



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

6-Monthly Surface Water Monitoring Report: April to October 2024

Sydney Metro Western Sydney Airport Station Boxes and Tunnelling Works

Project number	WSA-200-SBT
Document number	SMWSASBT-CPG-SWD-SW000-EN-RPT-295460
Revision date	08/11/2024
Revision	01

Document approval

Rev	Date	Prepared by	Reviewed by	Approved by
01	08/11/2024	J Cosier	A Smith	E Kline
Signature		<i>Josh Cosier</i>	<i>Andrew Smith</i>	<i>Emma Kline</i>

Details of Revision Amendments

Document Control

The Project Director is responsible for ensuring that this report is reviewed and approved. The Project Discipline Director is responsible for updating this plan to reflect changes to construction, legal and other requirements, as required.

Amendments

Any revisions or amendments must be approved by the Project Director and/or client before being distributed/implemented.

Revision Details

Revision	Details
01	6-Monthly Final issued to stakeholders



Contents

1. Introduction	4
2.1 Background	4
2.1 Station Boxes and Tunnelling Works	6
2.1 Purpose of this report.....	6
2.1 On-site Activity.....	7
2. Surface Water Monitoring in receiving waters	8
2.1 Performance Criteria.....	9
3. Discussion	10
2.1 Surrounding Land Uses	10
2.1 Observations	11
Annexure A Water Monitoring results	13
Annexure B Controlled Basin Discharge Register.....	15
Annexure C Upstream & Downstream Surface Water Monitoring Locations	16
Annexure D Site Discharge Locations EPL Premise Maps Rev 2	19
Annexure E Sampling Results SSTV Comparison	20

Tables

Table 1: Environmental Monitoring Reporting Requirements	7
Table 2: Conditions of Approval (CoA).....	7
Table 3: Site Specific Receiving Waterways	8
Table 4. Waterway Monitoring Locations	9
Table 6: Water monitoring Data SBT 6 (OHE).....	13
Table 7: Water Monitoring results SBT 7 (CMF).....	13
Table 8: Water Monitoring Results SBT 9 (BSF).....	14

Figures

Figure 1: Overview of the project	5
Figure 2: Orchard Hills Sampling Location SBT-6	16
Figure 3: Claremont Meadows Sampling Location SBT-7	17
Figure 4: Bringelly sampling location SBT-8.....	18



1. Introduction

2.1 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 Bradfield (formerly 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: Overview of the project)

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 (– 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 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.





FIGURE 1: OVERVIEW OF THE PROJECT



2.1 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 Bradfield 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 Bradfield (formerly 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 or if on-airport, handed back to Western Sydney Airport Corporation (WSACo) for their future works.

2.1 Purpose of this report

The purpose of this 6-Monthly Surface Water Monitoring Report is to present results of the Surface Water Quality Monitoring Program (SWQMP) outlined in the SBT Construction Environmental Management Plan (CEMP) and associated Sub-plans, including the results of the construction monitoring programs referred to in Condition C13 of the Infrastructure Approval.

This Surface Water Monitoring Report has been prepared to address Minister's Condition of Approval (CoA) C22 of the Infrastructure Approval (refer to Table 1). Per the SWQMP, this Report will be distributed to the stakeholders listed in Tables Table 1 and Table 2. The Report will be provided 30 days after end of the reporting period.

Environmental monitoring is undertaken to:

- Validate the predicted impacts of the Infrastructure Works (as discussed in SWQMP) through compliance against the EPL criteria
- Measure the effectiveness of environmental controls in minimising and managing environmental impacts.

The monitoring requirements for surface water are included in the Soil and Water Management Plan (specifically the SWQMP), refer Table 1. All monitoring results are presented in Annexure A and B. Annexure C and D shows the surface water monitoring locations.



TABLE 1: ENVIRONMENTAL MONITORING REPORTING REQUIREMENTS

CEMP or Sub-plan	Monitoring Program	Report	Distribution	Schedule (during construction)
Soil and Water Management Sub-Plan	Surface Water Quality Monitoring Program	Water Monitoring Report	30 days after end of reporting period to EPA, DPE, ER	Six-monthly

TABLE 2: CONDITIONS OF APPROVAL (CoA)

CoA	Detail	Addressed
C22	The results of the Construction Monitoring Programs must be submitted to the Planning Secretary, ER and relevant regulatory agencies, for information in the form of a Construction Monitoring Report at the frequency identified in the relevant Construction Monitoring Program.	This report is to be submitted to DPHI, ER and Sydney Metro

In accordance with Section 5.5 of the SWQMP, during construction, surface water quality data will be collected, tabulated and assessed against baseline conditions and performance criteria. The information provided is a summary and discussion of information provided monthly in the CPBG EPL reports which are posted on the CPBG web page.

2.1 On-site Activity

This report is to cover the monitoring period from 11 April 2024 to 11 October 2024. During this period, CPBG have completed all tunnelling within both north and south areas. Cross passage works including excavation have largely been completed. Water proofing and concrete lining works continue to be progressively completed within cross passages.

All metro station box and service facility sites have been established and currently have sediment basins and sumps installed where required per the Blue Book design. This has been achieved progressively from Project construction commencement as the sites have been established. WTPs are installed at all sites with commissioning completed.

No groundwater has been discharged from site. Groundwater has been processed through the WTPs but has not met discharge criteria therefore has not been discharged to the environment. CPBG has sent treated groundwater from northern tunnelling activities to a trade waste connection at Claremont Meadows if it couldn't be re-used on site. Similarly groundwater from southern tunnelling activities is being reused on CPBG airport sites or sent to an alternate trade waste connection.

During the reporting period a full handover has occurred of CPBG sites at St Marys (15/08/2024) and Bradfield (formerly Aerotropolis) (28/08/2024). These sites have been handed over to Sydney Metro and have not been monitored by CPBG after this time.

The current version of the EPL premise maps (Rev 27), approved by the EPA on 3 October 2024, can be seen in Annexure D.



2. Surface Water Monitoring in receiving waters

The SBT Works footprint lies entirely within the South Creek catchment. South Creek, a major tributary of the Hawkesbury-Nepean catchment, flows generally in a northerly direction from its headwaters near Narellan through to Windsor, where it joins the Hawkesbury River.

TABLE 3: SITE SPECIFIC RECEIVING WATERWAYS

Waterway	Worksite
South Creek	All
South Creek	St Marys Claremont Meadows Service Facility
South Creek	Orchard Hills
Badgerys Creek	Bringelly Service Facility
Thompsons Creek	Bradfield (formerly Aerotropolis Core)

South Creek is the receiving waterway for all creeks within the Project alignment.

During the reporting period, quarterly and wet-weather monitoring was undertaken in accordance with the Surface Water Quality Monitoring Program.

The Surface Water Quality Monitoring Program has been prepared and implemented to meet requirements of the EPL and CSSI 10051 Condition of Approval, including C13 and C21. This generally includes sampling post rainfall events and at least quarterly if no post rainfall sampling events occurring within that quarterly period.

Monitoring locations for WTP discharge are shown in the EPL as upstream and downstream of where the discharge point would occur if EPL criteria was met. These locations are identified in Annexure C. However it is noted, no groundwater was discharged from the WTP during the reporting period (nor has it to date).

Monitoring locations for sediment basin discharges are shown in the EPL also and included in Annexure D.



TABLE 4. WATERWAY MONITORING LOCATIONS

Site	Receiving Waterway	Sample ID	
		Upstream	Downstream
Orchard Hills	Unnamed tributary of South Creek	SBT-6U	SBT-6D
Claremont Meadows	Claremont Creek	SBT-7U	SBT-7D
Bringelly	Badgerys Creek	SBT-9U	SBT-9D

Due to the setting and inaccessibility of the waterways, the preferred sampling design was not possible as safe and public access immediately upstream and downstream of the Project’s discharge outlets is not available. Sampling locations were historically selected as close as possible to where potential discharges enter receiving waterways, however multiple non-Project discharges with the potential to alter water quality also fall within the sampling zone.

2.1 Performance Criteria

Location specific performance criteria (site specific trigger values (SSTV)) were developed for downstream (impact) surface water monitoring locations. SSTVs were initially developed for appropriate parameters using baseline monitoring data and ANZECC (2000) guideline criteria for slightly to moderately disturbed ecosystems (generally protecting 95% of species).

SSTVs are identified in the SWQMP and would be used to assess potential impacts on waterways in the instance of a breach of EPL criteria or in the absence of an EPL. SBT hold EPL 21672 which authorises discharge of water from specific locations and establishes criteria that differ from the SSTVs. The SWQMP identifies in such circumstances the EPL, and any conditions and criteria of that EPL, take precedence.

The SSTVs provide for an indication of a potential change in water quality. Per the SWQMP a management response would be initiated if any of the following occurs:

- A parameter exceeds the SSTV for any single monitoring event by more than 30%
- A parameter downstream exceeds the corresponding parameter upstream for any single monitoring event by more than 20%
- A parameter exceeds the SSTV for two consecutive monitoring events
- A parameter exceeds the SSTV for half of the sampling events in a twelve-month period

For the duration of the reporting period, the EPL has been in force, and water discharged from the licenced discharge points. To date only sediment basin discharges have occurred. No water has been discharged from SBT’s WTPs.

Surface water monitoring of upstream and downstream locations within the waterways is to determine potential impacts from WTP discharges under the EPL, however as WTP discharges have not occurred to date, the upstream and downstream monitoring was not triggered under the EPL. Nevertheless, upstream and downstream monitoring has been undertaken as per the SWQMP, quarterly wet weather and analysed against the SSTV trigger levels to confirm no impacts from SBT.



3. Discussion

WTP treated groundwater effluent across all SBT sites has not met surface water discharge criteria, and therefore SBT has not discharged from site into the local waterways. This has reduced the potential for SBT to impact the surrounding waterways. Instead treated groundwater was sent off-site via trade waste (to be reused by Sydney Water) or reused on site within the tunnels for dust suppression on the TBM spoil conveyors.

All surface water monitoring was undertaken per the sampling frequencies as outlined in the EPL and SWQMP (Section 3.2.4). In this reporting period, sampling was only required post rainfall events or quarterly if no post rainfall sampling events are triggered within that period. A Rainfall Event that triggers a wet weather monitoring event is defined in Section 3.2.4 of the SWQMP, “when a continuous rainfall event of >20mm 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.

During the reporting period, there were three sampling events. One sampling event was in response to a Rain Event (at Bringelly), on 4 June 2024, where surface water runoff from site was observed. Two other sampling events were undertaken at quarterly intervals and were not triggered by Rain Events. The results of these sampling events are shown in Annexure A.

The Project is located in a variety of surrounding land uses, which include industrial, residential, commercial and rural land uses. These all contribute to water quality in different ways and will have an impact on the varying water quality conditions measured over the last 6 months. These factors are discussed in section 3.1.

All monitoring results have been reviewed and shown in Annexure A, with the upstream and downstream data compared to see the impact the adjacent sampling site has after the mixing zone. As there has been no WTP discharges to date, the upstream and downstream monitoring results are generally reflective of external sources and are unlikely to be impacted by SBT works.

Where results are shown as “NA” in Annexure A, these were due to a lack of water at the sampling site.

2.1 Surrounding Land Uses

This section addresses the setting of each sampling location and waterway, highlighting the differing land uses around the sampling points. Whilst undertaking regular monitoring activities, the samplers would observe local conditions including water levels, visual quality and any activities occurring around the sampling sites, and where any irregular events are seen, they are recorded within this 6-monthly monitoring report. During this reporting period, no irregular events were recorded.

The upstream waterways receive discharges from the surrounding land users which will flow through and passed the SBT discharge locations..

The predominant land uses surround the sampling locations are described below (also refer Annexure D):

- SBT-6U and SBT-6D are located in a semi-rural setting with vegetated swales up and down stream of the sampling location. This ephemeral swale cannot always be sampled when



conditions are dry. Following rainfall water from various external sources would flow into the swale.

- SBT-7U and SBT-7D is a drainage line which collects water off road surfaces from Gipps Street and the Great Western Highway. Following rainfall, the water has the potential to pick up road residue and discharge it to the waterway.
- SBT-9U and SBT-9D is downstream of the Western Sydney Airport catchment and surrounding farmlands which have historically contributed runoff to the waterway. As noted in the WSA EIS, nutrient loads are typically high and above ANZECC guidelines. This creek is also ephemeral and as a result samples cannot always be taken.

2.1 Observations

SBT has not discharged any groundwater to the environment via the onsite WTPs. All treated water has been used as dust suppression within the tunnel on site or sent off site via a Sydney Water trade waste connection. Only releases of surface water from sediment basins, once tested and confirmed to be compliant with EPL discharge criteria, have been discharged to the environment from SBT sites during the reporting period. As noted in Annexure B, all sediment basin discharges were into vegetated land to allow for infiltration and not directly into the waterway. It is unlikely any water discharged from Bringelly or Orchard Hills would reach the waterway due to the large opportunity for prior infiltration.

SBT handed St Marys back to Sydney Metro on 15 August 2024 and Bradfield (formerly Aerotropolis) on 28 August 2024. In late March 2024, SBT was handed a small work area at St Marys and Bradfield to retrieve the TBMs for approximately 6 months. No EPL discharge points were required at either location, with SBT managing all surface water from site as per the Soil and Water Management Plan. Hence no surface water monitoring has occurred in these areas over this reporting period.

Sampling requirements were less than previous 6-monthly periods as there were fewer rainfall events triggered. As sampling is only required post rainfall events and at least quarterly if no post rainfall sampling events occurred within that quarterly period, only three sampling events were undertaken during the period.

The sampling results shown in Annexure A shows the water quality during sampling compared to the EPL (for basin discharges) and SSTV triggers (for upstream and downstream) criteria for each site. While some exceedances of the SSTV triggers were observed, these are unlikely to have resulted from SBT works due to the small volumes of water discharged from site.

At SBT-6D aluminium, copper and ammonia within the waterways was above the SWQMP triggers. Per the SWQMP, a review was undertaken to determine the significance of the exceedances and possible causes. The review assessed the baseline data for the waterway, recent rainfall records, other activities within the catchment and recent activities including erosion /sediment control compliance onsite. The increased levels were not able to be attributed to SBT works, with these levels consistent with previous monitoring periods upstream.

Similarly the results also show an increase in aluminium, ammonia, electrical conductivity and pH between up and down stream at SBT-7D which is also consistent with previous sampling results



throughout the project duration and during review, no SBT activities were found to be a likely cause of these increases.

At SBT-9D Total Suspended Solids, copper, phosphorus and nitrogen were observed above the SSTV levels. Upon review, these were found to be consistent with previous monitoring results and unlikely to have been impacted by SBT activities.

These waterways are affected by rainfall events and water entering the catchment from external sources as listed in 3.1 Surrounding Land Uses. Sampling results across the period have shown some localised differences between upstream and downstream results at all locations, these have not been able to be attributed to SBT works and are likely a result of external factors, as SBT were not discharging during most of these times.

There have been no significant adjacent land use changes occurring within the waterway identified at each location during this monitoring reporting period.

Where rain events greater than 10mm in 24 hours is predicted, SBT would conduct pre and post rainfall inspections, to determine any on-site activity that may impact the water quality of the surrounding water. These inspections check all ERSED controls, including sediment basins for overtopping as well as any other potential for dirty water to escape the site.

During the 6-month reporting period a total rainfall of 205.2mm has fallen in the north (BOM Penrith Lakes AWS) and 263mm in the south (BOM Badgerys Creek AWS). The largest 5-day rain event was 35.4mm and 33.2mm respectively for the north and south between the 2nd of May and 6th of May 2024. The highest continuous rainfall event i.e. consecutive days of rainfall, was 61.2 mm on the 1st of May till the 13th of May 2024 in the north (BOM Penrith Lakes AWS) and 50.2 mm on the 3rd of May till the 13th of May in the south (BOM Badgerys Creek AWS).

Between the April and October 2024 reporting period there were 14 discharges from SBT site sediment basins. Of these 14 discharges, only one triggered sampling to be undertaken due to the surface water run-off from site during the rain event. All other discharges occurred after the rain event had ended and following monitoring and treatment within the basin as required.

All SBT sediment basin discharges met EPL discharge criteria prior to discharge. A summary of discharges are shown in Annexure B



Annexure A Water Monitoring results

TABLE 5: WATER MONITORING DATA SBT 6 (OHE)

Analyte	Post Rain Event? Unit	SBT-6U*	SBT-6D	SBT-6U*	SBT-6D	SBT-6 SSTV
		No ¹		No ¹		
		13/06/2024		10/09/2024		
pH	pH	NA	7.39	NA	7.59	6.5-8
Oil/grease	Visual Inspection	Not Visible	Not Visible	Not Visible	Not Visible	Not Visible
Turbidity	NTU	NA	11.9	NA	117 ²	40
Electrical Conductivity	µS/cm	NA	3450	NA	1240	2200
Total Suspended Solids	mg/L	NA	12	NA	76 ²	25
Aluminium	mg/L	NA	5.11 ²	NA	0.36 ²	0.08
Chromium (VI)	mg/L	NA	<0.001	NA	<0.001	0.006
Copper	mg/L	NA	0.007 ²	NA	0.002	0.006
Zinc	mg/L	NA	0.017	NA	<0.005	0.014
Total Phosphorous	mg/L	NA	0.03	NA	0.12	0.14
Total Nitrogen	mg/L	NA	0.08	NA	1	1.33
Ammonia	mg/L	NA	0.25 ²	NA	0.04 ²	0.02

1: Sampling was undertaken for quarterly monitoring. Sampling wasn't triggered by a rainfall event.

2: Above SBT SSTV

* Due to low water levels in waterway, samples were unable to be taken.

TABLE 6: WATER MONITORING RESULTS SBT 7 (CMF)

Analyte	Post Rain Event? Unit	SBT-7U	SBT-7D	SBT-7U	SBT-7D	SBT-7 SSTV
		No ¹		No ¹		
		13/06/2024		10/09/2024		
pH	pH	8.01 ²	8.29 ²	8.18 ²	8.21 ²	7.78
Oil/grease	Visual Inspection	Not Visible	Not Visible	Not Visible	Not Visible	Not Visible
Turbidity	NTU	12	19	8.3	5	46
Electrical Conductivity	µS/cm	2580 ²	2820 ²	7200 ²	7210 ²	1130
Total Suspended Solids	mg/L	10	12	15	13	23
Aluminium	mg/L	0.56 ²	0.64 ²	0.11 ²	0.12 ²	0.0001
Chromium (VI)	mg/L	<0.001	<0.001	<0.001	<0.001	-
Copper	mg/L	0.004 ²	0.004	0.002	0.003	0.008
Zinc	mg/L	0.009	0.012	0.009	0.006	0.030
Total Phosphorous	mg/L	0.06	0.06	0.1	0.05	0.14
Total Nitrogen	mg/L	0.8	0.9	1.9 ²	1.8 ²	1.33
Ammonia	mg/L	0.06 ²	0.05 ²	0.07 ²	0.07 ²	0.02

1: Sampling was undertaken for quarterly monitoring. Sampling wasn't triggered by a rainfall event.

2: Above SBT SSTV



TABLE 7: WATER MONITORING RESULTS SBT 9 (BSF)

Analyte	Post Rain Event? Unit	SBT-9U	SBT-9D	SBT-9U	SBT-9D	SBT-9 SSTV
		Yes		No ¹		
		04/062024		10/09/2024		
pH	pH	7.74	7.82	7.55	7.23	6.5 - 8
Oil/grease	Visual Inspection	Not Visible	Not Visible	Not Visible	Not Visible	Not Visible
Turbidity	NTU	43	36.8	10.3	5.7	46
Electrical Conductivity	µS/cm	1890	1880	355	320	2200
Total Suspended Solids	mg/L	36* ²	37* ²	11	8	23
Aluminium	mg/L	0.23	0.34	0.45	0.72	1.46
Chromium (VI)	mg/L	0.001	0.001	<0.001	<0.001	0.001
Copper	mg/L	0.001	0.001	0.001	0.002 ²	0.0014
Zinc	mg/L	<0.005	<0.005	<0.005	<0.005	-
Total Phosphorous	mg/L	0.12 ²	0.14 ²	0.22 ²	0.18 ²	0.091
Total Nitrogen	mg/L	1.1	1.4 ²	2.8 ²	2.2 ²	1.36
Ammonia	mg/L	0.03	0.04	0.06	0.04	0.09

1: Sampling was undertaken for quarterly monitoring. Sampling wasn't triggered by a rainfall event.

2: Above SBT SSTV

*Total suspended solids was the only analyte that was higher during the rain event sampling, which can be attributed to sediment run-off in the wider catchment. Due to the setting of the water way and the minor volumes of water that overflowed from the SBT sediment basin it is unlikely that SBT influenced the water quality. The TSS amount is lower than the EPL discharge criteria.



Annexure B Controlled Basin Discharge Register

Site Location	Discharge Monitoring Point ID	Type of Monitoring Point	Type of Discharge Point	Date	Discharge Permit No.	Oil and Grease (Visual Inspection)	pH (6.5 – 8.5)	Turbidity (50 NTU)
Bringelly	SBT-011	Sediment Basin	Discharge into vegetated / stabilized land	01/04/2024	133	Not visible	8.01	46.7
Bringelly	SBT-011	Sediment Basin	Discharge into vegetated / stabilized land	20/04/2024	134	Not visible	7.81	7.5
Claremont Meadows	SBT-003	Sediment Basin	Discharge into vegetated / stabilized land	11/04/2024	135	Not visible	7.14	6
Orchard Hills	SBT-005	Sediment Basin	Discharge into vegetated / stabilized land	18/05/24	137	Not visible	7.42	45.1
Claremont Meadows	SBT-003	Sediment Basin	Discharge into vegetated / stabilized land	17/05/24	138	Not visible	7.74	35
Bringelly	SBT-011	Sediment Basin	Discharge into vegetated / stabilized land	20/05/24	139	Not visible	8.47	29
Claremont Meadows	SBT-003	Sediment Basin	Discharge into vegetated / stabilized land	02/06/2024	140	Not visible	7.76	47.7
Orchard Hills	SBT-005	Sediment Basin	Discharge into vegetated / stabilized land	13/06/2024	141	Not visible	7.58	38.2
Orchard Hills	SBT-006	Sediment Basin	Discharge into vegetated / stabilized land	01/07/2024	142	Not visible	8.33	47
Orchard Hills	SBT-006	Sediment Basin	Discharge into vegetated / stabilized land	11/07/2024	143	Not visible	8.01	24.1
Claremont Meadows	SBT-003	Sediment Basin	Discharge into vegetated / stabilized land	19/08/2024	144	Not visible	8.46	41.3
Bringelly	SBT-011	Sediment Basin	Discharge into vegetated / stabilized land	21/08/2024	145	Not visible	6.99	30.4
Orchard Hills	SBT-006	Sediment Basin	Discharge into vegetated / stabilized land	3/10/2024	146	Not visible	7.47	40.5
SBT EPL L2.4 Sediment Basin Discharge Criteria						Not visible	6.5 – 8.5	<50



Annexure C Upstream & Downstream Surface Water Monitoring Locations



FIGURE 2: ORCHARD HILLS SAMPLING LOCATION SBT-6



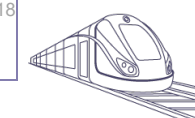


FIGURE 3: CLAREMONT MEADOWS SAMPLING LOCATION SBT-7





FIGURE 4: BRINGELLY SAMPLING LOCATION SBT-8

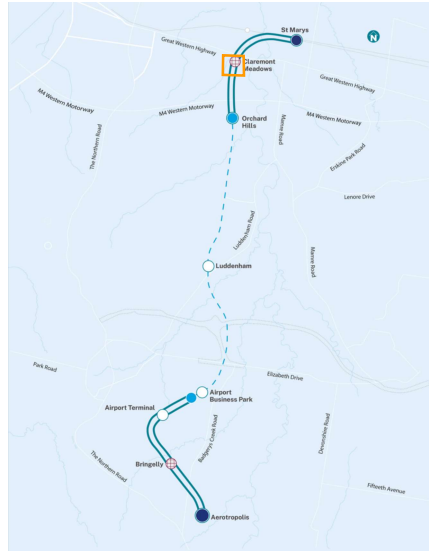


Annexure D Site Discharge Locations EPL Premise Maps Rev 2



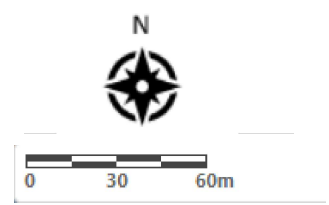
Revision	Comment	Issue Date
01	Initial Submission	30/05/2022
02	Areas added at Phillip St and Glossop St, St Marys for HV service relocation and under bore works	30/06/2022
03	Updated discharge register and premise maps reflecting the relevant locations associated with sediment basins <ul style="list-style-type: none"> St Marys Station Box: SBT-001 and SBT-002 Claremont Meadows Services Facility: SBT-003 and SBT-004 Orchard Hills Station Box and TBM Support: SBT-005, SBT-006, SBT-007, SBT-008, SBT-009, SBT-010, SBT-011 and SBT-012 Bringelly Services Facility: SBT-013 Aerotropolis Core: SBT-014 	28/08/2022
04	Updated discharge register and premise maps reflecting the relevant locations associated with the WTPs.	24/03/2023
05	<ul style="list-style-type: none"> St Marys Station Box: Reduced Premise area. Removed area on Phillip Street and Glossop Street. Discharge ID SBT 015 Inactive. Orchard Hills Station Box and TBM Support: Reduced Premise area. Removed areas of Kent and Lansdowne Road. Premise South of Lansdowne Road removed. Discharge ID SBT 008 and SBT 009 Inactive. 	31/07/2023
06	<ul style="list-style-type: none"> Orchard Hills Station Box and TBM Support: Premise area increased. The area south of Lansdowne Road was returned to CPBG by Sydney Metro to manage. Returned discharge location SBT 008. 	Not Submitted to the EPA
07	<ul style="list-style-type: none"> St Marys Station Box: Premise area increased. The area adjacent to the site along Phillip Street was added to allow for CPBG to undertake road works. Discharge locations SBT-001 and SBT-015 have been removed. Orchard Hills Station Box and TBM Support: Premise area decreased. The area south of Kent Road was handed over to Sydney Metro. Discharge location SBT-007 has moved to the East of Kent Road. Bringelly Services Facility: Discharge location SBT-012 has been removed. 	08/09/2023
08	<p>SBT Tunnel alignment added.</p> <ul style="list-style-type: none"> St Marys Station Box: Premise area decreased. Station box partial handover to Sydney Metro, CPBG to retain a section of the station box to finish stub tunnel works. Area North of Phillip Street handover to Sydney Metro, Water Treatment Plant area to be retained by CPBG for operations and discharge. 	21/09/2023
09	<ul style="list-style-type: none"> Aerotropolis Core premise was removed and handed over to Sydney Metro. Discharge location SBT-013 and SBT-014 has been removed. 	04/10/2023
10	<ul style="list-style-type: none"> Orchard Hills South premise removed. Discharge ID SBT-008 Removed 	10/10/2023
11	<ul style="list-style-type: none"> St Mary Premise reduced, handed over to Sydney Metro. Discharge ID SBT-002 Removed. Orchard Hills North premise reduced, handed over to Sydney Metro. 	31/10/2023
12	<ul style="list-style-type: none"> Orchard Hills North, premise increased to include Kent Road St Mary Premise removed. 	20/11/2023

13	<ul style="list-style-type: none"> Orchard Hills North premise reduced, completion of pothole repair works, Kent Road removed 	24/11/2023
14	<ul style="list-style-type: none"> Orchard Hills South premise added to allow for remediation works to take place. Discharge ID SBT-007 and SBT-015 added to premise. 	15/12/2023
15	<ul style="list-style-type: none"> Orchard Hills South premise removed, handed back to Sydney Metro. Discharge ID SBT-007 removed. 	18/12/2023
16	<ul style="list-style-type: none"> Orchard Hills South premise added to allow for remediation works to take place. Discharge ID SBT-007 added to premise. Orchard Hills North premise increased to allow for road repairs. 	10/01/2024
17	<ul style="list-style-type: none"> Orchard Hills South premise removed, handed back to Sydney Metro. Discharge ID SBT-007 removed. 	18/01/2024
18	<ul style="list-style-type: none"> Orchard Hills South premise added to allow for remediation works to take place. Discharge ID SBT-007 added to premise. 	07/02/2024
19	<ul style="list-style-type: none"> Orchard Hills South premise removed, handed back to Sydney Metro. Discharge ID SBT-007 removed. 	21/02/2024
20	<ul style="list-style-type: none"> Orchard Hills North premise increased to allow for road works to take place 	18/03/2024
21	<ul style="list-style-type: none"> Updated to include portions at St Marys and Aerotropolis where TBM retrieval works will commence. Orchard Hills North premise decreased to remove Kent Road. 	25/03/2024
22	<ul style="list-style-type: none"> Aerotropolis temporary premise area decreased. Handed over to Sydney Metro. 	01/05/2024
23	<ul style="list-style-type: none"> Updated to reinstate stormwater discharge point SBT-001 at St Marys. Refer to SMWSA-SBT Discharge Register Rev 15 	13/05/2024
24	<ul style="list-style-type: none"> Updated to remove portions at St Marys. Handed over to Sydney Metro 	15/08/2024
25	<ul style="list-style-type: none"> Updated to remove portions at Aerotropolis. Handed over to Sydney Metro 	28/08/2024
26	<ul style="list-style-type: none"> Orchard Hills North premise increased to allow for temporary works to take place 	27/09/2024
27	<ul style="list-style-type: none"> Orchard Hills North decreased temporary works completed. Discharge ID SBT-016 removed 	02/10/2024



- Basin Discharge Monitoring Point
- ⊗ Water Treatment Plant Discharge Monitoring Point
- CPBG Premise Area

Rev	Description	Date
C	SBT-005 Added	24/03/2022
B	SBT-003 and SBT-004 added	08/09/2023
A	Initial Submission	30/05/2022

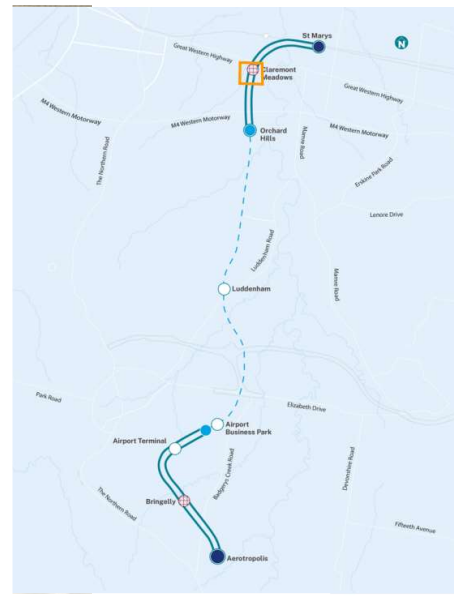


Status			
For Construction			
Designed By	JC	Rev	27
Date Printed	02/10/2024	Date Issued	02/10/2024
File Name	Claremont Meadows Services Facility Premise Map		
Doc Number	SMWSASBT-CPG-SWD-SW000-EN-RPT-295311		

Sydney Metro Western Sydney Airport Station Boxes and Tunnelling Works

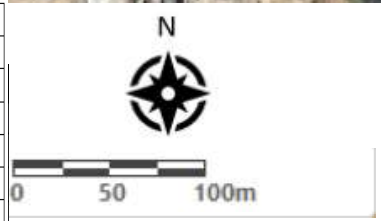
EPL Premise Map - Claremont Meadows

Page 1 of 6



- Basin Discharge Monitoring Point
- ⊗ Water Treatment Plant Discharge Monitoring Point
- CPBG Premise Area
- CPBG Tunnel Alignment

Rev	Description	Date
M	Temporary Premise area removed, SBT-016 Removed	02/10/2024
L	Temporary Premise area added	27/09/2024
K	Premise area decreased	28/03/2024
J	Premise area increased	18/01/2024
I	SBT-015	15/12/2023
H	Premise area decreased	24/11/2023

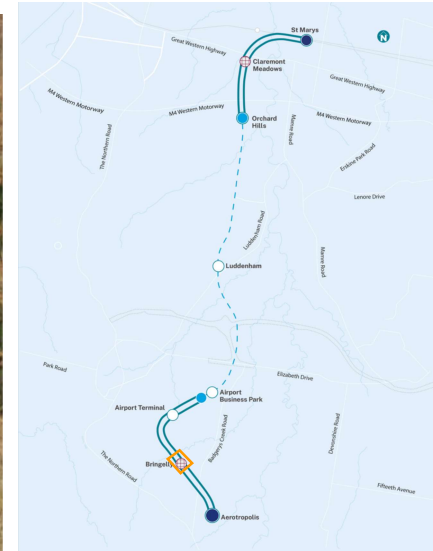
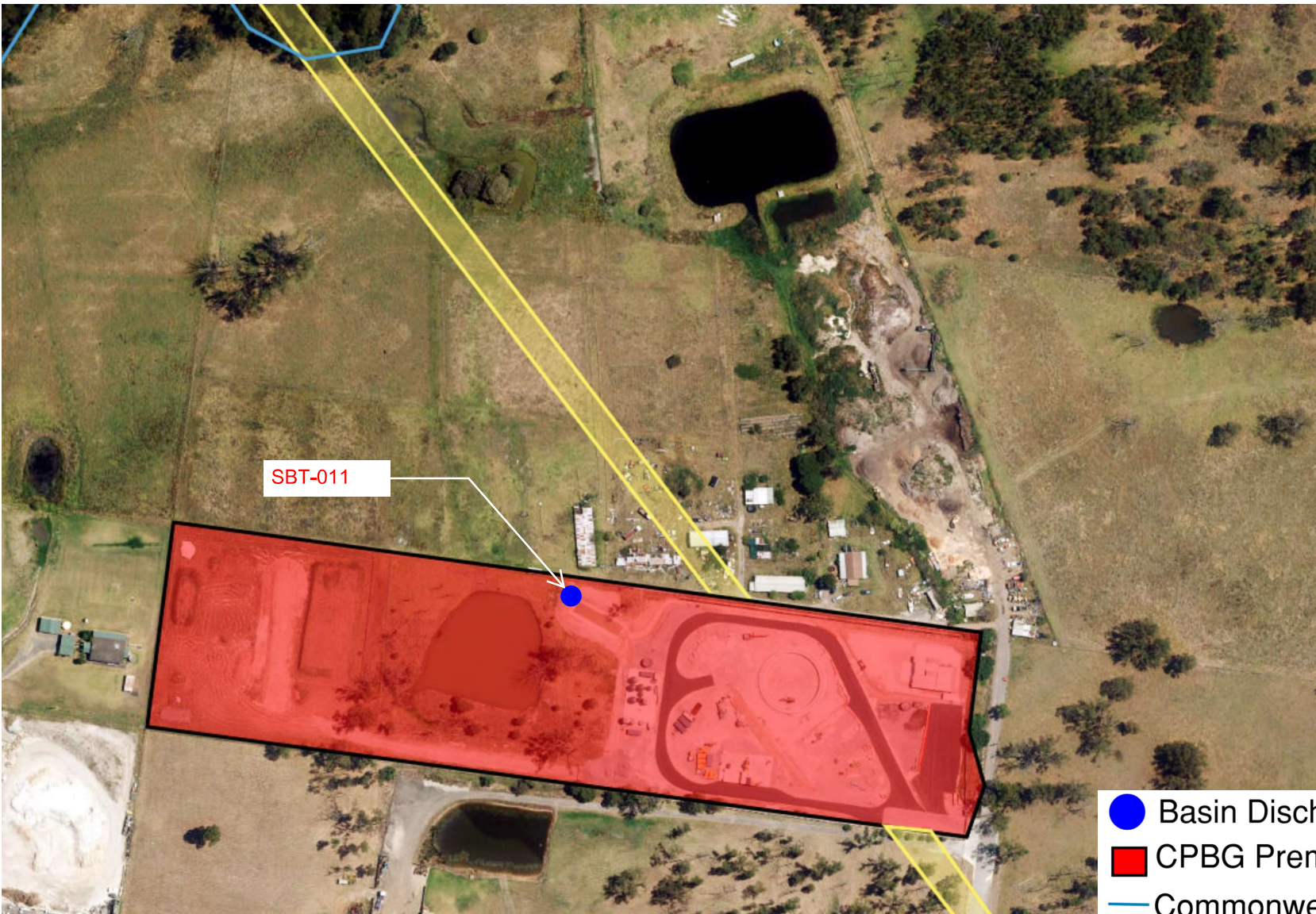


Status: For Construction			
Designed by	JC	Rev	27
Date Printed	02/10/2024	Date Issued	02/10/2024
File Name	Orchard Hills Station Box and TBM Support North Premise Map		
Doc Number	SMWSASBT-CPG-SWD-SW000-EN-RPT-295311		

Sydney Metro Western Sydney Airport Station Boxes and Tunnelling Works

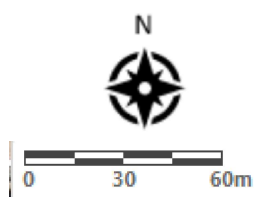
EPL Premise Map - Orchard Hills North

Page 2 of 6



- Basin Discharge Monitoring Point
- CPBG Premise Area
- Commonwealth Land Boundary
- CPBG Tunnel Alignment

Rev	Description	Date
D	SBT-012 removed	23/08/2022
C	SBT-012 added	23/08/2022
B	SBT-011 added	23/08/2022
A	Initial Submission	30/05/2022

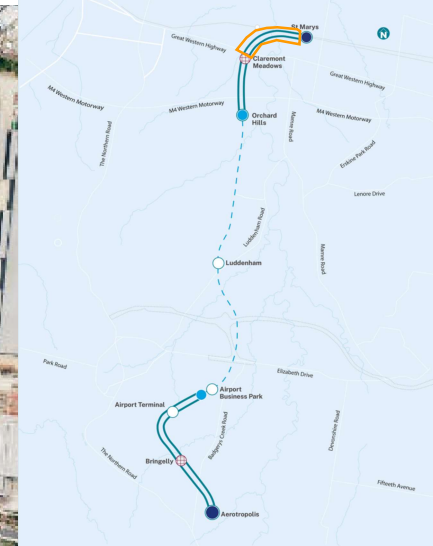
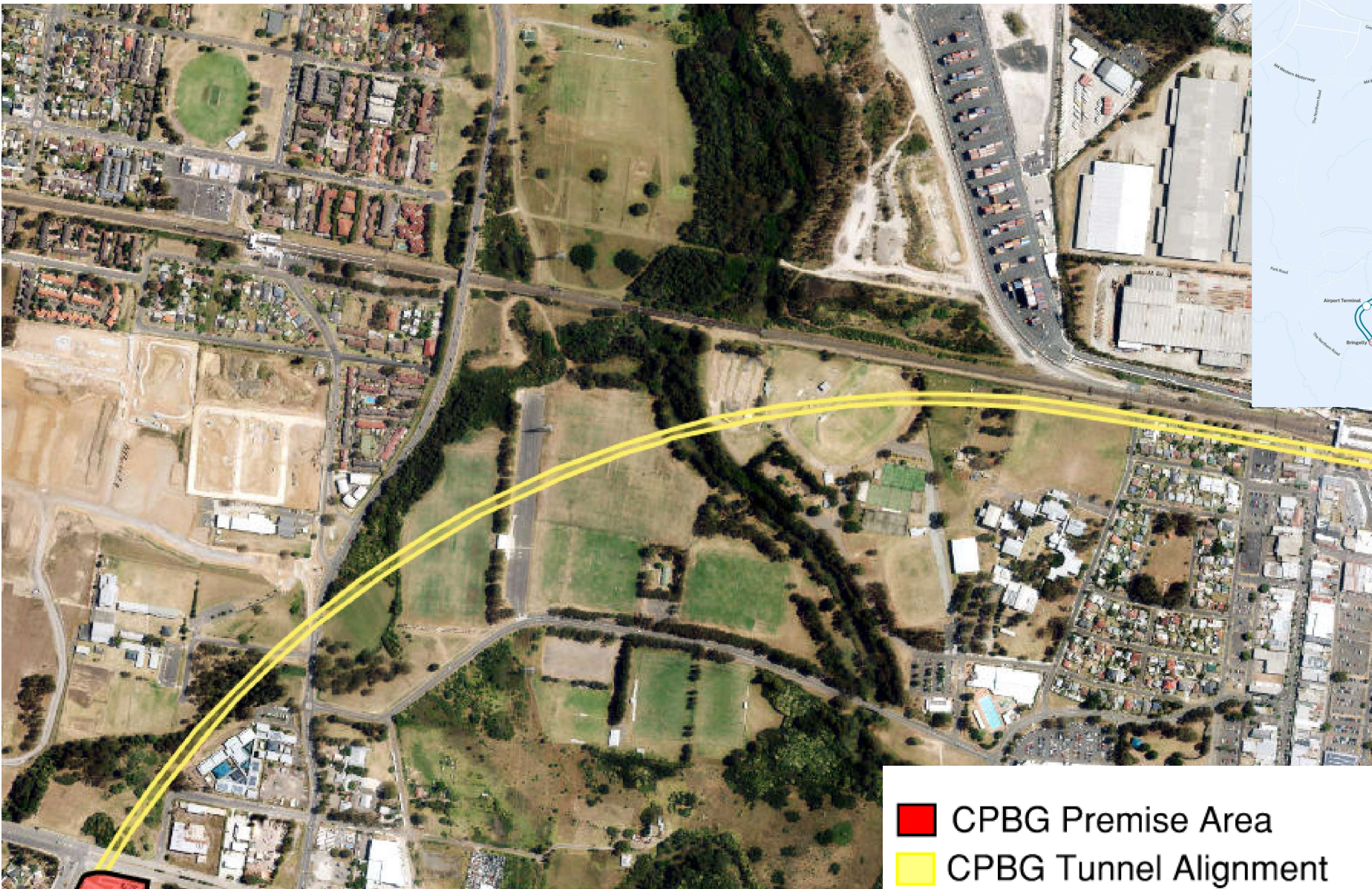


Status			
For Construction			
Designed By	JC	Rev	27
Date Printed	02/10/2024	Date Issued	02/10/2024
File Name	Bringelly Service Facility Premise Map		
Doc Number	SMWSASBT-CPG-SWD-SW000-EN-RPT-295311		

Sydney Metro Western Sydney Airport Station Boxes and Tunnelling Works

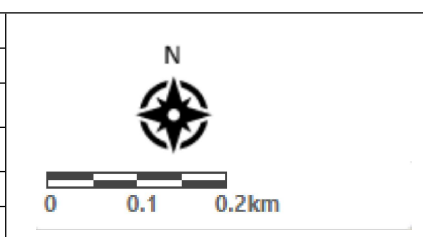
EPL Premise Map - Bringelly

Page 3 of 6



■ CPBG Premise Area
■ CPBG Tunnel Alignment

Rev	Description	Date
A	Tunnel alignment added	21/09/2023

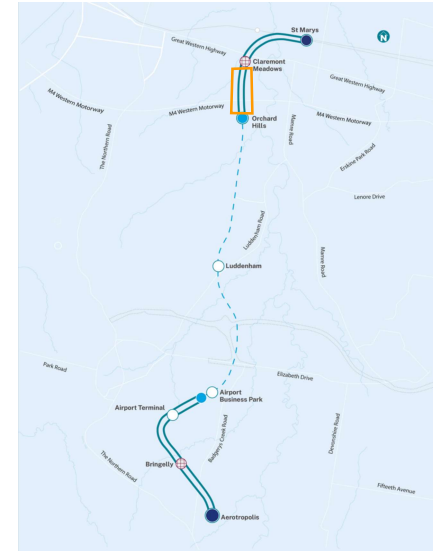


Status			
For Construction			
Designed By	JC	Rev	27
Date Printed	02/10/2024	Date Issued	02/10/2024
File Name	Tunnel Alignment St Marys to Claremont Meadows Premise Map		
Doc Number	SMWSASBT-CPG-SWD-SW000-EN-RPT-295311		

Sydney Metro Western Sydney Airport Station Boxes and Tunnelling Works

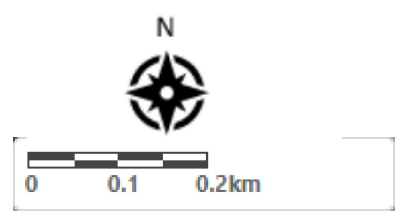
EPL Premise Map - Tunnel Alignment

Page 4 of 6



■ CPBG Premise Area
■ CPBG Tunnel Alignment

Rev	Description	Date
A	Tunnel alignment added	21/09/23

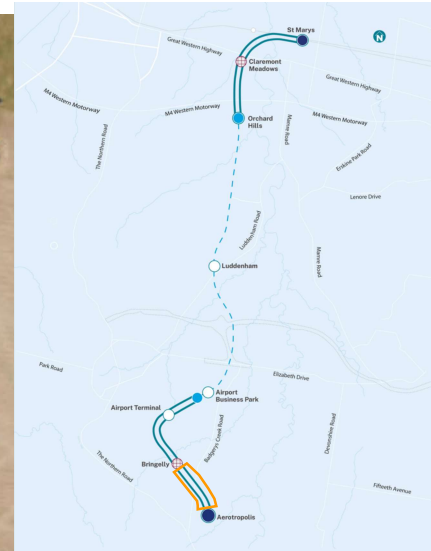


Status			
For Construction			
Designed By	JC	Rev	27
Date Printed	02/10/2024	Date Issued	02/10/2024
File Name	Tunnel Alignment Clarendon Meadows to Orchard Hills Premise Map		
Doc Number	SMWSASBT-CPG-SWD-SW000-EN-RPT-295311		

Sydney Metro Western Sydney Airport Station Boxes and Tunnelling Works

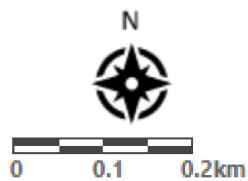
EPL Premise Map -Tunnel Alignment

Page 5 of 6



 CPBG Tunnel Alignment

Rev	Description	Date
B	Aerotropolis removed	04/10/23
A	Tunnel alignment added	21/09/23



Status			
For Construction			
Designed By	JC	Rev	27
Date Printed	02/10/2024	Date Issued	02/10/2024
File Name	Tunnel Alignment Bringelly to Aerotropolis Premise Map		
Doc Number	SMWSASBT-CPG-SWD-SW000-EN-RPT-295311		

Sydney Metro Western Sydney Airport Station Boxes and Tunnelling Works



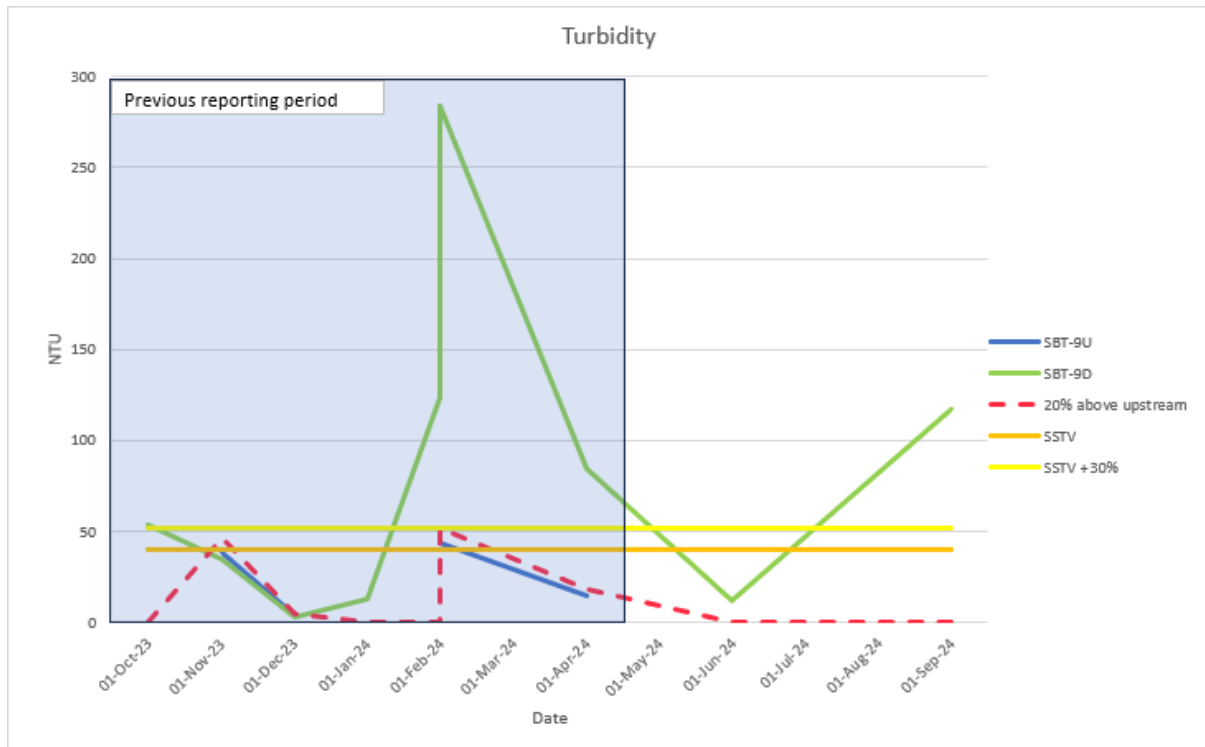

EPL Premise Map - Tunnel Alignment

Page 6 of 6

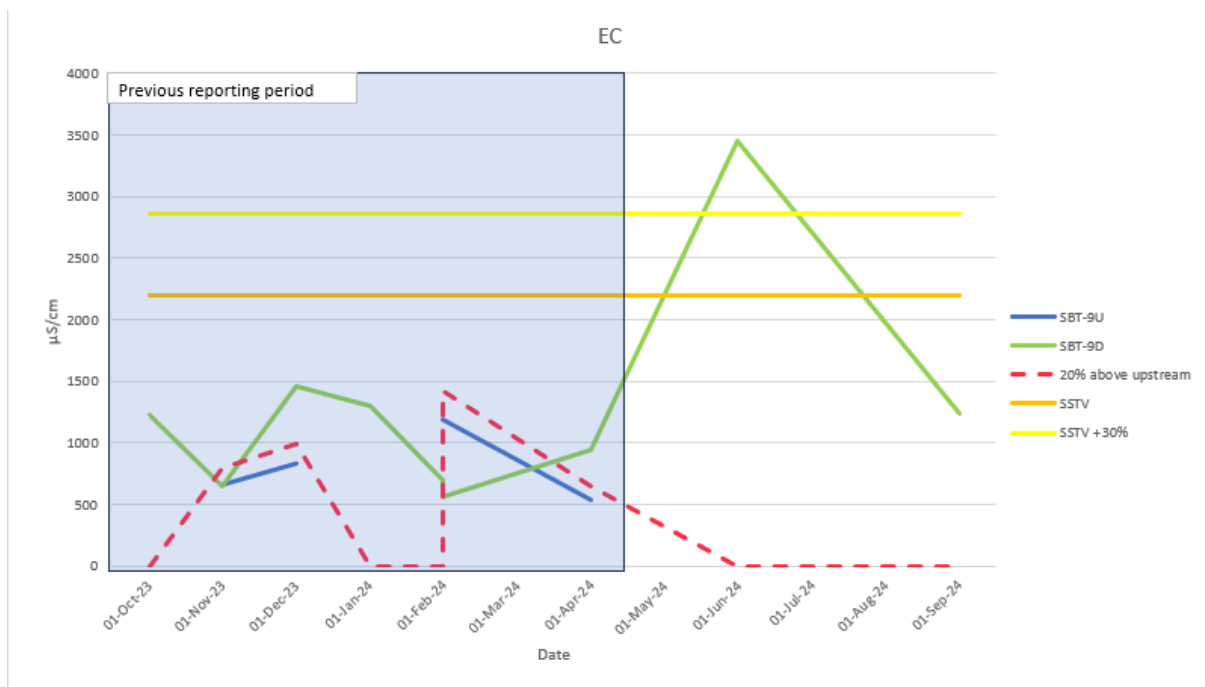
Annexure E Sampling Results SSTV Comparison



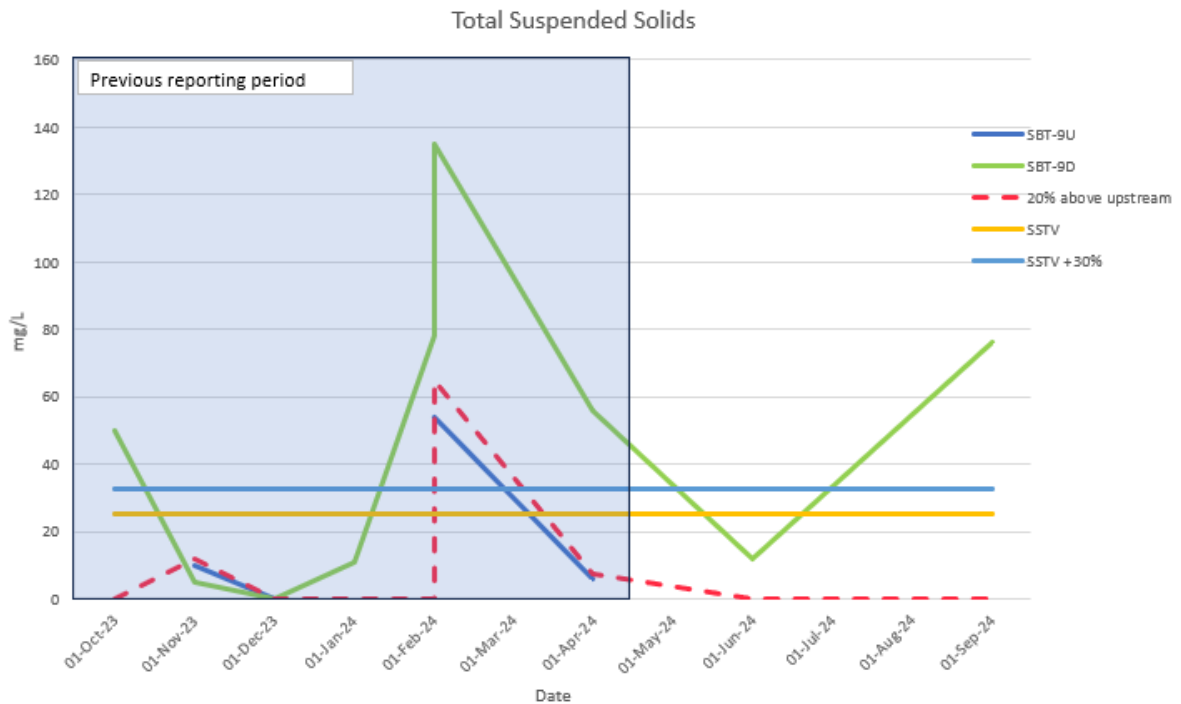
SBT 6 Orchard Hills



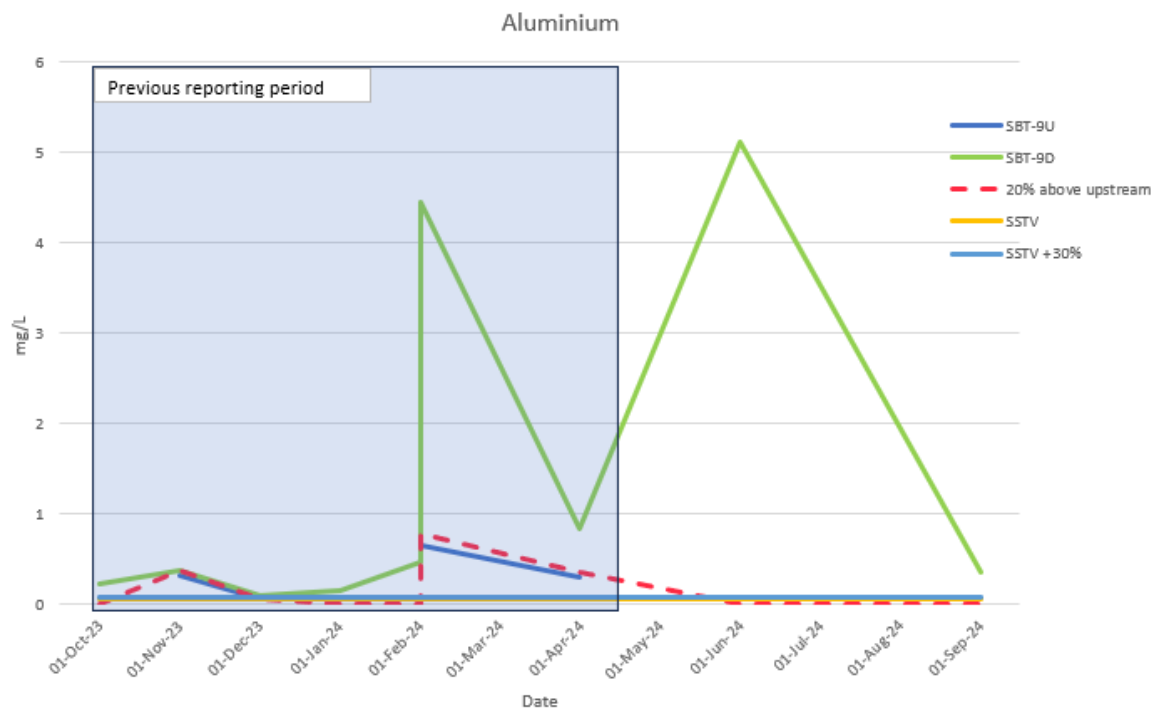
During the monitoring period one downstream sample was above the SSTV and the SSTV 30% threshold. On investigation, SBT did not discharge to waterways, nor had water leave site, around this sampling time, therefore SBT site activities were unlikely to be the cause of this event.



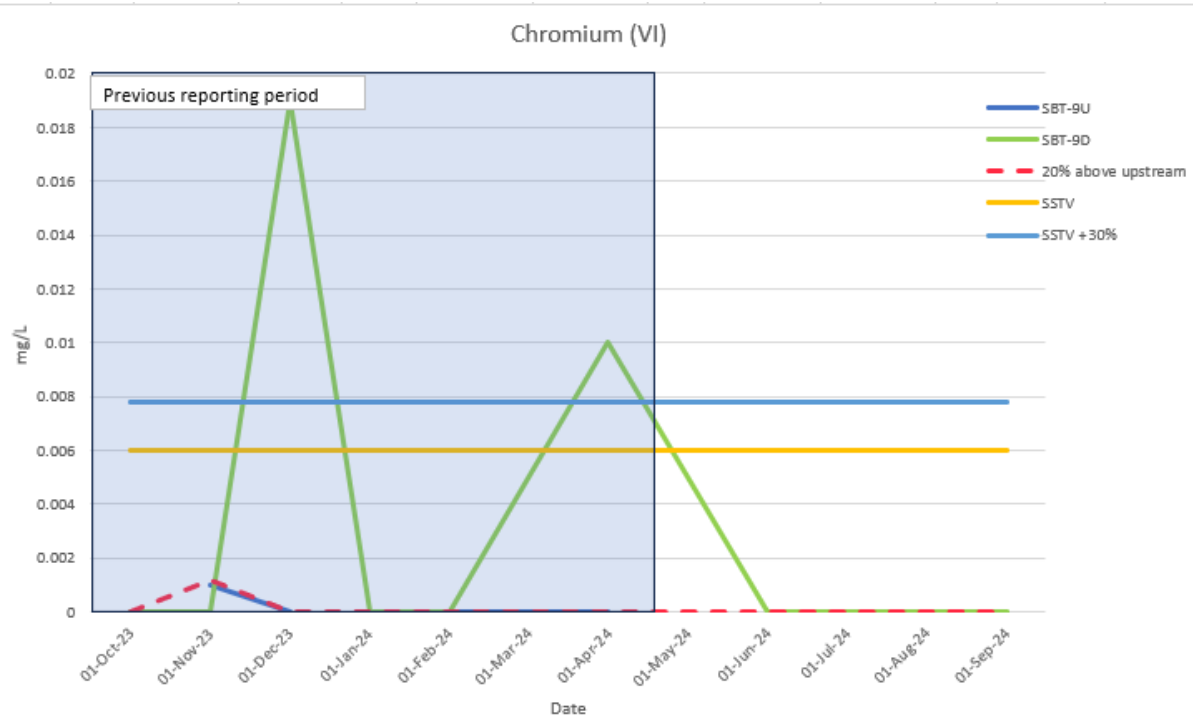
During the monitoring period one downstream sample was above the SSTV and the SSTV 30% threshold. On investigation, SBT did not discharge to waterways, nor had water leave site, around this sampling time, therefore SBT site activities were unlikely to be the cause of this event.



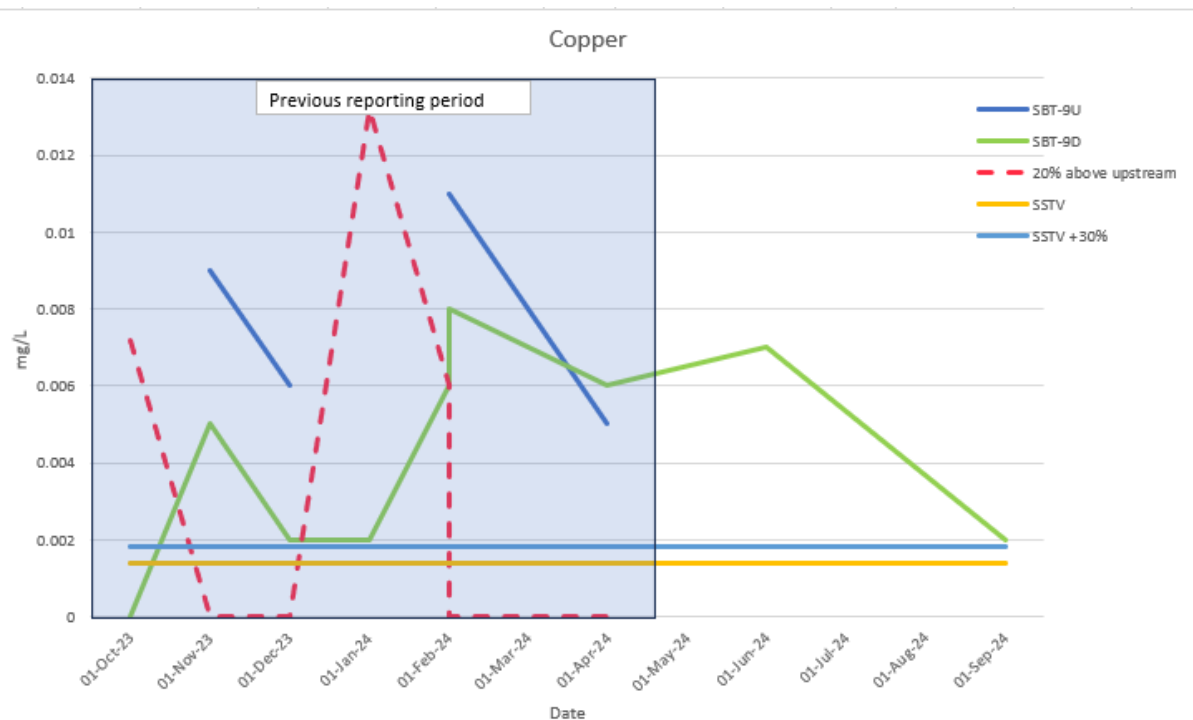
During the monitoring period one downstream sample was above the SSTV and the SSTV 30% threshold. On investigation, SBT did not discharge to waterways, nor had water leave site, around this sampling time, therefore SBT site activities were unlikely to be the cause of this event.



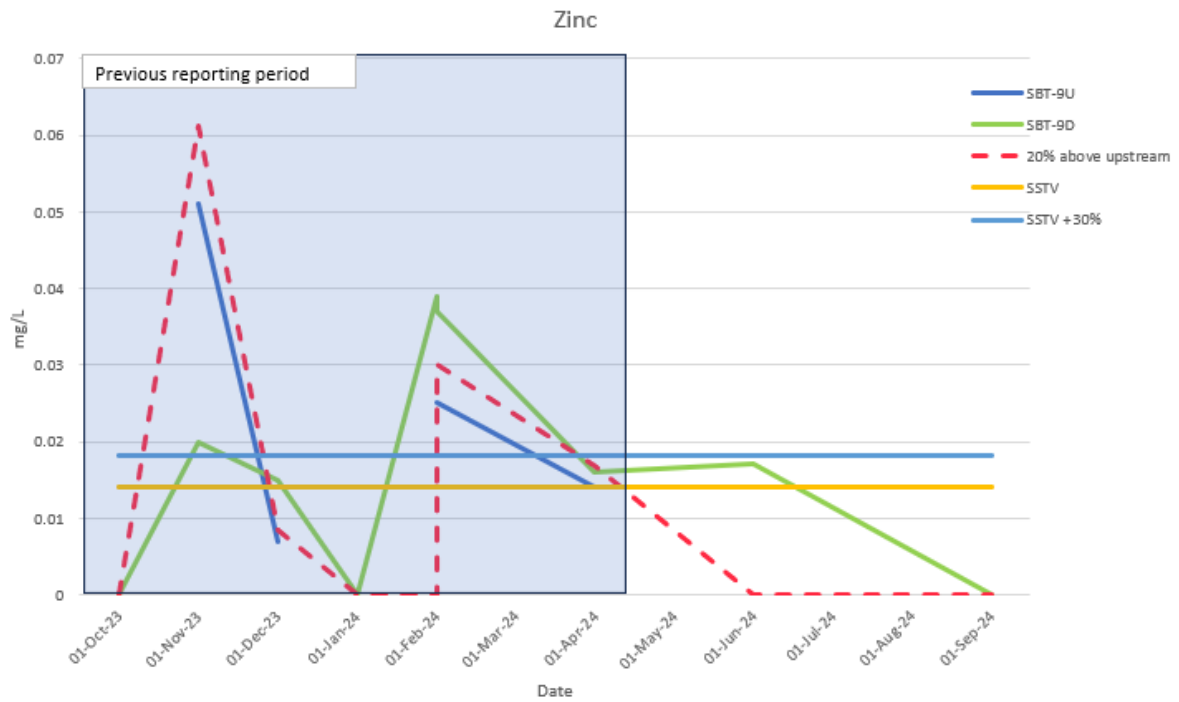
During the monitoring period two downstream sample was above the SSTV and the SSTV 30% threshold. On investigation, SBT did not discharge to waterways, nor had water leave site, around this sampling time, therefore SBT site activities were unlikely to be the cause of this event.



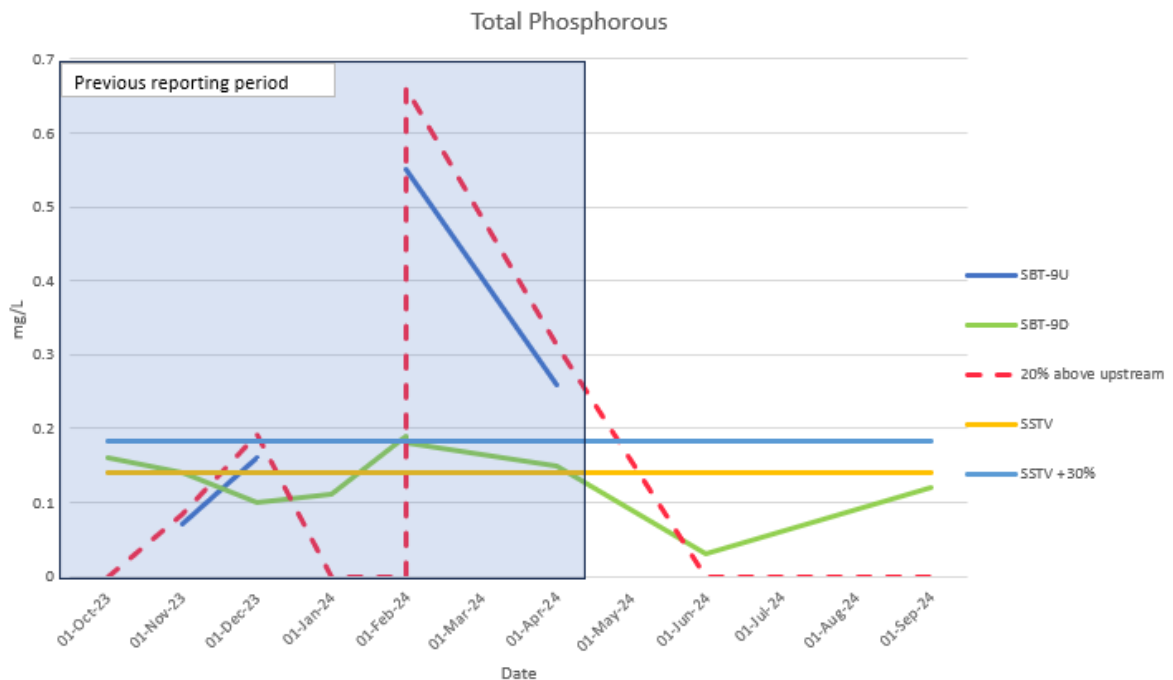
During the monitoring period no downstream sample were above the SSTV and the SSTV 30% threshold.



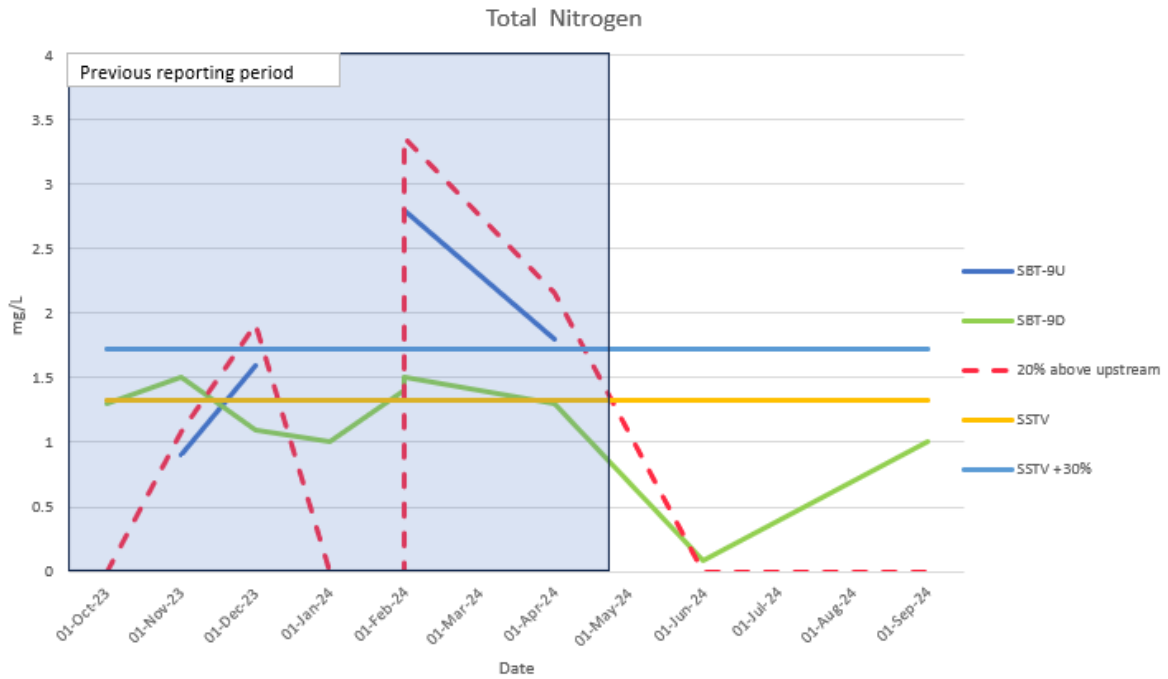
During the monitoring period two downstream sample was above the SSTV and the SSTV 30% threshold. On investigation, SBT did not discharge to waterways, nor had water leave site, around this sampling time, therefore SBT site activities were unlikely to be the cause of this event.



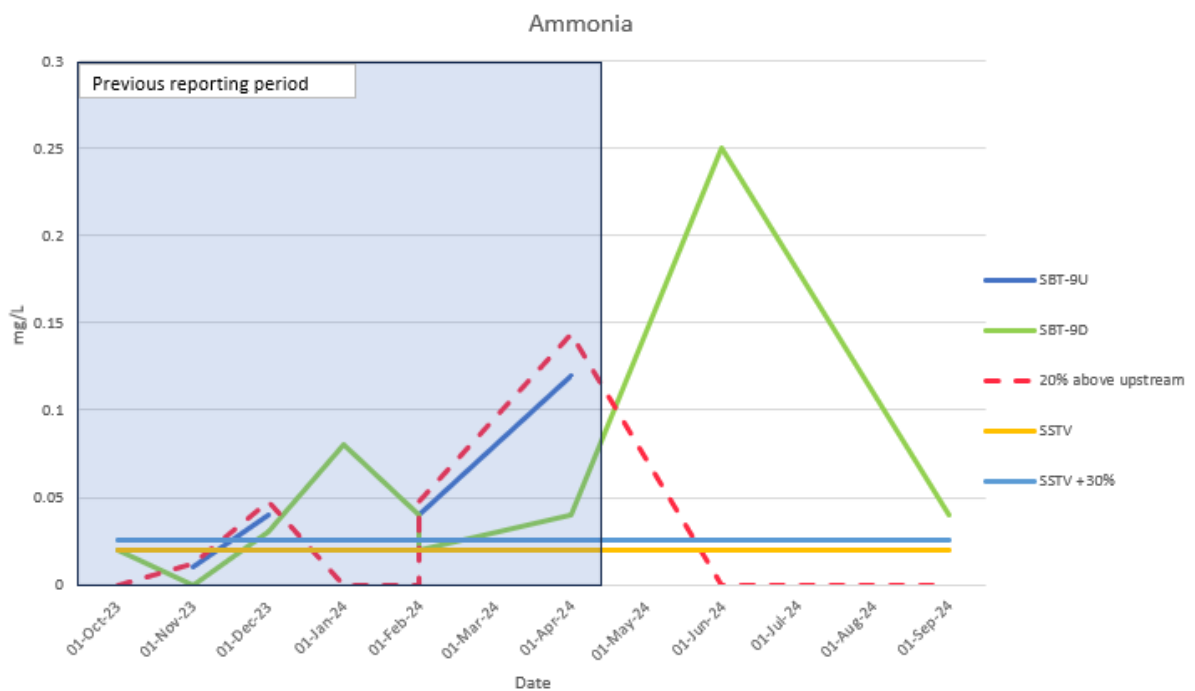
During the monitoring period no downstream sample were above the SSTV and the SSTV 30% threshold.



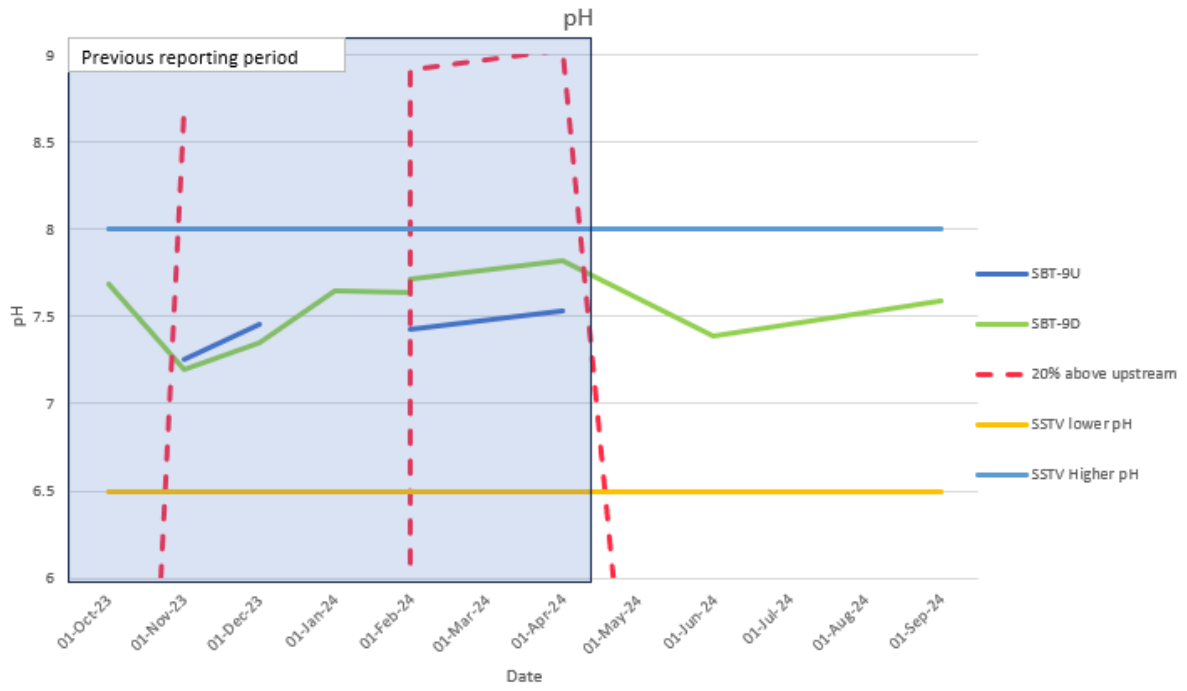
During the monitoring period no downstream sample were above the SSTV and the SSTV 30% threshold.



During the monitoring period no downstream sample were above the SSTV and the SSTV 30% threshold.

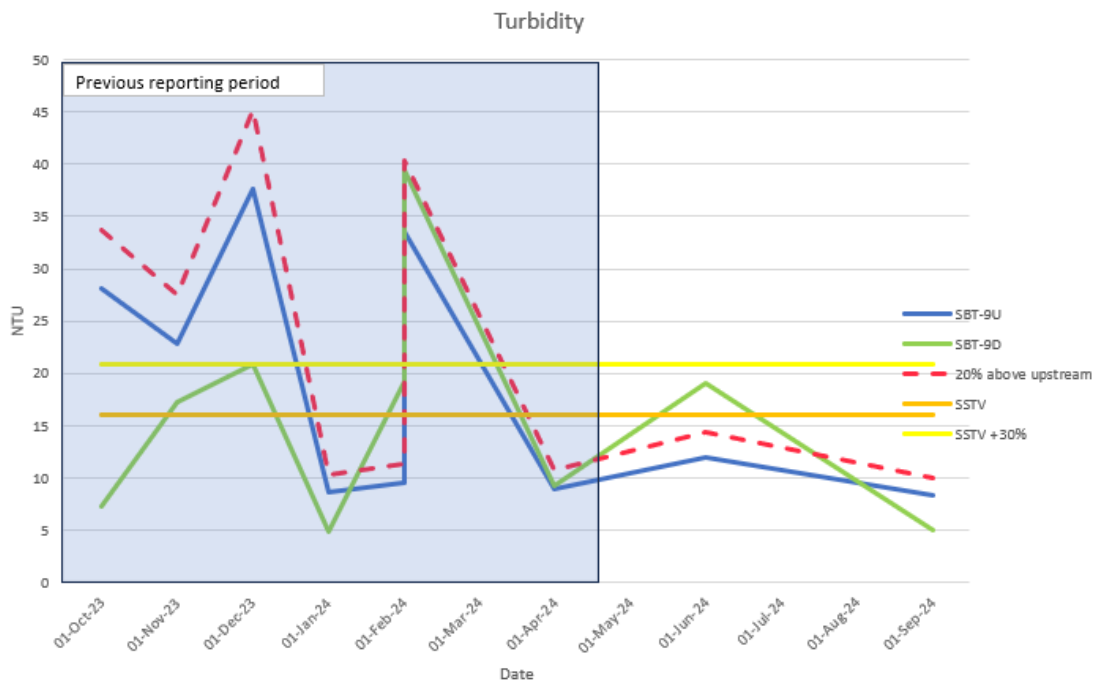


During the monitoring period two downstream sample was above the SSTV and the SSTV 30% threshold. On investigation, SBT did not discharge to waterways, nor had water leave site, around this sampling time, therefore SBT site activities were unlikely to be the cause of this event.

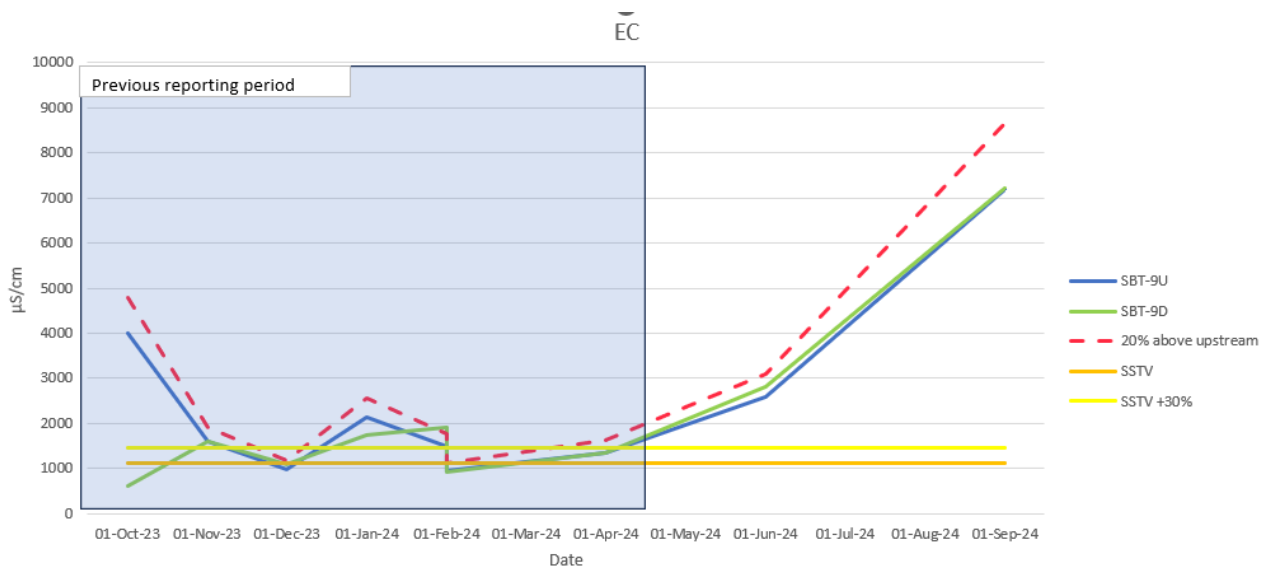


During the monitoring period no downstream sample were above the SSTV and the SSTV 30% threshold.

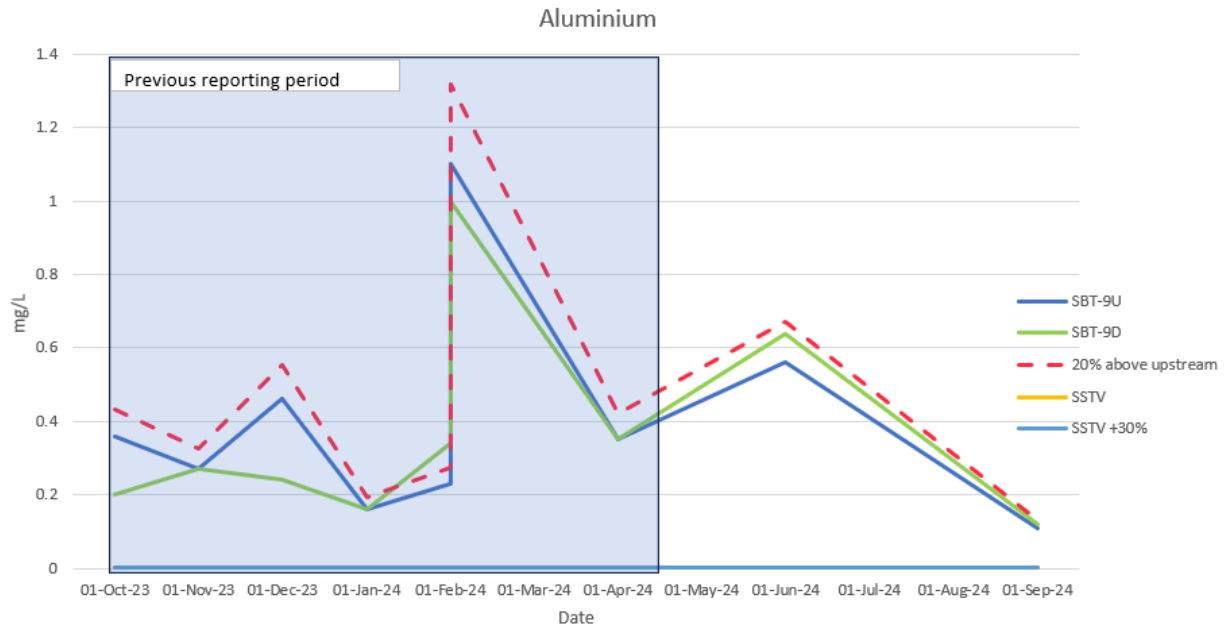
SBT 7 Claremont Meadows



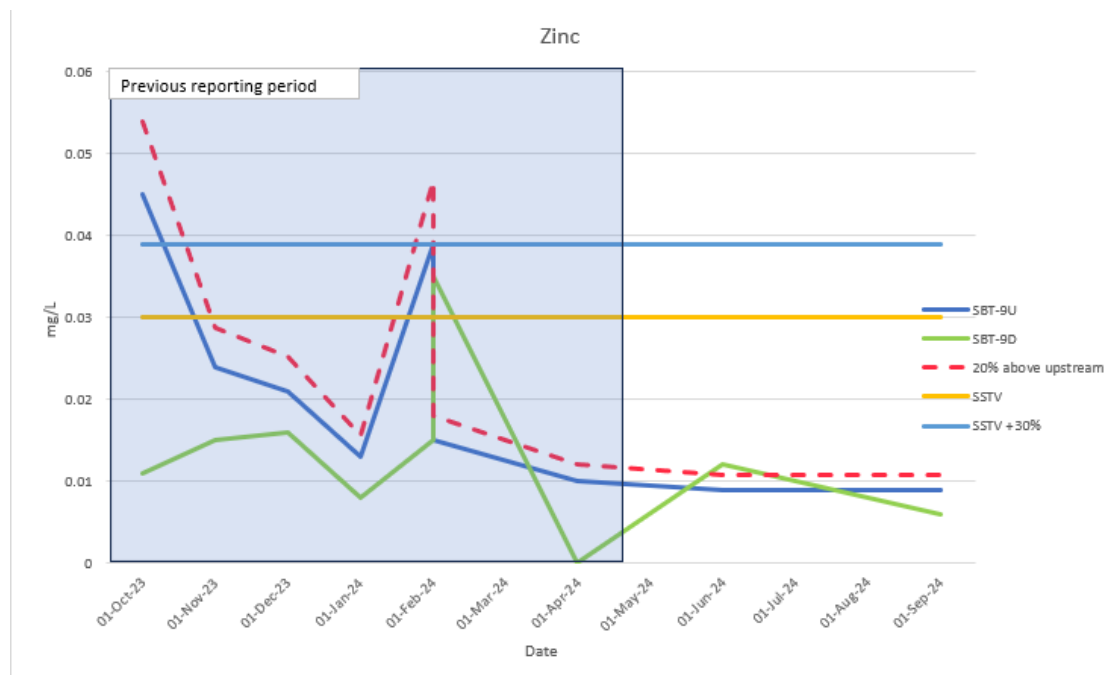
During the monitoring period one downstream sample was above the SSTV and the 20% above upstream sample threshold. On investigation, SBT did not discharge to waterways, nor had water leave site, around this sampling time, therefore SBT site activities were unlikely to be the cause of this event.



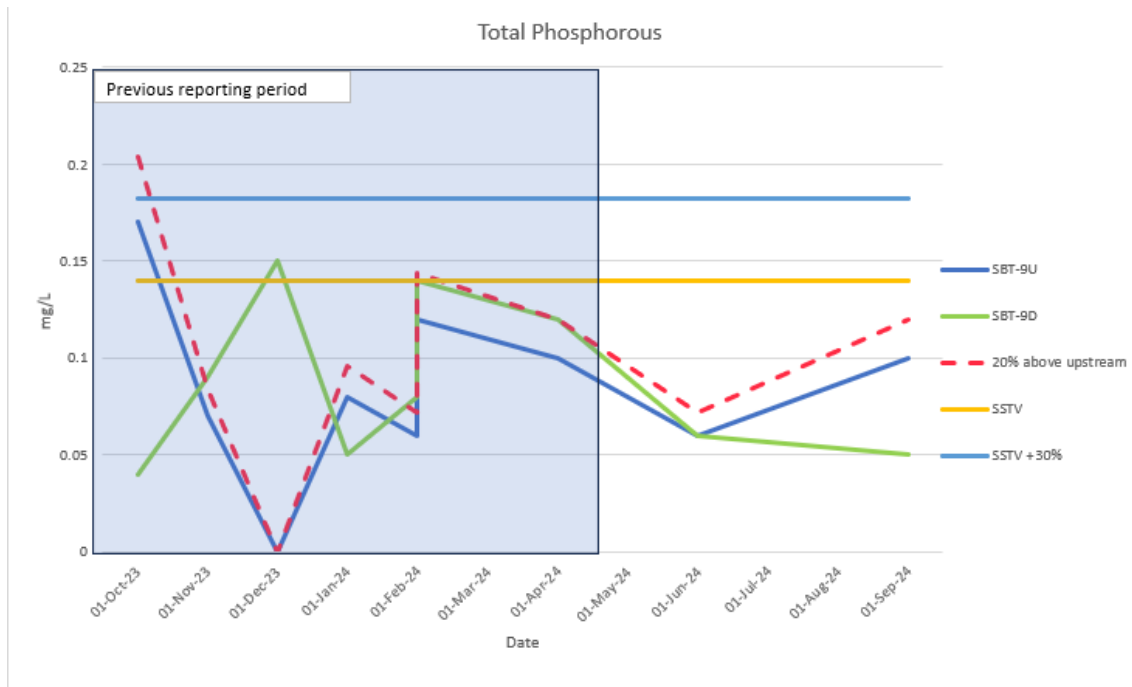
During the monitoring period two downstream and two upstream samples were above the SSTV and the SSTV 30% threshold. On investigation, SBT did not discharge to waterways, nor had water leave site, around this sampling time, therefore SBT site activities were unlikely to be the cause of this event.



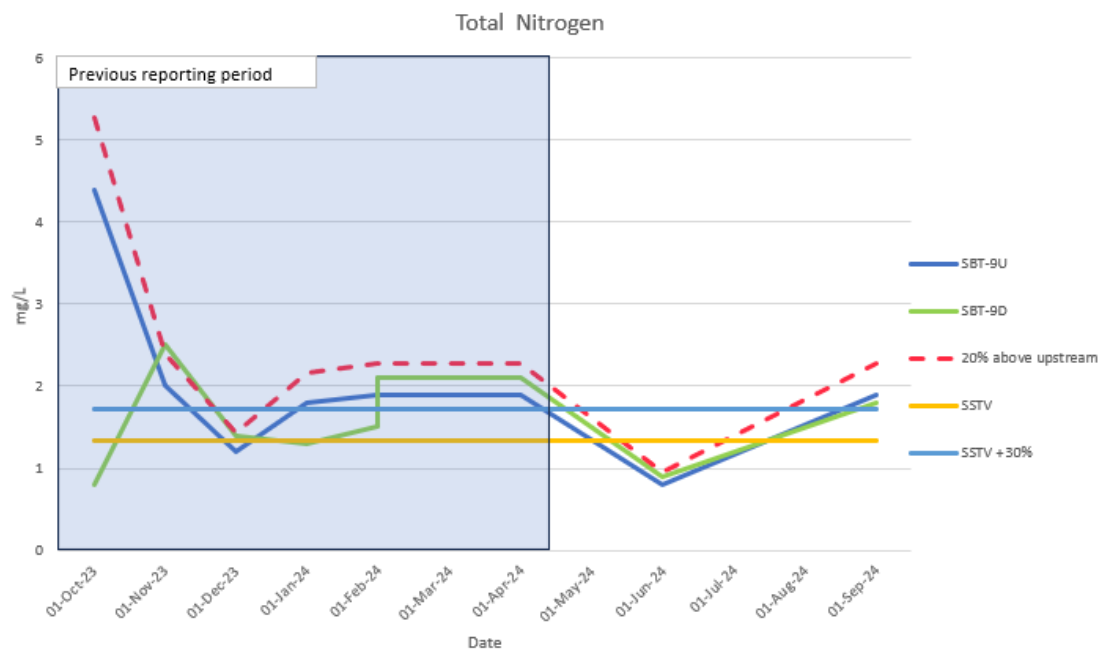
During the monitoring period two downstream and two upstream samples were above the SSTV and the SSTV 30% threshold. On investigation, SBT did not discharge to waterways, nor had water leave site, around this sampling time, therefore SBT site activities were unlikely to be the cause of this event.



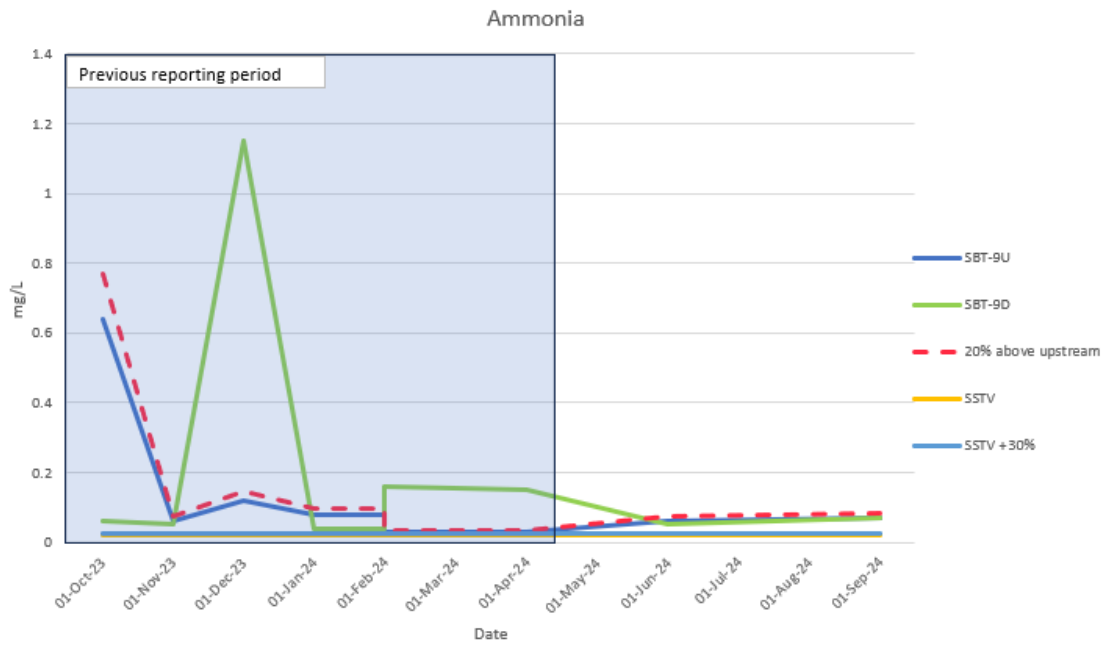
During the monitoring period one downstream sample was above the 20% above upstream sample threshold. On investigation, SBT did not discharge to waterways, nor had water leave site, around this sampling time, therefore SBT site activities were unlikely to be the cause of this event.



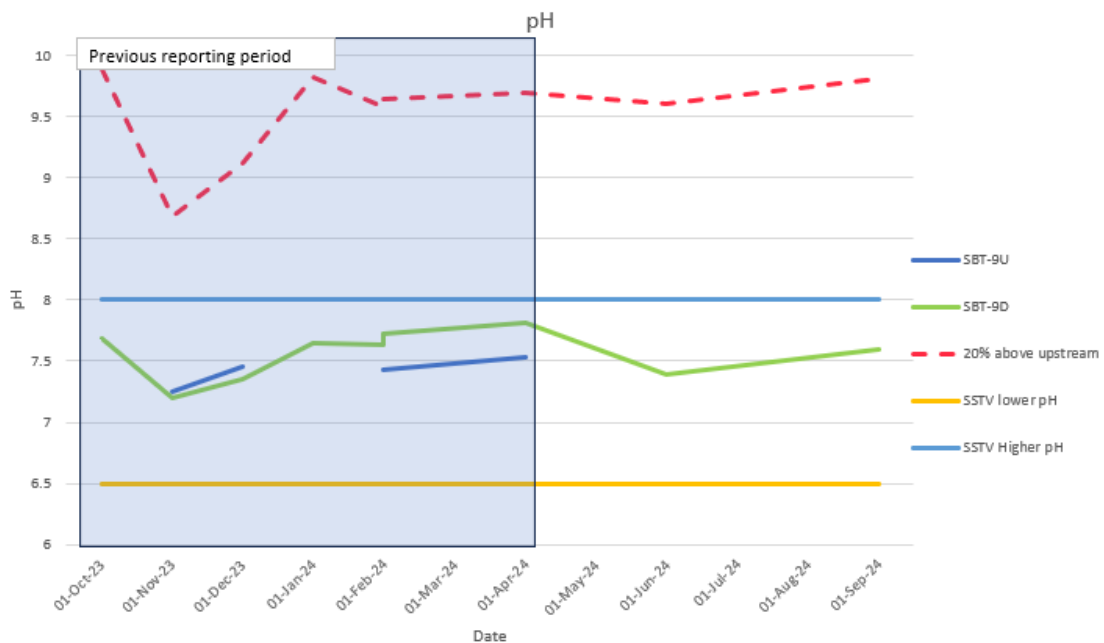
During the monitoring period no downstream or upstream sample were above the SSTV and the SSTV 30% threshold.



During the monitoring period one downstream and one upstream sample were above the SSTV and the 20% above upstream sample threshold. On investigation, SBT did not discharge to waterways, nor had water leave site, around this sampling time, therefore SBT site activities were unlikely to be the cause of this event.

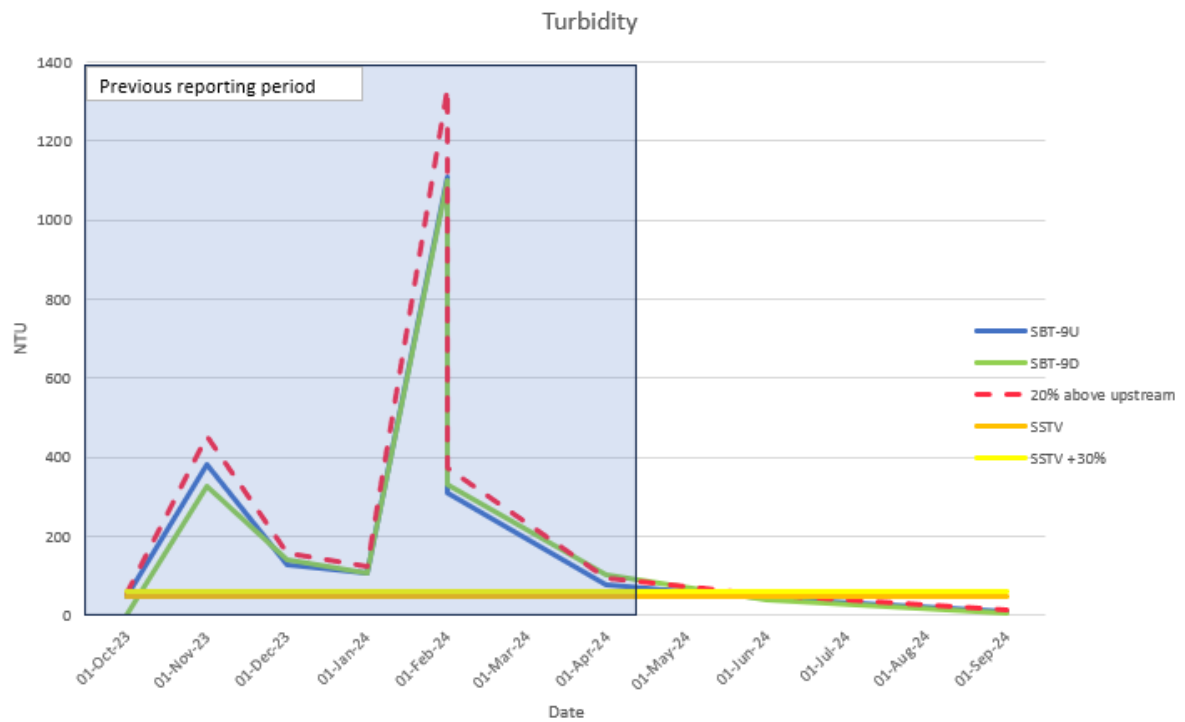


During the monitoring period two downstream and two upstream sample were above the SSTV and the SSTV 30% threshold. On investigation, SBT did not discharge to waterways, nor had water leave site, around this sampling time, therefore SBT site activities were unlikely to be the cause of this event.

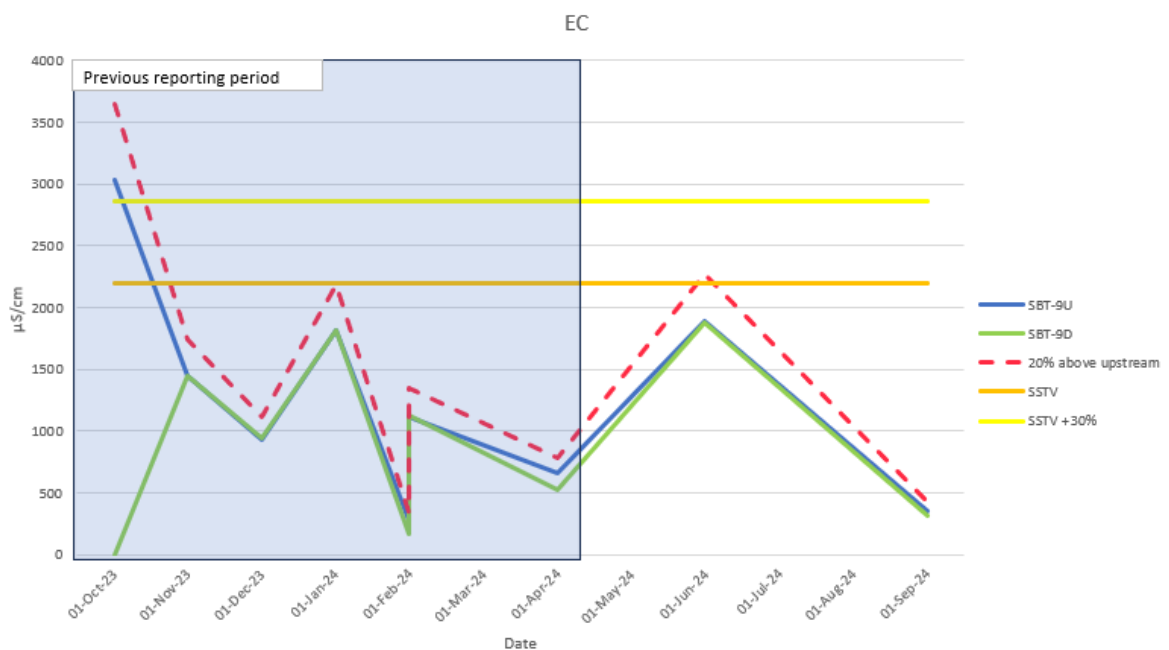


During the monitoring period no downstream or upstream sample were above the SSTV and the SSTV 30% threshold.

SBT 9 Bringelly



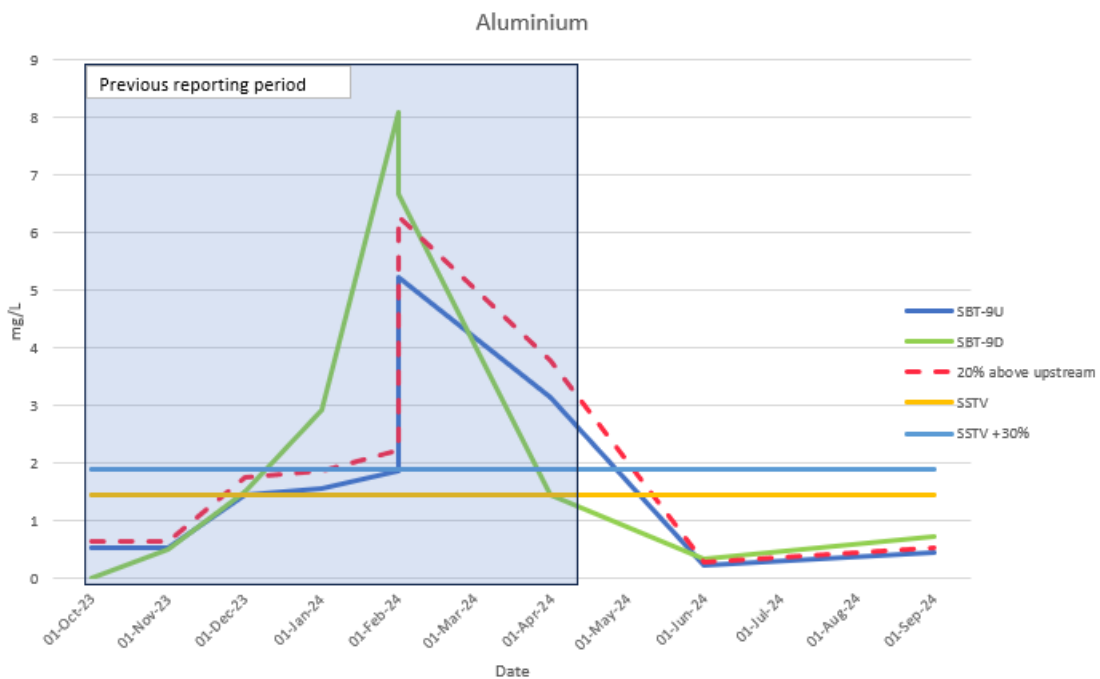
During the monitoring period no downstream or upstream sample were above the SSTV and the SSTV 30% threshold.



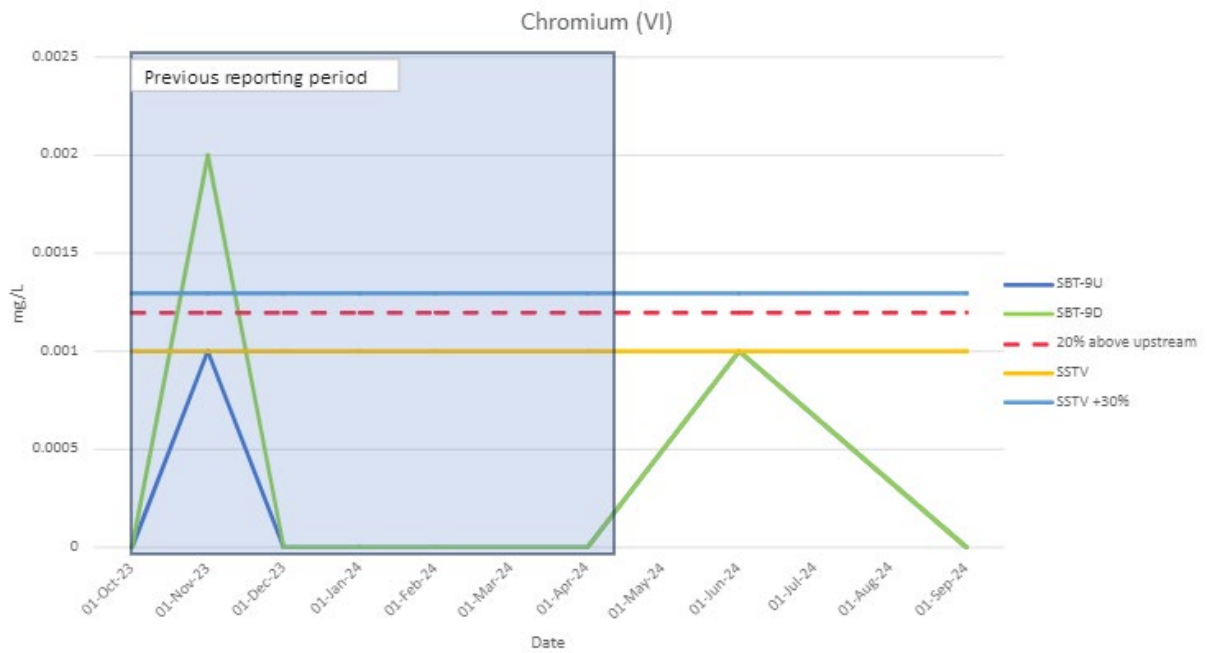
During the monitoring period no downstream or upstream sample were above the SSTV and the SSTV 30% threshold.



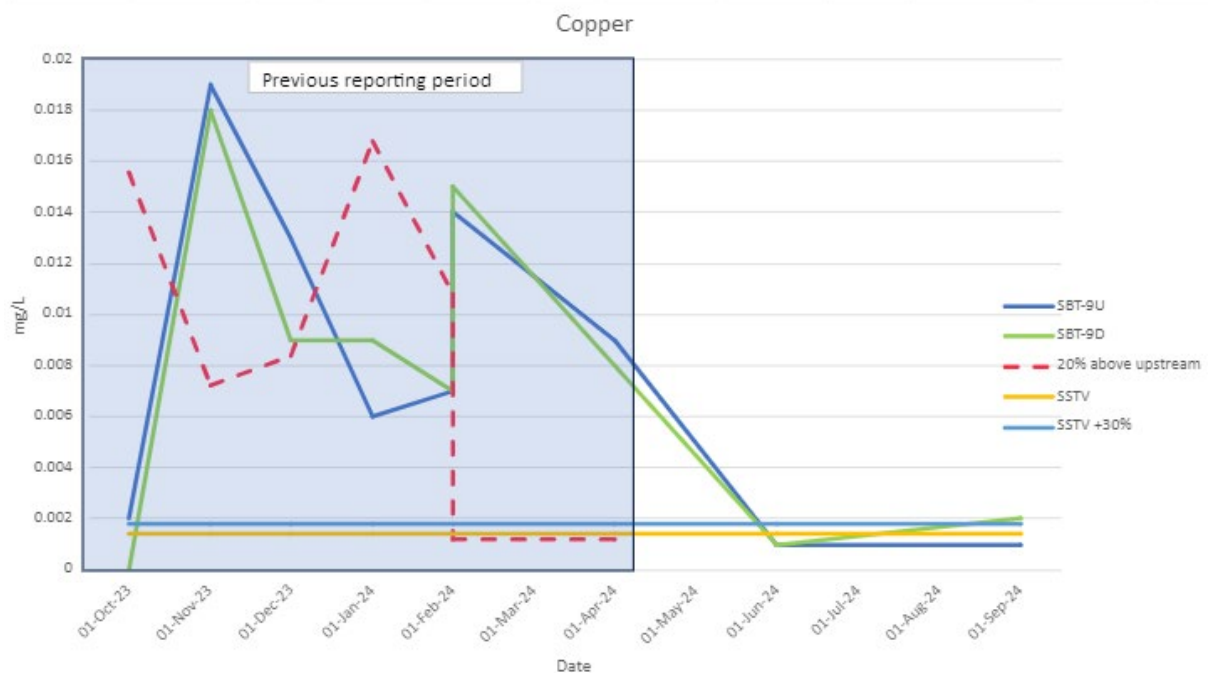
During the monitoring period one downstream and one upstream sample were above the SSTV and the SSTV 30% threshold. On investigation, SBT had discharged surface water from site around the June 2024 sampling event, however this was to vegetated ground near the sediment basin and due to the volume of water discharged and distance to the waterway, it is unlikely the flow would reach the waterway before infiltrating into the surface. It is not likely SBT activities would have resulted in this impact on water quality.



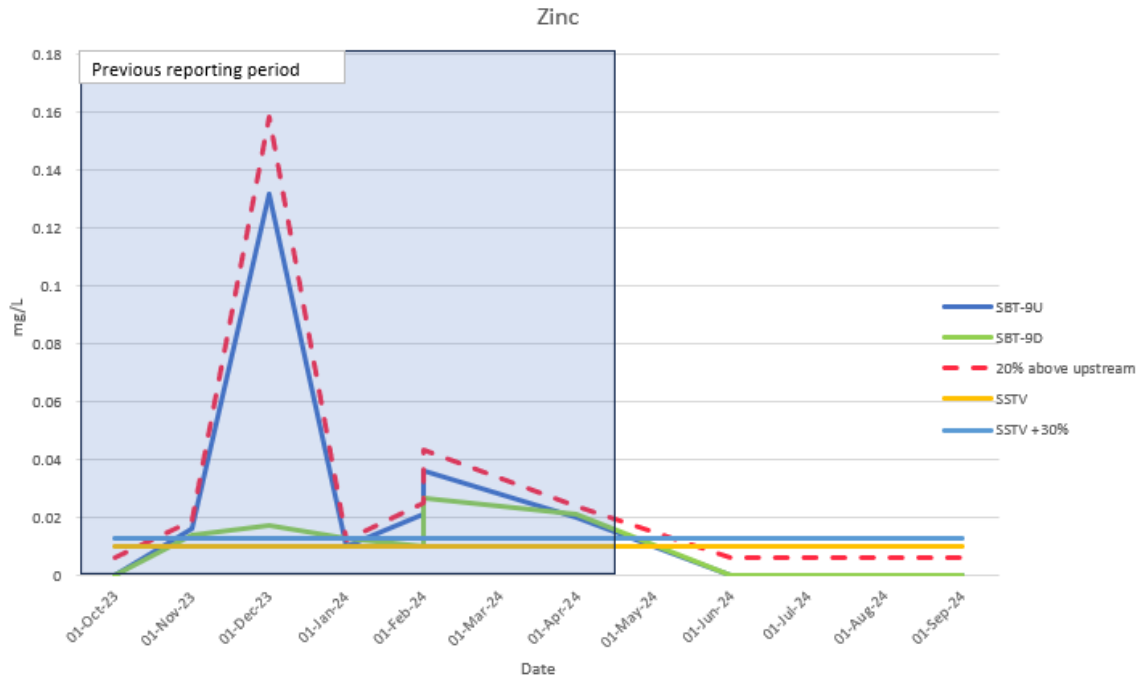
During the monitoring period no downstream or upstream sample were above the SSTV and the SSTV 30% threshold.



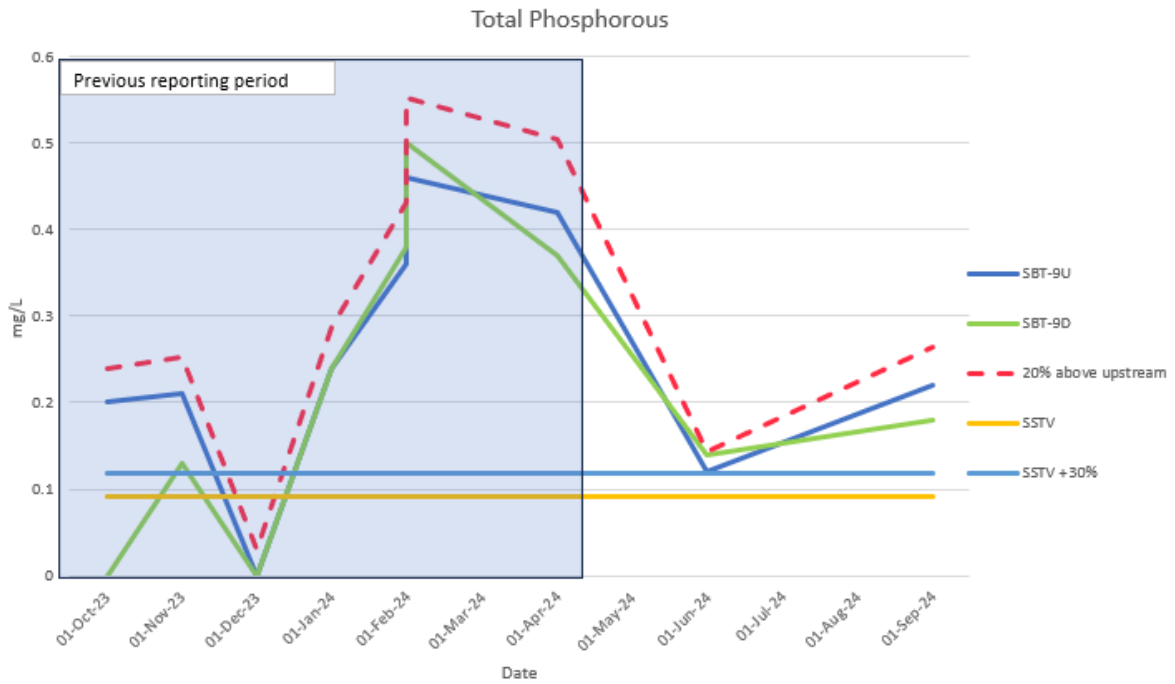
During the monitoring period no downstream or upstream sample were above the SSTV and the SSTV 30% threshold.



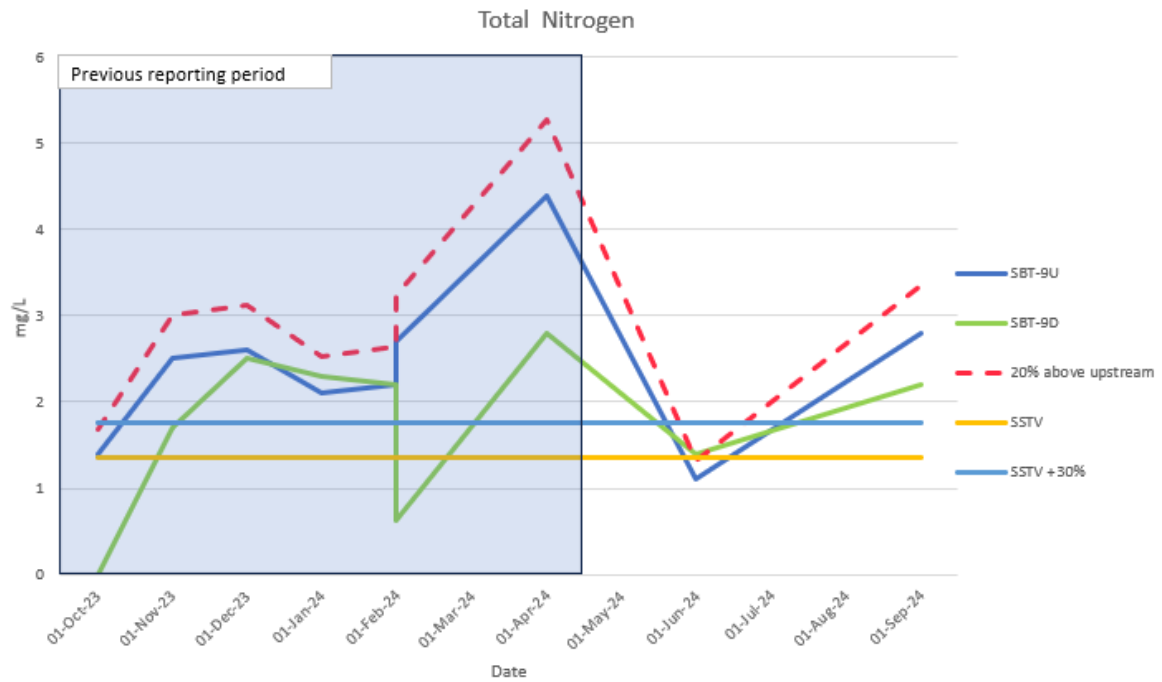
During the monitoring period one downstream sample was above the SSTV and the SSTV 30% threshold. On investigation, SBT did not discharge to waterways, nor had water leave site, around this sampling time, therefore SBT site activities were unlikely to be the cause of this event.



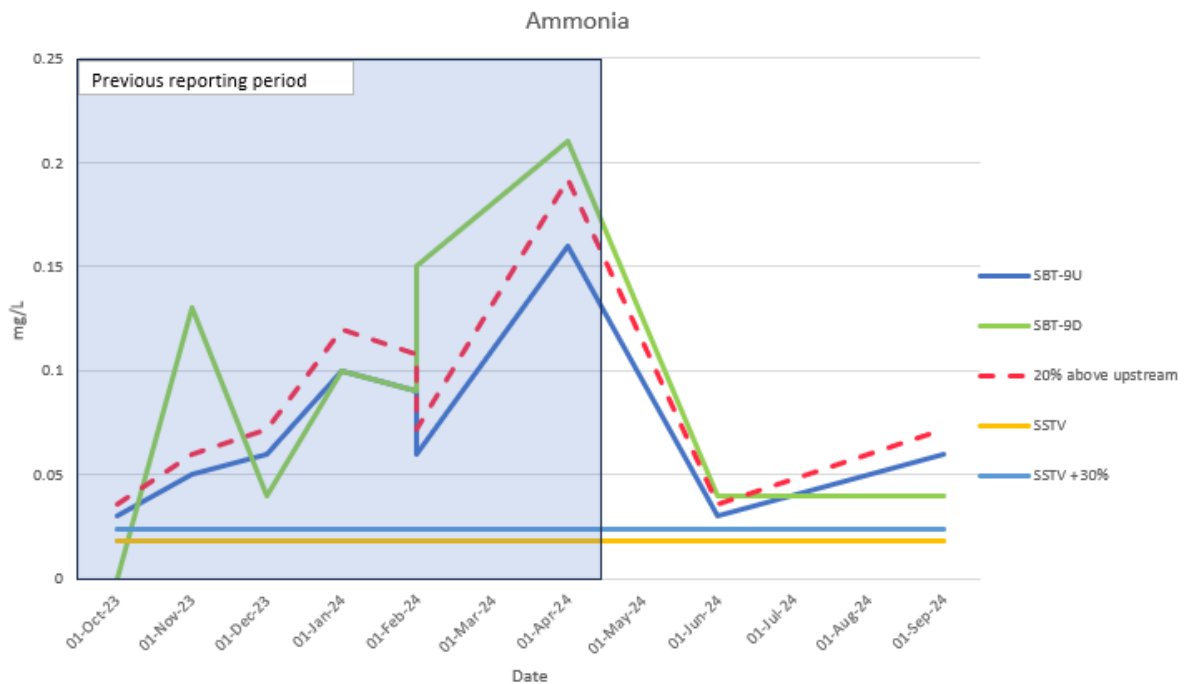
During the monitoring period no downstream or upstream sample were above the SSTV and the SSTV 30% threshold.



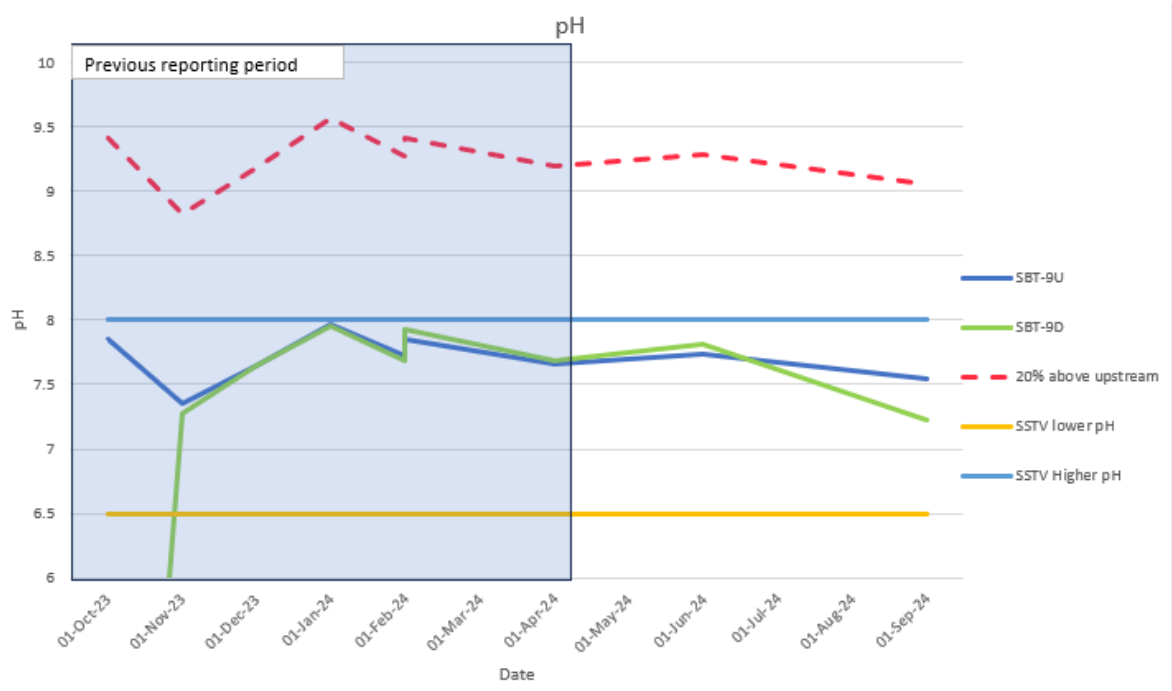
During the monitoring period two downstream and two upstream sample were above the SSTV and the SSTV 30% threshold. On investigation, SBT had discharged surface water from site around the June 2024 event, however this was to vegetated ground near the sediment basin and due to the volume of water discharged and distance to the waterway, it is unlikely the flow would reach the waterway before infiltrating into the surface. It is not likely SBT activities would have resulted in this impact on water quality. The previous sampling also shows total phosphorus is higher than the SSTV.



During the monitoring period one downstream and one upstream sample were above the SSTV and the SSTV 30% threshold. SBT did not discharge basins, nor had water leave site, around this sampling event. SBT do not believe this exceedance is due to site activity.



During the monitoring period two downstream and two upstream sample were above the SSTV and the SSTV 30% threshold. SBT had discharged surface water from site during the June 2024 event, however it is not likely for SBT water to have an impact on water quality. The previous sampling also shows Ammonia is higher than the SSTV.



During the monitoring period no downstream or upstream sample were above the SSTV and the SSTV 30% threshold.