

EPL 21672 Monitoring Report

March 2023

Sydney Metro – Western Sydney Airport, Station Boxes and Tunnelling

Project number	SSI 10051
Document number	SMWSASBT-CPG-SWD-SW000-EN-RPT-295225
Revision date	05/05/2023
Revision	Final

Document approval

Rev	Date	Prepared by	Reviewed by	Approved by	Remarks
Draft	05/05/2023	██████	██████	██████	
Final	16/05/2023	██████	██████	██████	

Table of contents

1.	Introduction	1
1.1.	Background	1
1.1.1.	Station Boxes and Tunnelling Works	3
1.2.	Scope of this report.....	3
2.	Reporting Requirements	5
3.	Monitoring	10
3.1	Meteorological Data	10
3.2	Noise	11
3.3	Discharge to Water	12
3.4	Receiving Waterways	14
4.	Correction Log.....	15

Tables

Table 1: SBT Worksite Jurisdiction	3
Table 2: Licence details	4
Table 3: EPL 21672 Pollution Monitoring Requirements	6
Table 4: Weather summary and trigger weather events for reporting period ¹	10
Table 5: Summary of noise monitoring for reporting period	11
Table 6: Recorded exceedances within reporting period	11
Table 7: Discharge Water Quality (Condition P1.1: Points 6,7,8,9,10).....	13
Table 8: Weather Observations: Penrith Lakes AWS {station 067113}.....	16
Table 9: Wind Observations: Penrith Lakes AWS {station 067113}.....	17
Table 10: Noise Monitoring Results	18
Table 11: SBT Discharge Point Register (electronic file EF22/5394) (Rev 1, submitted 4th of October 2022)	20
Table 12: March Surface Water Monitoring Results at Receiving Waterways at SBT 6 (OHE).....	21
Table 13: March Surface Water Monitoring Results at Receiving Waterways at SBT 7 (CMF).....	22
Table 14: March Surface Water Monitoring Results at Receiving Waterways at SBT 8 (STM).....	23
Table 15: March Surface Water Monitoring Results at Receiving Waterways at SBT 9 (BSF)	24
Table 16: March Surface Water Monitoring Results at Receiving Waterways at SBT 10 (AEC)	25



Figures

Figure 1: Overview of the Project.....	3
--	---

Annexures

Annexure A Weather Observations.....	16
Annexure B Noise Monitoring Results	18
Annexure C Discharge to water	20
Annexure D Surface Water Monitoring at Receiving Waterways.....	21



1. Introduction

1.1. Background

The Sydney Metro Western Sydney Airport will become the transport spine for Greater Western Sydney, connecting communities and travellers with the new Western Sydney International (Nancy-Bird Walton) Airport (referred to as Western Sydney International) and the growing region.

The Project forms part of the broader Sydney Metro network. It involves the construction and operation of a 23km new metro rail line that extends from the existing Sydney Trains suburban T1 Western Line (at St Marys) in the north and the Aerotropolis (at Bringelly) in the south. The alignment includes a combination of tunnels and civil structures, including viaduct, bridges, surface and open-cut troughs between the two tunnel sections (

Figure 1).

The Sydney Metro Western Sydney Airport EIS was prepared in October 2020 to assess the impacts of construction and operation of the Project and was placed on public exhibition between 21 October 2020 and 2 December 2020. The Project was declared a Critical State Significant Infrastructure (CSSI) Project and is listed in Schedule 5 of *State Environmental Planning Policy (State and Regional Development)*.

The Sydney Metro Western Sydney Airport was approved by the Minister for Planning and Public Spaces on 23 July 2021 (SSI 10051) under section 5.19 of the *Environmental Planning and Assessment Act 1997* (EP&A Act).

The Project will be delivered through the following stages:

- **Advanced and Enabling Works (AEW)** – Site investigations, modification of the existing transport network, power and water supply for construction sites, utility and stormwater diversions and some demolition works.
- **Station Boxes and Tunnelling Works (SBT)** – delivered through the following sub-stages:
 - Preparatory Works (the subject of this Plan) – Including NSW (off-airport) demolition works, site levelling/grading, site access and parking, utility and temporary services works, erection of demountable buildings and noise barriers, tunnelling preparatory works and use of ancillary facilities including onsite parking.
 - Bulk Excavation and Tunnelling Works – Preparatory Works (works not completed prior to Final CEMP approval), bulk excavation, acoustic shed installation, tunnelling and cross passage installation.
- **Surface and Civil Alignment Works (SCAW)** – Construction of bridges and viaducts to cross floodplains, watercourses and existing and proposed permanent infrastructure.
- **Stations, Systems, Trains, Operations and Maintenance (SSTOM)** – Station design and fitout, testing and commissioning, and operation of the Western Sydney Airport metro service
- **Finalisation Auxiliary Works.**

Each package of work is to be delivered under separate contracts on behalf of the proponent Sydney Metro.



**SYDNEY METRO – WESTERN SYDNEY AIRPORT
STATION BOXES AND TUNNELLING WORKS**



Figure 1: Overview of the Project



Figure 2: Overview of the Project

1.1.1. Station Boxes and Tunnelling Works

The CPB Ghella JV has been engaged to deliver the SBT Works. The SBT Works include the design and construction of:

- Two sections of twin tunnels with a total combined length of approximately 9.8km, including associated portal structures; Orchard Hills to St Marys and Western Sydney International (WSI) airport to the new Aerotropolis Station in NSW
- Excavations at either end to enable trains to turn back and stub tunnels to enable future extensions
- Station box excavations with temporary ground support for four stations at St Marys, Orchard Hills, Airport Terminal and Aerotropolis
- Excavations for two intermediate service facilities, one in each of the tunnel sections at Claremont and Bringelly.

Completed sections of the SBT Works, including established construction worksites, will be progressively handed over to Sydney Metro to enable follow-on contractors to commence works.

1.2. Scope of this report

CPB Contractors Pty Limited have been issued an Environmental Protection Licence (EPL No. 21672) from the NSW Environment Protection Authority (EPA) for the Sydney Metro Western Sydney Airport Station Box and Tunnelling Package on behalf of Sydney Metro.

The EPL applies to the works approved under the Infrastructure Approval SSI-10051 associated with the delivery of Sydney Metro Western Sydney Airport SBT Works Off-airport worksites. The EPL does not apply to other Sydney Metro Western Sydney Airport works packages or On-airport SBT Worksites.

An overview of relevant jurisdiction at each SBT Worksite is provided in Table 1.

Table 1: SBT Worksite Jurisdiction

Jurisdiction	Worksite
NSW	St Marys
NSW	Claremont Meadows
NSW	Orchard Hills
On-Airport	Airport Portal Dive Structure
On-Airport	Airport Terminal and TBM shaft
On-Airport	Precast Segment Storage Facility
On-Airport	Primary Spoil Reveal
NSW	Bringelly
NSW	Aerotropolis



**SYDNEY METRO – WESTERN SYDNEY AIRPORT
STATION BOXES AND TUNNELLING WORKS**

Note: Worksites shown in grey are within the boundary of the Western Sydney International (On-Airport), are regulated under the *Commonwealth Airports Act 1996* and are outside the scope of EPL 21672.

This EPL Pollution Monitoring Report provides the results of all pollution monitoring required to be measured or monitored by the licensee of EPL 21672 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 2 provides a summary of the EPL 21672 details.

Table 2: Licence details

Licence Details	
Number:	21672
Copy of Licence	ViewPOEOLicence.aspx (nsw.gov.au)
Anniversary Date	30-May
Licensee	CPB Contractors Pty Limited
Premises	Sydney Metro Western Sydney Airport Station Box and Tunnelling Package St Marys to Orchard Hills and Bringelly to Aerotropolis St Marys NSW 2760
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 SBT Works 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 licenced premises.

The data is provided in tabular format that is easy for the 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 3 provides a summary of the pollution monitoring requirements of EPL 21672.

Table 3: EPL 21672 Pollution Monitoring Requirements

EPL Condition	Requirement	Report Reference
Weather		
M5.1	<p>The licensee must monitor and record temperature, wind direction, wind velocity and rainfall at either the project weather station, or through analysis of equivalent weather information obtained from the Australian Bureau of Meteorology.</p> <p>Monitoring must:</p> <ul style="list-style-type: none"> a) be representative of the premises; 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. <p>The rainfall monitoring data collected in compliance with this condition can be used to determine compliance with condition L2.5</p>	<p>Section 1.3.1 Annexure A</p>
Noise		
L5.9	<p>In undertaking any works and activities outside of standard construction hours under condition L5.8, the licensee must comply with the following:</p> <ul style="list-style-type: none"> a) Prepare a construction noise and vibration impact assessment in accordance with the Interim Construction Noise Guideline (DEC, 2009) that is to include: <ul style="list-style-type: none"> i. a description of the proposed works and activities outside of standard construction 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). 	<p>Section 3.2</p> <p>No OOHW was undertaken during this reporting period under this licence condition.</p>
M4.4	<p>The licensee must undertake noise and vibration monitoring as directed by an authorised officer of the EPA. Where the monitoring is requested to take place on private land (for example a residential property) the licensee must request permission to access the premises in advance and keep a record of permission requests and responses. If a licensee is unable to obtain permission, the licensee must undertake the monitoring at an indicative location where possible and they must provide the response (including any nil response) to the EPA.</p>	<p>N/A</p> <p>No direction received from EPA to undertake noise and vibration monitoring during</p>



**SYDNEY METRO – WESTERN SYDNEY AIRPORT
STATION BOXES AND TUNNELLING WORKS**

EPL Condition	Requirement	Report Reference
		this reporting period.
Community Agreements The licensee may work outside standard construction hours (as defined in L5.1) in circumstances other than those permitted under conditions L5.3, L5.4, or any other condition of the licence, subject to the condition outlined Section E1.		
E1.4	A noise validation monitoring plan must be submitted to the EPA for approval as part of the community agreement documentation prior to any OOHW occurring.	N/A
E1.5	Validation monitoring must be undertaken for any OOHW that are the approved under condition E1.1 and must: a) be undertaken in accordance with the monitoring plan prepared under condition E1.4; b) be performed by a Competent Person; c) be performed on at least the first 2 occasions (day, evening, nights) where OOHW will be undertaken and are likely to impact Noise Sensitive Receivers; d) be performed on any other occasion (day, evening, night) where the nature of the works is likely to cause greater noise impacts than the first 2 occasions; e) be representative of the impacts in terms of monitoring locations, time and duration of measurements; and f) be recorded and provided to an EPA officer upon request	Not triggered during this reporting period.
Water		
P1.1	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.	Section 3.3 and 3.4. Annexure C and D No discharges from WTPs occurred during this reporting period.



**SYDNEY METRO – WESTERN SYDNEY AIRPORT
STATION BOXES AND TUNNELLING WORKS**

EPL Condition	Requirement	Report Reference																																																																
	<table><tr><td>1</td><td>Discharge and Monitoring</td><td>Discharge and Monitoring</td><td>The outlet(s) of the sediment basin(s) on the Orchard Hills site discharging to South Creek referred to in Condition P1.2</td></tr><tr><td>2</td><td>Discharge and Monitoring</td><td>Discharge and Monitoring</td><td>The outlet(s) of the sediment basin(s) on the Claremont site discharging to South Creek referred to in Condition P1.2</td></tr><tr><td>3</td><td>Discharge and Monitoring</td><td>Discharge and Monitoring</td><td>The outlet(s) of the sediment basin(s) on the St Marys site discharging to South Creek referred to in Condition P1.2</td></tr><tr><td>4</td><td>Discharge and Monitoring</td><td>Discharge and Monitoring</td><td>The outlet(s) of the sediment basin(s) on the Bringelly site discharging to Badgerys Creek referred to in Condition P1.2</td></tr><tr><td>5</td><td>Discharge and Monitoring</td><td>Discharge and Monitoring</td><td>The outlet(s) of the sediment basin(s) on the Aerotropolis site discharging to Thompson Creek referred to in Condition P1.2</td></tr><tr><td>6</td><td>Discharge and Monitoring</td><td>Discharge and Monitoring</td><td>The outlet of the water treatment plant on the Orchard Hills site discharging to South Creek</td></tr><tr><td>7</td><td>Discharge and Monitoring</td><td>Discharge and Monitoring</td><td>The outlet of the water treatment plant on the Claremont site discharging to South Creek</td></tr><tr><td>8</td><td>Discharge and Monitoring</td><td>Discharge and Monitoring</td><td>The outlet of the water treatment plant on the St Marys site discharging to South Creek</td></tr><tr><td>9</td><td>Discharge and Monitoring</td><td>Discharge and Monitoring</td><td>The outlet of the water treatment plant on the Bringelly site discharging to Badgerys Creek</td></tr><tr><td>10</td><td>Discharge and Monitoring</td><td>Discharge and Monitoring</td><td>The outlet of the water treatment plant on the Aerotropolis site discharging to Thompson Creek</td></tr></table>	1	Discharge and Monitoring	Discharge and Monitoring	The outlet(s) of the sediment basin(s) on the Orchard Hills site discharging to South Creek referred to in Condition P1.2	2	Discharge and Monitoring	Discharge and Monitoring	The outlet(s) of the sediment basin(s) on the Claremont site discharging to South Creek referred to in Condition P1.2	3	Discharge and Monitoring	Discharge and Monitoring	The outlet(s) of the sediment basin(s) on the St Marys site discharging to South Creek referred to in Condition P1.2	4	Discharge and Monitoring	Discharge and Monitoring	The outlet(s) of the sediment basin(s) on the Bringelly site discharging to Badgerys Creek referred to in Condition P1.2	5	Discharge and Monitoring	Discharge and Monitoring	The outlet(s) of the sediment basin(s) on the Aerotropolis site discharging to Thompson Creek referred to in Condition P1.2	6	Discharge and Monitoring	Discharge and Monitoring	The outlet of the water treatment plant on the Orchard Hills site discharging to South Creek	7	Discharge and Monitoring	Discharge and Monitoring	The outlet of the water treatment plant on the Claremont site discharging to South Creek	8	Discharge and Monitoring	Discharge and Monitoring	The outlet of the water treatment plant on the St Marys site discharging to South Creek	9	Discharge and Monitoring	Discharge and Monitoring	The outlet of the water treatment plant on the Bringelly site discharging to Badgerys Creek	10	Discharge and Monitoring	Discharge and Monitoring	The outlet of the water treatment plant on the Aerotropolis site discharging to Thompson Creek																									
1	Discharge and Monitoring	Discharge and Monitoring	The outlet(s) of the sediment basin(s) on the Orchard Hills site discharging to South Creek referred to in Condition P1.2																																																															
2	Discharge and Monitoring	Discharge and Monitoring	The outlet(s) of the sediment basin(s) on the Claremont site discharging to South Creek referred to in Condition P1.2																																																															
3	Discharge and Monitoring	Discharge and Monitoring	The outlet(s) of the sediment basin(s) on the St Marys site discharging to South Creek referred to in Condition P1.2																																																															
4	Discharge and Monitoring	Discharge and Monitoring	The outlet(s) of the sediment basin(s) on the Bringelly site discharging to Badgerys Creek referred to in Condition P1.2																																																															
5	Discharge and Monitoring	Discharge and Monitoring	The outlet(s) of the sediment basin(s) on the Aerotropolis site discharging to Thompson Creek referred to in Condition P1.2																																																															
6	Discharge and Monitoring	Discharge and Monitoring	The outlet of the water treatment plant on the Orchard Hills site discharging to South Creek																																																															
7	Discharge and Monitoring	Discharge and Monitoring	The outlet of the water treatment plant on the Claremont site discharging to South Creek																																																															
8	Discharge and Monitoring	Discharge and Monitoring	The outlet of the water treatment plant on the St Marys site discharging to South Creek																																																															
9	Discharge and Monitoring	Discharge and Monitoring	The outlet of the water treatment plant on the Bringelly site discharging to Badgerys Creek																																																															
10	Discharge and Monitoring	Discharge and Monitoring	The outlet of the water treatment plant on the Aerotropolis site discharging to Thompson Creek																																																															
L2.1	For each monitoring/discharge point or utilisation area specified in the table/s below (by a point number), the concentration of a pollutant discharged at that point, or applied to that area, must not exceed the concentration limits specified for that pollutant in the table.	Noted																																																																
M2.2	<p>POINT 1,2,3,4,5</p> <table><tr><th>Pollutant</th><th>Units of measure</th><th>Frequency</th><th>Sampling Method</th></tr><tr><td>Oil and Grease</td><td>Visible</td><td>Special Frequency 1</td><td>Visual Inspection</td></tr><tr><td>pH</td><td>pH</td><td>Special Frequency 1</td><td>Probe</td></tr><tr><td>Turbidity</td><td>nephelometric turbidity units</td><td>Special Frequency 1</td><td>Probe</td></tr></table> <p>POINT 6,7,8,9,10</p> <table><tr><th>Pollutant</th><th>Units of measure</th><th>Frequency</th><th>Sampling Method</th></tr><tr><td>Aluminium</td><td>milligrams per litre</td><td>Monthly during discharge</td><td>Grab sample</td></tr><tr><td>Ammonia</td><td>milligrams per litre</td><td>Monthly during discharge</td><td>Grab sample</td></tr><tr><td>Chromium (VI) Compounds</td><td>milligrams per litre</td><td>Monthly during discharge</td><td>Grab sample</td></tr><tr><td>Copper</td><td>milligrams per litre</td><td>Monthly during discharge</td><td>Grab sample</td></tr><tr><td>Electrical conductivity</td><td>microsiemens per centimetre</td><td>Monthly during discharge</td><td>Grab sample</td></tr><tr><td>Nitrogen (total)</td><td>milligrams per litre</td><td>Monthly during discharge</td><td>Grab sample</td></tr><tr><td>Oil and Grease</td><td>Visible</td><td>Monthly during discharge</td><td>Visual Inspection</td></tr><tr><td>pH</td><td>pH</td><td>Monthly during discharge</td><td>Probe</td></tr><tr><td>Phosphorus (total)</td><td>milligrams per litre</td><td>Monthly during discharge</td><td>Grab sample</td></tr><tr><td>Total suspended solids</td><td>milligrams per litre</td><td>Monthly during discharge</td><td>Grab sample</td></tr><tr><td>Zinc</td><td>milligrams per litre</td><td>Monthly during discharge</td><td>Grab sample</td></tr></table>	Pollutant	Units of measure	Frequency	Sampling Method	Oil and Grease	Visible	Special Frequency 1	Visual Inspection	pH	pH	Special Frequency 1	Probe	Turbidity	nephelometric turbidity units	Special Frequency 1	Probe	Pollutant	Units of measure	Frequency	Sampling Method	Aluminium	milligrams per litre	Monthly during discharge	Grab sample	Ammonia	milligrams per litre	Monthly during discharge	Grab sample	Chromium (VI) Compounds	milligrams per litre	Monthly during discharge	Grab sample	Copper	milligrams per litre	Monthly during discharge	Grab sample	Electrical conductivity	microsiemens per centimetre	Monthly during discharge	Grab sample	Nitrogen (total)	milligrams per litre	Monthly during discharge	Grab sample	Oil and Grease	Visible	Monthly during discharge	Visual Inspection	pH	pH	Monthly during discharge	Probe	Phosphorus (total)	milligrams per litre	Monthly during discharge	Grab sample	Total suspended solids	milligrams per litre	Monthly during discharge	Grab sample	Zinc	milligrams per litre	Monthly during discharge	Grab sample	Noted Annexure D
Pollutant	Units of measure	Frequency	Sampling Method																																																															
Oil and Grease	Visible	Special Frequency 1	Visual Inspection																																																															
pH	pH	Special Frequency 1	Probe																																																															
Turbidity	nephelometric turbidity units	Special Frequency 1	Probe																																																															
Pollutant	Units of measure	Frequency	Sampling Method																																																															
Aluminium	milligrams per litre	Monthly during discharge	Grab sample																																																															
Ammonia	milligrams per litre	Monthly during discharge	Grab sample																																																															
Chromium (VI) Compounds	milligrams per litre	Monthly during discharge	Grab sample																																																															
Copper	milligrams per litre	Monthly during discharge	Grab sample																																																															
Electrical conductivity	microsiemens per centimetre	Monthly during discharge	Grab sample																																																															
Nitrogen (total)	milligrams per litre	Monthly during discharge	Grab sample																																																															
Oil and Grease	Visible	Monthly during discharge	Visual Inspection																																																															
pH	pH	Monthly during discharge	Probe																																																															
Phosphorus (total)	milligrams per litre	Monthly during discharge	Grab sample																																																															
Total suspended solids	milligrams per litre	Monthly during discharge	Grab sample																																																															
Zinc	milligrams per litre	Monthly during discharge	Grab sample																																																															
M2.3	<p>For the purposes of Condition M2.2 and the Table thereto, ‘Special Frequency 1’ means:</p> <p>a) less than 24 hours prior to a controlled discharge and daily for any continued controlled discharge, when it is safe to do so; and</p>	Noted																																																																



**SYDNEY METRO – WESTERN SYDNEY AIRPORT
STATION BOXES AND TUNNELLING WORKS**

EPL Condition	Requirement	Report Reference
	b) when rainfall causes a discharge from a sediment basin which has not been emptied within the design management period following cessation of a rainfall event, when it is safe to do so.	
E2.1	<p>The licensee must undertake weekly surface water monitoring of receiving waterways at locations upstream, downstream and adjacent to each discharge point: 6, 7, 8, 9 and 10 identified in Condition P1.1. This monitoring must be undertaken for a minimum of 6 months from the date that points 6, 7, 8, 9 and 10 were added to the licence.</p> <p>Fortnightly monitoring results must include:</p> <ul style="list-style-type: none"> a) quality and quantity of all parameters that are identified in the table in M2.2 for each discharge point: 6, 7, 8, 9 and 10; and b) results must be submitted to the EPA no more than 2 weeks after each monitoring event has occurred for a minimum of 6 months from the date that points 6, 7, 8, 9 and 10 were added to the licence. 	Noted
E4.1	<p>A) The licensee must undertake water quality sampling of all discharges from the WTPs (as identified as Point 6, 7, 8, 9 and 10 under condition P1.1) and submit to the EPA a WTP Performance Report within 10 business days of each sample result being taken. Sampling must be undertaken:</p> <ul style="list-style-type: none"> i. daily on the first 3 days of discharges ii. weekly for the first month of discharges iii. fortnightly for the first 3 months <p>As per condition M2.2, following this sampling frequency or as directed by the EPA</p>	Not triggered during this reporting period.
Additional Monitoring Conditions		
M4.5	<p>The licensee must undertake monitoring, sampling, video recording and/or take photographs:</p> <ul style="list-style-type: none"> a) if the EPA or licensee reasonably suspects that an event has occurred at the premises or in connection with the carrying out of the activities that has caused, is causing, is likely to cause or has the potential to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies); b) as soon as practicable; and c) as directed by an authorised officer. 	Noted



3. Monitoring

Section 3 presents a summary of the monitoring programs completed in the reporting period from 1 March 2023 to 31 March 2023.

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

3.1 Meteorological Data

Meteorological data for the Project has been taken from Badgerys Creek Automatic Weather Station (AWS).

The total rainfall recorded during the reporting period was 48.6 mm with 1 day exceeding one millimetre of rain and no days exceeding 10 mm of rain.

During the reporting period, there were 20 days where the maximum wind gust recorded was greater than 25km/hr and 1 day where the maximum wind gust recorded was greater than 50km/h and no days where the maximum wind gust was greater than 60 km/hr. Winds recorded during the reporting period were predominantly easterly component, however there was variability throughout the month.

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

This information is used daily on site to assess daily activities and consider mitigation measures as required.

Table 4: Weather summary and trigger weather events for reporting period¹

Weather Event	Observation
Minimum temperature	10 °C
Maximum temperature	40.1 °C
Total rainfall	48.6 mm
Number of days with rain (>1mm)	1 Day
Number of days with rain (>10mm)	0 Days
Number of days with >25km/hr wind ²	20 Days
Number of days with >50km/hr wind	1 Day
Number of days with >60km/hr wind	0 Days

¹Weather summary based on data from the 1 March 2023 to 31 March 2023 (31 days).

²Weather data from Penrith Lakes AWS {station 067113}.



3.2 Noise

Noise monitoring is a requirement of the following conditions of EPL 21672:

- L5.9, E1.4 Monitoring to validate the noise predictions for works undertaken outside of the standard construction hours as per the construction noise impact assessment
- M7.6 Noise monitoring following noise and vibration complaints
- M4.4 Noise and vibration monitoring as directed by an authorised officer of the EPA.

Table 5 provides a summary of noise monitoring events conducted during the reporting period. Exceedances are described in Table 6. Detailed noise monitoring results and comments are presented in Annexure B.

Table 5: Summary of noise monitoring for reporting period

Date	Monitoring Location	Attended/Continuous	Description
3/03/2023	45 Derwent Road, Badgerys Creek	Attended	Shaft Excavation
3/03/2023	47 Derwent Road, Badgerys Creek	Attended	Shaft Excavation
3/03/2023	38 Derwent Road, Badgerys Creek	Attended	Shaft Excavation
6/03/2023	1b Chesham Street	Attended	Anchor Stressing
6/03/2023	On-Site Next to Hoarding, St Marys	Attended	Anchor Stressing
10/03/2023	83 Kent Road, Orchard Hills	Attended	TBM Assembly
10/03/2023	83 Kent Road, Orchard Hills	Attended	TBM Assembly
12/03/2023	83 Kent Road, Orchard Hills	Attended	Bridge works
13/03/2023	1 Dolphin Close, Claremont Meadows	Attended	Shaft Excavation
13/03/2023	1 Dolphin Close, Claremont Meadows	Attended	No Work
13/03/2023	1 Dolphin Close, Claremont Meadows	Attended	Shaft Excavation
13/03/2023	1 Dolphin Close, Claremont Meadows	Attended	Shaft Excavation
13/03/2023	1 Dolphin Close, Claremont Meadows	Attended	No work
13/03/2023	1 Dolphin Close, Claremont Meadows	Attended	Shaft Excavation
27/03/2023	3 Station Street	Attended	Dowel Drilling
27/03/2023	Off-Site Next to Hoarding, St Marys	Attended	Dowel Drilling
28/03/2023	On-Site Next to WTP	Attended	Cage Splicing
28/03/2023	1 Station Street	Attended	Cage Splicing

Attended monitoring undertaken during this reporting period measured exceedances of the predicted noise levels during three monitoring events (Table 6). Measured exceedances were the result of extraneous noise sources and the distance of residential buildings from the property boundary where noise monitoring is undertaken outlined in Annexure B.

Table 6: Recorded exceedances within reporting period

Date	Monitoring Location	Reason for exceedance
3/03/2023	45 Derwent Road, Bringelly	Exceedance attributed to location of monitoring point which is 100m from the receptor and modeling location due to property access.



Date	Monitoring Location	Reason for exceedance
3/03/2023	38 Derwent Road, Bringelly	Exceedances attributed to extraneous noise sources including local traffic movements.
6/03/2023	1b Chesham Street, St Marys	Extraneous noise was found to be the dominant noise source.

3.3 Discharge to Water

3.3.1. Discharge to Water

The discharge of water from sediment basins and settling containers occurred at the following discharging monitoring points/locations during this reporting period:

- SBT-002
- SBT-003
- SBT-004
- SBT-008
- SBT-010

Discharge to natural waterways, and local stormwater systems is directly linked to the surface water monitoring program, where monitoring is undertaken to:

- Measure the effectiveness of environmental controls in minimising and managing environmental impacts
- Demonstrate compliance with relevant stakeholder conditions

The EPL discharge criteria apply to the sediment basins and settling containers identified and located on Electronic File EF22/5394 and approved by the EPA. Discharge to water events must adhere to the following Limit Conditions of EPL 21672:

- L1.1 Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.
- L2.1 For each monitoring/discharge point or utilisation area specified in the table/s below (by a point number), the concentration of a pollutant discharged at that point, or applied to that area, must not exceed the concentration limits specified for that pollutant in the table.
- L2.2 Where a pH quality limit is specified in the table, the specified percentage of samples must be within the specified ranges.
- L2.3 To avoid any doubt, this condition does not authorise the pollution of waters by any pollutant other than those specified in the table/s.
- L2.4 Water and/or Land Concentration Limits

The active basins and discharge points during this reporting period are summarised in Table 7.

The discharge events and water quality monitoring data during the reporting period are summarised in Annexure C.



Table 7: Discharge Water Quality (Condition P1.1: Points 6,7,8,9,10)

ID	Construction Status	EPA ID	Easting	Northing	Description of location of discharge point	Catchment name	Name of nearest waters	Direct discharge to waters	Location description	Date added	Revision Added
SBT-001	Inactive	3	294119.4684	6261927.807	The outlet of the sediment basin(s) on the St Marys site North of Station Street	South Creek	South Creek	No	Discharge into local stormwater system	4/10/2022	1
SBT-002	Active	3	294041.6184	6261905.9783	The outlet of the sediment basin(s) on the St Marys site at former Plaza	South Creek	South Creek	No	Discharge into local stormwater system	4/10/2022	1
SBT-003	Active	2	292018.2099	6261255.3813	The outlet of the sediment basin on the Claremont Meadows Site south of Great Western Highway	South Creek	Claremont Creek	No	Discharge into local stormwater system	4/10/2022	1
SBT-004	Active	2	292072.0196	6261326.0789	The outlet of the sediment basin on the Claremont Meadows site West of Gipps Street	South Creek	Claremont Creek	No	Discharge into local stormwater system	4/10/2022	1
SBT-005	Inactive	1	292053.3538	6259530.3707	The outlet of the sediment basin on the Orchard Hills site	South Creek	South Creek	No	Discharge into vegetated / stabilized land	4/10/2022	1
SBT-006	Inactive	1	292065.7524	6259303.9277	The outlet of the sediment basin on the Orchard Hills site south of M4	South Creek	South Creek	No	Discharge into vegetated / stabilized land	4/10/2022	1
SBT-007	Inactive	1	291857.7443	6259276.8491	The outlet of the sediment basin on the Orchard Hills site east of Kent Road	South Creek	Unnamed tributary of South Creek	Yes	Discharge into creek	4/10/2022	1
SBT-008	Active	1	291857.4535	6259221.8921	The outlet of the sediment basin on the Orchard Hills site east of Kent Road	South Creek	Unnamed tributary of South Creek	Yes	Discharge into creek	4/10/2022	1
SBT-009	Inactive	1	291808.8936	6258854.9307	The outlet of the sediment basin on the Orchard Hills site north of Lansdowne Road	South Creek	South Creek	No	Discharge into vegetated / stabilized land	4/10/2022	1
SBT-010	Inactive	1	291963.0058	6258833.1224	The outlet of the sediment basin on the Orchard Hills site north of Lansdowne Road	South Creek	South Creek	No	Discharge into vegetated / stabilized land	4/10/2022	1
SBT-011	Active	1	291975.5092	6258798.5199	The outlet of the sediment basin on the Orchard Hills site south of Lansdowne Road	South Creek	South Creek	No	Discharge into vegetated / stabilized land	4/10/2022	1
SBT-012	Active	1	291803.9504	6258604.2804	The outlet of the sediment basin on the Orchard Hills site south of Lansdowne Road	South Creek	South Creek	No	Discharge into vegetated / stabilized land	4/10/2022	1
SBT-013	Active	4	289481.8143	6245851.2954	The outlet of the sediment basin on the Bringelly site west of Derwent Road	South Creek	Badgerys Creek	No	Discharge into vegetated / stabilized land	4/10/2022	1
SBT-014	Active	5	290853.6384	6243780.4655	The outlet of the sediment basin on the Aerotropolis site east side of Aerotropolis	South Creek	Thompsons Creek	No	Discharge into vegetated / stabilized land	4/10/2022	1



3.4 Receiving Waterways

As per Condition E2.1 of the EPL, weekly surface water monitoring of receiving waterways commenced on 14 February 2023 and will be undertaken for a minimum of six months. For each sampling event undertaken during the reporting period, samples were taken at each monitoring location for the analytes listed in Condition M2.1 for Points 6,7,8,9 and 10.

Wet weather monitoring is carried out as per the following:

- A minimum of once per 3 months where rainfall does not exceed 25mm
- In the event of a continuous rainfall event of >27.4mm is received in the local catchment during a 24-hour period (as recorded at the SBT Works rain gauge(s) or nearby weather station) and has generated runoff from site.

Surface water monitoring at receiving water ways was undertaken on the following dates during this reporting period:

- 7 March 2023
- 14 March 2023
- 20 March 2023

A review of the data for these monitoring events can be found in Annexure D.



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.



Annexure A Weather Observations

Table 8: Weather Observations: Penrith Lakes AWS {station 067113}.

Date	Temperatures		Rain	9am		3pm	
	Min	Max		Temperature	Relative Humidity	Temperature	Relative Humidity
	°C			mm	°C	%	°C
1/03/2023	18.3	31	0	21.8	94	30	38
2/03/2023	20.1	29.9	0	23.8	72	29.4	49
3/03/2023	17.8	30.3	0	22.1	84	27.6	62
4/03/2023	18.8	26.6	0.8	20.4	93	25.2	63
5/03/2023	16	32.8	0.2	20.6	93	31.5	40
6/03/2023	18.6	40.1	0	28.4	54	39.1	16
7/03/2023	19	36.9	0	24.2	66	35.8	17
8/03/2023	14.2	33.4	0	21.6	54	32	13
9/03/2023	13.5	31.5	0	19.6	58	30.1	20
10/03/2023	13.6	30.9	0	19.7	68	27.9	41
11/03/2023	15.9	34.8	0	20.8	84	34.1	30
12/03/2023	20.8	30	0	24.2	70	26.1	60
13/03/2023	18.5	22	6.8	18.8	98	20	96
14/03/2023	18.4	25.8	4.8	20.2	97	21.1	98
15/03/2023	17.3	31.8	1	19.4	99	30.9	44
16/03/2023	16.8	37.6	0	20.3	98	37.1	19
17/03/2023	20.4	35.1	0	27.7	35	31.6	37
18/03/2023	17.6	34.6	0	21	98	32.9	38
19/03/2023	17.1	39.5	0	22	79	38.2	32
20/03/2023	20.5	23.9	0	23.6	81	20.2	81
21/03/2023	16.8	22.9	2	18.6	98	22.2	59
22/03/2023	16.2	24.3	0	18.9	97	23.8	69
23/03/2023	17.3	26	0.4	20.3	98	24.8	73
24/03/2023	16.3	28.3	6.8	18.5	99	25.7	63
25/03/2023	18.6	23	0	20.4	91	20.1	92
26/03/2023	17	25.4	2	19.2	98	24.8	66
27/03/2023	18.1	24.7	11.8	19.1	99	22.7	98
28/03/2023	18.1	23.1	1.8	19.9	98	20.9	97
29/03/2023	18.6	28.5	9.8	19.9	98	26.7	65
30/03/2023	13.1	26	0.4	18.7	71	24.5	33
31/03/2023	10	26.8	0	17.1	72	25.4	36



Table 9: Wind Observations: Penrith Lakes AWS {station 067113}.

Date	Maximum wind gusts			9am		3pm	
	Direction	Speed	Time	Direction	Direction	Speed km/h	Time
		km/h	Local		km/h		Local
1/02/2023	SE	43	15:01	30	38	SE	15
2/02/2023	ESE	24	15:22	29.4	49	SE	11
3/02/2023	SE	33	14:02	27.6	62	ESE	17
4/02/2023	E	17	15:32	25.2	63	WNW	6
5/02/2023	ENE	30	14:23	31.5	40	NE	15
6/02/2023	NW	54	14:17	39.1	16	W	22
7/02/2023	NW	48	12:10	35.8	17	WNW	20
8/02/2023	NW	46	16:17	32	13	WNW	24
9/02/2023	ESE	33	16:31	30.1	20	WSW	11
10/02/2023	ENE	30	16:34	27.9	41	NNE	9
11/02/2023	NE	28	17:02	34.1	30	NE	7
12/02/2023	SE	31	14:09	26.1	60	SE	22
13/02/2023	NE	26	17:41	20	96	SSW	11
14/02/2023	SE	24	12:31	21.1	98	SSW	2
15/02/2023	E	26	16:48	30.9	44	ESE	6
16/02/2023	WNW	39	14:11	37.1	19	WNW	22
17/02/2023	SE	41	13:48	31.6	37	SE	28
18/02/2023	ENE	19	17:42	32.9	38	NNE	9
19/02/2023	ESE	24	16:59	38.2	32	NNW	13
20/02/2023	SE	41	10:40	20.2	81	SSW	13
21/02/2023	ENE	22	11:22	22.2	59	E	4
22/02/2023	N	13	10:57	23.8	69	NNW	4
23/02/2023	NE	31	16:41	24.8	73	S	11
24/02/2023	ESE	26	17:28	25.7	63	E	9
25/02/2023	NNW	24	13:53	20.1	92	NNW	17
26/02/2023	ENE	19	14:44	24.8	66	N	7
27/02/2023	SW	17	5:53	22.7	98	NNE	2
28/02/2023	N	20	15:44	20.9	97	W	4
29/02/2023	WNW	44	15:56	26.7	65	N	13
30/02/2023	SW	30	15:14	24.5	33	SSW	15
31/02/2023	SW	26	11:50	25.4	36	SE	7



Annexure B Noise Monitoring Results

Table 10: Noise Monitoring Results

Date	Time	Works Period	Construction Activity	Activity Location	Monitoring Location	NML (dBA)	Predicted (dBA)	Additional Mitigation Measures	Recorded $L_{eq, 15min}$ (dBA)	L_{Amax}	L_{Amin}	Exceedance of Predicted (dBA)	Exceedance of Predicted	Comments
3/03/2023	11:21am	Day (Standard)	Shaft Excavation	SBT Bringelly Service Facility	45 Derwent Road, Bringelly	45	56	LB	57.5	70.7	47.1	1.5	Yes	Verification noise monitoring. Construction was the dominant noise source during this monitoring event.
3/03/2023	11:50am	Day (Standard)	Shaft Excavation	SBT Bringelly Service Facility	47 Derwent Road, Bringelly	45	56	LB	53.4	76.7	38.2	-2.6	No	Verification noise monitoring. Local traffic was found to be the dominant noise source during this monitoring event.
3/03/2023	12:24pm	Day (Standard)	Shaft Excavation	SBT Bringelly Service Facility	38 Derwent Road, Bringelly	45	56	LB	58.8	83.3	31.7	2.8	Yes	Verification noise monitoring. Extraneous noise was found to be the dominant noise source. Construction activities were inaudible during this monitoring event.
6/03/2023	8:50pm	OOHW1	Anchor Stressing	SBT St Marys	1b Chesham Street	47	47	LB	47.9	63.1	40.7	0.9	Yes	Verification noise monitoring. Extraneous noise was found to be the dominant noise source. Construction activities were inaudible during this monitoring event.
6/03/2023	9:15pm	OOHW1	Anchor Stressing	SBT St Marys	On-Site Next to hoarding, St Marys	47	47	LB	50.9	72	45.1	N/A	N/A	Verification noise monitoring. On-site monitoring causes for the recorded $L_{eq, 15min}$ to be subtracted by 10dB. It is necessary to consider solid barrier (on-site hoarding)
10/03/2023	6:20pm	OOHW1	TBM Assembly	SBT Orchard Hills	83 Kent Road, Orchard Hills	49	49	LB, M, IB, PC, RO, SN	43.7	63.9	—	-5.3	No	Verification noise monitoring. Local traffic (Kent Road) was found to be the dominant noise source during this monitoring event. Construction activities were inaudible at the sensitive receiver during this monitoring event.
10/03/2023	6:20pm	OOHW1	TBM Assembly	SBT Orchard Hills	83 Kent Road, Orchard Hills	49	49	LB, M, IB, PC, RO, SN	41.8	70.8	43.1	-7.2	No	Verification noise monitoring. Local traffic (Kent Road) was found to be the dominant noise source during this monitoring event. Construction activities were inaudible at the sensitive receiver during this monitoring event.
12/03/2023	6:15pm	OOHW1	Bridge works – Lansdowne Rd	SBT Orchard Hills	40 Lansdowne Road, Orchard Hills	49	44	LB, M, IB, PC, RO, SN	41.1	67.9	39.7	-2.9	No	Verification noise monitoring. Construction activities were inaudible at the sensitive receiver during this monitoring event.
13/03/2023	6:15pm	OOHW1	Shaft Excavation	SBT Claremont Meadows Facility	1 Dolphin Close, Claremont Meadows	42	67	LB, M	59.3	-	38.3	-7.7	No	Instrument error. The noise monitor failed 6 minutes into the monitoring event. The final reading was unable to be recorded.
13/03/2023	6:30pm	OOHW1	No work	SBT Claremont Meadows Facility	1 Dolphin Close, Claremont Meadows	42	67	LB, M	53.4	78	38.1	-13.6	No	Verification noise monitoring. A measure of background noise without construction.



Date	Time	Works Period	Construction Activity	Activity Location	Monitoring Location	NML (dBA)	Predicted (dBA)	Additional Mitigation Measures	Recorded Leq, 15min (dBA)	L _{Amax}	L _{Amin}	Exceedance of Predicted (dBA)	Exceedance of Predicted	Comments
13/03/2023	6:45pm	OOHW1	Shaft Excavation	SBT Claremont Meadows Facility	1 Dolphin Close, Claremont Meadows	42	67	LB, M	48.5	69	38.1	-18.5	No	Verification noise monitoring. Extraneous noise was found to be the dominant noise source. Construction activities were inaudible during this monitoring event.
13/03/2023	7:15pm	OOHW1	Shaft Excavation	SBT Claremont Meadows Facility	1 Dolphin Close, Claremont Meadows	42	67	LB, M	52.3	74	35.7	-14.7	No	Verification noise monitoring. Extraneous noise was found to be the dominant noise source. Construction activities were inaudible during this monitoring event.
13/03/2023	7:45pm	OOHW1	No work	SBT Claremont Meadows Facility	1 Dolphin Close, Claremont Meadows	42	67	LB, M	45.2	64.5	29.8	-21.8	No	Verification noise monitoring. A measure of background noise without construction.
13/03/2023	8:00pm	OOHW1	Shaft Excavation	SBT Claremont Meadows Facility	1 Dolphin Close, Claremont Meadows	42	67	LB, M	45.2	67.6	27.4	-21.8	No	Verification noise monitoring. Extraneous noise was found to be the dominant noise source. Construction activities were inaudible during this monitoring event.

OOHW1 is defined as:

- a. 6:00pm to 10:00pm (evenings) Monday to Saturday
- b. 7:00am to 8:00am and 1:00pm to 10:00pm (day & evening) Saturday and
- c. 8:00am to 6:00pm Sunday and public holidays (days).

OOHW2 is defined as:

- a. 10:00pm to 7:00am (nights) Monday to Saturday and
- b. 6:00pm to 8:00am (nights) Sundays and public holidays.

Additional Mitigation Measures

- LB = Letter box drops
- M = Monitoring
- SN = Specific Notification
- RO = Project Specific Respite Offer
- IB = Individual Briefing
- PC = Phone Calls and Emails
- AA = Alternate Accommodation



Annexure C Discharge to water

Table 11: SBT Discharge Point Register (electronic file EF22/5394) (Rev 1, submitted 4th of October 2022)

Discharge Monitoring Point ID	Type of Monitoring Point	Type of Discharge Point	Date	Discharge Permit No.	Oil and Grease	pH	Turbidity
					Visual Inspection	pH	NTU
SBT-002	Basins and settling containers	Stormwater system	1/03/2023	056	Not visible	8.40	46.4
SBT-002	Basins and settling containers	Stormwater system	2/03/2023	057	Not visible	8.32	24.6
SBT-002	Basins and settling containers	Stormwater system	7/03/2023	061	Not visible	6.50	49.5
SBT-002	Basins and settling containers	Stormwater system	8/03/2023	062	Not visible	7.53	34.6
SBT-003	Basins and settling containers	Stormwater system	9/03/2023	063	Not visible	7.82	45.2
SBT-008	Sediment basin discharge	Creek	9/03/2023	065	Not visible	8.36	1.0
SBT-004	Basins and settling containers	Stormwater system	10/03/2023	064	Not visible	7.91	34.5
SBT-008	Sediment basin discharge	Creek	29/03/2023	066	Not visible	8.49	49
SBT-010	Sediment basin discharge	Vegetated / stabilized land	29/03/2023	069	Not visible	8.5 & 8.42	7 & 49



Annexure D Surface Water Monitoring at Receiving Waterways

Table 12: March Surface Water Monitoring Results at Receiving Waterways at SBT 6 (OHE)

Analyte		SBT-6U	SBT-6A	SBT-6D	SBT-6U	SBT-6A	SBT-6D	SBT-6U	SBT-6A	SBT-6D
	Post Rain Event	No			No			No		
	Unit	7/03/2023			14/03/2023			20/03/2023		
pH	pH	8.66	8.61	8.59	8.87	8.63	8.63	7.48	7.26	7.46
oil/grease	Visual Inspection	Not Visible	Not Visible	Not Visible	Not Visible	Not Visible	Not Visible	Not Visible	Not Visible	Not Visible
Electrical Conductivity	µS/cm	1220	1130	1130	152	1290	1160	1220	1040	990
Total Suspended Solids	mg/L	94	124	81	68	529	150	54	57	102
Aluminium	mg/L	2.28	2.8	1.35	1.05	10.8	1.62	0.56	0.68	0.48
Chromium (VI)	mg/L	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	0.004	0.005	<0.001
Copper	mg/L	0.002	0.003	<0.001	0.003	0.019	0.002	0.002	0.002	0.001
Zinc	mg/L	0.012	0.008	<0.005	0.006	0.04	0.007	0.018	0.009	0.011
Total Phosphorous	mg/L	0.15	0.12	0.06	0.53	<0.20	<0.10	0.18	0.21	0.14
Total Nitrogen	mg/L	1.3	1.1	1	1.9	3.1	2.6	1.3	1.5	1.4
Ammonia	mg/L	0.13	0.02	0.02	0.12	0.06	0.04	0.02	0.01	0.02



Table 13: March Surface Water Monitoring Results at Receiving Waterways at SBT 7 (CMF)

Analyte		SBT-7U	SBT-7A	SBT-7D	SBT-7U	SBT-7A	SBT-7D	SBT-7U	SBT-7A	SBT-7D
	Post Rain Event	No			No			No		
	Unit	7/03/2023			14/03/2023			20/03/2023		
pH	pH	8.32	8.6	8.26	8.63	8.51	8.2	7.74	6.92	7.99
Electrical Conductivity	µS/cm	5340	1550	6240	369	1650	1160	6140	2560	6300
Total Suspended Solids	mg/L	25	45	7	216	36	10	15	25	9
Aluminium	mg/L	0.19	1.14	0.13	7.13	2.40	0.48	0.19	0.27	0.08
Chromium (VI)	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.001	0.002	<0.001
Copper	mg/L	0.004	0.003	0.001	0.024	0.026	0.008	0.001	0.001	0.002
Zinc	mg/L	0.014	0.016	<0.005	0.104	0.172	0.98	0.011	0.017	<0.005
Total Phosphorous	mg/L	0.09	0.05	0.06	<0.20	0.13	0.07	0.18	0.04	0.07
Total Nitrogen	mg/L	1	1.4	1.6	<2.0	1.1	1.2	1	1	1.6
Ammonia	mg/L	0.2	0.29	0.11	0.02	<0.01	0.06	0.18	0.29	0.12



Table 14: March Surface Water Monitoring Results at Receiving Waterways at SBT 8 (STM)

Analyte		SBT-8U	SBT-8A	SBT-8D	SBT-8U	SBT-8A	SBT-8D	SBT-8U	SBT-8A	SBT-8D
	Post Rain Event	No			No			No		
	Unit	7/03/2023			14/03/2023			20/03/2023		
pH	pH	7.48	7.51	7.52	7.62	8.51	8.1	7.57	7.43	7.41
Electrical Conductivity	µS/cm	1030	862	863	9120	6250	7550	500	492	489
Total Suspended Solids	mg/L	24	37	30	18	6	29	21	24	18
Aluminium	mg/L	0.92	0.90	0.88	0.33	0.03	0.34	0.33	0.45	0.51
Chromium (VI)	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001	0.002
Copper	mg/L	0.002	0.002	0.002	0.003	0.002	0.002	0.001	0.001	0.001
Zinc	mg/L	0.006	0.012	0.009	0.019	0.641	0.013	<0.005	<0.005	<0.005
Total Phosphorous	mg/L	0.12	0.07	0.07	0.09	0.01	0.15	0.08	0.08	0.09
Total Nitrogen	mg/L	0.9	0.8	0.7	1	0.3	1	0.8	0.7	0.7
Ammonia	mg/L	0.06	0.07	0.04	0.03	0.1	0.05	0.07	0.02	0.02



Table 15: March Surface Water Monitoring Results at Receiving Waterways at SBT 9 (BSF)

Analyte		SBT-9U	SBT-9A	SBT-9D	SBT-9U	SBT-9A	SBT-9D	SBT-9U	SBT-9A	SBT-9D
	Post Rain Event	No			No			No		
	Unit	7/03/2023			14/03/2023			20/03/2023		
pH	pH	8.37	8.34	8.09	8.34	8.33	8.28	7.7	7.7	7.6
Electrical Conductivity	µS/cm	4570	4620	4700	4820	4820	4770	2380	2310	2240
Total Suspended Solids	mg/L	<5	10	26	126	6	<5	30	10	10
Aluminium	mg/L	0.05	0.06	0.04	0.05	0.16	1.43	0.16	0.17	0.28
Chromium (VI)	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001	<0.001
Copper	mg/L	0.004	<0.001	<0.001	0.002	0.002	0.006	0.002	0.002	0.002
Zinc	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	0.009	<0.005	<0.005	<0.005
Total Phosphorous	mg/L	0.06	0.08	0.4	0.08	0.13	0.11	0.08	0.11	0.08
Total Nitrogen	mg/L	0.9	1	1.1	1.1	1.2	1.2	0.9	0.9	0.8
Ammonia	mg/L	<0.01	<0.01	0.1	0.02	0.01	0.04	0.03	0.04	0.04



Table 16: March Surface Water Monitoring Results at Receiving Waterways at SBT 10 (AEC)

Analyte		SBT-9U	SBT-9A	SBT-9D	SBT-9U	SBT-9A	SBT-9D	SBT-9U	SBT-9A	SBT-9D
	Post Rain Event	No			No			No		
	Unit	7/03/2023			14/03/2023			20/03/2023		
pH	pH	7.75	7.71	7.58	7.63	7.71	7.69	7.68	7.69	7.69
Electrical Conductivity	µS/cm	2690	2700	2660	2110	2090	2110	4200	4180	4210
Total Suspended Solids	mg/L	<5	26	62	8	9	7	9	14	16
Aluminium	mg/L	0.01	0.02	0.11	0.12	0.15	0.16	0.22	0.05	0.06
Chromium (VI)	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001	<0.001
Copper	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	<0.001
Zinc	mg/L	<0.005	<0.005	0.005	<0.005	0.009	0.006	<0.005	0.013	<0.005
Total Phosphorous	mg/L	0.03	0.04	0.1	0.08	0.15	0.08	0.05	0.06	0.05
Total Nitrogen	mg/L	0.7	0.7	1.4	0.15	1	0.8	0.6	0.9	0.7
Ammonia	mg/L	<0.01	<0.01	<0.01	0.04	0.04	0.03	0.02	0.06	0.02

