*	*	*	*	*	*	Real time noise and vibration monitoring data is available on request.
	Continuous	Construction – Noise	Hunter Street	The Ivy (Level 2 Office Printer Room)	*	*	*	*	*	*	
	Continuous	Construction – Noise	Pyrmont	1-5 Hardwood Ln	*	*	*	*	*	*	
	Continuous	Construction – Noise	Pyrmont East	69 Edward Street, Pyrmont, 2009	*	*	*	*	*	*	
	Continuous	Construction – Noise	Pyrmont West	Site Hoarding on Paternoster Row	*	*	*	*	*	*	
	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 – Vibration	Pyrmont	125 Pyrmont St	*	*	*	*	*	*	
	Continuous	Construction – Vibration	Pyrmont	170 Harris Street	*	*	*	*	*	*	
	Continuous	Construction – Vibration	Pyrmont	107 Pyrmont St	*	*	*	*	*	*	
	Continuous	Construction – Vibration	Hunter Street	The Ivy (Basement)	*	*	*	*	*	*	
	Continuous	Construction – Vibration	Hunter Street	The Skinners Hotel (Level 3 South)	*	*	*	*	*	*	
	Continuous	Construction – Vibration	Hunter Street	The Skinners Hotel (Level 1)	*	*	*	*	*	*	
	Continuous	Construction – Vibration	Hunter Street	Pangas House	*	*	*	*	*	*	
	Continuous	Construction – Vibration	Pyrmont East	69 Edward Street, Pyrmont, 2009	*	*	*	*	*	*	
	Continuous	Construction – Vibration	Pyrmont West	28 Paternoster Row, Pyrmont, 2009	*	*	*	*	*	*	
	Continuous	Construction – Vibration	Hunter Street	109 Pitt Street	*	*	*	*	*	*	

	Continuous	Construction – Vibration	Pyrmo nt	Pyrmont Pharmacy	*	*	*	*	*	*	